

A Preference for Self-Reliance  
Beyond the Typical Conceptualization of Social Support in Close Relationships:  
Can Less be More?

Kenzie A. Snyder

Submitted in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy  
in the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2017

©2017  
Kenzie A. Snyder  
All rights reserved

ABSTRACT  
A Preference for Self-Reliance

Beyond the Typical Conceptualization of Social Support in Close Relationships:

Can Less be More?

Kenzie Snyder

Social support is classically conceptualized as “*what you can do*” or “*what you can offer*” to support someone in times of stress. But for some individuals, could less be more when it comes to social support? Empirical research has shown that support receipt can have differential effects. A preference for self-reliance in stressful situations might be one explanation as to why social support is not always beneficial for some individuals.

The current work introduces the phenomenon that some people prefer to be self-reliant in times of stress, i.e., they want to independently deal with the stressor instead of receiving direct supportive acts from a partner or someone else. Across seven studies, within three unique populations, and through low and high stress periods, we aimed to understand individual differences in a preference for self-reliance within close relationships. We discovered that a preference for self-reliance is a common phenomenon from adolescence through adulthood. This preference matters at a daily level across different outcomes and relationships, and is an integral part of daily human interaction affecting support transactions across different support providers. People with certain personality traits may be more likely to prefer self-reliance. The interaction between a preference for self-reliance and social support provision has important implications during critical time periods such as the college application process. Times

of acute stress are particularly revealing of links between a preference for self-reliance and support transactions.

Wanting to be self-reliant in stressful situations may be a more common desire than previously thought in the literature on close relationships. Individual differences such as the preference for self-reliance may explain the mixed effects of social support. The addition of preference for self-reliance as an individual difference impacting support transactions expands the field's current understanding of social support and support provision. We now know that there is a desired form of support beyond the classic conceptualization of social support and, for some, less *is* in fact more.

# Table of Contents

<b>List of Figures</b>	v
<b>List of Tables</b>	vi
<b>Acknowledgments</b>	vii
<b>Dedication</b>	xi
<b>Preface</b>	xii
<b>1 <u>General Introduction</u></b>	<b>1</b>
Introduction .....	2
Literature Review .....	2
Classic Conceptualization of Social Support	
Evidence of a Preference for Self-Reliance in Romantic Relationships	
Evidence of a Preference for Self-Reliance as an Individual Difference	
The Current Dissertation .....	5
Studies Overview	
<b>2 <u>Preference for Self-Reliance and Support in Close Relationships</u></b>	<b>8</b>
Introduction .....	9
Method .....	10
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Support Interactions	
Results .....	11
Discussion .....	16
<b>3 <u>Replication of Preference for Self-Reliance Phenomenon</u></b>	<b>17</b>
Introduction .....	18
Study 2 .....	18
Method	
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Results .....	20

Participant Support Preferences	
Correlations between Support Preferences	
Partners' Support Preferences	
Study 3 .....	23
Method	
Participants	
Procedure	
Measures	
Results .....	23
Participant Support Preferences	
Correlations between Support Preferences	
Partners' Support Preferences	
Discussion .....	26
<b>4 <u>Personality and Preference for Self-Reliance</u></b>	<b>28</b>
Introduction .....	29
Method .....	31
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Personality Traits	
Results .....	33
Discussion .....	37
<b>5 <u>Preference for Self-Reliance During the Transition into Independence</u></b>	<b>39</b>
Introduction .....	40
Method .....	41
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Preference for Self-Reliance during the College Application Process Including Parental Involvement	
Preference for Self-Reliance during the College Application Process	
Preference for Self-Reliance when Handling Application, Academic, and Personal Challenges	
Support Interactions	
Results .....	44

Discussion .....	47
Future Research	
<b>6 <u>Preference for Self-Reliance and Parental Control during the College Application Process: Understanding the Person by Situation Interaction</u></b>	<b>50</b>
Introduction .....	51
Method .....	53
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Satisfaction with the College Application Process	
Parental Control	
Results .....	55
Sensitivity Analysis	
Discussion .....	58
<b>7 <u>The Link between Preference for Self-Reliance and Social Support during Times of Increased Stress</u></b>	<b>61</b>
Introduction .....	62
Method .....	62
Participants	
Procedure	
Measures	
Preference for Self-Reliance	
Support Interactions	
Results .....	66
Informational Support	
Support Need	
Support Seeking	
Support Receipt	
Tangible Support	
Support Seeking	
Emotional Connectedness	
Discussion .....	78
<b>8 <u>General Discussion</u></b>	<b>80</b>
Summary of Findings .....	81
Limitations and Future Directions .....	81
State- or Trait- Individual Difference	

Costs and Benefits	
Generalizability	
Experimental Design	
Perceived vs. Received Support	
Theoretical Implications .....	85
Invisible Support	
Applied Implications .....	88
In Sum .....	90
<b>References</b>	<b>92</b>



# List of Figures

2	Predicted probabilities of social support by preference for self-reliance	12
3	Social support assessment measure	20
4.1	Emotional stability and the probability of endorsing preference for self-reliance	34
4.2	Openness to experience and the probability of endorsing preference for self-reliance	34
4.3	Agreeableness and the probability of endorsing preference for self-reliance	35
4.4	Extraversion and the probability of endorsing preference for self-reliance	36
4.5	Conscientiousness and the probability of endorsing preference for self-reliance	36
6	College application satisfaction by preference for self-reliance and three levels of parental control (low, average, high)	57
7.1	Informational support interactions as a function of preference for self-reliance	71
7.2	Tangible support interactions as a function of preference for self-reliance	74
7.3	Emotional connectedness as a function of preference for self-reliance	77

# List of Tables

2.1	Probability of Support from Partner	14
2.2	Probability of Support from Close Others	15
3.2	Correlations between Preference for Self-Reliance and other Forms of Social Support	22
3.3	Correlations between Preference for Self-Reliance and other Forms of Social Support	25
4	Descriptive Statistics for Big 5 Personality Traits grouped by Preference for Self-Reliance	33
5.1	Descriptive Statistics for Received Help and Support by Provider	44
5.2	Descriptive Statistics for Self-Reliance Measures	45
5.3	Correlations between Preference for Self-Reliance and Support Receipt	46
6	Analysis of Variance for College Application Process Satisfaction	56
7.1	Descriptive Statistics for Support Interactions by Wave	65
7.2	Informational Support Interactions	70
7.3	Tangible Support Interactions	73
7.4	Emotional Connectedness Interactions	76

# Acknowledgements

The topic of this dissertation is a preference for self-reliance, but its production would not have been possible without the collaboration and support of many, and most especially those mentioned below.

Chiefly, I would like to thank Turu Stadler, who over the last seven years has become more than a collaborator and advisor, but an essential part of my life. Turu has the innate ability to keep me grounded and centered, while focused and optimistic about the future. Working with Turu, I have always felt secure enough to make mistakes, admit when I did not understand, and ask questions to clarify. Learning by doing was a strategy we adopted together, for which I credit my abilities as a researcher and statistician today. Her passion for learning and for our research was infectious, and motivated me on days when even caffeine could not. The number of days (weeks, months) of this process when I anxiously asked myself, “What am I doing?” “What have I accomplished?” were more than I will admit. It was Turu’s unwavering belief in me, and my research program, that eased my apprehension and allowed me to forge ahead. There are times in life when we need someone to believe in us because we don’t believe in ourselves enough, and over the last seven years Turu has been that someone for me.

The sophisticated study designs and analytic approaches comprising this dissertation would not have been possible without my advisor and statistical guru, Niall Bolger. Niall had the uncanny ability to take one look at my syntax and identify the error, and encapsulate all my scattered thoughts and ideas into a single sentence or phrase. But I am most thankful for his willingness to

allow me to pursue a program of research that excited me. While many graduate students are restrained or limited by lab or advisor interests, Niall facilitated the development of a research program both unique and tailored to my own interests. Graduate school would not have been as meaningful or fulfilling without this freedom and encouragement. I will always be grateful to Niall for trusting my intuition and awarding me the opportunity to explore uncharted territory within the social support literature.

Thank you to Walter Mischel for his role as an honorary co-advisor throughout my first years of graduate school. Much of the work in this dissertation is the product of many exciting and novel thoughts he stimulated. Walter's encouragement to bridge two bodies of research—social support and self-regulation—essentially established the foundation for this dissertation. The privilege of learning from someone as esteemed as Walter is one I will always treasure.

A special thanks to Larisa Heiphetz, Caterina Gawrilow and Geraldine Downey for their professional support, compassion and flexibility as my defense date approached. Their agreement to be a part of my committee was not taken lightly. When life threw me a curveball before my scheduled defense, their empathy and understanding went above and beyond what I expected from committee members. The culmination of my dissertation would not have been possible without both their academic and personal support.

While the discovery of a preference for self-reliance was unexpected in the social support research, it is something that rings true to me since childhood. The independence and self-reliance encouraged by my parents early on established the self-sufficiency necessary to complete this dissertation. A PhD is not unlike life, in that there is inevitable failure,

disappointment, apprehension and confusion. I am fortunate to have a familial support system that helped combat these disappointments, and parents who taught me to be resilient when a dissertation, or life, doesn't go as planned. I attribute my curiosity for the undiscovered to my parents: growing up, I was always challenged to ask why, and to consider alternative explanations and perspectives before coming to conclusions. My tendency to consider alternative explanations, like individual differences, and to explore uncharted research territory, like supporting someone by *not* providing support, I attribute to my mother, Diana and father, John. I must also thank my little brother, Barrett, for his humor, his humanistic perspective, and for being my biggest cheerleader. I am happy I will no longer be teased for being thirty years old and still in school.

Graduate school would have been more tears than laughs if it were not for the following allies. First and foremost, thank you to Matt Riccio: my sanity, voice of reason, pros-and-cons-weigher, realist and relentless encourager (across multiple domains). Thanks to Lexi Suppes, Jeff Craw, and Mariana Martins for playing the role of older siblings. There were times I could have been more self-reliant, but having the luxury of these three available to answer questions and provide professional, intellectual and personal support overrode my general and lifelong preference for self-reliance. Thanks to Johanna Schmid, undoubtedly the best collaborator I have ever had the pleasure of working with. The final study of this dissertation would not have been possible without her knowledge, statistical skill set, work ethic and efficiency. "And then there were four," was a common phrase among my cohort. Thank you to Rebecca Martin, Matt Bailey and Seth Kallman for calmly responding to my panicked emails, for not taking our five years too seriously, and for your constant reminders that there is life beyond Columbia University (and we

will survive it). Finally, thank you to my dear friends outside of academia. Although they may not have always understood what my work entailed, their support of my intellectual pursuits and celebration of my achievements had a way of making me feel like a rock star. They provided space, listened, empathized, distracted and teased me just enough about my “PhDuh” that I remembered to laugh along the way. “Friends are like walls. Sometimes you lean on them, and sometimes they’re just there.” How lucky am I to know that whether it is a failed experiment or a failed relationship, I’ll always have my walls.

Finally, I owe a special thank you to the Psychology Department front office, especially Joanna Borchert-Kopczuk—this dissertation would not have been submitted without your logistical guidance and support.

# Dedication

For my Mom – The one I rely on

# Preface

"Let there be spaces in your togetherness,  
And let the winds of the heavens dance between you.  
Love one another but make not a bond of love:  
Let it rather be a moving sea between the shores of your souls.  
Fill each other's cup but drink not from one cup.  
Give one another of your bread  
but eat not from the same loaf.  
Sing and dance together and be joyous, but let each one of you be alone, Even as  
the strings of a lute are alone though they quiver with the same music.  
Give your hearts, but not into each other's keeping.  
For only the hand of Life can contain your hearts. And stand together, yet not too  
near together: For the pillars of the temple stand apart,  
And the oak tree and the cypress grow not in each other's shadow."

(Kahlil Gibran, *The Prophet*)



# 1

## General Introduction

## Introduction

You are up for a promotion at work and have been putting in twelve-hour days. You are feeling increased stress because of the extra workload and pressure to earn your new position. You come home to your spouse, who immediately tries to offer support and alleviate some of your stress. You feel better, right? Not necessarily. Perhaps, upon arriving home, you would have preferred your own space to work through and manage your distress independently. While this seems like a logical, and likely, preference for some when handling stressors, the support provider act of *not* doing something—and recognizing that the support recipient prefers time alone to deal with the stressor *independently*—is not yet recognized as a form of provided or desired support in the social support literature.

The present dissertation explores the question: **Could *less* sometimes be *more* when it comes to social support?** A desire for self-reliance in stressful situations may be a more common desire than previously thought. The literature on close relationships regularly focuses on the types of active support a partner can provide (e.g., listening, practical support) while overlooking that some people may prefer to deal with tasks and stressors on their own. We introduce the phenomenon that some people prefer to be self-reliant in times of stress, i.e., they want to independently deal with the stressor *instead of* receiving direct supportive acts from their partner or someone else.

## Literature Review

### Classic Conceptualization of Social Support

Social support is classically conceptualized as *what can you do* or *what can you offer* to support someone in times of stress (Cutrona & Suhr, 1992). House (1981) defined social support

as resources (actual or perceived by a focal person) available from one or more others to assist the focal person in the management of stress experiences and to increase the experience of well-being. Much of the literature examining social support does so in terms of specific transactions involving the seeking and receiving of help in the context of coping with specific stressors (Lazarus & Folkman, 1984; Wills, 1991). Taxonomies of social support have usually examined several forms: informational (i.e., when one individual aids another in understanding a stressful event better, and advises resources and coping strategies needed to deal with it); instrumental (i.e., the provision of tangible assistance such as services, financial assistance and other specific aid or goods); and emotional (i.e., providing warmth and nurturance to another individual while reassuring them of their worth and that they are cared for).

In general, researchers have noted that a lack of or inadequacy in social support during stressful situations may increase the vulnerability of individuals to psychological distress, emotional and functional problems, and somatic illnesses (Antonovsky, 1979; Cobb, 1976; Cohen, 1988; Kiecolt-Glaser & Glaser, 1986). There is opposing evidence that social support in times of stress can also be detrimental physically, emotionally and relationally (Coyne, Ellard, & Smith, 1990; Coyne, Wortman, & Lehman, 1988; Dakof & Taylor, 1990; Hobfoll & London, 1986; Repetti, 1989; Shrout, Herman, & Bolger, 2006; Taylor, Seeman, Eisenberger, Kozanian, Moore, & Moons, 2010; Uno, Uchino, & Smith 2002). However, when considering the potential costs and benefits of support receipt, it is important to remember that support transactions do not exist in a vacuum; rather, they are embedded within both situational and personal contexts, such as the individual differences of support recipients. One explanation for the inconsistency of support effects may lie in a recipient's actual desire for social support when managing stress.

### **Evidence of a Preference for Self-Reliance in Romantic Relationships**

The few studies exploring the need for space in close relationships have shown mixed findings for both personal and relational outcomes. Repetti (1989) examined a situation whereby the stressor was unrelated to the relationship; in this case, the stressed person and their partner seemed to frequently recognize a need for space. Spending time alone after a stressful workday helped male air traffic controllers return to their baseline physiological and emotional states, thereby enhancing their well-being (Repetti, 1989). Men who more frequently withdrew from their spouses and children after a stressful workday identified as more emotionally stable (low on neuroticism) and better able to handle work-related stress (Wang, Repetti, & Campos, 2011). From a relational perspective, couples in happy marriages reported experiencing greater distance from one another in times of stress (Lavee & Ben-Ari, 2007). Indeed, distance from a partner during times of stress may entail a regulation strategy aimed at protecting the relationship (Lavee & Ben-Ari, 2007). Others have found that self-reliance may mimic a demand/withdrawal pattern linked with lower relationship satisfaction (Heavey, Christensen, & Malamuth, 1995; Repetti, Wang, & Saxbe, 2009).

### **Evidence of a Preference for Self-Reliance as an Individual Difference**

In a rare example, the term “self-reliance” was used in a study on women with breast cancer (Funch & Marshall, 1984). Participants were divided into two groups: those who perceived themselves as responsible for their recovery (self-reliant) and those who perceived their family or doctor responsible for their recovery (other-reliant). While self-reliance played no direct role in psychological adjustment, it did serve as a modifier of the relationships between stress, social support and adjustment. For those categorized as self-reliant, life stress influenced

their recovery more than support. The authors deemed the study an “attempt to consider what differences might be present in the roles which stress and social support play in adjustment for these women who, instead of offering a conventional response, were motivated to emphasize their own role in their recovery” (p. 9). Although recognized retroactively, a preference for self-reliance was deemed an important individual difference when understanding the effects of social support on recovery.

### **The Current Dissertation**

We conceptualize self-reliance as an individual difference in which a person prefers to handle stressors or tasks independently from their partner. Self-reliance as a support process consists of the support provider doing nothing, allowing the support recipient to manage the stressor and/or task independently (Ryan & Solky, 1996). It follows then that the preference for self-reliance differs from other traits, such as autonomy, which is assessed as the satisfaction of a need for autonomy (Deci & Ryan, 2008); independence, which is assessed as self-perception in the context of the social environment (Cross, 1995; Markus & Kitayama, 2010); and avoidant attachment, which is assessed as unwillingness to make and receive intimate disclosures (Mikulincer & Nachshon, 1991).

The current work aims to better understand individual differences in a preference for self-reliance within close relationships. Across seven studies within three unique populations, and through high and low stress periods, we tested seven hypotheses. **Hypothesis 1:** Some individuals will prefer self-reliance when experiencing a stressor. **Hypothesis 2:** Individuals who report this preference will differ in daily support receipt, experienced benefits and support seeking. **Hypothesis 3:** These effects will extend to support from people other than romantic

partners. **Hypothesis 4:** People with certain personality traits will be more likely to prefer self-reliance, as compared to other forms of support. **Hypothesis 5:** The preference for self-reliance will matter across the lifespan: replicating the results found in adult romantic couples, adolescents and young adults will also show a preference for self-reliance, as well as showing similar links between self-reliance and support. **Hypothesis 6:** Adolescents' satisfaction with the college application process will be linked to both adolescent preference for self-reliance and parental control. **Hypothesis 7:** The preference for self-reliance will be more closely linked with daily support transactions in times of higher stress than in times of lower stress.

### **Studies Overview**

**Study 1.** An intensive-longitudinal design, the study seeks to establish that the preference for self-reliance exists (Hypothesis 1) and matters on a daily basis across different outcomes and relationships (Hypotheses 2 and 3).

**Study 2 and Study 3.** Using an alternative assessment measure, the two studies seek to replicate the finding that the preference for self-reliance is a common phenomenon (Hypothesis 1).

**Study 4.** Using the same sample as Study 1, this study explores whether the interaction between individual coping and partner-desired social support might be influenced by personality. The study tests whether people with certain personality traits are more likely to prefer self-reliance when experiencing a stressor (Hypothesis 4).

**Study 5.** The study seeks to replicate that a preference for self-reliance exists among adolescents and that they show similar support links to adults in committed romantic relationships (Hypotheses 1 – 3, Hypothesis 5).

**Study 6.** The study investigates the interaction between adolescent preference for self-reliance and level of parental control during the college application process. The study tests whether an adolescents' preference for self-reliance is linked to satisfaction with the college application process, and how parental control might moderate this link (Hypothesis 6).

**Study 7.** An intensive longitudinal design, the study seeks to replicate that a preference for self-reliance exists among young adult undergraduate students (Hypotheses 1 and 5). The study further tests whether the preference for self-reliance would be more closely linked with daily support tendencies in higher stress versus lower stress periods (Hypothesis 7).

# 2

## **Preference for Self-Reliance and Support in Close Relationships**



## Introduction

Could *less* sometimes be *more* when it comes to social support? The desire for self-reliance in stressful situations may be more common than previously explored in the literature on close relationships. Research regularly focuses on the types of active support a partner can provide (e.g., listening, practical support), while overlooking that some people may prefer to deal with tasks and stressors on their own. We introduce the concept that some people prefer to be self-reliant in times of stress—they want to independently deal with the stressor *instead of* receiving direct supportive acts from their partner or someone else.

