

Relational sacrifice across family relationships and contexts

by

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B.S., Brigham Young University, 2014

M.S., Brigham Young University, 2017

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Applied Human Sciences
College of Health and Human Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2020

Abstract

The first study in this dissertation proposes and seeks to validate a new measure of relational sacrifice, the Relational Sacrifice Processes Scale (RSPS). Items were developed based on gaps identified through an extensive literature review and edited based on feedback from content experts. Through this process, a two-factor solution was hypothesized: active and passive. However, exploratory and confirmatory factor analyses yielded a three-factor solution. Through these analyses, the initial pool of 31 items was cut down to 20 total items across three subscales, identified as *developing dependence*, *communication*, and *managing habits*. Each of these concepts matches to themes existent within interdependence theory (Kelley & Thibaut, 1978, Rusbult & Buunk, 1993). The RSPS was designed to have wide-reaching applicability across a variety of family relationships and contexts, rather than solely being used to explore sacrifice within romantic relationships, a common shortcoming of current assessment tools.

The second study operationalizes and tests a theorized model of sacrifice within family relationships; the model suggests that motivations to sacrifice, transformation of motivations to sacrifice, types of sacrifice, types of self-care, and family processes are all interrelated with bidirectional influence (Pippert et al., 2019). This model was operationalized and tested using a sample of adults with minor children who were coparenting apart (divorced, separated, etc.). A structural equation model was fit and demonstrated that one will be more likely to sacrifice in a relationship as they increase personal and relational efforts. One's motivations to sacrifice and relationship quality were found to influence one's relational sacrifice as well, providing partial support for the theorized model from Pippert and colleagues (2019). Faith and self-care practices at Wave 1 were directly related to relational sacrifice at Wave 1, while only faith practices were indirectly related to relational sacrifice at Wave 2.

The third study validates the RSPS among the parent-child relationship, within a military family context. It specifically explores how motivations to sacrifice in a mother-child relationship moderate the effects of relational sacrifice on the mother, child, and family as a whole. Multi-group moderation was employed to determine how varying levels of motivation (high avoidance and high approach, low avoidance and low approach, or either high approach and low avoidance or low approach and high avoidance) influenced the relationships between relational sacrifice and the mother, child, and family as a whole. Moderation was found between relational sacrifice and each of the dependent variables. Results of these analyses suggest that those who were high in both approach and avoidance motivations demonstrated a more complete approach to sacrifice.

Taken together these studies demonstrate that it may be meaningful to explore a holistic motivation to sacrifice, as compared to separating out distinct motivations, in studies exploring relational sacrifice processes. The RSPS can aid practitioners in helping their clients (within various relationships and contexts) understand that the self, the other, and the relationship are important to consider when striving to build successful and healthy relationships.

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Table of Contents

List of Figures	xii
List of Tables	xiii
Acknowledgements.....	xiv
Chapter 1 - Introduction.....	1
Interdependence Theory	1
Relational Sacrifice.....	1
Overview.....	4
Study 1: A New Measure of Sacrifice: Relational Sacrifice Processes Scale	6
Study 2: Relational Sacrifice Processes among Those Coparenting across Households: Insights from Interdependence Theory.....	7
Study 3: Impact of Military Wives' Motivations to Sacrifice on the Self, Child, and Family ...	8
Chapter 2 - A New Sacrifice Measure: Relational Sacrifice Processes Scale	10
Interdependence Theory	11
Definitions of Sacrifice.....	11
Current Sacrifice Scales.....	12
Religiosity and Sacrifice	15
Current Study.....	15
Method.....	16
Participants.....	16
Measures	18
The relational sacrifice processes scale	18
Faith activities in the home scale (FAITHS)	20
Analysis.....	21
Results.....	23
Exploratory Factor Analysis	23
Confirmatory Factor Analysis.....	26
The association between the RSPS and other indicators	29
Discussion.....	29
Implications.....	34

Limitations and Future Directions	36
Chapter 3 - Relational Sacrifice Processes among Those Coparenting across Households:	
Insights from Interdependence Theory	38
Interdependence Theory	39
Motivations to Sacrifice	41
Relational Sacrifice	42
Self-Care	44
Family Relational Processes	45
Religious Family Processes	46
Coparenting Quality	46
Covariates	48
Current Study	48
Methods	51
Participants	51
Measures	53
Motivations to sacrifice	53
Relational sacrifice	53
Self-Care	54
Faith activities	54
Coparenting quality	54
Covariates	55
Analysis	55
Results	56
Preliminary Results	56
Measurement Models	59
Structural Model	59
Tests for Indirect Effects	61
Discussion	61
Implications	63
Limitations and Future Directions	65
Chapter 4 - Impact of Military Wives' Motivations to Sacrifice on the Self, Child, and Family	68