The few studies exploring the need for space in close relationships reveal mixed findings for both personal and relational outcomes. For instance, spending time alone after a stressful workday helped male air traffic controllers return to their baseline physiological and emotional states, thereby enhancing their well-being (Repetti, 1989). Couples in happy marriages reported experiencing greater distance from one another in times of stress (Lavee & Ben-Ari 2007). Yet for others, self-reliance might mimic a demand/withdrawal pattern linked with lower relationship satisfaction (Heavey et al., 1995; Repetti et al., 2009).

We conceptualize the preference for self-reliance as an individual difference in which a person prefers to handle stressors or tasks independently from close others. In order to support self-reliance, the support provider suppresses the impulse to help and gives their partner space to deal with the stressor on his or her own (Ryan & Solky, 1996). Thus, the preference for self-reliance differs from other traits, such as autonomy, assessed as the satisfaction of a need for autonomy (Deci & Ryan, 2008); independence, assessed as self-perception in the context of the

social environment (Cross, 1995; Markus & Kitayama, 2010); and avoidant attachment (Mikulincer & Nachshon, 1991), a more compulsive form of self-reliance.

Utilizing an intensive longitudinal design, we aimed to better understand individual differences in self-reliance preferences within close relationships. Committed romantic couples were used to test two hypotheses: (1) some individuals will prefer self-reliance when experiencing a stressor, and (2) individuals who report this preference will differ in daily support receipt, experienced benefits and support seeking. We also explored (3) if these effects extend to support from people other than partners.

## **Methods**

### **Participants**

The sample consisted of 94 heterosexual, native English-speaking couples from the New York metropolitan area who had cohabitated for at least six months. The sample was diverse, with nearly half of participants having an ethnic/racial minority background (41.8%), and ages ranging from 18 to 76 years ( $M = 30.59$ ). Average relationship duration was 9.29 years. Couples could earn up to \$290 for completing all study components.

### **Procedure**

Following eligibility screening, 121 couples filled out an initial questionnaire and 35 days of daily online evening diaries, completed by 94 couples.

### **Measures**

**Preference for Self-Reliance.** At baseline, participants were presented an open-ended question to assess their preference for self-reliance: “When you are feeling pressure in work or school, are there things that your partner can do to help you? If so, list a few.” Responses were

coded using the Social Support Coding Scheme (Cutrona & Suhr, 1992). The “preference for self-reliance” category was coded when participants mentioned that their partner could “give them space,” they wanted to handle the stressor independently, or their partner could not do anything to help (inter-rater reliability  $\kappa = .87$ ).

**Support Interactions.** Support was defined as practical (i.e., doing something concrete) or emotional (e.g., listening, comforting). Participants were asked in parallel items whether they had received support from their partner and/or from others in the past 24 hours, and if so, if it was beneficial. Analogous items concerned seeking support from a partner or others, regardless of support received. All responses were “yes” or “no.”

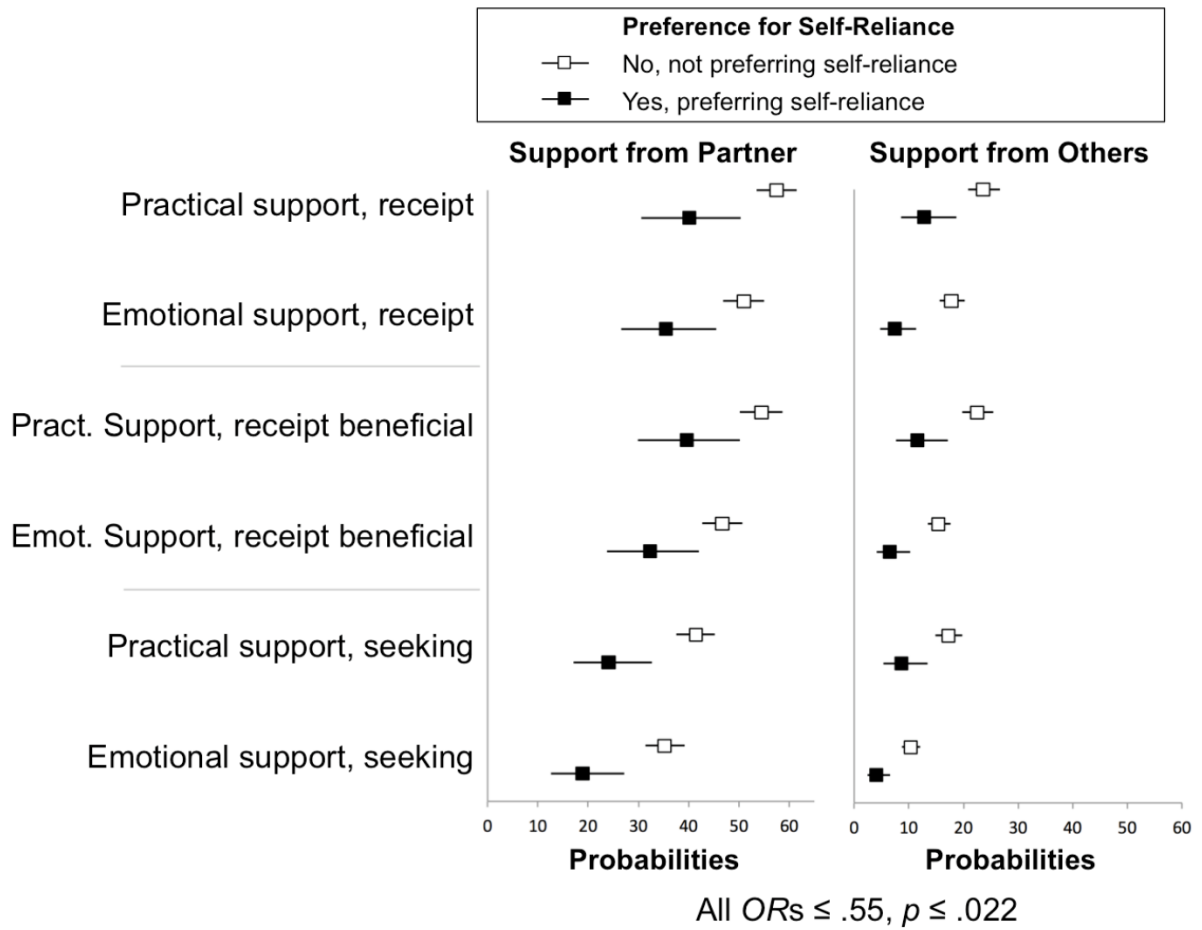
## Results

We found that 19.2% of participants preferred self-reliance to other forms of social support when experiencing a stressor. We modeled the probability of support on a given day for individuals with and without the preference for self-reliance using multilevel logistic regressions in SAS 9.4 (see syntax example in Footnote 1). Figure 2.1 shows predicted probabilities of daily practical and emotional support from the partner and from others for individuals preferring self-reliance versus those who do not. Across all outcomes and irrespective of whether the support came from the partner or from others, we consistently found that individuals preferring self-reliance differed from those who did not show this preference (all  $ORs \leq .55, p \leq .022$ ).

---

Footnote 1: (SAS Code For PROC GLIMMIX Model: PROC GLIMMIX DATA = SASSYBQDIARY20141104GSKS NOCLPRINT OR ; CLASS coupleid gender couplegender diaryday1\_35 ; MODEL dde\_011a01(event = "1")= bq\_yp09\_r01 / CL LINK=logit DIST=bin DDF=83, 83, 83 SOLUTION; RANDOM int / SUBJECT = coupleid TYPE=UN S G GCORR CL ; \* couple level var ; RANDOM int / SUBJECT = gender(coupleid) TYPE=UN S G GCORR CL ; \*individual within couple ; RANDOM diaryday1\_35 /SUBJECT=gender(coupleid) TYPE=ar(1) residual CL; \*within individual ar1 process ; NLOPTIONS TECH = NRRIDG ;).

Figure 2. Predicted probabilities of social support by preference for self-reliance. Predicted probabilities of daily practical and emotional support from a romantic partner and others (e.g., other family members, friends, co-workers) in everyday life for individuals preferring self-reliance (black squares) versus those who do not (white squares) using model-based estimated mean probabilities and 95% confidence intervals (asymmetric due to probability metric).



Participants who preferred self-reliance received less daily practical and emotional support from their partner, as compared to participants who did not prefer self-reliance. Participants with this preference for self-reliance found practical and emotional support less beneficial when they did receive it,  $t(83) = -2.33, p = 0.02$  and  $t(83) = -2.33, p = 0.02$ , and sought less practical and emotional support,  $t(83) = -2.99, p < 0.01$  and  $t(83) = -2.82, p = 0.01$ , compared to participants with no preference for self-reliance (Table 2.1). We also examined the probability of support from close others and found similar patterns, despite overall lower support levels (Table 2.2).

Table 2.1

*Probability of Support from Partner*

<i>Support from partner</i>	Effect	Estimate	SE	t	p	OR	Pr	95% CI	
								Lower	Upper
Practical support, receipt	Intercept	0.30	0.17	1.83	0.07	1.35	57.50	53.41	61.48
	Preference for self-reliance	-0.70	0.25	-2.80	0.01	0.49	40.10	30.60	50.38
Emotional support, receipt	Intercept	0.04	0.16	0.24	0.81	1.04	51.00	46.92	55.03
	Preference for self-reliance	-0.64	0.25	-2.51	0.01	0.53	35.50	26.62	45.47
Practical support, receipt beneficial?	Intercept	0.18	0.17	1.05	0.30	1.20	54.50	50.21	58.70
	Preference for self-reliance	-0.60	0.26	-2.33	0.02	0.55	39.60	29.90	50.20
Emotional support, receipt beneficial?	Intercept	-0.13	0.16	-0.82	0.41	0.88	46.70	42.72	50.72
	Preference for self-reliance	-0.61	0.26	-2.33	0.02	0.54	32.30	23.81	42.09
Practical support, seeking	Intercept	-0.35	0.16	-2.21	0.03	0.71	41.40	37.59	45.24
	Preference for self-reliance	-0.80	0.27	-2.99	<.01	0.45	24.10	17.17	32.68
Emotional support, seeking	Intercept	-0.61	0.17	-3.54	<.01	0.54	35.20	31.40	39.25
	Preference for self-reliance	-0.85	0.30	-2.82	0.01	0.43	18.90	12.64	27.17

*Note.* Multilevel logistic regression results using SAS PROC GLIMMIX to model the probability of support from a *partner* on a given day for individuals with and without preference for self-reliance.

Table 2.2

*Probability of Support from Close Others*

Effect	Estimate	SE	t	p	OR	Pr	95% CI	
							Lower	Upper
<i>Support from others</i>								
Practical support, receipt								
Intercept	-1.17	0.16	-7.12	< .01	0.31	23.60	20.80	26.74
Preference for self-reliance	-0.74	0.29	-2.60	0.01	0.47	12.80	8.56	18.75
Emotional support, receipt								
Intercept	-1.53	0.16	-9.63	< .01	0.22	17.80	15.63	20.28
Preference for self-reliance	-1.00	0.31	-3.21	< .01	0.37	7.40	4.76	11.34
Practical support, receipt beneficial?								
Intercept	-1.24	0.16	-7.56	< .01	0.29	22.50	19.76	25.46
Preference for self-reliance	-0.80	0.29	-2.71	0.01	0.45	11.60	7.66	17.13
Emotional support, receipt beneficial?								
Intercept	-1.70	0.16	-10.48	< .01	0.18	15.40	13.45	17.69
Preference for self-reliance	-0.96	0.33	-2.94	< .01	0.38	6.50	4.11	10.24
Practical support, seeking								
Intercept	-1.57	0.17	-9.07	< .01	0.21	17.20	14.89	19.83
Preference for self-reliance	-0.79	0.33	-2.43	0.02	0.45	8.60	5.40	13.42
Emotional support, seeking								
Intercept	-2.17	0.18	-11.92	< .01	0.11	10.30	8.70	12.06
Preference for self-reliance	-1.02	0.35	-2.87	0.01	0.36	4.00	2.36	6.61

*Note.* Multilevel logistic regression results using SAS PROC GLIMMIX to model the probability of support from *others* on a given day for individuals with and without preference for self-reliance.

## Discussion

Preference for self-reliance is a common occurrence, with one in five participants preferring self-reliance to other forms of social support. Self-reliance is an integral part of daily human interaction, which considerably affects support transactions (emotional and practical support receipt, benefits and support seeking), and is relevant across relationships (partners vs. close others). Individual differences such as the preference for self-reliance might explain the mixed effects of social support. These results justify expanding the paradigm within which we typically conceive of social support. Research has generally overlooked self-reliance preferences in times of stress within close relationships, along with the concept that one's partner *not* doing something can indeed be conceptualized as support. Future research investigating the costs and benefits of self-reliance over time at both the individual and relationship level will clarify the impact of these interactions and expand our understanding of social support more generally.



# 3

## **Replication of Preference for Self-Reliance Phenomenon**

## Introduction

Initial evidence suggests that seeking space from a partner in times of stress may be beneficial at both an individual and relationship level (Lavee & Ben-Ari, 2007; Repetti, 1989;). We will refer to this desire for space as a “preference for self-reliance” (Study 1). In Study 1, one in five participants was found to prefer self-reliance as compared to other forms of social support, though until now researchers have only recognized this preference for self-reliance after the fact (Funch & Marshall, 1984). The present research tested whether a preference for self-reliance will be endorsed when the preference is made salient to participants.

We sought to replicate our finding that preference for self-reliance is a common phenomenon (Study 1) across two one-time assessment studies (Study 2 and Study 3). Using a more traditional measure of social support, we tested whether or not individuals would endorse a preference for self-reliance (i.e., give space) amidst more classic conceptualizations of social support (Figure 3).

## Study 2

### Method

**Participants.** The sample consisted of 54 heterosexual, native English-speaking couples from the New York metropolitan area. Couples had cohabitated for at least six months ( $M = 4.63$  years,  $SD = 3.27$ ). Fifty percent of the participants were married (average relationship length across all participants = 4.06 years,  $SD = 3.01$ ). The sample was diverse, with almost a third of participants identifying as “non-white” (32.1%), and ages ranging from 22 to 73 years ( $M = 34.61$  years,  $SD = 8.38$  years). Average relationship satisfaction was 6.09 ( $SD = .98$ ) on a 1 – 7

(high) Likert-type scale. Couples received financial compensation for completing all study components.

**Procedure.** Following eligibility screening, 54 individuals filled out an initial questionnaire. This data point was a component within an intensive longitudinal study.

**Measures.**

***Preference for Self-Reliance.*** Support preferences were asked using the prompt from Study 1: “When you are feeling pressure in work or school, are there things that your partner can do to help you? If so, list a few.” In addition, participants were also asked: “When you are feeling sad or down, are there things that your partner can do to help you? If so, list a few.” However, rather than answer in the form of free response, as in Study 1, participants indicated their support preferences by endorsing items from a 15-item checklist (Figure 3). The 15-item measure was developed based on the most common responses in Study 1 and the Social Support Coding Scheme (Cutrona & Suhr, 1992). Participants were able to endorse more than one item on the list. Analogous questions concerned the support preferences of participants’ partners.

Figure 3. Social support assessment measure.

- Listen
- Hug / massage / cuddle
- Encourage and be positive
- Give space
- Focus on solving the problem
- Reframe or get perspective
- Take care of chores
- Cook or get food
- Distract with humor
- Distract with conversation
- Exercise or go for a walk together
- Watch TV or a movie together
- Give suggestions / advice
- Give reassurance
- Help assess the situation
- Talk it through in other ways
- Other

## Results

We replicated our finding that a preference for self-reliance is a common phenomenon when one is experiencing pressure or stress, *and* when one is feeling sad or down. Participants endorsed a preference for self-reliance (i.e., give space) when the preference was made salient and amidst more classic conceptualizations of social support.

**Participant Support Preferences.** Using a checklist to detect a preference for self-reliance, we found that when experiencing a stressor and when feeling sad or down, some individuals prefer self-reliance. In response to how their partner can best support them in times of stress, participants endorsed “give space” 33.9% of the time, compared to more traditional forms of support (listen: 82.1%, massage: 71.4%, encourage: 69.6%, solve the problem: 51.8%, reframe: 42.9%, chores: 35.7%, cook: 50%, humor: 32.1%, conversation: 30.4%, exercise:

51.8%, TV: 48.2%). Similarly, when asked what their partner can do to help when they are feeling sad or down, participants endorsed “give space” 35.7% of the time, compared to more traditional forms of support (listen: 83.9%, massage: 76.8%, encourage: 62.5%, solve the problem: 23.2%, reframe: 44.6%, chores: 42.9%, cook: 28.6%, humor: 28.6%, conversation: 42.9%, exercise: 32.1%, TV: 42.9%).

In an exploratory analysis, we looked at whether a preference for self-reliance was related to the endorsement of other forms of social support. Due to the small sample size we put more emphasis on the pattern of results than the significance of single correlations. There was some indication that a preference for self-reliance might be related to less of a desire for emotional (e.g. hugging; encouraging) and practical (e.g. cooking) support from a partner when experiencing a stressor. In comparison, when feeling sad or down, participants with a preference for self-reliance endorsed more emotional support items and more practical support items. See Table 3.2 for complete results. These mixed findings warrant further research with a larger sample size.

Table 3.2

*Correlations between Preference for Self-Reliance and other Forms of Social Support*

Support Item	Pref. Self-Reliance Stressor		Pref. Self-Reliance Sad/Down	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Listen	-0.02	0.89	<b>0.18</b>	0.19
Hug / massage / cuddle	<b>-0.10</b>	0.49	<b>0.29*</b>	0.03
Encourage and be positive	<b>-0.15</b>	0.28	<b>0.24</b>	0.08
Focus on solving the problem	0.06	0.66	<b>0.11</b>	0.44
Reframe or get perspective	0.04	0.76	0.06	0.68
Take care of chores	-0.08	0.55	0.09	0.54
Cook or get food	<b>-0.22</b>	0.11	<b>0.68**</b>	< .01
Distract with humor	-0.03	0.84	<b>0.17</b>	0.21
Distract with conversation	-0.08	0.56	<b>0.24</b>	0.08
Exercise or go for a walk together	<b>-0.17</b>	0.22	-0.05	0.70
Watch TV or a movie together	-0.04	0.78	<b>0.32*</b>	0.02
Other	-0.06	0.67	0.02	0.89

*Note.* Preference for self-reliance endorsement correlated with endorsement of each support item in Figure 3. Correlations of at least small effect size ( $r \geq .10$ ) are bolded. \* $p < .05$ ; \*\*  $p < .01$ .  $N = 54$ .

**Partners' Support Preferences.** Although the current study was not a dyadic design like Study 1, in which we collected information from both partners, we asked participants to report on their partners' support preferences as well. When asked how they support their partner when he or she is experiencing a stressor, 32.1% of participants reported providing their partner space as a form of support (i.e., they allow their partner space to be self-reliant), compared to the other forms of support listed (listen: 92.9%, massage 75%, encourage: 89.3%, solve the problem: 73.2%, reframe: 58.9%, chores: 48.2%, cook: 53.6%, humor: 53.6%, conversation: 37.5%, exercise: 23.2%, TV: 51.8%). When a partner is feeling sad or down, 57% of participants reported providing their partner space, compared to other supportive acts (listen: 87.5%, massage

85.7%, encourage: 75%, solve the problem: 50%, reframe: 60.7%, chores: 55.4%, cook: 42.9%, humor: 37.5%, conversation: 32.1%, exercise: 32.1%, TV: 58.9%).

### Study 3

#### Method

**Participants.** The sample consisted of 216 MTurk workers (65% women) who had cohabitated with a romantic partner for at least six months (60.5% had been living with their current partner for more than five years). 66.4% of participants had been in their current romantic relationship for more than five years; 61% of participants were married. The sample identified primarily as “white/Caucasian” (82.5%); ages ranged from 20 to 68 years ( $M = 38.88$  years,  $SD = 11.56$  years). Average relationship satisfaction was 5.98 ( $SD = 1.21$ ) on a 1 – 7 (high) Likert-type scale. The survey took approximately 15 minutes to complete, and participants earned \$0.50 for their participation.

**Procedure.** 216 individuals completed a one-time online questionnaire.

**Measures.** Measures were identical to those in Study 2.

#### Results

We again replicated our finding from Study 1, that a preference for self-reliance is a common phenomenon, using an alternative measure of assessment. Consistent with Study 2 results, certain participants and partners of participants preferred self-reliance when experiencing a stressor and when feeling sad or down. Participants endorsed a preference for self-reliance when the preference was made salient and amidst more classic conceptualizations of social support.

**Participant Support Preferences.** Comparable to Study 2, 28.7% of participants endorsed self-reliance as a form of support when experiencing stress or pressure (listen: 83.9%, massage 66.4%, encourage: 74%, solve the problem: 32.3%, reframe: 23.3%, chores: 38.1%, cook: 43.9%, humor: 41.7%, conversation: 32.7%, exercise: 42.6%, TV: 48%, talk: 32.7%, advice: 37.2%, reassurance: 63.2%, assess the situation: 40.8%). When asked what type of support they preferred when feeling sad or down, participants endorsed wanting space 33% of the time (listen: 77.1%, massage 70.4%, encourage: 67.3%, solve the problem: 24.2%, reframe: 21.5%, chores: 42.4%, cook: 45.3%, humor: 43%, conversation: 33.6%, exercise: 41.7%, TV: 53.4%, talk: 28.3%, advice: 26.9%, reassurance: 56.1%, assess the situation: 32.3%).

We again explored the correlations between a preference for self-reliance and other forms of social support. Within this larger sample, a consistent and significant pattern of results emerged. When experiencing a stressor and when feeling sad or down, a preference for self-reliance was positively related to the endorsement of practical forms of support, such as a partner taking care of chores and cooking. Emotional support items, such as receiving hugs and encouragement from a partner, were endorsed less among participants with a preference for self-reliance. See Table 3.3 for complete results.



Table 3.3

*Correlations between Preference for Self-Reliance and other Forms of Social Support*

Support Item	Pref. Self-Reliance Stressor		Pref. Self-Reliance Sad/Down	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Listen	-0.05	0.50	-0.01	0.92
Hug / massage / cuddle	<b>-0.20**</b>	< .01	<b>-0.11</b>	0.09
Encourage and be positive	<b>-0.17*</b>	0.01	0.00	0.98
Focus on solving the problem	0.03	0.67	0.07	0.27
Reframe or get perspective	0.00	0.98	0.05	0.43
Take care of chores	<b>0.16*</b>	0.02	<b>0.16*</b>	0.02
Cook or get food	<b>0.16*</b>	0.02	<b>0.13*</b>	0.05
Distract with humor	-0.09	0.16	-0.09	0.20
Distract with conversation	-0.06	0.35	0.05	0.46
Exercise or go for a walk together	-0.05	0.50	0.09	0.19
Watch TV or a movie together	-0.03	0.13	0.08	0.25
Give suggestions / advice	-0.08	0.24	0.01	0.91
Give reassurance	-0.07	0.29	-0.04	0.58
Help assess the situation	0.02	0.79	0.01	0.90
Talk it through in other ways	0.04	0.52	-0.06	0.41
Other	-0.06	0.37	0.02	0.73

*Note.* Preference for self-reliance endorsement correlated with endorsement of each support item in Figure 3. Correlations of at least small effect size ( $r \geq .10$ ) are bolded. \* $p < .05$ ; \*\*  $p < .01$ .  $N = 216$ .

**Partners' Support Preferences.** Participants recognized their partner's preference for self-reliance, confirming what was found in Study 2. Nearly half of participants (45.3%) indicated "giving space" to a stressed partner (listen: 88.3%, massage: 64.1%, encourage: 75.8%, solve the problem: 39.5%, reframe: 30.9%, chores: 54.3%, cook: 63.2%, humor: 40.8%, conversation: 35.9%, exercise: 23.8%, TV: 49.3%, talk: 34.5%, advice: 52.5%, reassurance: 63.2%, assess the situation: 52%). Over half of participants (53.4%) endorsed "give space" when indicating how they choose to support their partner when he or she is feeling sad or down (listen:

83.9%, massage: 70.4%, encourage: 72.6%, solve the problem: 37.2%, reframe: 28.3%, chores: 48.4%, cook: 60.1%, humor: 41.7%, conversation: 35.4%, exercise: 29.1%, TV: 54.3%, talk: 30.5%, advice: 45.3%, reassurance: 61%, assess the situation: 40.8%).

## **Discussion**

In making a preference for self-reliance more salient, especially amidst classic support behaviors, we ran the risk of discrediting our finding that a preference for self-reliance is a common phenomenon. This, however, was not the case. Our original finding was replicated in two studies using alternative assessment procedures: a preference for self-reliance is a common phenomenon, in that some individuals prefer self-reliance when experiencing both stress and distress.

As a first attempt to integrate preference for self-reliance into more classic measures of social support, we are encouraged by the endorsement of “giving space” as a desired and provided form of social support. Participants could conceivably have been confused by or hesitant to admit the fact that they desire or provide space amidst more classic conceptualizations of support, but this was not found to be the case.

One advantage in making a preference for self-reliance more salient is that individuals are potentially more likely to recognize this support preference in both themselves and in others. However, by increasing accessibility and visibility, are we also increasing the likelihood that those with only a slight preference for self-reliance will endorse the item? We found initial evidence that a preference for self-reliance is related to other forms of practical and emotional support. We recommend that future research limit the number of items that participants are presented with when completing support measures such as Figure 3. By doing so, researchers

could more confidently claim that some individuals truly prefer self-reliance as a primary means of support.

# 4

## **Personality and Preference for Self-Reliance**

## Introduction

Since the mid-1980s, personality has been recognized as an important predictor of response to stressful situations (Parkes, 1986). Indeed, the vast majority of models and research describing families and couples under stress maintain that personality plays an important role in influencing responses to stress (Boss, 2002; Burgess, 1926; Hill, 1958; Kantor & Lehr, 1975; Karney & Bradbury, 1995; Lavee, 2013). Personality is also predictive of the likelihood of using certain coping strategies (David & Suls, 1999; Lee-Baggley, Preece, & DeLongis, 2005; McCrae & Costa, 1986; O'Brien & DeLongis, 1996; Watson & Hubbard, 1996), as well as the outcome of those coping strategies (Bolger & Zuckerman, 1995; Gunthert, Cohen, & Armeli 1999). Moreover, individual differences in personality have been shown to influence the availability of social support, an individual's perception and response to support, and the tendency to seek and elicit support (Pierce, Lakey, & Sarason, 2013; Pierce, Lakey, Sarason, Sarason, & Joseph, 1997; Roos & Cohen, 1987; Swickert, 2009).

These individual differences in personality can also influence couple-level outcomes, such as a couple's distance regulation processing and dyadic adaptations to stress (Karney & Bradbury, 1995; Lavee, 2013). Dyadic processes under stress have been described as "a dance of closeness and distance" (Rosenblatt & Barner, 2006), referring to the interaction between coping and social support as being continuously shaped by the amount of distance or closeness desired by each individual at any given time (Kantor & Lehr, 1975; Lavee, 2013). While well established that people often seek proximity to close others during stressful situations (Taylor, 2007), research on daily stressors has also found that short-term withdrawal from a partner can have a buffering effect, benefitting both the individual and the relationship (Doumas, Margolin, & John,

2008; Larson & Gillman, 1999; Lavee & Ben-Ari, 2007; Repetti, 1989; 1992; Roberts & Levenson, 2001; Schulz, Cowan, Cowan, & Brennan, 2004; Story & Repetti, 2006). We know from our present research that some individuals prefer to be self-reliant in times of stress, and instead of support, seek space in order to cope effectively (Studies 1 – 3). Study 4 explored whether people with certain personality traits are more likely to prefer self-reliance when experiencing a stressor.

Much of the research on personality and social support has focused on the Five-Factor Model of personality. What we know today is that emotional stability has been linked to higher levels of problem-focused coping, lower levels of emotional support seeking and less relationship-disruptive behaviors (e.g., hostile reactions, catharsis; Gunthert et al., 1999). Agreeable individuals are more likely to avoid confrontation (O'Brien & DeLongis, 1996), to seek and use social support (Carver & Connor-Smith, 2010; Connor-Smith & Flachsbart, 2007), and to utilize strategies that engage or protect their social relationships (Hooker, Frazier, & Monahan, 1994; O'Brien & DeLongis, 1996; Vickers, Kolar, & Hervig, 1989). The relationship between openness to experience and social support is less clear, though one study suggests that people who are more open to new experiences are more likely to withdraw from others during periods of stress (McCrae, Costa, & Busch, 1986). A similar ambiguity exists in examining coping strategies for conscientiousness and extraversion: several researchers have reported the two traits are unrelated to support-seeking (David & Suls, 1999; Lee-Baggley et al., 2005; O'Brien & DeLongis, 1996), but are related to disengagement and withdrawal behaviors (Carver & Connor-Smith, 2010; Connor-Smith & Flachsbart, 2007).

Preliminary evidence exists to suggest that certain personality traits are associated with the need for autonomy or interdependence. Charania and Ickes (2007) found that individuals higher in social individuation (i.e., maintain a strong cognitive distinction between self and others) were higher in emotional stability and lower in agreeableness. Similarly, individuals lower in social absorption (i.e., seek to be behaviorally independent of others) were higher in emotional stability and lower in openness to experience, agreeableness, extraversion and conscientiousness.

Using committed couples in intimate relationships (Study 1 sample), the current study tested whether people with certain personality traits were more likely to prefer self-reliance when experiencing stress or pressure, as compared to other forms of social support. We hypothesized that individuals who were (a) more emotionally stable, (b) more open to new experiences, and (c) less agreeable would be more likely to prefer self-reliance compared to more traditional forms of support. We also tested if extraversion and conscientiousness are related to a preference for self-reliance.

## **Method**

### **Participants**

The current study used data collected during the baseline period of Study 1. The sample consisted of 196 heterosexual, native English-speaking couples from the New York metropolitan area who had cohabitated for at least six months. The sample was diverse, with nearly half of participants having an ethnic/racial minority background (41.8%), and ages ranging from 18 to 76 years ( $M = 30.59$ ). Average relationship duration was 9.29 years. Participants could earn up to \$290 for completing all study components.

### **Procedure**

Following eligibility screening, 196 participants filled out an initial questionnaire.

### **Measures**

**Preference for Self-Reliance.** To assess a preference for self-reliance, as described in Study 1, participants were presented an open-ended question at baseline: “When you are feeling pressure in work or school, are there things that your partner can do to help you? If so, list a few.” Responses were coded using the Social Support Coding Scheme (Cutrona & Suhr, 1992). The “preference for self-reliance” category was coded when participants mentioned that their partner could “give them space,” they wanted to handle the stressor independently, or their partner could not do anything to help (inter-rater reliability  $\kappa = 0.87$ ).

**Personality Traits.** Personality was measured using Saucier’s (1994) Big Five mini-markers scale. The scale is a 46-item version of Goldberg’s longer scale measuring the “Big Five” personality traits: emotional stability, openness to experience, agreeableness, conscientiousness and extraversion. Participants rated themselves on a five-point Likert-type scale ranging from “very inaccurate” (1) to “very accurate” (5).



## Results

We tested the relation between the Big Five personality traits and a preference for self-reliance. Table 4 shows the descriptive statistics for the five personality traits.

Table 4.

*Descriptive Statistics for Big Five Personality Traits Grouped by Preference for Self-Reliance*

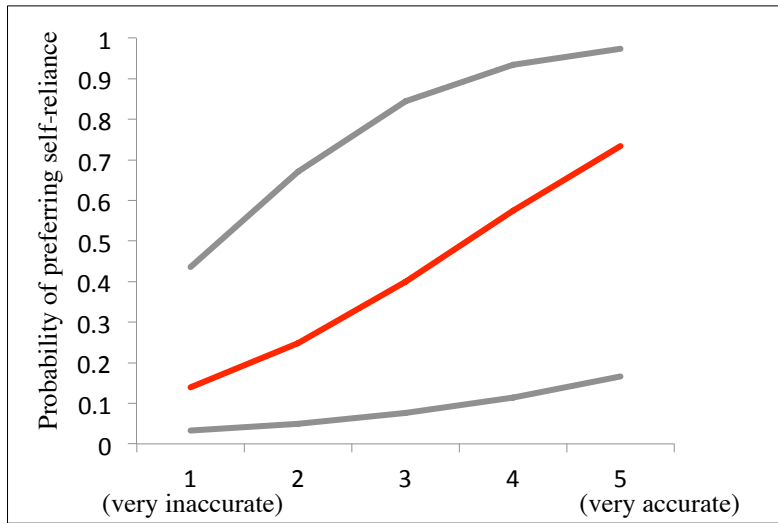
Preference for self-reliance	Personality Variable	<i>M</i>	<i>SD</i>
Yes, endorsed	Emotional stability	3.28	0.90
	Openness to new experiences	4.36	0.55
	Agreeableness	4.00	0.74
	Extraversion	3.42	0.86
	Conscientiousness	3.71	0.83
No, not endorsed	Emotional stability	3.05	0.86
	Openness to new experiences	4.15	0.63
	Agreeableness	4.21	0.58
	Extraversion	3.65	0.76
	Conscientiousness	3.77	0.76

*Note:* Descriptive statistics for each Big Five personality variable grouped by preference for self-reliance or not.  $N = 196$ . Participants responded on a 1 – 5 (high) scale.

Using logistic regressions, we modeled the probability of preferring self-reliance (coded as 1 = yes, 0 = no). The five personality trait variables were centered at the grand mean and were included in all models. Consistent with previous findings, people who were more emotionally stable ( $OR = 2.03$ ,  $z = 7.12$ ,  $p < .01$ ) (Figure 4.1), more open to new experiences ( $OR = 2.39$ ,  $z = 5.34$ ,  $p < .01$ ) (Figure 4.2), and less agreeable ( $OR = 0.40$ ,  $z = 6.54$ ,  $p < .01$ ) (Figure 4.3) were

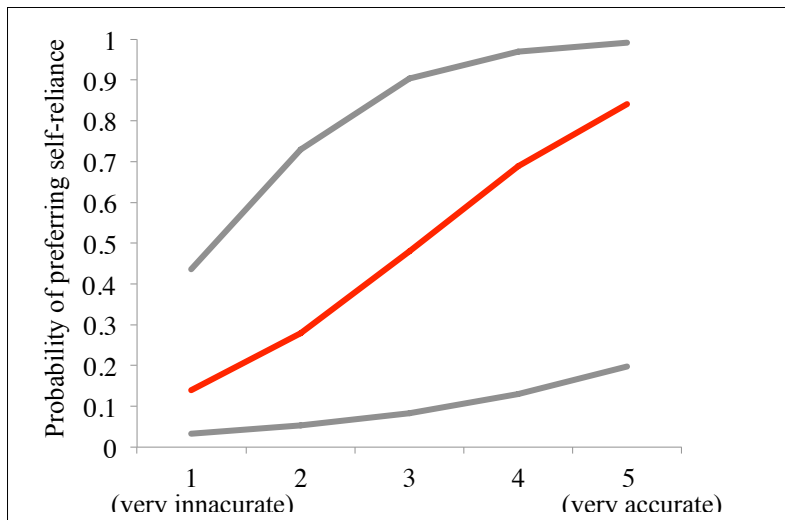
more likely to endorse a preference for self-reliance compared to other forms of social support (Figures 4.1 – 4.3).

Figure 4.1. Emotional stability and the probability of endorsing preference for self-reliance.



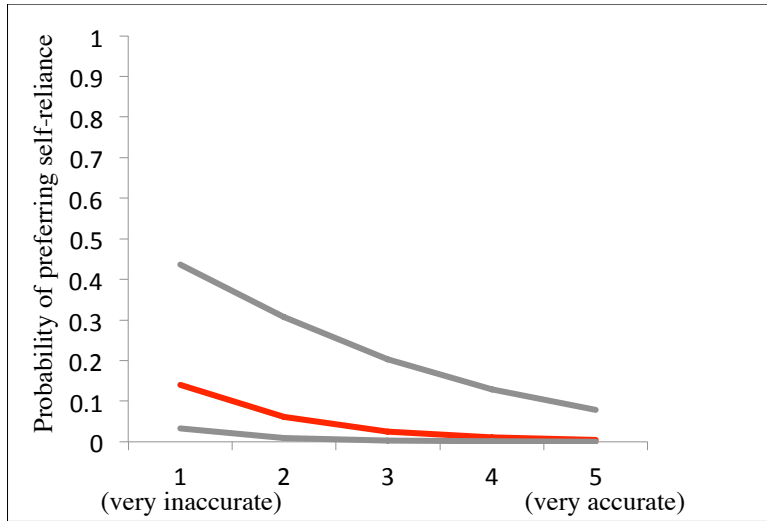
Note. Red line indicates the mean; gray lines indicate one SE above and below the mean.

Figure 4.2. Openness to experience and the probability of endorsing preference for self-reliance.



Note. Red line indicates the mean; gray lines indicate one SE above and below the mean.

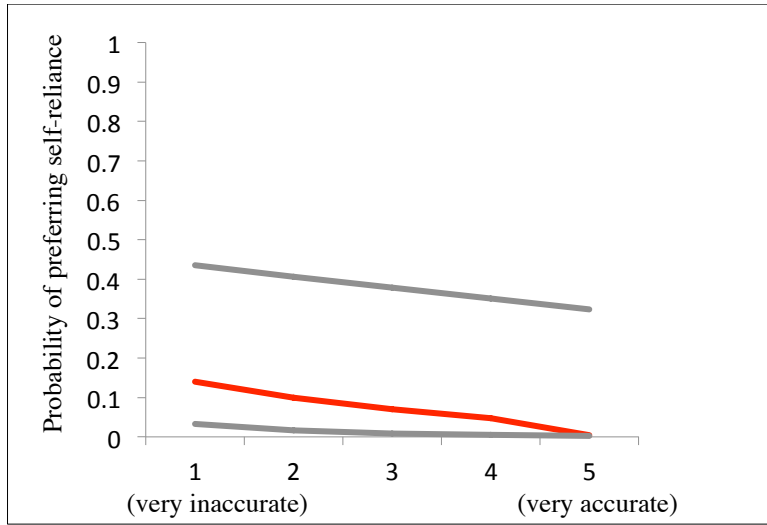
Figure 4.3. Agreeableness and the probability of endorsing preference for self-reliance.



Note. Red line indicates the mean; gray lines indicate one *SE* above and below the mean.