Interdependence Theory	69
Military Families and Well-Being	70
Mental Health.....	70
Child Well-Being	71
Family Relational Health	71
Sacrifice	72
Current Study	74
Methods	75
Procedures and Participants	75
Measures	78
Relational sacrifice.....	78
Well-being.....	78
Mental health	78
Family relational health	79
Child well-being.....	79
Motivations to sacrifice.....	79
Covariates	80
Analysis.....	80
Results.....	81
Preliminary Results	82
Confirmatory Analysis.....	84
Structural Model	84
Multi-Group Moderation.....	84
Discussion.....	88
Implications.....	90
Limitations & Future Directions	91
Chapter 5 - Conclusion	95
References.....	100
Appendix A - Measure List for Study 1.....	124
Measure List	124
Motivations to Sacrifice	124

Relational Sacrifice Processes Scale:.....	125
The Pittsburgh Enjoyable Activities Test (PEAT).....	127
Faith Activities In The Home Scale (FAITHS)	128
Multidimensional Co-parenting Scale for Dissolved Relationships	129
Appendix B - Measure List for Study 2.....	131
Measure List	131
Motivations to Sacrifice	131
Relational Sacrifice Processes Scale:.....	132
The Pittsburgh Enjoyable Activities Test (PEAT).....	134
Faith Activities In The Home Scale (FAITHS)	135
Multidimensional Co-parenting Scale for Dissolved Relationships	136
Appendix C - Measure List for Study 3.....	138
Motivations to Sacrifice	138
Scoring: Aggregate scores for each subscale to get a summary score for each scale.....	138
Relational Sacrifice Processes Scale:.....	139
Rhode Island Stress and Coping Inventory.....	141
Child Behavior Checklist (CBCL).....	142
FACES IV (Family Satisfaction Subscale).....	143

List of Figures

Figure 2.1. Confirmatory Factor Analysis for Relational Sacrifice Processes Scale.....	28
Figure 3.1. Study 2 Conceptual Model.	50
Figure 3.2. Study 2 Final Structural Equation Model.	60
Figure 4.1. Study 3 Conceptual Model.	75
Figure 4.2. Study 3 Final Multi-Group Moderation Model.	86

List of Tables

Table 2.1. Study 1 Sample Descriptions.....	17
Table 2.2. Initial Conceptualization of Relational Sacrifice Processes Scale.....	19
Table 2.3. Study 1 Bivariate Correlations.....	22
Table 2.4. Exploratory Factor Analysis Results for Relational Sacrifice Processes Scale.....	25
Table 3.1. Study 2 Concepts and Associated Measures.....	52
Table 3.2. Study 2 Sample Characteristics.....	52
Table 3.3. Study 2 Bivariate Correlations and Descriptive Statistics.....	58
Table 4.1. Study 3 Concepts and Associated Measures.....	76
Table 4.2. Study 3 Sample Characteristics.....	77
Table 4.3. Study 3 Bivariate Correlations and Descriptive Statistics.....	83

Acknowledgements

There are many people whom I need to thank who have helped me along the journey that has been this dissertation. I am so grateful for the funding that I have received to complete my research through a small university grant and the Robert H. Poresky Assistantship in Family Studies and Human Services through Kansas State University. My co-advisors Drs. Anthony Ferraro and Mindy Markham have been crucial to my success. They have guided me and helped keep me stay motivated. I am also grateful to the other members of my committee for their support and expertise: Duane Crawford, Glade Topham, and Sarah Riforgiate. They have helped me make this project more meaningful and have contributed to helping me expand my skills. I am so grateful to the other professors at Kansas State University who have demonstrated their support and given me encouragement along the way. The friends that I have made through my educational pursuits have motivated me and have always been willing to lend a listening ear. They have helped me to see the trees from the forest, helping me come to conclusions that have moved my work forward. My family has been critical to my success. My husband and parents have spent countless hours listening to my ideas and lending support when roadblocks arose. They have expressed silent and explicit support, for which I am forever grateful. My large support group has been critical to my success, which extends much farther than the actual writing of the dissertation, but the skills and confidence I have gained during this process.

Chapter 1 - Introduction

Interdependence Theory

As individuals engage in close relationships with one another, interdependence theory argues that both individuals invest in the relationship, with efforts affecting both individuals (Kelley & Thibaut, 1978) and the relationship as a whole (Rusbult & Buunk, 1993; Rusbult et al., 1998). Scholars often explain sacrifice as a way that those in close relationships invest in the relationship in hopes of increasing the bond and connection felt to the other person (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). According to interdependence theory, one's actions are not enough to facilitate relationship commitment and satisfaction, but one's motivations to act must transform from being self-focused to other-focused (Rusbult & Arriaga, 1997; Rusbult & Buunk, 1993). When one is able to sacrifice in the interest of their relationship, in place of seeking self-interest, commitment levels, satisfaction levels, and the size of investment into the relationship increase (Rusbult & Van Lange, 2008; Van Lange et al., 1997). Within interdependence theory, sacrifices are important to the continuation of close relationships. They have influence within the lives of the individuals, and within relationships as a whole. When viewed through a lens of interdependence theory, scholars can ask questions about and understand the wide-reaching effects of sacrifice on individuals and the family as a whole.