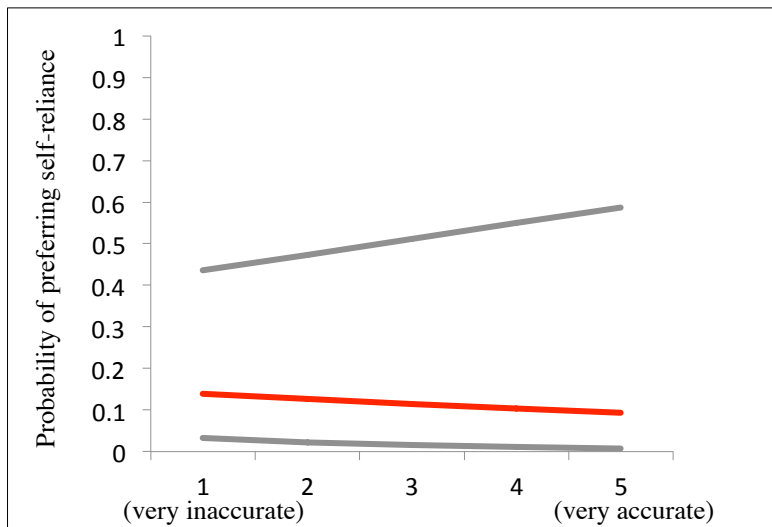
Holding all other personality factors constant, we found no evidence for a relationship between extraversion ( $OR = 0.68$ ,  $z = 2.10$ ) (Figure 4.4) or conscientiousness ( $OR = 0.89$ ,  $z = 0.18$ ) (Figure 4.5) and a preference for self-reliance. (Note: In additional sensitivity analyses we adjusted for gender and relationship satisfaction. Results remained unchanged.)

Figure 4.4. Extraversion and the probability of endorsing preference for self-reliance.



Note. Red line indicates the mean; gray lines indicate one *SE* above and below the mean.

Figure 4.5. Conscientiousness and the probability of endorsing preference for self-reliance.



Note. Red line indicates the mean; gray lines indicate one *SE* above and below the mean.

## Discussion

People with certain personality traits are more likely to prefer self-reliance when experiencing a stressor, compared to other forms of social support. We found evidence that people who were more emotionally stable, more open to new experiences, and less agreeable were also more likely to prefer self-reliance.

It could be the case that individuals who are more emotionally stable are more independent and experienced with individual problem solving, and are therefore better equipped to handle stressors independently (Corr & Matthews, 2009). By comparison, highly agreeable individuals tend to have a wide social support network and strive to maintain positive relationships (Jensen-Campbell, Adams, Perry, Workman, Furdella, & Egan, 2002). As a result, they may be more likely to prefer social support from others in times of stress, rather than coping independently (Bowling, Beehr & Swader, 2005; Connor-Smith & Flachsbart, 2007; Corr & Matthews, 2009; Tong, Bishop, Diong, Enkelmann, Why, Ang, & Khader, 2004). There is evidence that individuals who are more open to new experiences possess a forward-thinking approach to problem solving (Corr & Matthews, 2009), and are more likely to engage in adaptive, flexible coping during times of stress (Lee-Baggley et al., 2005). Maintaining self-reliance would enable such individuals to evaluate their own emotions, explore and select possible solutions, and handle stressors as they see best (David & Suls, 1999; McCrae & Costa, 1986; McCrae et al., 1986; O'Brien & DeLongis, 1996). Consistent with previous result patterns, both conscientiousness and extraversion were unrelated to a preference for self-reliance (Carver & Connor-Smith, 2010; Connor-Smith & Flachsbart; 2007; David & Suls, 1999; Lee-Baggley et al., 2005; O'Brien & DeLongis, 1996).

While the results of the current study are correlational, we approached the link between personality and self-reliance in the same direction as previous literature i.e. personality influences support preference. However, it is also plausible that a preference for self-reliance might lead individuals to exhibit particular personality traits. Furthermore, third variables, such as the situation or context (e.g. work versus social), might cause both personality traits and support preferences.

Preliminary evidence suggests a link between certain personality traits and preference for self-reliance. Like personality, individual differences in preference for self-reliance may prove important when predicting responses to stress (Boss, 2002; Burgess, 1926; Hill, 1958; Kantor & Lehr, 1975; Karney & Bradbury, 1995; Lavee, 2013; Parkes, 1986), availability of social support (Pierce et al., 1997; Pierce et al., 2013; Roos & Cohen, 1987; Swickert, 2009), and dyadic adaptations to stress (Karney & Bradbury, 1995).

# 5

## **Preference for Self-Reliance during the Transition into Independence**

## **Introduction**

Choosing which college or university to attend is one of the first consequential and complex decisions in the life of an average adolescent, arguably creating significant stress for both adolescents and their families. For the adolescent, the stressors are many and varied: the pressure of balancing current obligations with the time required for the college search, lack of familiarity with college selection, lack of understanding of complex decision-making, peer pressure surrounding acceptance, and friction from the normal developmental process of becoming independent from their parent(s). Erikson's developmental task of "individual identity versus role diffusion" speaks to this far-ranging challenge. During this time, adolescents must establish a sense of self and personal identity; they assess their assets and how to use them (Erikson, 1950). As adolescents determine "who they are" and "what they want to be when they grow up," some may struggle with "developing competence," while others who habitually consult with their parents before making decisions may be challenged with "moving through autonomy toward independence" (Gibbons, 2003). Autonomy development, which is captured by the transition to independence, is a central concept in theories of adolescent development. Autonomy can be manifested in behavioral (behavior and decision-making regulation), cognitive (independent reasoning and decision-making without excessive reliance on social validation, a subjective sense of self-reliance), and emotional (relinquishing dependencies, individuating from parents) domains (Steinberg, 1999). In part defined by the development of self-reliance, the transition to independence, as revealed through the college application process, is an ideal period to study the occurrence of a preference for self-reliance and explore potential implications.



The present study examined a preference for self-reliance and support receipt patterns during the college application process. As this transitional period is a time of identity formation (Waterman, 1982), we predicted that a preference for self-reliance would be common among adolescents. We were interested in whether adolescents who report a higher preference for self-reliance would differ in support receipt patterns, as we found to be the case for adults (Study 1). Additionally, we explored if any effects extend to support receipt from family members, friends and professionals.

## **Method**

### **Participants**

The sample consisted of 210 high school juniors and seniors recruited from a public high school (44% male). The sample identified as 27.6% having an ethnic/racial minority background. Family income (SES) was as follows: middle class and below (69.1%), upper middle class and above (16.2%), don't know / prefer not to answer (14.7%). Highest education level of the parent most involved with the college application was as follows: high school and below (45.6%), some college (34.3%), B.A and above (20.1%). 36.2% were the oldest child in their family, and 36.5% had at least one sibling who had or was currently attending college. Average GPA was 3.21, and most found school difficulty to be between “moderately difficult” and “some work, but fairly easy.”

### **Procedure**

Students filled out a one-time online questionnaire during a class period.

### **Measures**

**Preference for Self-Reliance.** We used seven items to assess a preference for self-reliance. Items were derived from the Couple Support Inventory (i.e. support availability, responses, behavior) (Gilad, Lavee, & Innes-Kenig, 2009). The first measure of preference for self-reliance specifically focused on parental involvement during the college application process. We formed two additional self-reliance preference measures to explore if the pattern of results would be similar when the measure focused on the college application process, but did not include parental involvement, and when the measure extended beyond the college application process to include academic and personal preferences for self-reliance.

***Preference for Self-Reliance during the College Application Process Including Parental Involvement.*** The primary measure of interest captured a preference for self-reliance during the college application process tailored to the parent-adolescent relationship, for reasons discussed in the current study's introduction. Items included: "I prefer to handle the college application process on my own"; "I prefer that my parent does not offer college application advice unless I ask for it"; "I feel handling the college application process on my own is most beneficial for me"; "Handling the college application process on my own makes me feel good about myself"; "When my parent allows me to handle the college application process on my own, I experience relief." A factor analysis revealed that the items hung together with a Cronbach's (alpha) of 0.88. Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale ( $M = 2.88$ ,  $SD = 1.00$ ). We used a continuous scale, versus a dichotomous outcome as in Studies 1 – 3, in order to capture varying degrees of preference for self-reliance (Funch & Marshall, 1984).

***Preference for Self-Reliance during the College Application Process.*** In response to concern that our original measure was too specific to the parent-adolescent relationship during the transition to independence, we constructed a measure focusing only on the preference for self-reliance during the application process. Items included: “I prefer to handle the college application process on my own”; “I feel handling the college application process on my own is most beneficial for me”; “Handling the college application process on my own makes me feel good about myself.” A factor analysis revealed that the items hung together with a Cronbach’s (alpha) of 0.88. Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale ( $M = 2.92, SD = 1.10$ ).

***Preference for Self-Reliance when Handling Application, Academic and Personal Challenges.*** In anticipation of future research (Study 6), we constructed a measure assessing preference for self-reliance during the application process, in addition to a preference for self-reliance when handling academic and personal challenges. The items included: “I prefer to handle the college application process on my own”; “In general, I prefer to handle academic challenges (stressors) on my own”; “In general, I prefer to handle personal challenges (stressors) on my own.” A factor analysis revealed that the items hung together with a Cronbach’s (alpha) of 0.77. Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale ( $M = 3.30, SD = 0.98$ ).

***Support Interactions.*** Items were derived from the Couple Support Inventory (alternative sources of support) (Gilad et al., 2009). Participants reported on received support (help) by answering the following question: “In regards to the college application process, please rate the degree that each of the following help you with practical matters, emotionally, and when

making decisions.” Participants responded for practical help receipt, emotional support receipt, and decision-making help receipt. Analogous questions asked about support receipt from friends and from professionals (e.g., college advisors). Participants responded on a 1 (I don’t receive any) – 6 (I receive a lot) Likert-type scale for each type of support interaction and for each of the three support providers. Descriptive statistics for all support interactions with each support provider are reported in Table 5.1.

Table 5.1  
*Descriptive Statistics for Received Help and Support by Provider*

	Family			Friends			Professionals		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Practical Help	217	4.04	1.64	213	3.63	1.54	215	3.85	1.66
Emotional Support	217	4.00	1.76	213	3.81	1.64	215	3.07	1.68
Help Making Decisions	217	4.21	1.64	215	3.79	1.60	216	3.71	1.71

*Note.* Participants responded on a 1 (I don’t receive any) – 6 (I receive a lot) scale

## Results

As hypothesized, certain high school juniors and seniors had a preference for self-reliance as they made the transition into independence (see Table 5.2 for descriptive statistics). Results were consistent across all the three measures of preference for self-reliance. Regardless of whether the measure focused on parental involvement during the college application process, strictly the application process, or a preference for self-reliance beyond the application process, we consistently found a preference for self-reliance during this transitional time period.

Table 5.2

*Descriptive Statistics for Self-Reliance Measures*

	<i>N</i>	<i>M</i>	<i>SD</i>
Application and parental involvement	214	2.88	1.00
Application only	213	2.92	1.10
Application and beyond	215	3.30	0.98

*Note.* Participants responded on a 1 (strongly disagree) – 5 (strongly agree) scale.

Knowing that the college application process is a new experience for adolescents, yet also a time of identity development and relationship realignment, we investigated support receipt from family members, friends and professionals. We tested whether adolescents with a higher preference for self-reliance would receive fewer support transactions compared to those with a lower preference for self-reliance. While we are unable to identify any significant support receipt differences between the three support providers, we did note larger effect sizes for family receipt across all three measures of preference for self-reliance, as compared to friends and professionals. A higher preference for self-reliance was significantly negatively correlated with received practical help, emotional support, and decision-making help from family members, but not from friends or professionals (see Table 5.3 for complete results).

Table 5.3

*Correlations between Preference for Self-Reliance and Support Receipt*

	Family			Friends			Professionals		
	Practical Help	Emotional Support	Decision Help	Practical Help	Emotional Support	Decision Help	Practical Help	Emotional Support	Decision Help
Application and parental involvement (N = 207)	-0.26**	-0.23**	-0.19**	-0.08	-0.14*	-0.11	0.08	-0.04	0.07
Application only (N = 206)	-0.24**	-0.23**	-0.22**	-0.09	-0.16*	-0.10	0.07	-0.04	0.04
Application and beyond (N = 208)	-0.17*	-0.20**	-0.17*	0.01	-0.11	-0.10	0.08	-0.04	0.03

Note. \*  $p < .05$ ; \*\*  $p < .01$ . Correlations between preference for self-reliance and support receipt by relationship and preference for self-reliance measure.

## Discussion

The college application process is a concrete event in which developmental and social psychology researchers can explore adolescents' transition into independence, and any corresponding implications of this time period. A preference for self-reliance is common among high school juniors and seniors as they embark upon the transition into independence. This preference was found when the measure of self-reliance was tailored to the college application process and parental involvement during that process, as well as the application process on its own, and to the application process in addition to academic and personal challenges. We found that, unlike with adults, where support effects extended to multiple relationships, adolescents reported only receiving less support (help) from family members. Receiving less parental support may be an implication of this transitional period for those with a higher preference for self-reliance (Steinberg, 1987).

We consider possible reasons as to why support receipt effects did not extend across the other two relationships. In the case of friend receipt, one of the distinctions of adolescent friendship is the motivation to help a friend; adolescents reported a stronger preference for equal sharing amongst peers than for competition (Berndt, 1989). Consequently, receiving support from friends may be typical of adolescence in general. We anticipated a certain level of professional support to be received by all, regardless of preference for self-reliance. As the college application process is new to adolescents, even those with a high preference for self-reliance are expected to require and receive guidance and support from professionals well versed in the application process. Our findings further complement Erickson's theoretical perspective. According to Erickson's model, part of the task of adolescence is specifically to become

independent from one's family. As adolescents separate from their family, they must in turn learn to rely, to some extent, on other relationships such as those with friends or professionals. This theoretical perspective could help explain the somewhat different patterns we observed for family, compared to others.

While we cannot say with confidence that any differences between support effects are significant, the negative relationship between preference for self-reliance and familial receipt illustrates the importance of understanding the adolescent-family relationship during this time period.

### **Future Research**

Future research should not disregard the lack of support effects found for friends and professionals. The fact that support receipt differed by support source requires future research to explore the possibility of preference for self-reliance being both a state- and trait-like individual difference. The preference may also vary across situations (e.g., support provider) and/or experiences (e.g., writing a personal statement; Ayduk & Kross, 2010). Support preferences during the transition into independence might also vary depending on the nature of the stressor, such as more personal stressors (e.g., the decision to move away or stay close to home) which may increase the likelihood of the adolescent receiving support from family members as compared to friends or professionals.

Mischel and colleagues have encouraged researchers to approach human behavior and cognition from a person-situation interaction perspective (Mischel, 2004; Mischel & Shoda, 1995, 1999). With this methodology in mind, future research should examine preference for self-reliance by social support. The interaction between preference for self-reliance (support



preference) and support provision, and the potential implications when a match between preferred and received support is or is not achieved, should also be explored (Cutrona & Suhr, 1992; Eccles, Buchanan, Flanagan, Fuligni, Midgley, & Yee, 1991). Analyses could test social support as a moderator of the link between preference for self-reliance and application-related outcomes, using the interaction of preference for self-reliance by support as a predictor variable in the model. Results would speak to the most optimal combinations of preference for self-reliance and support for various application-related outcomes (e.g., meeting deadlines, acceptance rate). Recommendations could then be made for optimizing support provision during the college application process, tailored to an adolescent's support preference and the desired outcome.

# 6

## **Preference for Self-Reliance and Parental Control during the College Application Process: Understanding the Person by Situation Interaction**

## Introduction

Social support is classically conceptualized as *what you can do* or *what you can offer* to support someone in times of stress. House (1981) defined social support as resources (actual or perceived by a focal person) available from one or more others to assist the focal person in the management of stress experiences and to increase the experience of well-being. Although social support is often conceptualized as a globally positive construct, it is not difficult to imagine situations where support in this classic conceptualization would be undesirable. Empirical research has shown that support receipt can be a mixed blessing, with both positive and negative effects (Antonovsky, 1979; Cobb, 1976; Cohen, 1988; Coyne et al., 1990; Coyne et al., 1988; Dakof & Taylor, 1990; Hobfoll & London, 1986; Kiecolt-Glaser & Glaser, 1986; Repetti, 1989; Shrout et al., 2006; Taylor et al., 2010; Uno et al., 2002).

When considering both the costs and benefits of support receipt, it is important to keep in mind that support transactions do not exist in a vacuum; rather, they are embedded within a situational context (e.g., relationship to support provider, timing of support) and a personal context (e.g., individual differences of support recipient). In other words, supportive transactions and their consequent outcomes are products of both interpersonal and intrapersonal processes.

Social support functions best when it is given with respect to the needs of the recipient or the stressful situational context (Horowitz, Hill, & King, 2001). Referred to as the “optimal matching hypothesis of social support,” Cutrona and colleagues found that social support behaviors tailored to the stressor promoted better adjustment and well-being (Cutrona & Russell, 1990; Cutrona & Suhr, 1992). Further, a mismatch of support to a recipient’s goal can decrease performance, effort, confidence and the likelihood of goal completion (Earley, Northcraft, Lee,

& Lituchy, 1990; Kappes & Shrout, 2011; Kim, 1984). In a more specific context, marital satisfaction may be reduced when the type of support offered by one partner does not match the type sought by the other partner (i.e., when support preference did not match support provision; Bar-Kalifa & Rafaeli, 2013; Cutrona, Shaffer, Wesner, & Gardner, 2007; Rafaeli & Gleason, 2009). Similarly, a match between a child's support need and a parent's support provision is critical for a child's well-being (Eccles et al., 1991).

In developmental research, person-environment fit theory stresses the importance of the match between a child's need for autonomy and a parent's level of control (Eccles et al., 1991). Parental over-control can be aversive when it conflicts with a child's pursuit of independence; parental under-control or lack of involvement can leave a child with too little structure (Sethi, Mischel, Aber, Shoda, & Rodriguez, 2000). A child's need for autonomy or the pursuit of independence is likely also affected by individual differences in a preference for self-reliance.

As it is in part defined by the development of self-reliance, the transition to independence (here, as examined through the college application process) is an ideal period to study how features of a situation (i.e., parental control) interact with an adolescent's preference for self-reliance. Though these interactions have largely been explored within childhood development and adult relationship research, they are relatively under-studied, specifically during the transition to independence. The family-adolescent relationship was reasoned to be particularly important during the transition to independence for the present work. Our previous findings found a higher preference for self-reliance related to lower levels of support receipt from family members, but not from other relationships (Study 5).

The current study investigated the interaction between adolescent preference for self-reliance and level of parental control during the college application process. We tested whether adolescents' preference for self-reliance is linked to satisfaction with the college application process, and how parental control might moderate this link. We hypothesized that satisfaction with the college application process would be linked to both adolescent preference for self-reliance (i.e., support preference) and parental control (i.e., support provision).

The link between preference for self-reliance and application satisfaction, to our knowledge, has not yet been studied. The college application process is unique in that it occurs during a time of autonomy development, yet is also a novel and challenging experience for an adolescent that requires parental support. We therefore hypothesized that the relationship may not be linear, e.g. that both a very low and a very high preference for self-reliance would not be optimal when mastering the challenge of the application process. As a result, our analysis allowed for a nonlinear relationship between preference for self-reliance and college application satisfaction (quadratic term). Knowing the importance of the parent-adolescent relationship during this time period, we also examined the link between parental control and college application satisfaction. Finally, we examined the interplay of preference for self-reliance and parental control with college application satisfaction. It was unclear what combination of preference for self-reliance and parental control would be optimal during this transitional period.

## **Method**

### **Participants**

The sample consisted of 126 high school juniors and seniors recruited from a public high school (61% male). 67% of the sample identified as White. Family income (SES) was as follows:

middle class and below (64.4%), upper middle class and above (19.2%), don't know / prefer not to answer (16.4%). Highest education level of the parent most involved with the college application was as follows: high school and below (46.6%), some college (31.6%), B.A and above (19.7%). 34.5% were the oldest child in their family, and 43.4% had at least one sibling who had or was currently attending college. Average GPA was 3.28, and most found school difficulty to be between "moderately difficult" and "some work, but fairly easy."

### **Procedure**

Students filled out a one-time online questionnaire during a class period.

### **Measures**

**Preference for Self-Reliance.** We used five items to assess a preference for self-reliance. Items were derived from the Couple Support Inventory (support availability, responses, behavior) (Gilad et al., 2009). The measure specifically focused on parental involvement during the college application process ("Preference for Self-Reliance during the College Application Process Including Parental Involvement" used in Study 5). Items included: "I prefer to handle the college application process on my own"; "I prefer that my parent does not offer college application advice unless I ask for it"; "I feel handling the college application process on my own is most beneficial for me"; "Handling the college application process on my own makes me feel good about myself"; "When my parent allows me to handle the college application process on my own I experience relief". A factor analysis revealed that the items hung together with a Cronbach's (alpha) of 0.89. Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale ( $M = 2.75$ ,  $SD = 0.99$ ).

**Satisfaction with the College Application Process.** Satisfaction with the application process was measured using the Brief Multidimensional Students' Life Satisfaction Scale (Huebner, 1997). Participants responded on a 1 (extremely dissatisfied) – 7 (extremely satisfied) Likert-type scale ( $M = 4.34$ ,  $SD = 1.71$ ).

**Parental Control.** Participants' reported parental control was measured using the Parental Control Scale (Barber, 1994). Sample items include: "My parent wants to control whatever I do regarding the application process" and, "My parent insists on doing things his/her way when it comes to the application process." Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale ( $M = 3.19$ ,  $SD = 0.95$ ).

## Results

We tested whether preference for self-reliance and parental control were linked with adolescents' satisfaction with the college application process, examining potential linear and quadratic relationships. We ran additional analyses including potential confounding demographic variables (SES, social identity group, parent education and gender); the pattern of result remained robust; therefore, we report the more parsimonious model without these covariates.

We examined the linear relationships between preference for self-reliance and parental control and application satisfaction. There was no main effect for adolescents' preference for self-reliance on application satisfaction (see Table 6 for complete results, linear and quadratic terms). There was a significant main effect for parental control on college application satisfaction; higher parental control was associated with higher application satisfaction,  $t(105) = 4.40$ ,  $p < 0.01$ . We also modeled a linear and quadratic relationship between adolescents' preference for self-reliance and application satisfaction, moderated by parental control. To do so,

we entered both the linear and quadratic terms of preference for self-reliance as predictors and the interaction term of preference for self-reliance<sup>2</sup> x parental control. We found that in fact the relationship between preference for self-reliance and application satisfaction was not linear,  $t(105) = -1.27, p = 0.21$ , and that parental control moderated this link between the quadratic term of preference for self-reliance and application satisfaction,  $t(105) = -3.31, p < 0.01$ .

Table 6

*Analysis of Variance for College Application Process Satisfaction*

Source	Estimate	SE	t	p	95% CI	
					Lower	Upper
Intercept	3.87	0.28	14.06	< .01	3.32	4.41
Preference for self-reliance (linear term)	0.21	0.16	1.31	0.19	-0.11	0.53
Preference for self-reliance <sup>2</sup> (quadratic term)	0.09	0.16	0.55	0.59	-0.23	0.40
Parental control	1.07	0.24	4.40	< .01	0.59	1.56
Preference for self-reliance x Parental control	-0.20	0.16	-1.27	0.21	-0.51	0.11
Preference for self-reliance <sup>2</sup> x Parental control	-0.47	0.14	-3.31	< .01	-0.76	-0.19

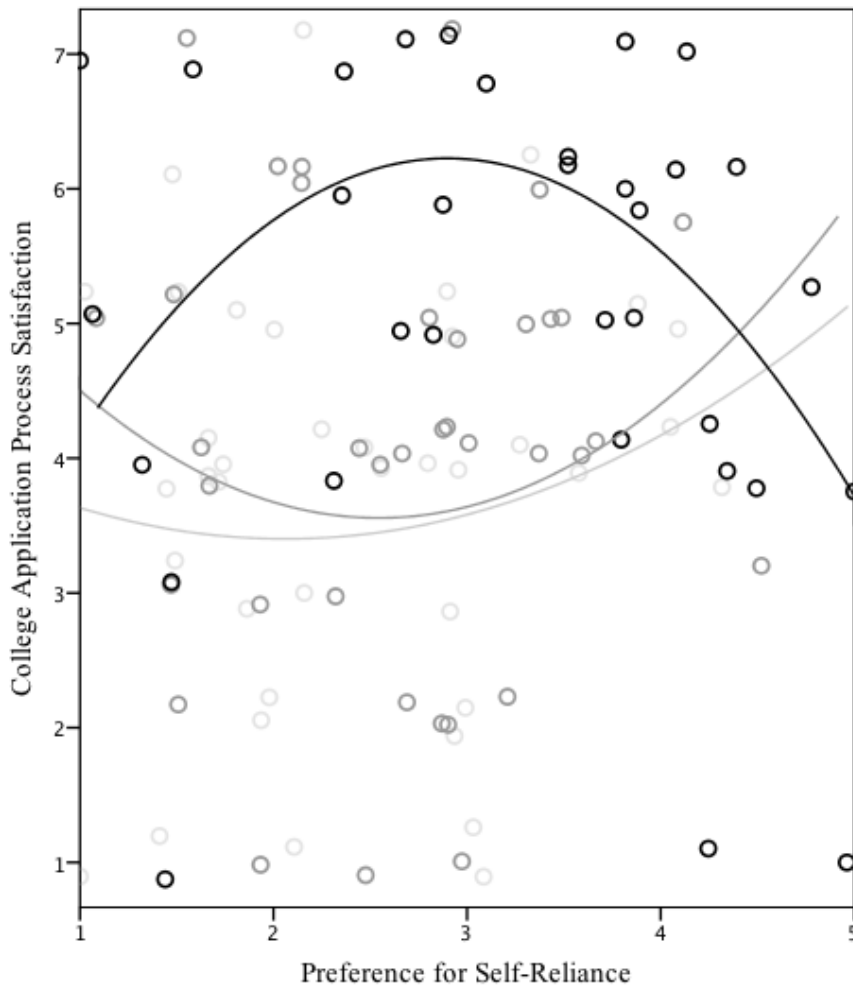
In order to interpret this finding, we trichotomized parental control into low, average, and high levels, created a scatterplot for these three subgroups, and included quadratic fit lines (see Figure 6). Application satisfaction varied depending on preference for self-reliance and level of parental control (low, average, high) (Figure 6). Overall, high parental control was associated with higher application satisfaction. An average preference for self-reliance and high parental control appeared optimal in terms of application satisfaction. Adolescents with high preference for self-reliance and high parental control showed less application satisfaction than adolescents with lower preference for self-reliance. Interestingly, adolescents with low and average parental



control, but a high preference for self-reliance reported more application satisfaction than adolescent with an average or low preference for self-reliance; suggesting that perhaps a high preference for self-reliance could help compensate for less parental control.

Figure 6. College application satisfaction by preference for self-reliance and three levels of parental control (high: ●, average: ○, low: ○).

- High parental control (black line)
- Average parental control (dark gray line)
- Low parental control (light gray line)



## **Sensitivity Analysis**

We tested for any potential academic performance differences between adolescents with and without a preference for self-reliance. No differences were found between those with a high and those with a low preference for self-reliance (median split) in terms of GPA ( $t(94) = 1.95, p = 0.22$ ), SAT/ACT score ( $t(15) = .15, p = 0.97$ ), or how challenging they found school academically ( $t(118) = -.17, p = .87$ ). Participants with a higher preference for self-reliance generally endorsed more items on an application “to-do” checklist (e.g., “I know the application deadline for each college I am applying to”, “My resume is up to date”) ( $t(100) = -3.05, p < 0.01$ ), compared to those with a low preference for self-reliance. Results helped eliminate concern that a higher preference for self-reliance could be related to academic differences or indifference towards the college application process.

## **Discussion**

Adolescents’ satisfaction with the college application process varied dependent on an adolescents’ preference for self-reliance and the level of parental control. Overall, high parental control was associated with more application satisfaction, and low parental control with less satisfaction. However, for adolescents with a high preference for self-reliance, application satisfaction was lower when parental control was high, and higher when parental control was low. Future research should explore the possibility that a preference self-reliance might help compensate when too little structure and/or guidance is provided by a parent during this transitional period. An average preference for self-reliance combined with high parental control appeared optimal in terms of application satisfaction.

Parental reports evaluating ones' own level of control and adolescent preference for self-reliance are needed for validation and future analyses. Naturalistic observation of parent and adolescent interactions during lab paradigms, such as unsolvable word puzzle tasks (Buckley & Woodruff-Borden, 2006) would allow for objective observation of parent-adolescent interaction during a stressful situation. It is our hope that such a paradigm would mirror family processes that occur in the home during stressful situations, such as the college application process.

At this time, it is unclear whether a preference for self-reliance is a result of the situation (e.g., parent-adolescent relationship, attachment to support provider, level of parental control), or whether the preference is a trait of the adolescent. Daily diaries would help to clarify whether those preferring self-reliance ever need and/or desire parental control during the college application process (Bolger & Laurenceau, 2013).

Future research should examine the behavioral and emotional implications of receiving high and low levels of parental control, and how a preference for self-reliance might modify the relationship. Both short- and long-term implications should be explored—high parental control might be linked to immediate satisfaction with the application process, but a high preference for self-reliance might be associated with long-term satisfaction .

While information about the college application process is common, practical information to advise parents on how to optimally support their child during the transition is scarce. College application satisfaction is likely only one of many outcomes affected by the combination of preference for self-reliance and parental control during the transition to independence. Research such as the current study has the potential to produce concrete support recommendations, accounting for personal and situational differences. Continuing this program

of study has the potential to fill a void in the literature, and to advance the understanding of optimal support provision to adolescents during a seminal time.

# 7

## **The Link between Preference for Self-Reliance and Social Support during Times of Increased Stress**

## **Introduction**

Individuals may prefer to independently cope with the stressors surrounding stressful situations and may need space in order to do so effectively. Thus far, research has captured this preference for self-reliance during either what we assume were standard, everyday stressors or during a particular time period. Using an intensive longitudinal design, the current study tested the link between preference for self-reliance and support during two times of acute stress in a college student's life. This afforded us the opportunity to compare students' support preferences during times of lower and higher stress (Thompson & Bolger, 1999).

Major stressors, like academic exam periods, are useful for studying the relationship between preference for self-reliance and support transactions, for several reasons. First, as the exam period is the same for all participants, we can be confident that any differences in stress outcomes are likely not due to the heterogeneity of the stressors themselves (Bolger & Eckenrode, 1991). Second, we do not expect the nature of any relationship to change as a result of the exam periods themselves (Bolger & Eckenrode, 1991). Third, the nature of the exam periods permits us to monitor participants and compare support transaction patterns during both low and high stress time periods (Bolger & Eckenrode, 1991).

The current study examined a preference for self-reliance and support transaction patterns in university students. We tested whether a preference for self-reliance would be more closely linked to daily support tendencies in times of higher stress, as compared to lower stress.

## **Method**

### **Participants**

The sample consisted of 64 first-semester female students at Universität Tübingen ( $M_{\text{Age}} = 22.22$  years,  $SD_{\text{Age}} = 7.00$  years) in Germany. 63.2% were German citizens. About half of participants were in a relationship and 17.6% lived at home with their parents.

## **Procedure**

We used an intensive longitudinal design in which we obtained three waves of 10-day daily reports from students, for a total of 30 days. Students completed an initial background questionnaire during their first week at the university. This was followed by three waves of online evening diaries, each wave lasting for 10 days. Wave 1, a low stress period, occurred during the fourth and fifth weeks of classes. Wave 1 became the reference category. Wave 2, a high stress period, was the fall semester exam period. Wave 3, a high stress period, occurred during the start of the spring semester when exams grades were given and new classes were selected (Note: Previous research conducted by co-authors has found Waves 2 and 3 to be proven stressful time periods for students at this university. Our own sensitivity analysis confirmed that average stress levels were higher during Waves 2 and 3, as compared to Wave 1).

## **Measures**

**Preference for Self-Reliance.** To assess a preference for self-reliance, students were presented the “Preference for Self-Reliance when Handling Application, Academic, and Personal Challenges” used in Study 5 (Gilad et al., 2009), as part of an initial background questionnaire. The items included: “I preferred to handle the college application process on my own”; “In general, I prefer to handle academic challenges (stressors) on my own”; “In general, I prefer to handle personal challenges (stressors) on my own.” A factor analysis revealed that the items

hung together with a Cronbach's alpha of 0.78 ( $M = 4.00$ ,  $SD = 0.71$ ). Participants responded on a 1 (strongly disagree) – 5 (strongly agree) Likert-type scale.

**Support Interactions.** Participants reported on their support interactions in online daily evening diaries for 30 days in total. Informational support was defined as advice, guidance, suggestions or useful information. Tangible support was defined as financial assistance, material goods or services (i.e., concrete, direct ways of assisting). Emotional connectedness was defined as a more global construct encompassing empathy, concern, affection, love, trust, acceptance, intimacy and encouragement.

Similar to Study 1, participants were asked daily whether they needed, sought and/or received each category of support within the past 24 hours, and if so, from whom. Students completed these measures daily throughout all three waves. Students responded on a 1 (none) – 6 (very much) Likert-type scale. The between-person means and within-person standard deviations are displayed in Table 7.1.



Table 7.1

*Descriptive Statistics for Support Interactions by Wave*

Wave	N	Informational Support			Tangible Support			Emotional Connectedness		
		Between-person <i>M</i>	Between-person <i>SD</i>	Pooled within <i>SD</i>	Between-person <i>M</i>	Between-person <i>SD</i>	Pooled within <i>SD</i>	Between-person <i>M</i>	Between-person <i>SD</i>	Pooled within <i>SD</i>
Need	1	2.49	0.99	1.18	2.34	0.97	1.10	3.33	1.04	1.24
	2	2.34	0.87	1.05	2.01	0.92	0.90	3.14	1.05	1.17
	3	2.22	0.93	1.04	2.04	0.82	1.07	2.89	1.15	1.09
Seeking	1	2.26	0.86	1.11	2.08	0.87	0.99	2.74	0.92	1.14
	2	2.10	0.83	0.98	1.86	0.81	0.89	2.68	0.94	1.08
	3	2.10	0.86	1.00	1.92	0.76	0.97	2.56	1.04	1.07
Receipt	1	2.48	0.79	1.24	2.56	0.87	1.31	3.26	0.92	1.31
	2	2.23	0.82	1.07	2.21	0.94	1.12	3.05	0.88	1.21
	3	2.17	0.82	1.10	2.21	0.80	1.24	2.90	1.00	1.26

*Note.* Descriptive statistics for support interactions by wave: between-person means and standard deviations and pooled within-person SDs for informational support, tangible support and emotional connectedness.

## Results

For a statistical test of whether preference for self-reliance would be more closely linked with daily support interactions during higher stress as compared to lower stress periods, we analyzed the intensive longitudinal data with multilevel models. Results are presented in Tables 7.2 – 7.4 and Figures 7.1 – 7.3.

### Informational Support

In times of higher stress, as compared to lower stress, those with a higher preference for self-reliance reported needing, seeking and receiving less informational support than those who reported lower levels of self-reliance (see Table 7.2 and Figure 7.1). For a statistical test of our research question—whether self-reliance would be more closely linked with daily informational support in more stressful as compared to less stressful time periods—we turn to the upper panel of Table 7.2.

Models for informational support were set up to allow for contrasting the lower stress period, Wave 1, with the higher stress periods, Wave 2 and Wave 3 (Wave 1 as reference category). We ran separate models for daily support need, seeking and receipt. We used Day 2 to 30 in the analysis (divided by 10 to make the time slopes more interpretable and excluded Day 1 to allow for participants to adapt to the daily diary), and centered the study day at the beginning (Day 2 = 0). Each wave was coded with two dummy variables (Wave 2 indicator: 1 is Wave 2, 0 is other Waves; Wave 3 indicator: 1 is Wave 3, 0 is other Waves; Wave 1 as reference category). Participants' baseline stress level (centered at the grand mean) was included as a covariate. Self-reliance was centered at the grand mean. We included two-way interactions to test if the time-slope changed in the higher stress periods as compared to the lower stress periods, and to test our

main question of whether self-reliance would matter more in higher stress periods than in lower stress periods. We conducted all multilevel analyses in SPSS 23 (see syntax example in Footnote 1). To facilitate interpretation of the results in Table 7.2, we provide interpretations of each estimate for informational support *need*; all other models have parallel interpretations.

**Support Need.** At the start of the study in Wave 1, on Study Day 2, a typical participant with an average preference for self-reliance had a need for informational support of 2.58 (intercept, 95% CI: 2.24, 2.91,  $p < .01$ ). The slope for study day was -0.38, i.e., not significantly related to informational support need in Wave 1 (95% CI: -0.89, 0.14,  $p = .15$ ). Baseline stress level was not significantly linked with informational support need, with an estimate of 0.20 in Wave 1 (95% CI: -0.10, 0.49,  $p = .19$ ). A preference for self-reliance was not significantly related to informational support need in Wave 1, with an estimate of -0.07 (95% CI: -0.40, 0.26,  $p = .68$ ). In Wave 2, informational support need did not increase significantly, with an estimate of 0.38 (95% CI: -0.33, 1.10,  $p = .29$ ), compared to Wave 1. The effect of study day did not significantly change in Wave 2, with an estimate of -0.14 (95% CI: -0.84, 0.57,  $p = .71$ ), compared to Wave 1. In support of our tested hypothesis, a higher preference for self-reliance was significantly related to a lower need for informational support in Wave 2, with an estimate of -0.28 (95% CI: -0.55,  $< 0.01$ ,  $p = .05$ ), compared to Wave 1. In Wave 3, informational support

---

1: Note. All models were run using maximum likelihood (ML), with the exception of tangible support receipt due to convergence problems. This model was run using REML because of very small random effects (Time slope).  
MIXED Daily\_Support with StudyDay SelfReliance\_CGM mb2\_dummy mb3\_dummy BQ\_stress\_CGM  
/FIXED StudyDay\_10 SelfReliance\_CGM BQ\_stress\_CGM  
mb2\_dummy mb2\_dummy\*StudyDay mb2\_dummy\*SelfReliance\_CGM  
mb3\_dummy mb3\_dummy\*StudyDay mb3\_dummy \*SelfReliance\_CGM  
|SSTYPE(3)  
/METHOD ml  
/PRINT= g solution testcov  
/RANDOM=INTERCEPT StudyDay | subject(id) COVTYPE(UN)  
/repeated StudyDay| subject(id) COVTYPE(ar1).

did not increase significantly, with an estimate of 0.23 (95% CI: -0.96, 1.43,  $p = .70$ ), compared to Wave 1. The effect of study did not change significantly in Wave 3, with an estimate of 0.14 (95% CI: -0.56, 0.84,  $p = .70$ ), compared to Wave 1. However, similar to Wave 2, a higher preference for self-reliance was marginally related to a lower need for informational support in Wave 3, with an estimate of -0.32 (95% CI: -0.68, 0.04,  $p = .08$ ), compared to Wave 1.

As illustrated in Figure 7.2, there was considerable between-subject variability in slopes and intercepts. The lower panel of Table 7.2 presents numerical estimates and statistical tests of this variability. These are reported as variances and covariances. We found support for considerable between-person variation at the initial level of informational support need on Day 2 of Wave 1. The random intercept estimate was 0.72 (95% CI: 0.42, 1.22,  $p < .01$ ). The time slope was 0.11 (95% CI: 0.05, 0.26) and varied significantly between-people ( $p < .01$ ) in Wave 1. We know from the covariance random estimate of -0.16 (95% CI: -0.33,  $< .001$ ,  $p = .05$ ) that the higher people started out with a need for informational support, the less their need changed over time. At the bottom of Table 7.2 is an estimate of the size of the residual variance at level 1 (the level-1 random effect). This represents the deviations of the actual informational support needing scores at level 1 from the predicted values obtained from the model (Bolger & Laurenceau, 2013). A significant effect of 1.47 (95% CI: 1.35, 1.59,  $p < .01$ ) indicated considerable differences between-people that could explain the need for informational support. There was significant evidence of autocorrelation in the level 1 (within-subject) residuals (0.17, 95% CI: 0.10, 0.23,  $p < .01$ ) showing consistency in informational support need from one day to the next. Implications of these random effects will be discussed in the Discussion section.