Relational Sacrifice

Conceptually, sacrifice has been defined in a number of distinctive ways. I was purposeful in including and identifying both commonly and uncommonly assessed aspects of sacrifice within my conceptual definition, toward the interest of having an inclusive, expansive, and versatile definition. Herein, relational sacrifice is defined as: *voluntarily and deliberately giving up, setting aside, or surrendering some type of self-interest or personal desire for a*

purpose to obtain or achieve something. This definition has broader applicability within relationships and across contexts. It represents a process of engagement in a relationship – sometimes one may choose to engage in a sacrifice that could be considered an isolated, one-time sacrifice; alternatively, one may have to continuously choose to engage in the same type of sacrifice within a relationship (e.g., continuously choosing to sacrifice to care for a loved one with a health problem). This definition of sacrifice allows individuals to be motivated by various factors, for the specific types of sacrifice to fluctuate, and space for the desires or purposes of sacrifice to be beneficial or harmful to the individual and/or the relationship.

A common aspect of family life is to interact through sacrifice, in an effort to meet each other's needs. Through engaging in sacrifice processes, family members build affection for and strengthen bonds with each other (Dollahite et al., 2009). To understand the effects of sacrifice on individuals and their families requires an understanding of both the process and driving motivations. As these processes and motivations are better comprehended, the effects of sacrifice on family members, their relationships, and the family as a whole can be more fully realized. Family members will be able to recognize when a sacrifice may be negative or positive, either for themselves or for the relationship (Pippert et al. 2019). As family members are able to recognize the influence their behaviors have on themselves and those around them, they may be motivated to engage in sacrifice in healthy ways that will be beneficial to themselves, their relationships, and their families.

Scholars have argued that in order for research to be the most comprehensive and thorough, qualitative and quantitative methodologies should be used in conjunction and build upon each other (Roberts & Castell, 2016). Sacrifice is a concept that has been explored using quantitative methodologies (Impett et al., 2014; Powell & Van Vugt, 2003), qualitative

methodologies (Dollahite et al., 2009; Pippert et al., 2019), and a mixture of quantitative and qualitative methodologies (Guillaume & Pochic, 2009). Using these different methodologies (e.g., daily diaries, interviews, surveys), scholars have learned about many aspects of relational sacrifice processes. Although extensive work has been done qualitatively, this dissertation will build upon that work through the development of a new scale and operationalization of a model of sacrifice in family life (Pippert et al., 2019). The quantitative nature of these studies will add to our collective understanding of sacrifice processes and findings will inform future qualitative and quantitative studies.

Previous research has revealed sacrifice to be a complex relational process. Although most sacrifice research focuses exclusively on the relational motivations from the perspective of the one sacrificing, some scholars have acknowledged that motivations to sacrifice could be perceived as positive or negative (Ruppel & Curran, 2012) in nature, or personal, relational, or religious (Pippert et al., 2019). These relational motivations are typically categorized as either approach (e.g., to feel closer to someone) or avoidance (e.g., to keep the other person from getting angry; Impett et al., 2005; Impett & Gordon, 2010; Kogan et al., 2010). Various types of sacrifice in romantic relationships have been identified including friendships, participating in recreational activities, relationships with family members, and popularity or social standing (Impett et al., 2005; Totenhagen et al., 2013). The amount one is willing to sacrifice for a romantic partner (Righetti et al., 2015; Ruppel & Curran, 2012; Whitton et al., 2007) and the frequency of sacrifice (Impett et al., 2005; Impett & Gordon, 2010; Whitton et al., 2007) have also been explored. The broadness of sacrifice aspects measured across these scales demonstrates that there is complexity in relational sacrifice processes.

Most questions scholars have posed about sacrifice have been in the context of romantic relationships (Impett et al., 2005; Ruppel & Curran, 2012), where sacrifice has been found to positively affect marital relationship quality (Stanley et al., 2006). A few studies have explored how parents sacrifice for their children through giving money or time to help those children in various ways (Kochuyt, 2004; Marks et al., 2010), but those are not the only ways parents may sacrifice for their children. They may give up personal dreams and goals in order to provide what they perceive as best for their children (Ashton-James et al., 2013; Warnick, 2014). Family members of military servicemembers sacrifice innately by simply being part of a military family (Boberiene & Hornback, 2014; Hall, 2011), but scholars have yet to explore the nuances of these sacrifices.

Due to sacrifice being connected to many religious beliefs and practices, some may find it challenging to see them as distinct (Burr et al., 2012; Dollahite et al., 2009; Mahoney, 2013). For example, prayer has been connected with helping couples increase their loving actions towards each other and their willingness to sacrifice for their partner (Fincham et al., 2008; Marks, 2008). Sacrifices have been explored from a perspective of sacredness, where the potential influence of the sacrifice becomes greater simply because one perceives significant meaning in the sacrifice process (Mahoney, 2013). Ultimately, the range of family types and contexts that sacrifice has been studied in are relatively limited. To the best of my knowledge, sacrifice has not been explored among those coparenting apart (e.g., divorced, separated) and has only scratched the surface of sacrifice processes within a parent-child relationship (Kelly & Kropf, 1995) and relationships in the context of military family life (Bergmann et al., 2014).