**Support Seeking.** We found a similar link between informational support *seeking* and preference for self-reliance (for complete results see Table 7.2). The effect of preference for self-reliance varied depending on wave. A higher preference for self-reliance was marginally related to less seeking of informational support in Wave 2, with an estimate of -0.24 (95% CI: -0.49, 0.01,  $p = .06$ ), and in Wave 3, with an estimate of -0.27 (95% CI: -0.57, 0.04,  $p = .08$ ), compared to Wave 1. The random intercept of 1.37 (95% CI: 1.26, 1.49,  $p < .01$ ) indicated significant between-person variation at the initial level of support sought on Day 2 of Wave 1. Again, we saw significant residual variance and autocorrelation, suggesting that, while consistent, there are many individual differences that could explain the variation in informational support-seeking behavior.

**Support Receipt.** The effect of preference for self-reliance once again varied dependent on wave. A higher preference for self-reliance was significantly related to less informational support receipt in Wave 2, with an estimate of -0.30 (95% CI: -0.57, -0.02,  $p = .04$ ), and marginally to less support receipt in Wave 3, with an estimate of -0.33 (95% CI: -0.68, 0.02,  $p = .07$ ), compared to Wave 1. The random intercept of 1.56 (95% CI: 1.43, 1.69,  $p < .01$ ) indicated significant between-person variation at the initial level of support receipt on Day 2 of Wave 1. The time slope varied significantly between people in Wave 1. Consistent with our informational support needed and sought findings, there was significant residual variance and autocorrelation (see Table 7.2 for complete results).

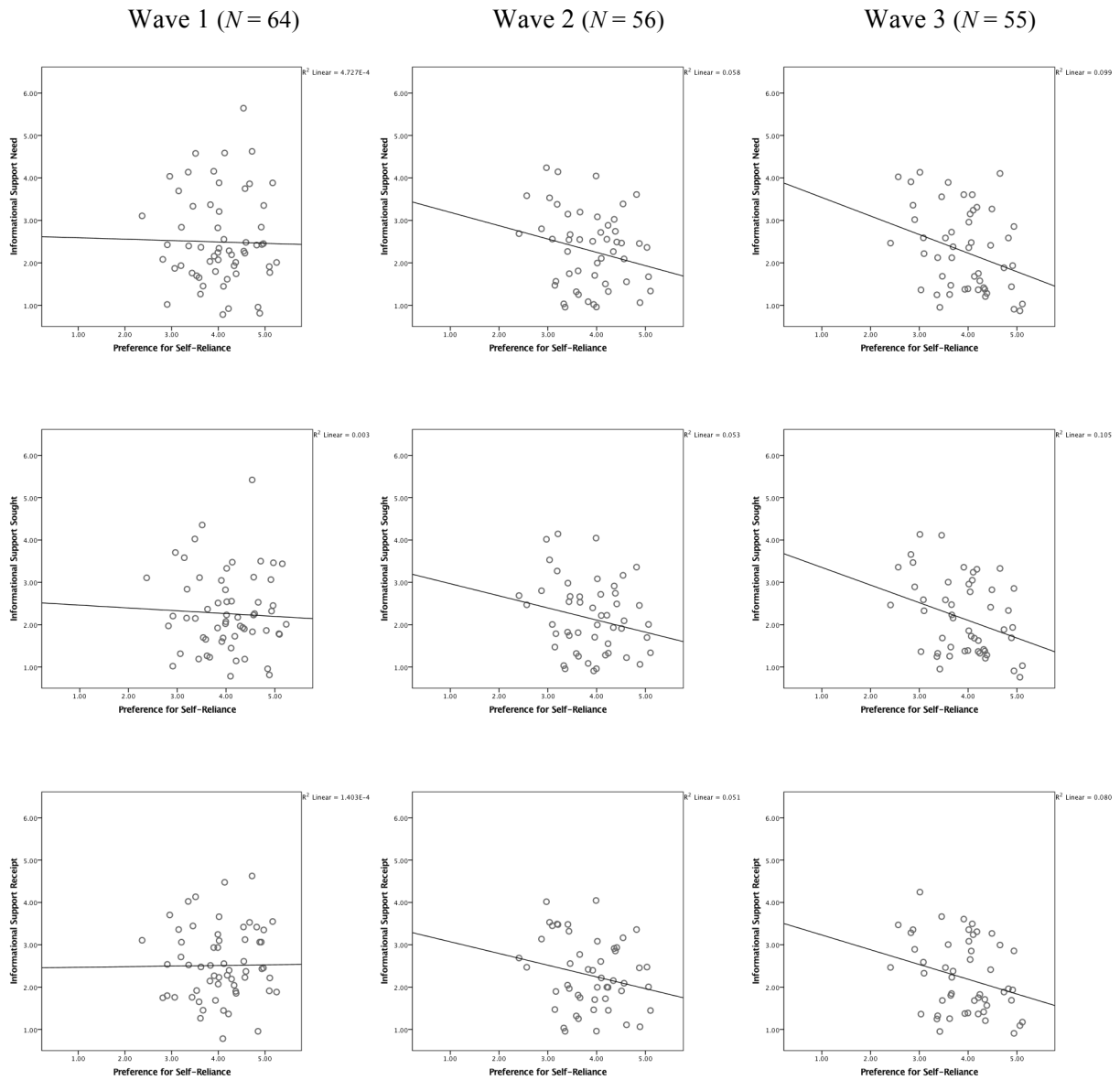
Table 7.2

*Informational Support Interactions*

	Support Need			Support Seeking			Support Receipt					
	Est.	<i>p</i>	95% <i>CI</i>	Est.	<i>p</i>	95% <i>CI</i>	Est.	<i>p</i>	95% <i>CI</i>			
Fixed effects			Lower	Lower	Lower	Upper	Lower	Lower	Upper			
Intercept, level of support at Wave 1	2.58	< .01	2.24	2.91	2.37	< .01	2.07	2.67	2.68	< .01	2.37	2.99
Time slope, (study day, per 10 days) at Wave 1	-0.38	.15	-0.89	0.14	-0.38	.13	-0.88	0.11	-0.59	.03	-1.12	-0.06
Baseline stress (covariate)	0.20	.19	-0.10	0.49	0.12	.39	-0.15	0.39	0.12	.34	-0.13	0.38
Self-reliance at Wave 1	-0.07	.68	-0.40	0.26	-0.09	.55	-0.37	0.20	-0.02	.89	-0.31	0.27
Difference in level of support (Wave 2 vs. 1)	0.38	.29	-0.33	1.10	0.31	.37	-0.38	1.01	0.16	.67	-0.58	0.90
Difference in time slope (Wave 2 vs. 1)	-0.14	.71	-0.84	0.57	-0.05	.89	-0.73	0.63	0.16	.67	-0.57	0.88
Difference in self-reliance slope (Wave 2 vs. 1)	<b>-0.28</b>	<b>.05</b>	<b>-0.55</b>	<b>-0.00</b>	<b>-0.24</b>	<b>.06</b>	<b>-0.49</b>	<b>0.01</b>	<b>-0.30</b>	<b>.04</b>	<b>-0.57</b>	<b>-0.02</b>
Difference in level of support (Wave 3 vs. 1)	0.23	.70	-0.96	1.43	0.42	.47	-0.73	1.57	-0.28	.66	-1.51	0.95
Difference in time slope (Wave 3 vs. 1)	0.14	.70	-0.56	0.84	0.10	.78	-0.58	0.77	0.51	.16	-0.21	1.24
Difference in self-reliance slope (Wave 3 vs. 1)	<b>-0.32</b>	<b>.08</b>	<b>-0.68</b>	<b>0.04</b>	<b>-0.27</b>	<b>.08</b>	<b>-0.57</b>	<b>0.04</b>	<b>-0.33</b>	<b>.07</b>	<b>-0.68</b>	<b>0.02</b>
Random effects	Est.	<i>p</i>	Lower	Upper	Est.	<i>p</i>	Lower	Upper	Est.	<i>p</i>	Lower	Upper
Level 2 (between-person)												
Intercept	0.72	< .01	0.42	1.22	0.42	< .01	0.23	0.80	0.44	< .01	0.23	0.85
Covariance	-0.16	.05	-0.33	< .001	-0.04	.50	-0.14	0.07	-0.09	.18	-0.23	0.04
Time slope	0.11	.02	0.05	0.26	0.04	.18	0.01	0.18	0.08	.05	0.03	0.23
Level 1 (within-person)												
Residual	1.47	< .01	1.35	1.59	1.37	< .01	1.26	1.49	1.56	< .01	1.43	1.69
Autocorrelation	0.17	< .01	0.10	0.23	0.16	< .01	0.10	0.22	0.16	< .01	0.10	0.22

Note. N = 64, 30 days over three waves with 10 days each. Hypothesis testing estimates in bold.

Figure 7.1. Informational support interactions as a function of preference for self-reliance. Raw data and predicted regression lines for support need, seek, and receipt (Y-axes) as a function of preference for self-reliance (X-axes). Columns represent each time wave.



## **Tangible Support**

In times of higher stress, as compared to lower stress, there was a trend for those with a higher preference for self-reliance to *seek* less tangible support than those who reported lower levels of preference for self-reliance (Figure 7.2).

**Support Seeking.** While the direction of results was consistent with those found for informational support transactions, tangible support seeking was the only marginally significant evidence that the link between preference for self-reliance and daily tangible support interactions tightened in higher stress as compared to lower stress time periods. A higher preference for self-reliance was marginally related to less seeking of tangible support in Wave 2, with an estimate of  $-0.23$  (95% CI:  $-0.48, 0.03$ ,  $p = .08$ ), and in Wave 3, with an estimate of  $-0.28$  (95% CI:  $-0.57, 0.02$ ,  $p = .07$ ), compared to Wave 1. Across all three support interactions, we found significant between-person variation at the initial level of support on Day 2 of Wave 1, and significant residual variance and autocorrelation. For complete results illustrating the link between preference for self-reliance and daily tangible support interactions, see Table 7.3.



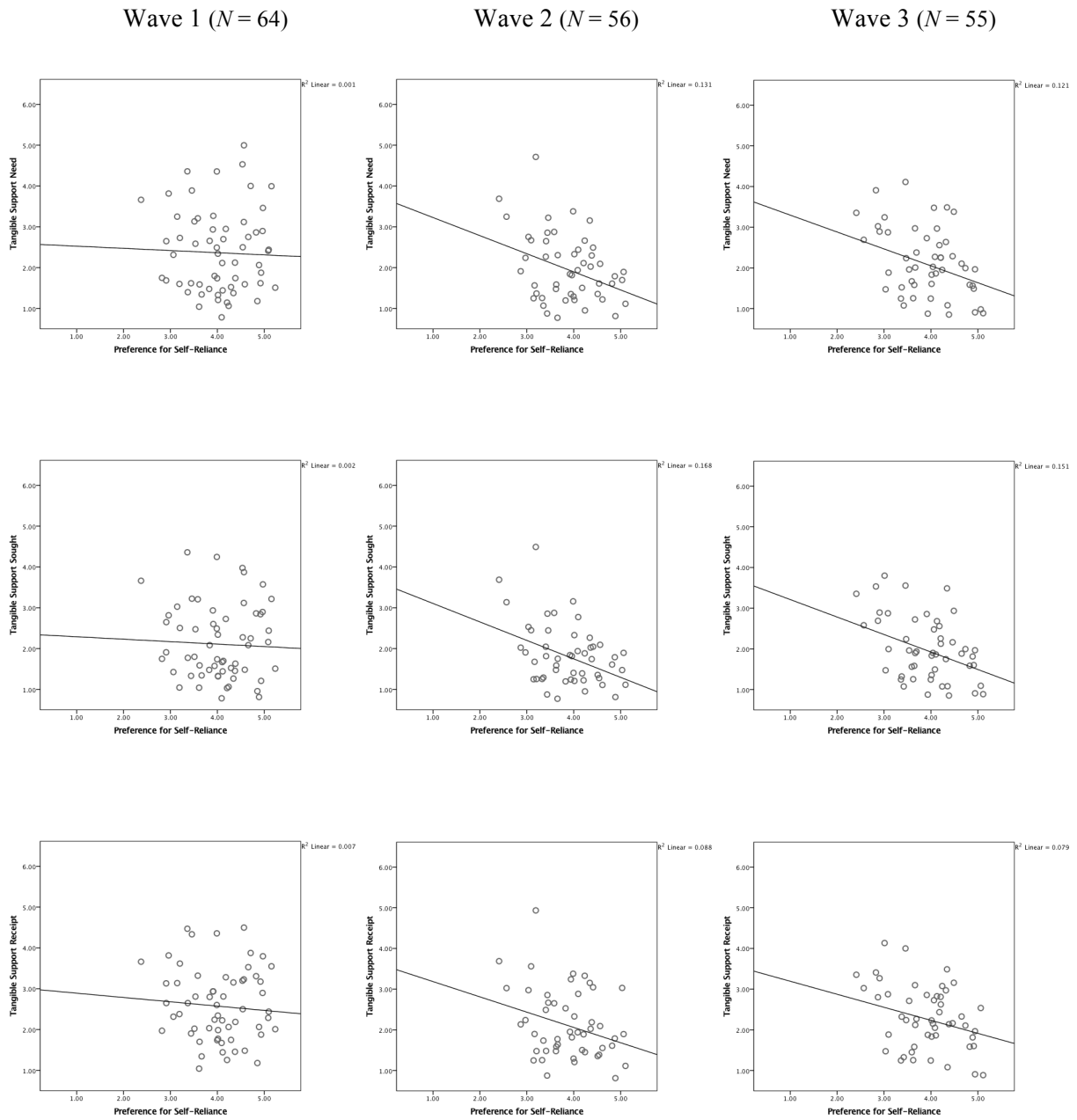
Table 7.3

*Tangible Support Interactions*

	Support Need			Support Seeking			Support Receipt					
	Est.	<i>p</i>	95% <i>CI</i>	Est.	<i>p</i>	95% <i>CI</i>	Est.	<i>p</i>	95% <i>CI</i>			
Fixed effects			Lower	Upper	Lower	Upper	Lower	Upper				
Intercept, level of support at Wave 1	2.62	< .01	2.27	2.97	2.23	< .01	1.91	2.54	2.73	< .01	2.37	3.09
Time slope, (study day, per 10 days) at Wave 1	-0.68	.01	-1.20	-0.16	-0.31	.21	-0.81	0.18	-0.47	.12	-1.07	0.13
Baseline stress (covariate)	0.14	.35	-0.16	0.44	0.07	.59	-0.19	0.33	0.01	.95	-0.28	0.30
Self-reliance at Wave 1	-0.13	.46	-0.47	0.22	-0.05	.75	-0.36	0.26	-0.20	.24	-0.53	0.14
Difference in level of support (Wave 2 vs. 1)	-0.43	.25	-1.16	0.30	-0.55	.12	-1.25	0.15	-0.97	.03	-1.82	-0.12
Difference in time slope (Wave 2 vs. 1)	0.54	.14	-0.18	1.26	0.41	.24	-0.28	1.10	0.79	.06	-0.05	1.63
Difference in self-reliance slope (Wave 2 vs. 1)	<b>-0.10</b>	<b>.45</b>	<b>-0.38</b>	<b>0.17</b>	<b>-0.23</b>	<b>.08</b>	<b>-0.48</b>	<b>0.03</b>	<b>0.08</b>	<b>.60</b>	<b>-0.22</b>	<b>0.38</b>
Difference in level of support (Wave 3 vs. 1)	-0.09	.89	-1.29	1.12	0.07	.91	-1.09	1.23	-1.06	.14	-2.46	0.34
Difference in time slope (Wave 3 vs. 1)	0.51	.16	-0.20	1.22	0.18	.61	-0.50	0.86	0.73	.08	-0.09	1.56
Difference in self-reliance slope (Wave 3 vs. 1)	<b>-0.16</b>	<b>.34</b>	<b>-0.50</b>	<b>0.17</b>	<b>-0.28</b>	<b>.07</b>	<b>-0.57</b>	<b>0.02</b>	<b>-0.05</b>	<b>.78</b>	<b>-0.38</b>	<b>0.29</b>
Random effects	Est.	<i>p</i>	Lower	Upper	Est.	<i>p</i>	Lower	Upper	Est.	<i>p</i>	Lower	Upper
Level 2 (between-person)												
Intercept	0.81	< .01	0.49	1.36	0.58	< .01	0.33	1.01	0.56	< .01	0.28	1.10
Covariance	-0.17	< .01	-0.32	-0.01	-0.10	.12	-0.22	0.02	-0.05	.48	-0.20	0.09
Time slope	0.07	.06	0.03	0.21	0.03	.25	0.01	0.18	0.01	.79	< .01	14.77
Level 1 (within-person)												
Residual	1.44	< .01	1.32	1.56	1.34	< .01	1.23	1.46	1.93	< .01	1.77	2.10
Autocorrelation	0.21	< .01	0.15	0.27	0.20	< .01	0.14	0.26	0.22	< .01	0.16	0.28

Note. Receipt run with REML due to small random effects & convergence problems. N = 64, 30 days over three waves with 10 days each. Hypothesis estimates in bold.

Figure 7.2. Tangible support interactions as a function of preference for self-reliance. Raw data and predicted regression lines for support need, seek, and receipt (Y-axes) as a function of preference for self-reliance (X-axes). Columns represent each time wave.



## **Emotional Connectedness**

While the direction of our findings was consistent with those found for informational and tangible support, we found no statistically significant evidence that in times of higher stress, as compared to lower stress, people with a higher preference for self-reliance needed, sought, or received less emotional connectedness. For complete results illustrating the link between preference for self-reliance and emotional connectedness, see Table 7.4.