Overview

Minimal research has been done to contextualize sacrifice across relationship types and situations, with most work focused on sacrifices that fall exclusively within the confines of romantic relationships (Burr et al., 2012; Whitton et al., 2007). This dissertation builds off of a previously established qualitative model of sacrifice within family relationships (Pippert et al., 2019), based upon principles of interdependence theory (Kelley & Thibaut, 1978). It is purposeful in studying sacrifice within various family contexts, including sacrifices between those coparenting apart (i.e., divorced, separated, or otherwise not currently in a relationship) and between mothers and children within a military family context. To evaluate this model, a new measure of relational sacrifice processes is needed. Thus, Study 1 provides the development and validation of The Relational Sacrifice Processes Scale (RSPS), before utilizing the scale to evaluate Pippert and colleagues' (2019) model about the role of sacrifice processes within the relationship of those coparenting apart and how sacrifice relates to other personal and relational factors (Study 2). Finally, the measure will be utilized in a secondary context (military families) and with a secondary relationship type (mother-child) to explore how motivations to sacrifice influence the effects that relational sacrifice has on personal factors for the mother and the child, and the family's relational health as a unit (Study 3).

The central purpose of this dissertation is to aid families and practitioners with a greater understanding about the role of sacrifice in building interdependence, and to provide expanded tools (i.e., a new relational sacrifice process measure) that practitioners can use to help them gauge how and if clients are realistically engaging in sacrifice processes. Further, that information can then be used to help practitioners identify areas of emphasis or growth for their clients. The following research questions guide this dissertation:

RQ1: Is the Relational Sacrifice Processes Scale a valid scale to measure the construct of relational sacrifice processes?

RQ2: Does the Relational Sacrifice Processes Scale factor structure demonstrate consistency across different relationship types (e.g., coparents in different households and mother-child relationship) and contexts (e.g., divorce, separation, military families)?

RQ3: How do motivations to sacrifice impact the relationship between relational sacrifices and individual, child, and family health?

Study 1: A New Measure of Sacrifice: Relational Sacrifice Processes Scale

Most sacrifice research has been explored within the context of romantic relationships (Ruppel & Curran, 2012); however a limited number of studies have been conducted that expand the knowledge base, exploring sacrifice within other types of relationships or contexts (Bergmann et al., 2014; Stack & Meredith, 2018). Sacrifice scales currently explore many nuances of sacrifice processes, including one's willingness to sacrifice (Van Lange et al., 1997), the frequency of sacrifice in a romantic relationship (Whitton et al., 2007), one's satisfaction with the way he/she engaged in a sacrifice for another (Stanley & Markman, 1992), and one's motivations for engaging in a sacrifice (Impett et al., 2005). These scales do not address the fundamental aspects of sacrifice processes across relationships and contexts. This study seeks to validate a new measure of relational sacrifice, the RSPS, which is designed to have wide-reaching applicability across a variety of family relationships and contexts, rather than solely being used to explore sacrifice within romantic relationships. To this end, the development of the scale will purposefully aim to address gaps identified through an extensive literature review and as suggested through review by subject matter experts. Based upon previous research, a two-factor solution is hypothesized that will consist of subscales for active and passive relational

sacrifices. Exploratory and confirmatory factor analyses, using two independent samples, will be conducted, in the interest of testing the following hypotheses:

H1: It is expected that the hypothesized Relational Sacrifice Processes Scale will have two emergent factors: active and passive.

H2: It is expected that the Relational Sacrifice Processes Scale will have a second order factor of sacrifice upon which the hypothesized active and passive subscales will load, representing relational sacrifice more broadly.

H3: It is anticipated that some of the hypothesized items of the scale will not be retained through the process of exploratory factor analysis.

H4: It is expected that this measure of sacrifice will be distinct from religious practices, demonstrating discriminant validity.

Study 2: Relational Sacrifice Processes among Those Coparenting across Households:

Insights from Interdependence Theory

A substantial portion (30-35%) of the US population are raised in a home without both biological parents present (U.S. Census Bureau, 2016; Vespa et al., 2013). Those who coparent apart (e.g., divorced, separated) have a continued relationship due to shared responsibilities for shared children (Ahrons, 1994). Within the context of interdependence theory (Kelley & Thibaut, 1978), Kelley (1979) argues that close relationships do not have to have a romantic quality. This theory argues that relational sacrifice is a means of investing in a relationship to increase bond and commitment (Ruppel & Curran, 2012), while self-care is a means to help individuals remember that they have importance and need to not lose themselves completely in a relationship (Rusbult & Van Lange, 2003). Pippert and colleagues (2019) proposed a model of how sacrifice and self-care processes are related to other family processes, based on principles

from interdependence theory. This study seeks to operationalize and test this model using a sample of those coparenting apart. The hypotheses for this study include:

H1: It is expected that Wave 1 approach motivations to positively influence Wave 2 relational sacrifice and Wave 2 coparenting support.

H2: It is expected that Wave 1 avoidance motivations to negatively influence Wave 2 relational sacrifice and Wave 2 coparenting support.