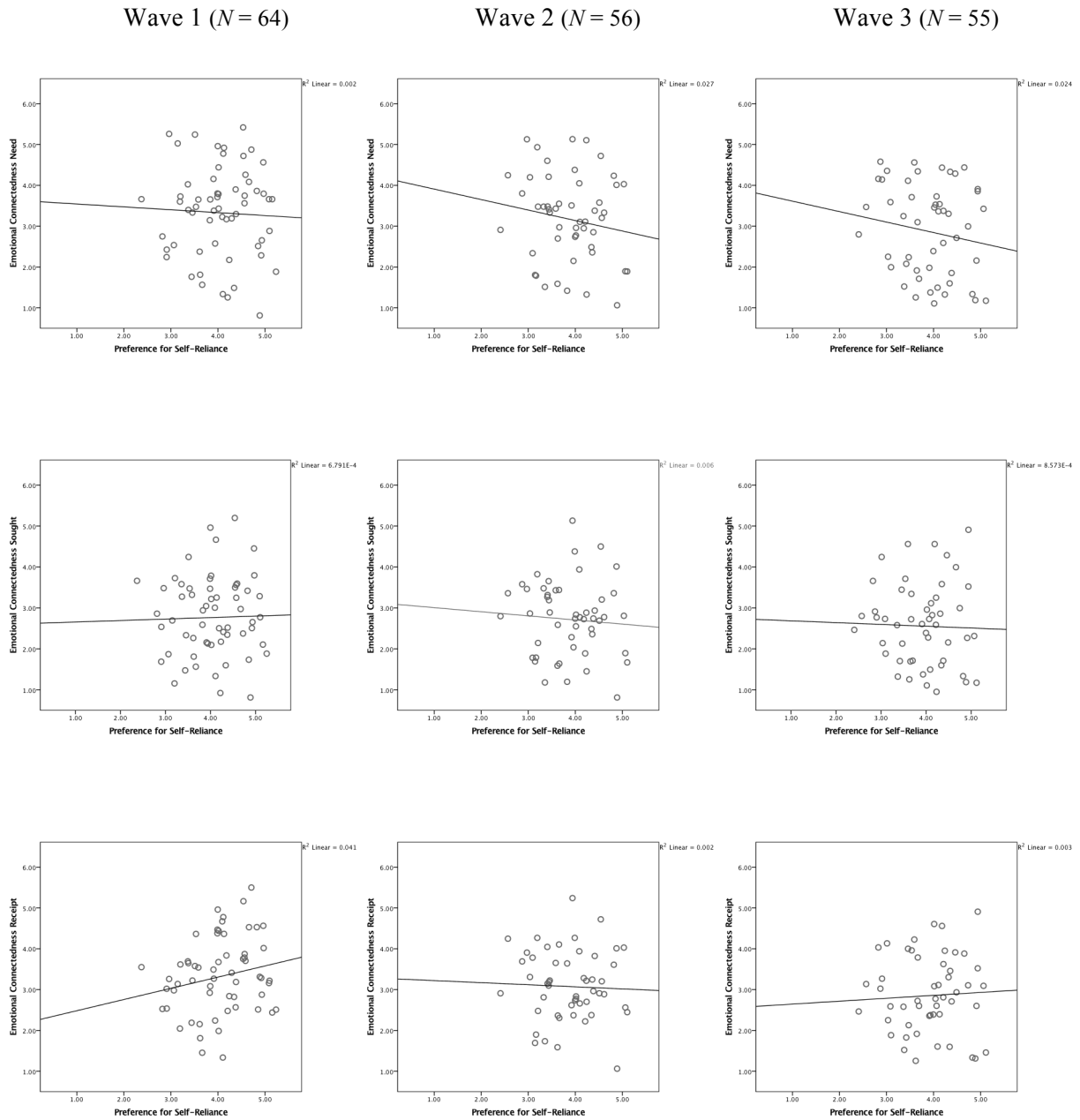
As illustrated in Figure 7.3 and reported in the random effects of Table 7.4, there was substantial between-subject variability. Across emotional connectedness need, seeking, and receipt, we found support for considerable between-person variation at the initial level of connectedness on Day 2 of Wave 1. Time slopes varied significantly between-people in Wave 1: the higher participants started on emotional connectedness need, seeking, and receipt, the more their support interactions changed over time. Consistent with previous results, there was significant residual variance and autocorrelation.

Table 7.4  
Emotional Connectedness Interactions

	Connectedness Need			Connectedness Seeking			Connectedness Receipt		
	Est.	<i>p</i>	95% CI Lower Upper	Est.	<i>p</i>	95% CI Lower Upper	Est.	<i>p</i>	95% CI Lower Upper
Fixed effects									
Intercept, level of support at Wave 1	3.31	< .01	2.96 3.67	2.71	< .01	2.38 3.05	3.42	< .01	3.05 3.80
Time slope, (study day, per 10 days) at Wave 1	-0.06	.83	-0.62 0.49	0.04	.89	-0.48 0.55	-0.48	.09	-1.05 0.08
Baseline stress (covariate)	0.33	.07	-0.02 0.67	0.12	.47	-0.20 0.44	-0.04	.81	-0.34 0.26
Self-reliance at Wave 1	-0.05	.79	-0.41 0.31	0.04	.80	-0.29 0.38	0.22	.21	-0.13 0.56
Difference in level of support (Wave 2 vs. 1)	1.10	.01	0.33 1.87	0.76	.04	0.05 1.47	0.27	.49	-0.50 1.05
Difference in time slope (Wave 2 vs. 1)	-0.84	.03	-1.59 -0.08	-0.63	.08	-1.32 0.07	0.02	.95	-0.74 0.79
Difference in self-reliance slope (Wave 2 vs. 1)	<b>-0.19</b>	<b>.20</b>	<b>-0.49 0.10</b>	<b>-0.16</b>	<b>.24</b>	<b>-0.43 0.11</b>	<b>-0.29</b>	<b>.07</b>	<b>-0.61 0.02</b>
Difference in level of support (Wave 3 vs. 1)	-0.57	.38	-1.85 0.71	-0.28	.65	-1.46 0.91	-0.33	.62	-1.63 0.96
Difference in time slope (Wave 3 vs. 1)	0.12	.75	-0.63 0.88	0.01	.98	-0.70 0.69	0.39	.32	-0.37 1.15
Difference in self-reliance slope (Wave 3 vs. 1)	<b>-0.08</b>	<b>.68</b>	<b>-0.47 0.31</b>	<b>-0.06</b>	<b>.72</b>	<b>-0.43 0.30</b>	<b>-0.24</b>	<b>.29</b>	<b>-0.69 0.21</b>
Random effects	Est.	<i>p</i>	95% CI Lower Upper	Est.	<i>p</i>	95% CI Lower Upper	Est.	<i>p</i>	95% CI Lower Upper
Level 2 (between-person)									
Intercept	0.78	< .01	0.46 1.33	0.72	< .01	0.44 1.20	0.92	< .01	0.56 1.52
Covariance	-0.11	.20	-0.28 0.06	-0.12	.10	-0.27 0.02	-0.34	< .01	-0.57 -0.11
Time slope	0.12	.02	0.05 0.29	0.12	.01	0.05 0.25	0.26	< .01	0.15 0.47
Level 1 (within-person)									
Residual	1.69	< .01	1.55 1.84	1.49	< .01	1.38 1.62	1.76	< .01	1.62 1.91
Autocorrelation	0.17	< .01	0.10 0.23	0.13	< .01	0.07 0.19	0.14	< .01	0.08 0.20

Note. N = 64; 30 days over three waves with 10 days each. Hypothesis testing estimates in bold.

Figure 7.3. Emotional connectedness as a function of preference for self-reliance. Raw data and predicted regression lines for support need, seek, and receipt (Y-axes) as a function of preference for self-reliance (X-axes). Columns represent each time wave.



## Discussion

A preference for self-reliance is common among first-year female college students. Using an intensive longitudinal design, we tested whether a preference for self-reliance would be more closely linked with daily support interactions in higher stress, as compared to lower stress, time periods. Results revealed that the relationship between preference for self-reliance and informational support interactions varied depending on wave. In times of higher stress, as compared to lower stress, women with a higher preference for self-reliance reported needing, seeking and receiving less informational support. A significant relationship was found between a preference for self-reliance and tangible support seeking: in times of higher stress, as compared to lower stress, women with a higher preference for self-reliance sought less tangible support than women who reported lower levels of preference for self-reliance.

We did not find consistent effects across support behaviors and support interactions, as had been found in previous results. One explanation might lie in how we defined tangible support and emotional connectedness. Tangible support was defined as financial assistance, material goods or services, i.e., concrete, direct ways of assisting. Considering that the population is university students, most participants are likely still dependent on financial assistance from parents and/or other support sources. While those with a higher preference for self-reliance tended to seek less tangible support, the needing and receiving of such support was likely necessary for their survival, regardless of preference. Emotional connectedness was defined as a more global construct, encompassing empathy, concern, affection, love, trust, acceptance, intimacy and encouragement. In retrospect, our finding of no support effects as a function of preference for self-reliance is encouraging. Having a higher preference for self-

reliance is not associated with needing, seeking or receiving less affection, love or encouragement, thus differentiating preference for self-reliance from a preference for less physical and emotional connection with others.

The female sample allows us to comment with confidence that a preference for self-reliance is not specific to men, and generalizes across genders (Repetti, 1989; Wang et al., 2011). However, gender should not be disregarded in future research. Third variables such as culture could affect the likelihood of a preference for self-reliance uniquely for men and women.

The intensive longitudinal design and multilevel analyses provide insight into the degree to which participants vary as a function of time, stress level, and preference for self-reliance. The random effect findings advise that while a preference for self-reliance might explain some differences in support transactions, much of the variance is still left unexplained. Future work is needed in future to understand support transaction differences at both a between- and within-person level.

# 8

## General Discussion



## **Summary of Findings**

Less *can*, in fact, be more. A preference for self-reliance is a common phenomenon across the lifespan (Hypotheses 1 and 5), and an integral part of daily human interaction across different support transactions and relationships (Hypotheses 2, 3 and 5). Being more emotionally stable, more open to new experiences, and less agreeable may increase the likelihood of a preference for self-reliance, versus other forms of social support (Hypothesis 4). A fit between preference for self-reliance and support provision has important implications: adolescents' satisfaction with the college application process varied dependent on the combination of adolescent preference for self-reliance and level of parental control (Hypothesis 6). Times of acute stress may be particularly revealing of the link between preference for self-reliance and support transactions (Hypothesis 7). We also note that a preference for self-reliance was unrelated to relationship and life satisfaction outcomes, though this assessment is beyond the scope of our research. These findings, though preliminary, also allow us to comment that a preference for self-reliance does not likely stem from a lack of social resources, low relationship satisfaction, or inadequate life adjustment.

## **Limitations and Future Questions**

Unresolved questions and anticipated critiques have and will arise, as occurs with any new program of research. We address some of these limitations and make recommendations for future research in the subsequent sections.

### **State- or Trait-Individual Difference**

Thus far, we have studied the preference for self-reliance as a trait-like individual difference. Future research should investigate preference for self-reliance at a daily level. The

checklist we developed (Figure 3) could be implemented on a daily basis to track within person changes in preference for self-reliance, compared to other forms of support. Daily reports would address whether preference for self-reliance is a general orientation of the individual, represents an overall description of a relationship, or refers to a particular event or time. Initial evidence suggests that the identity of the support provider is influential (Cutrona, 1990). Daily reports would further shed light on when and from whom those with a general preference for self-reliance seek and/or need support. Future research should explore additional mechanisms that are likely at play (e.g., experience, motivation, competency, prior knowledge) affecting an individual's preference for self-reliance.

### **Costs and Benefits**

We can determine whether someone has a preference for self-reliance. However, we are unable to posit whether and under what conditions this preference is a positive or a negative. For example, were the self-reliant breast cancer patients putting themselves at risk medically by opting to rely only on themselves? Self-reliance might be a resource for dealing with minor health problems, but it could potentially interfere with seeking professional care, as need increases (Ortega & Alegria, 2002). An understanding of which mechanisms interact with self-reliance (e.g., skill level, abilities, expectations, goals, competency) will help to discern for whom a preference for self-reliance is most (or least) beneficial, and in which situations it is most (or least) beneficial.

The costs and benefits of having a preference for self-reliance should be explored at the dyadic level. At an individual level, space can bring relief from stress and enable coping with demands and rebuilding of resources. But at a dyadic level, space might undermine relationship

satisfaction, leading to less sharing, disclosure and intimacy (Reis & Aron, 2008). And what about support providers? How are they affected when their partners (children, close friends) do not want their support? Highly rejection-sensitive support providers are an especially interesting population for future research to consider. On the one hand, having a partner with a preference for self-reliance could increase the likelihood of a rejection-sensitive individual experiencing relationship insecurity or dissatisfaction. On the other hand, it could protect the rejection-sensitive provider from having to engage in potential conflicts, which could trigger and reinforce concerns about rejection (Downey & Feldman, 1996).

### **Generalizability**

Because relationship satisfaction was high across Studies 1 – 3, and couples had cohabitated for at least six months, our results may not generalize across all romantic couples. Self-reliance and dyadic closeness may be a unified construct within close relationships, developing over time and involving the investment and understanding of both partners. The development of this construct could represent dyadic closeness at a higher systematic thinking level, and has the potential to ultimately strengthen a relationship (Ben-Ari, 2012). However, a preference for self-reliance may also occur in response to low relationship satisfaction and a lack of dyadic closeness. It could be the case that we are underestimating the commonality of a preference for self-reliance by studying satisfied, well-adjusted couples. Future samples should include dissatisfied couples, non-cohabitating couples, and couples in relationships for less than six months.

While we know that self-reliance is a common preference from adolescence through late adulthood, we have not explored this preference among senior citizens. This population is unique

in that self-reliance may not be physically and/or mentally feasible, irrespective of preference. Covariates such as religion and culture may additionally affect the likelihood of a preference for self-reliance. In Judaism, for example, the first period of structured mourning after a death is Shiva. Traditionally during this period, family members gather in one home and receive visitors for up to seven days; space to manage one's distress and the stressors inevitable after a death may not be an option. In situations like this, cultural expectations may trump a personal preference for self-reliance. Cultural norms and expectations can sway one's decision to seek and/or utilize social support when managing a stressful event (Taylor, Sherman, & Kim, 2004). Taylor and colleagues reported that European Americans, for example, explicitly recruited their social networks for help and support when coping with stressful events, while Asians and Asian Americans did so to a lesser extent. The extent to which a preference for self-reliance is physically possible, or is accepted, encouraged, or hindered by religion and/or culture should not be ignored in future analyses. Culture, as a third variable, could also potentially affect the likelihood of a preference for self-reliance uniquely for men and women.

### **Experimental Design**

We recognize that without randomized experiments in which support provision and receipt are manipulated, we cannot determine direction of effect. Although daily diary research is unique in that it allows us to study relationship processes across time with minimal retrospection, it does not allow us to speak definitively about causal direction. Lab paradigms in which a stressor is presented and the opportunity to be self-reliant is manipulated would help us to understand the costs and benefits of varying levels of self-reliance. An experimental design would further enable us to contrast self-generated responses with objective observations of

supportive transactions; it is possible that participants are underestimating or overestimating their preference for self-reliance.

### **Perceived vs. Received Support**

When studying social support, prior research advocates for discerning between perceived and received support (Bolger & Amarel, 2007). Indeed, the mere perception that support is available may be more beneficial and effective in reducing distress than an actual support transaction (Bolger & Amarel, 2007). Wethington and Kessler (1986) found that perceiving social support was a stronger predictor of adjustment to stressful life events than received support. They deduced that the perception of support availability might either be comforting in itself, or provide the kind of psychological safety net that helps motivate self-reliant coping efforts (Bolger & Amarel, 2007; Wethington & Kessler, 1986). Perhaps counter-intuitively, those with the best social and personal resources were least likely to report seeking support when under stress (Brown, 1978). Taken together, those with a preference for self-reliance could in fact have access to the most optimal support, and are simply electing not to utilize it. Social network analyses will be crucial in determining whether a preference for self-reliance is more likely when high-quality support is perceived as available.

### **Theoretical Implications**

Prior to the current work, the preference for self-reliance has arguably remained unexamined. Other than a single study on breast cancer patients where self-reliance was categorized post-hoc, this preference—both as an individual difference and an important moderator when understanding social support transactions—has been neglected. We not only recognize that this preference exists, but we assessed and found evidence of it across three

assessment methods (open-ended, checklist and Likert scale). Though not explicitly referred to as preference for self-reliance, our findings complement what Repetti (1989) and Lavee and Ben-Ari (2007) found when examining space within romantic relationships during times of stress. Similar to Repetti (1989), in Studies 1 – 3 we found that partners recognize their counterparts' preference for self-reliance. Taking this a step further, we found that partners and close others provided fewer supportive transactions in response to this preference. We replicated the finding that certain personality traits are linked to a preference for self-reliance (Wang et al., 2011), and found that, like personality, individual differences in preference for self-reliance may prove important when predicting responses to stress (Boss, 2002; Burgess, 1926; Hill, 1958; Kantor & Lehr, 1975; Karney & Bradbury, 1995; Lavee, 2013; Parkes, 1986), availability of social support (Pierce et al., 1997; Pierce et al., 2013; Roos & Cohen, 1987; Swickert, 2009), and dyadic adaptations to stress (Karney & Bradbury, 1995). Most critical to advancing the understanding of individual differences and social support is our discovery that a preference for self-reliance is not specific to a certain age group, gender, support provider, profession or period in time (Heavey et al., 1995; Lavee & Ben-Ari, 2007; Repetti, 1989; Repetti et al., 2009).

### **Invisible Support**

Results justify broadening our typical conceptualization of social support. We know that support receipt is not always beneficial. A preference for self-reliance may be one explanation as to why. Bolger and colleagues spearheaded the idea that less can be more in regards to social support. Among a sample of Bar Exam takers, examinees' depressed mood was reduced when they did not report receiving support, yet their partners reported providing support, a term Bolger and colleagues coined as “invisible support” (Bolger, Zuckerman, & Kessler, 2000). In

comparison, when examinees reported receiving support and their partners reported providing support (i.e., visible support), examinees experienced a greater degree of anxiety and depression. A follow-up set of experimental studies corroborated these results. Participants receiving visible support reported greater distress reactivity to a laboratory stressor as compared to participants receiving invisible support (Bolger & Amarel, 2007). Howland and Simpson (2010) expanded on these findings by developing a coding scheme of visible and invisible partner support behaviors during a dyadic interaction task. Their coding system specified that visible support behaviors “emphasize the role of supporter and supported” and “focus on the partner and his/her problem,” while invisible support behaviors “deemphasize the role of supporter and supported” and “draw the focus away from the partner and his/her problem” (p. 1881). Observer-rated invisible support predicted increased self-efficacy and greater declines in negative emotions from pre- to post-interaction.

Our idea of a support provider doing nothing, allowing the support recipient to manage the stressor and/or task independently, takes invisible support provision a step further, to *no* support provision. However, the underlying concept of *less can be more* is common between both forms of support. We consider the implications of this commonality and hypothesize how someone with a preference for self-reliance would respond to receiving invisible support. Though purely speculative, we predict that invisible tangible support would be the most optimal for someone with a preference for self-reliance. Invisible tangible support provision would entail the provider doing something concrete, yet unrelated to the recipient’s primary stressor(s), and outside of the recipient’s awareness. To help illustrate, we consider our opening example: the husband with a preference for self-reliance would rather his wife provide him space to handle his

work stress independently, than provide him with support. However, what if the wife, knowing her husband would be stressed, took out the trash prior to his return home from work? This simple, concrete act is unrelated to the husband's work stress, and is completed before the husband returns home. In this situation, the husband has more time to independently manage his work stress (as he no longer has to take out the trash), but the wife experiences the benefits of actually being able to provide support to her self-reliant husband (Brown, Nesse, Vinokur, & Smith, 2003). Further research could determine if this is a true win-win scenario.

### **Applied Implications**

Much of the work this dissertation comprises is focused on support transactions within close relationships, many of which we presume occurred within the home. We understand the significant limitations to our understanding if we do not consider whether, and to what extent, a preference for self-reliance extends to other relationships (e.g. employer – employee, teacher – student) and contexts (e.g., hospitals, religious institutions). Just as human resource departments take note of educational and ethnic backgrounds, and teachers document social and academic capabilities, should companies (employers) and schools (teachers) be aware of employee and student support preferences? Expecting a boss to refrain from advising a stressed employee may be unrealistic and not in the best interest of the company, but what about in the case of a teacher? If a class consists of students with varying degrees of preferred self-reliance, should the opportunity to work on a project either as an individual or within a group be afforded? If so, would offering the choice increase learning and motivation among students with a preference for self-reliance, or could the opportunity to work alone potentially hinder the development of



important social skills? We pose questions such as these in the hope of encouraging future researchers to think as we do: broadly and practically.