Study 3: Impact of Military Wives' Motivations to Sacrifice on the Self, Child, and Family

Propositions from interdependence theory would suggest that the self, the other, and the relationship are all distinctive and necessary to consider in the study of close relationships (Rusbult & Buunk, 1993). Motivations to sacrifice have also been found to be important in determining relational outcomes (Akhtar & Varma, 2012), but interdependence theory argues that motivations to sacrifice need to be transformed from being self- to other-focused in order for relationships to be the most successful and have the greatest quality (Rusbult & Arriaga, 1997). This study will validate the RSPS among the parent-child relationship within a military family context. Multi-group moderation will be employed to determine how varying levels of motivation (high avoidance and high approach, low avoidance and low approach, or either high approach and low avoidance or low approach and high avoidance) influence the relationship between relational sacrifice and the mother, child, and family as a whole. The hypotheses for this study include:

H1: It is expected that the Relational Sacrifice Processes Scale will hold consistent with its previously validated structure.

H2: It is expected that mothers' motivations to sacrifice will moderate the relationship between their sacrifices, and their mental health (as evidenced by stress and coping), their child's behavioral outcomes, and family satisfaction.

Chapter 2 - A New Sacrifice Measure:

Relational Sacrifice Processes Scale

Although there is an extensive body of literature surrounding sacrifice in family life, most of the current research focuses exclusively on sacrifices occurring between those in romantic relationships (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). However, there are many other relationships in which sacrifice may be present and influential. Sacrifice may be present in parent-child relationships, including parents giving their time and money to provide what they see as best for their children (Kochuyt, 2004). Alternatively, sacrifice may also play a part in sibling relationships, but little research has been conducted beyond learning that increased willingness to sacrifice for one sibling may be related to increased willingness to sacrifice for other siblings (Marciniak, 2015). Further, parents and children may sacrifice due to their religious beliefs (Dollahite et al., 2009). These varying types of relationships highlight the complexity of assessment and the versatility in measurement needed to capture this complexity.

Sacrifice may also be present across a variety of family contexts. Dating and marital contexts are sometimes studied in conjunction when it comes to sacrifice (Whitton et al., 2007; Young, 2010). Although the research is limited, sacrifice has been studied within a military family life context, specifically in regards to when a family member is deployed (Bergmann et al., 2014). Single parents have expressed the need to sacrifice to make sure that their child's needs were met (Stack & Meredith, 2018), but research has yet to explore how sacrifices may vary between different relationships and contexts. The differences in sacrifice processes across relationships and contexts may be understudied due to the variety of human relationships that exist and the complexity of associated interpersonal processes. Guided by interdependence theory (Kelley, 1979), this study seeks to provide scholars with a tool to measure relational

sacrifice across a variety of relationships and circumstances that can allow for more consistency, increased potential for cross-population comparison, and an expansion of collective understanding regarding sacrifice across relationships.

Interdependence Theory

Interdependence theory provides a theoretical lens for scholars to use, through which it is possible to better interpret the behaviors of individuals both collectively and individually (Kelley, 1979; Rusbult & Van Lange, 2008). An important aspect of interdependence theory is that those in close relationships invest in the relationship in an effort to increase the bond felt (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). Within interdependence theory, one of the ways that investing in a relationship has been operationalized is through engaging in sacrifice processes (Kelley, 1979; Ruppel & Curran, 2012; Rusbult & Buunk, 1993). As individuals invest in a relationship, they are more likely to develop a level of dependence on each other that can contribute to the relationship commitment and satisfaction that one may feel (Rusbult & Buunk, 1993). Interdependence theory has also demonstrated that as individuals sacrifice from a place of being relationship-focused instead of being self-focused, the positive benefits of the investment can increase (Rusbult & Van Lange, 2008; Van Lange et al., 1997).

Definitions of Sacrifice

Conceptually, sacrifice has been defined in a number of distinctive ways. An early definition that emerged in the sacrifice literature referred to sacrifice as “the propensity to forego immediate self-interest to promote the well-being of a partner or relationship” (Van Lange et al., 1997, p. 1374). This definition has often been referenced within research about romantic relationships. Other scholars, while employing interdependence theory, have utilized variations of this definition (Impett & Gordon, 2010; Kogan et al., 2010). In an in-depth discussion to

clarify sacrifice within psychoanalytic literature, Akhtar and Varma (2012) claim that a sacrifice is “a deliberate act that results from putting self-interest aside for the benefit of someone else” (p. 108). Their definition is applicable to a variety of relationships and highlights the actor’s purposeful action. Akhtar and Varma (2012) also explained that sacrifice can be complicated due to being influenced by many factors, is not equal to a compromise, and often includes moral elements. Their definition helps demonstrate some of the complexities regarding sacrifice processes.

I was purposeful in including and identifying both commonly and uncommonly assessed aspects of sacrifice within my conceptual definition, toward the interest of having an inclusive, expansive, and versatile definition. Herein, relational sacrifice is defined as: *voluntarily and deliberately giving up, setting aside, or surrendering some type of self-interest or personal desire for a purpose to obtain or achieve something*. This definition has broader applicability within relationships and across contexts. It represents a process of engagement in a relationship – sometimes one may choose to engage in a sacrifice that could be considered an isolated, one-time sacrifice; alternatively, one may have to continuously choose to engage in the same type of sacrifice within a relationship (e.g., continuously choosing to sacrifice to care for a loved one with a health problem). This definition of sacrifice allows individuals to be motivated by various factors, for the specific types of sacrifice to fluctuate, and space for the desires or purposes of sacrifice to be beneficial or harmful to the individual and/or the relationship.