The surge in psychological intervention research evidences the importance of uncovering new ways to facilitate effective behavioral patterns. Gawrilow and colleagues (2013) successfully used the intervention strategy of implementation intentions to facilitate self-regulation of goal pursuit. Modeled after an intervention technique performed among schoolchildren with and without ADHD (Gawrilow, Morgenroth, Schultz, Oettingen, & Gollwitzer, 2013), we consider whether by increasing goal commitment and effective goal striving, individuals with no preference for self-reliance would be able to independently complete a goal? As an example of how the intervention would be conducted, an individual would first name a stressor: “I need to create a budget for a new product,” followed by the development of an if-then plan relying solely on themselves: “If I do not know which formulas to use, then I will use a completed budget from my files as a reference.” If our results are consistent with those of Gawrilow et al. (2013), implementation intentions would enable non-self-reliant individuals to independently “master their challenges” and the stressors of their everyday lives. If interventions like the one described above prove successful at creating a preference for self-reliance, future investigations could determine under what conditions a preference for self-reliance should be increased (reduced), and whether the effects of such interventions extend across domain goals (e.g., weight loss, not arguing with a spouse; Gawrilow et al., 2013; Gollwitzer, Oettingen, Kirby, Duckworth, & Mayer, 2011; Oettingen & Gollwitzer 2010). Further, as has been found in the self-regulation literature, is there an optimal level of preference

for self-reliance for outcomes such as academic performance, school and social adjustment, and personal well-being (Mischel, Shoda, & Rodriguez, 1989; Sethi et al., 2000)?

We have speculated about the potential implications surrounding an increase in preference for self-reliance, but what could be the potential consequences of reducing or even eliminating a preference for self-reliance? Variables outside an individual's control (e.g., age, illness) can limit self-reliance capabilities, irrespective of their preference. The forced eradication of one's preference for self-reliance would likely impact the individual, the newly-created support providers, and the relationship between support provider and forced support recipient. Our ongoing research explores these implications among a sample of transplant recipients and their close others (i.e., spouse, family member, friend). What we learn from these close others has the further potential to explore human resiliency and adaptability—will a preference for self-reliance develop in response to a counterpart's medical condition? Many may not even realize that they have a preference for self-reliance until self-reliance becomes a matter of necessity rather than choice.

### **In Sum**

We are enthusiastic about our findings, their positive implications for future research, and the potential scope of this research program as a whole. We now have the analytical tools to identify individual differences, to characterize within-person processes, and to understand how individual differences might change over time (Bolger & Laurenceau, 2013; Bolger, Davis, & Rafaeli, 2003). A preference for self-reliance is a possible explanation as to why social support may not always be beneficial. Our findings draw attention to the importance of considering moderators when evaluating support effects. By integrating the study of individual differences

with dyadic processes, our work has successfully bridged two bodies of literature that have historically been studied separately. The addition of preference for self-reliance as an individual difference impacting dyadic processes i.e. support transactions, expands the field's understanding of social support and support provision. When providing support, we need to not only consider what *can be done* or *offered*, but also what *cannot be done* or *offered* in order to assist someone in their management of stressor. Our present work has shown that there *is* a desired form of support beyond the classic conceptualization of social support and, for some, less *is* in fact more.

# References

- Antonovsky, Aaron. (1979). *Health, Stress, and Coping* (1st ed). San Francisco: Jossey-bass.
- Ayduk, Ö., & Kross, E. (2010). From a distance: implications of spontaneous self-distancing for adaptive self-reflection. *Journal of Personality and Social Psychology, 98*(5), 809-829.
- Bar-Kalifa, E., & Rafaeli, E. (2013). Disappointment's sting is greater than help's balm: Quasi-signal detection of daily support matching. *Journal of Family Psychology, 27*(6), 956-967.
- Ben-Ari, A. (2012). Rethinking closeness and distance in intimate relationships are they really two opposites? *Journal of Family Issues, 33*(3), 391-412.
- Berndt, T. J. (1989). Obtaining support from friends during childhood and adolescence. In D. Belle (Ed.), *Children's social networks and social supports* (pp. 308-331). New York: Wiley.
- Bolger, N., & Eckenrode, J. (1991). Social relationships, personality, and anxiety during a major stressful event. *Journal of Personality and Social Psychology, 61*(3), 440-449.
- Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology, 69*(5), 890-902.
- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology, 79*(6), 953-961.
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology, 54*(1), 579-616.
- Bolger, N., & Amarel, D. (2007). Effects of social support visibility on adjustment to stress: experimental evidence. *Journal of Personality and Social Psychology, 92*(3), 458-475.

- Bolger, N., & Laurenceau, J. P. (2013). *Intensive Longitudinal Methods: An Introduction to Diary and Experience Sampling Research (Methodology in the Social Sciences)*. New York: The Guilford Press.
- Boss, P. (2002). *Family Stress Management: A Contextual Approach*. Thousand Oaks, CA: Sage.
- Bowling, N. A., Beehr, T. A., & Swader, W. M. (2005). Giving and receiving social support at work: The roles of personality and reciprocity. *Journal of Vocational Behavior, 67*(3), 476-489.
- Brown, B. B. (1978). Social and psychological correlates of help-seeking behavior among urban adults. *American Journal of Community Psychology, 6*(5), 425-439.
- Brown, S. L., Nesse, R. M., Vinokur, A. D., & Smith, D. M. (2003). Providing social support may be more beneficial than receiving it results from a prospective study of mortality. *Psychological Science, 14*(4), 320-327.
- Buckley, A. F., & Woodruff-Borden, J. (2006). Maternal modeling of coping: Relation to child anxiety. *Child & Family Behavior Therapy, 28*(4), 59-80.
- Burgess, E. W. (1926). The family as a unity of interacting personalities. *The Family, 7*(1), 3-9.
- Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology, 61*, 679-704.
- Charania, M. R., & Ickes, W. (2007). Predicting marital satisfaction: Social absorption and individuation versus attachment anxiety and avoidance. *Personal Relationships, 14*(2), 187-208.
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine, 38*(5), 300-314.

- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Social Psychology of Health: Claremont Symposium on Applied Social Psychology*. Newbury Park, CA: Sage.
- Connor-Smith, J. K., & Flachsbart, C. (2007). Relations between personality and coping: a meta-analysis. *Journal of Personality and Social Psychology, 93*(6), 1080-1107.
- Corr, P.J., & Matthews, G. (2009). *Cambridge Handbook of Personality Psychology*. Cambridge: Cambridge University Press.
- Coyne, J. C., Wortman, C. B., & Lehman, D. R. (1988). The other side of support: Emotional over involvement and miscarried helping. In B. H. Gottlieb (Ed.), *Marshaling social support: Formats, processes, and effects* (pp. 305–330). Newbury Park, CA: Sage
- Coyne, J. C., Ellard, J. H., & Smith, D. A. (1990). Social support, interdependence, and the dilemmas of helping. In B. R. Sarason & I. G. Sarason (Eds.), *Social support: An Interactional view* (pp. 129-149). Washington, DC: Hemisphere.
- Cross, S. E. (1995). Self-construals, coping, and stress in cross-cultural adaptation. *Journal of Cross-Cultural Psychology, 26*(6), 673-697.
- Cutrona, C. E. (1990). Stress and social support-in search of optimal matching. *Journal of Social and Clinical Psychology, 9*(1), 3-14.
- Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In I. G. Sarason, B. R. Sarason, & G. R. Pierce (Eds.), *Social support: An Interactional view* (pp. 319-366). New York: Wiley.
- Cutrona, C.E., & Suhr, J.A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication Research, 19*(2), 154-174.

- Cutrona, C.E., Shaffer, P.A., Wesner, K.A., & Gardner, K.A. (2007). Optimally matching support and perceived partner sensitivity. *Journal of Family Psychology, 21*(4), 754-758.
- Dakof, G. A., & Taylor, S. E. (1990). Victims' perceptions of social support: What is helpful from whom? *Journal of Personality and Social Psychology, 58*(1), 80-89.
- David, J. P., & Suls, J. (1999). Coping efforts in daily life: Role of Big Five traits and problem appraisals. *Journal of Personality, 67*(2), 265-294.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie canadienne, 49*(3), 182-185.
- Doumas, D. M., Margolin, G., & John, R. S. (2008). Spillover patterns in single-earner couples: Work, self-care, and the marital relationship. *Journal of Family and Economic Issues, 29*(1), 55-73.
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology, 70*(6), 1327-1342.
- Earley, P.C., Northcraft, G.B., Lee, C., & Lituchy, T.R. (1990). Impact of process and outcome feedback on the relation of goal setting to task performance. *Academy of Management Journal, 33*, 87-105.
- Eccles, J. S., Buchanan, C. M., Flanagan, C., Fuligni, A., Midgley, C., & Yee, D. (1991). Control versus autonomy during early adolescence. *Journal of Social Issues, 47*(4), 53-68.
- Funch, D. P., & Marshall, J. R. (1984). Self-reliance as a modifier of the effects of life stress and social support. *Journal of Psychosomatic Research, 28*(1), 9-15.



- Gawrilow, C., Morgenroth, K., Schultz, R., Oettingen, G., & Gollwitzer, P. M. (2013). Mental contrasting with implementation intentions enhances self-regulation of goal pursuit in schoolchildren at risk for ADHD. *Motivation and Emotion, 37*(1), 134-145.
- Gibbons, M. (2003). *The Self-Directed Learning Handbook: Challenging Adolescent Students to Excel*. New York: John Wiley & Sons Inc.
- Gilad, D., Lavee, Y., & Innes-Kenig, O. (2009). The structure of dyadic support among couples with and without long-term disability. *Journal of Behavioral Medicine, 32*(5), 453-465.
- Gollwitzer, A., Oettingen, G., Kirby, T. A., Duckworth, A. L., & Mayer, D. (2011). Mental contrasting facilitates academic performance in school children. *Motivation and Emotion, 35*(4), 403-412.
- Gunthert, K. C., Cohen, L. H., & Armeli, S. (1999). The role of neuroticism in daily stress and coping. *Journal of Personality and Social Psychology, 77*(5), 1087-1100.
- Heavey, C. L., Christensen, A., & Malamuth, N. M. (1995). The longitudinal impact of demand and withdrawal during marital conflict. *Journal of Consulting and Clinical Psychology, 63*(5), 797-801.
- Hill, R. (1958). Generic features of families under stress. *Social Casework, 39*, 139-150.
- Hobfoll, S. E., & London, P. (1986). The relationship of self-concept and social support to emotional distress among women during war. *Journal of Social and Clinical Psychology, 4*(2), 189-203.
- Hooker, K., Frazier, L. D., & Monahan, D. J. (1994). Personality and coping among caregivers of spouses with dementia. *The Gerontologist, 34*(3), 386-392.

- Horwitz, A. G., Hill, R. M., & King, C. A. (2011). Specific coping behaviors in relation to adolescent depression and suicidal ideation. *Journal of Adolescence, 34*(5), 1077-1085.
- House, J. (1981). *Work, Stress, and Social Support*. Reading, MA: Addison-Wesley.
- Howland, M., & Simpson, J. A. (2010). Getting in under the radar a dyadic view of invisible support. *Psychological Science, 21*, 1878-1885.
- Jensen-Campbell, L. A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J. Q., & Egan, S. K. (2002). Agreeableness, extraversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality, 36*(3), 224-251.
- Kantor, D., & Lehr, W. (1975). *Inside the Family: Towards a Theory of Family Process*. San Francisco: Josey-Bass.
- Kappes, H.B., & Shrouf, P.E. (2011). When goal sharing produces support that is not caring. *Personality and Social Psychology Bulletin, 37*(5), 662-673.
- Karney, B.R. & Bradbury, T.N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin, 118*, 3-34.
- Kiecolt-Glaser, J. K., & Glaser, R. (1986). Psychological influences on immunity. *Psychosomatics, 27*(9), 621-624.
- Kim, J.S. (1984). Effect of behavior plus outcome goal setting and feedback on employee satisfaction and performance. *The Academy of Management Journal, 27*(1), 139-149.
- Larson, R. W., & Gillman, S. (1999). Transmission of emotions in the daily interactions of single-mother families. *Journal of Marriage and the Family, 61*(1) 21-37.

- Lavee, Y. (2013). Stress processes in families and couples. In G. W. Peterson & K. Bush (Eds.), *Handbook of marriage and the family* (3<sup>rd</sup> ed., pp. 159-176). New York, NY: Springer Science.
- Lavee, Y., & Ben-Ari, A. (2007). Relationship of dyadic closeness with work-related stress: a daily diary study. *Journal of Marriage and Family*, 69(4), 1021-1035.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. New York, NY: Springer Publishing Company, Inc.
- Lee-Baggley, D., Preece, M., & DeLongis, A. (2005). Coping with interpersonal stress: Role of Big Five traits. *Journal of Personality*, 73(5), 1141-1180.
- Markus, H. R., & Kitayama, S. (2010). Cultures and selves A cycle of mutual constitution. *Perspectives on Psychological Science*, 5(4), 420-430.
- McCrae, R. R., & Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, 54(2), 385-404.
- McCrae, R. R., Costa, P. T., & Busch, C. M. (1986). Evaluating comprehensiveness in personality systems: The California Q-Set and the five-factor model. *Journal of Personality*, 54(2), 430-446.
- Mikulincer, M., & Nachshon, O. (1991). Attachment styles and patterns of self-disclosure. *Journal of Personality and Social psychology*, 61(2), 321-331.
- Mischel, W. (2004). Toward an integrative science of the person. *Annu. Rev. Psychol.*, 55, 1-22.
- Mischel, W., Shoda, Y., & Rodriguez, M. L. (1989). Delay of gratification in children. *Science*, 244(4907), 933-938.

- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological review*, *102*(2), 246-268.
- Mischel, W., & Shoda, Y. (1999). Integrating dispositions and processing dynamics within a unified theory of personality: The cognitive-affective personality system. *Handbook of personality: Theory and research*, *2*, 197-218.
- O'Brien, T. B., & DeLongis, A. (1996). The interactional context of problem-, emotion-, and relationship-focused coping: the role of the big five personality factors. *Journal of Personality*, *64*(4), 775-813.
- Oettingen, G., & Gollwitzer, P. M. (2010). Strategies of setting and implementing goals: Mental contrasting and implementation intentions. In J. E. Maddux & J. P. Tangney (Eds.), *Social psychological foundations of clinical psychology* (pp. 114-135). New York: Guilford Press.
- Ortega, A. N., & Alegría, M. (2002). Self-reliance, mental health need, and the use of mental healthcare among island Puerto Ricans. *Ment Health Serv Res*, *4*(3), 131-140.
- Parkes, K. R. (1986). Coping in stressful episodes: The role of individual differences, environmental factors, and situational characteristics. *Journal of Personality and Social Psychology*, *51*(6), 1277.
- Pierce, G. R., Lakey, B., Sarason, I. G., Sarason, B. R., and Joseph, H. J. (1997). Personality and social support processes: A conceptual overview. In Pierce, G. R., Lakey, B., Sarason, I. G., and Sarason, B. R. (Eds.), *Sourcebook of social support and personality* (pp. 3–18). Plenum Press, New York.

- Pierce, G. R., Lakey, B., & Sarason, I. G. (2013). *Sourcebook of Social Support and Personality*. Seattle, Washington: Springer Science & Business Media, LLC.
- Rafaeli, E., & Gleason, M. E. (2009). Skilled support within intimate relationships. *Journal of Family Theory & Review*, *1*(1), 20-37.
- Reis, H. T., & Aron, A. (2008). Love: What is it, why does it matter, and how does it operate? *Perspectives on Psychological Science*, *3*(1), 80-86.
- Repetti, R.L. (1989). Effects of daily workload on subsequent behavior during marital interaction: The roles of social withdrawal and spouse support. *Journal of Personality and Social Psychology*, *57*(4), 651-659.
- Repetti, R. L. (1992). Social withdrawal as a short-term coping response to daily stressors. In H. S. Friedman(Ed.), *Hostility, coping and health* (pp. 151-165). Washington, DC: American Psychological Association.
- Repetti, R.L., Wang, S., & Saxbe, D. (2009) Bringing it all back home: how outside stressors shape families' everyday lives. *Current Directions in Psychological Science*, *18*(2), 106-111.
- Roberts, N. A., & Levenson, R. W. (2001). The remains of the workday: Impact of job stress and exhaustion on marital interaction in police couples. *Journal of Marriage and Family*, *63*(4), 1052-1067.
- Roos, P. E., & Cohen, L. H. (1987). Sex roles and social support as moderators of life stress adjustment. *Journal of Personality and Social Psychology*, *52*(3), 576-585.
- Rosenblatt, P. C., & Barner, J. R. (2006). The dance of closeness-distance in couple relationships after the death of a parent. *OMEGA-Journal of Death and Dying*, *53*(4), 277-293.

- Ryan, R. M., & Solky, J. A. (1996). What is supportive about social support? On the psychological needs for autonomy and relatedness. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.), *Handbook of social support and the family* (pp. 249-267). New York: Plenum.
- Saucier, G. (1994). Mini-markers: A brief version of Goldberg's unipolar Big-Five markers. *Journal of Personality Assessment*, 63(3), 506–516.
- Schulz, M. S., Cowan, P. A., Pape Cowan, C., & Brennan, R. T. (2004). Coming home upset: Gender, marital satisfaction, and the daily spillover of workday experience into couple interactions. *Journal of Family Psychology*, 18(1), 250-263.
- Sessa, F. M., & Steinberg, L. (1991). Family structure and the development of autonomy during adolescence. *The Journal of Early Adolescence*, 11(1), 38-55.
- Sethi, A., Mischel, W., Aber, J. L., Shoda, Y., & Rodriguez, M. L. (2000). The role of strategic attention deployment in development of self-regulation: Predicting preschoolers' delay of gratification from mother–toddler interactions. *Developmental Psychology*, 36(6), 767-777.
- Shrout, P.E., Herman, C.M., & Bolger, N. (2006). The costs and benefits of practical and emotional support on adjustment: A daily diary study of couples experiencing acute stress. *Personal Relationships*, 13(1), 115-134.
- Steinberg, L. (1987). The impact of puberty on family relations: Effects of pubertal status and pubertal timing. *Developmental Psychology*, 23, 451-460.
- Story, L. B., & Repetti, R. (2006). Daily occupational stressors and marital behavior. *Journal of Family Psychology*, 20(4), 690-700.

- Swickert, R. (2009). 9). Personality and social support. In P. Corr & G. Matthews (Eds.), *Cambridge handbook of personality* (pp. 524–540). Cambridge, England: Cambridge University Press.
- Taylor, S. E. (2007). Social support. In H. S. Friedman and R. C. Silver (Eds.), *Foundations of Health Psychology* (pp. 145-171). New York: Oxford University Press.
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology, 87*(3), 354-362.
- Taylor, S.E., Seeman, T.E., Eisenberger, N.I., Kozanian, T.A., Moore, A.N., & Moons, W.G. (2010). Effects of a supportive or an unsupportive audience on biological and psychological responses to stress. *Journal of Personality and Social Psychology, 98*(1), 47-56.
- Thompson, A., & Bolger, N. (1999). Emotional transmission in couples under stress. *Journal of Marriage and the Family, 61*(1), 38-48.
- Tong, E. M., Bishop, G. D., Diong, S. M., Enkelmann, H. C., Why, Y. P., Ang, J., & Khader, M. (2004). Social support and personality among male police officers in Singapore. *Personality and Individual Differences, 36*(1), 109-123.
- Uno, D., Uchino, B.N., & Smith, T.W. (2002). Relationship quality moderates the effect of social support given by close friends on cardiovascular reactivity in women. *International Journal of Behavioral Medicine, 9*(3), 243-262.
- Vickers, R. R., Jr., Kolar, D. W. & Hervig, L. K. (1989). Personality correlates of coping

- with military basic training (Report No. 89-3). San Diego, CA: Naval Health Research Center.
- Wang, S. W., Repetti, R. L., & Campos, B. (2011). Job stress and family social behavior: The moderating role of neuroticism. *Journal of Occupational Health Psychology, 16*(4), 441-456.
- Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18*(3), 341-358.
- Watson, D., & Hubbard, B. (1996). Adaptational style and dispositional structure: Coping in the context of the Five-Factor model. *Journal of Personality, 64*(4), 737-774.
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior, 27*, 78-89.
- Wills, T. A. (1991). Social support and interpersonal relationships. In M. Clark (Ed.), *Review of personality and social psychology* (vol. 12, pp. 265-289). Newbury Park, CA: Sage.