Current Sacrifice Scales

There are a variety of scales utilized by scholars to explore sacrifice, each with the purpose of tapping into different aspects of complex sacrifice processes, with some being used more consistently than others. These scales include types of sacrifice (Impett et al., 2005), the

frequency of engaging in a sacrifice (Whitton et al., 2007), the ease of a sacrifice (Kogan et al., 2010), a willingness to sacrifice (Van Lange et al., 1997), motivations to engage in sacrifice (Impett et al., 2005), emotions about a sacrifice (Impett et al., 2010), and one's satisfaction with a sacrifice (Stanley & Markman, 1992).

Scholars have tended to classify the types sacrifices as either active or passive (Impett et al., 2005; Righetti et al., 2013; Van Lange et al., 1997). When one engages in active sacrifices they are participating in an activity they originally did not want to do. When engaging in passive sacrifice one gives up participating in an activity that they had originally wanted to do (Van Lange et al., 1997). When active and passive categories are not used to describe the sacrifice, scholars have used a list of common sacrifice categories (i.e., recreation, health and lifestyle, and communication and interaction) to learn about the ways that individuals sacrifice (Corkery et al., 2011; Impett et al., 2005; Totenhagen et al., 2013).

The frequency of sacrifice has been measured in both quantitative and qualitative ways, with little consistency. Quantitative scales have ranged from using dichotomous indexes (Akcabozan et al., 2016; Ruppel & Curran, 2012) to a 7-point Likert scale (Mattingly & Clark, 2012). These Likert scales have varying scale point labels including *never to all the time* (Impett & Gordon, 2010), *never to often* (Corkery, 2015), or *never to daily* (Young, 2010), making comparison between scales difficult.

The difficulty of engaging in a sacrifice has typically been measured in one of two ways. In the first, researchers have asked participants if they felt like they put a lot of time and effort into making the sacrifice (Kogan et al., 2010; Ruppel & Curran, 2012); alternatively, researchers have asked participants how difficult they thought the sacrifice was (Akcobozan et al., 2016; Young & Curran, 2016). The most common method of measuring one's willingness to sacrifice

consists of researchers asking participants to self-identify three of the most important activities in their lives, followed by asking them how willing they would be to end their relationship if faced with a choice between the activity and their relationship (Righetti et al., 2015, Van Lange et al., 1997; Whitton et al., 2007). Other ways of measuring one's willingness to sacrifice include researchers asking participants to select yes or no to a question about if they would sacrifice if they felt forced to choose (Powell & Vugt, 2003), asking participants to agree with a statement about feeling reluctant or hesitant to make a sacrifice (Kogan et al., 2010; Ruppel & Curran, 2012), or asking participants their agreement with a statement about being willing to give up something that they enjoy that their partner does not (Mattingly et al., 2011).

Motivations to engage in sacrifice have most commonly been divided between approach and avoidance motivations. In studies exploring approach and avoidance motivations, participants were asked to identify how often they sacrificed for these reasons from *never* to *all the time* (Impett et al., 2005; Impett & Gordon, 2010) or to rate the importance of the same items from *not at all important* to *extremely important* (Cooper et al., 2017; Impett et al., 2005). Positive and negative emotions regarding engaging in sacrifice have been explored through scholars asking participants how often they had experienced a set of positive and negative emotions (Impett et al., 2010; Kogan et al., 2010). One's satisfaction with their engagement in sacrifice has been measured by scholars asking participants how strongly they agreed with a list of statements about finding satisfaction as a result of their actions (Lambert et al., 2012; Stanley & Markham, 1992; Whitton et al., 2007).

The differences across studies due to these variations in measurement and scope make it difficult for scholars to identify common themes across research studies. The fact that researchers are not consistent with the use of one scale for each of the many aspects of relational

sacrifice reveals that relational processes, such as sacrifice, are complex. These differences also demonstrate a need for a measure that can capture the fundamental aspects of sacrifice processes across various relationships and contexts in a way that can allow for similarities, patterns, and differences to be identified and explored more deeply.

Religiosity and Sacrifice

Sacrifice is a relational process discussed often in the context of religious beliefs. Studies have shown sacrifice to be discussed openly in religious situations, where believers may be encouraged to engage in sacrifice (Dollahite et al., 2009), or to perceive sacrifice as being sacred (Mahoney et al., 2003), which would then influence other areas of one's life and relationships (Krumrei et al., 2009). Due to this strong connection between sacrifice and religious beliefs (Burr et al., 2012; Dollahite et al., 2009; Mahoney, 2013), some may have a hard time recognizing sacrifice processes as distinct from religious beliefs and practices. Burr and colleagues (2012) argue that sacrifice is inherent in all kinds of relationships, just as interdependence theory posits that sacrifice processes are key in close relationships (Kelley & Thibaut, 1978; Rusbult & Buunk, 1993). It is within this broader context of close relationships (not considering religious influence) that I strive to identify relational sacrifice.

Current Study

This study seeks to add to the broader research on sacrifice by testing and validating a new scale of relational sacrifice processes that has the potential to tap into sacrifice across numerous contexts and relationship types. The central aim is to determine if the Relational Sacrifice Processes Scale (RSPS) is a valid scale to measure the construct of relational sacrifice processes. The hypotheses are as follows:

H1: It is expected that the hypothesized Relational Sacrifice Processes Scale will have two emergent factors: active and passive.

H2: It is expected that the Relational Sacrifice Processes Scale will have a second order factor of sacrifice upon which the hypothesized active and passive subscales will load, representing relational sacrifice more broadly.

H3: It is anticipated that some of the hypothesized items of the scale will not be retained through the process of exploratory factor analysis.

H4: It is expected that this measure of sacrifice will be distinct from religious practices, demonstrating discriminant validity.

Method

Participants

Two independent samples (see Table 2.1) were utilized to cross-validate the factor structure of the RSPS through use of an Exploratory Factor Analysis (EFA) and subsequent Confirmatory Factor Analysis (CFA). Use of independent samples is a common method in measurement development (Handel, 2016; Krumrei-Mancuso & Rouse, 2016) and can serve as a means to minimize risk of correlation between the samples used for exploratory and confirmatory factor analyses (Smith et al., 2000). As the risk of correlation between samples decreases, the confidence in the reliability of the data increases, especially when similar results are found between the two samples.

Sample 1 (S1) consisted of a community-based sample drawn from two Midwestern counties; 2,418 potential participants were identified through public court records at county court houses. Inclusion criteria required that participants had at least one minor child and had experienced a court proceeding involving that child between 2015 and 2017 (e.g., divorce with

minor children, change in custody/child support, or paternity). Participants were excluded if there was an order of protection in place. Of those potential participants, 127 were identified as having moved without a forwarding address or had an undeliverable mailing address and were eliminated. Invitations to participate were mailed to those that met the inclusion criteria, along with a small token, consistent with the tailored design method (Dillman et al., 2009). Participants were recruited from two highly transient counties, due to their inclusion of a U.S. Army installation and a major public university, which may have inhibited potential participants' ability to receive the invitation to participate in the study.

In total 144 participants completed the survey with a 6.29% response rate. Participants were 69.44% female, 72.92% White, 10.42% Black or African American, 34-years-old ($SD = 7.90$), and their youngest child was, on average, 7-years-old ($SD = 4.65$). They completed a questionnaire about their experiences coparenting with their child's other parent, which included the hypothesized 31-item RSPS about sacrificing for their child's other parent. S1 was utilized for the EFA.

Table 2.1. Study 1 Sample Descriptions.

	Sample 1 N (%)	Sample 2 N (%)
Total participants	144	455
Females	100 (69.44%)	169 (37.14%)
Males	42 (29.17%)	284 (62.42%)
Ethnicity		
White	105 (72.92%)	334 (73.41%)
Black or African American	15 (10.42%)	80 (17.58%)
Hispanic or Latino	8 (5.56%)	24 (5.27%)
Asian	4 (2.78%)	16 (3.52%)
Participant age (M/SD)	34.36 (7.90)	32.17 (6.66)
Youngest child's age (M/SD)	7.62 (4.65)	9.16 (3.71)

Sample 2 (S2), was identified using Amazon Mechanical Turk. Inclusion criteria were largely uniformed with S1, with the exception of a location restriction. Participants were required to: (a) be from the United States, (b) have at least one minor child, (c) live apart from their

child's other parent, and (d) have participated in a court filing regarding their minor child between 2015 and 2017. Upon entering the MTurk survey, potential participants were first presented with a list of screener questions to determine eligibility for the survey. A total of 1,131 attempts were started within the MTurk survey. Potential participants were disqualified if they attempted the screener questions multiple times, or if they did not answer the quality check questions appropriately. One quality check consisted of participants being asked to answer a question about if they were divorced or separated multiple times and if answers did not match, they were rejected for inconsistent responses. Another check question first presented potential participants with a paragraph where they were told what color to select on the following question and the next question presented a list of colors. If potential participants selected the wrong color, they were disqualified. Of the 499 completed attempts at the survey, 455 were deemed usable for analyses. Participants ($n = 455$) were 37.14% female, 73.41% White, 17.58% Black or African American, 32-years-old ($SD = 6.66$), and their youngest child was 9-years-old ($SD = 3.71$). Among other instruments measuring varying aspects of coparenting, participants in this sample also completed the RSPS. S2 was utilized for the CFA.

Measures

The relational sacrifice processes scale. The initial 31-item scale was designed to address limitations that had been identified through rigorous database searches involving existing sacrifice scales, their content, frequency of use, scaling, and associated limitations. Items were crafted through an iterative process of scanning and compiling items from existing measures used in the broader sacrifice literature, and generation of new items that represented theoretical gaps in conceptual themes and subthemes that were anticipated to reflect relational sacrifice. Participants were given the following prompt: "When thinking about your child's other parent

and your relationship with him/her, in a typical month, how often do you do each of the following?” Due to the nature of the population as a highly transitional group, the use of typical month was preferred, in comparison to a uniform timeframe (e.g., in the last 30 days). The prompt was designed to be flexible, allowing for the researcher to prompt participants to a specific person and the relationship with that person. It was intended that researchers who use this scale could choose the person/relationship of interest, and thus, the use of “child’s other parent” was reflective of the population being studied herein. Participants replied on a 5-point Likert scale of (1) *never* to (5) *very often*. Items were assessed by eight content experts (i.e., involved in sacrifice research, have created other sacrifice-related scales), who all have doctorates and hold faculty positions at research universities across the U.S., for face-validity, content-validity, and reading comprehension. Upon receiving feedback, slight alterations were made to the conceptual definition of sacrifice and to a number of the items.

The scale was hypothesized to split into two subscales: active and passive sacrifice (see Table 2.2) based upon an understanding of the extant literature, and feedback from subject matter experts. Active sacrifice has been broadly defined, in the literature, as someone doing something that they did not want to do for a purpose or to obtain or achieve something (Impett et al., 2005; Van Lange et al. 1997). Passive sacrifice has been described as someone not doing something that they wanted to do for a purpose or to obtain or achieve something (Impett, et al., 2005; Van Lange et al., 1997).

Table 2.2. Initial Conceptualization of Relational Sacrifice Processes Scale.

Items
I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities ₁
I refrained from doing something that I felt like doing for him/her ₁
I stopped myself from spending money on something I really wanted for his/her sake ₁
I put off fulfilling a responsibility to do something for him/her ₁

I held back from complaining about him/her at a certain time because I knew it would be hard for him/her to hear at that moment₁
I missed an activity/event I wanted to attend to spend more time with him/her₁
I delayed sharing what was on my mind to listen to him/her₁
I refrained from bragging about my accomplishments when I knew it could potentially hurt his/her feelings₁
I spent less time fulfilling my work/school/other obligations/responsibilities to spend more time with him/her₁
I avoided joking/jesting with him/her when I knew it could potentially hurt his/her feelings₁
I allowed him/her to add a task to my work load so that he/she would be less stressed₁
I did not celebrate a holiday the way I wanted to for him/her₁
I spent less time with a friend/family member for him/her₁
I changed the way I said something for the sake of his/her feelings₂
I planned or changed my schedule so that it worked better for him/her₂
I did things that I was not interested in doing for his/her sake₂
I attended one of his/her activities/obligations that I do not enjoy for him/her₂
I was nice to his/her friends/coworkers/family even when I did not want to be for him/her₂
I completed household tasks I did not enjoy doing because he/she was busy with his/her obligations/responsibilities₂
I ran errands for him/her even when I did not want to₂
I took time to do things he/she would find meaningful₂
I listened while he/she vented or complained, although I was not really interested in what he/she was saying₂
I changed my working/spending behaviors to make/save more money for him/her₂
In a disagreement/argument I apologized first even though I was still hurting₂
I helped fulfill his/her responsibilities₂
I allowed him/her to choose the location/restaurant rather than going where I wanted to go₂
I spent more money to reduce burden on him/her₂
I communicated with him/her even when I did not want to₂
I accommodated his/her needs even though it was inconvenient for me₂

₁ Identifies items anticipated to represent a passive sacrifice subscale.

₂ Identifies items anticipated to represent an active sacrifice subscale.

Faith activities in the home scale (FAITHS). The FAITHS consists of two subscales: frequency and importance of faith activities in the home (Lambert & Dollahite, 2010), and were utilized to assess the validity of the RSPS. Participants were asked to identify the frequency and importance of several different activities such as “family prayer (family together other than at meals)” and “family religious conversations at home.” Frequency was identified on a 5-point Likert scale of (0) *never or not applicable* to (4) *always* and importance was identified on a 5-point Likert scale of (0) *not important or not applicable* to (4) *extremely important*. Internal

reliability was high for the frequency ($\alpha = .96$ [S1]; $\alpha = .95$ [S2]) and importance ($\alpha = .97$ [S1]; $\alpha = .95$ [S2]) subscales, respectively. The sample rarely engaged in religious practices in the home ($M = 2.16$ on FAITHS frequency scale; Lambert & Dollahite, 2010) and saw these religious practices as important ($M = 2.33$ on FAITHS importance scale; Lambert & Dollahite, 2010).

Analysis

Missing data analysis was conducted for S1 and a non-significant coefficient on Little's MCAR test ($\chi^2 = 2652.79$, $p = .16$) indicated that data were missing completely at random. Data were also found to be normally distributed using Q-Q plots. An EFA was conducted using S1 in SPSS 25 using principal axis factoring and promax rotation (see Fabrigar et al., 1999).

Consistent with suggestions from Hogarty and colleagues (2005), the number of extracted factors, factor loadings, scree plots, and communalities were considered, using an iterative process. First, items with communality extractions below .05 were considered to not explain enough of the construct and were deleted from the analyses (Thompson, 2004). The item with the lowest communality extraction was deleted first and then the model was rerun and communalities were again explored to determine if there were still communalities below .05. This process was repeated until all communalities were above .05. Then the scree plot was examined to help determine how many factors would be appropriate (Fabrigar et al., 1999); it was determined that there was either a two- or three-factor solution. The EFA process was iterative and decisions related to item deletion were made using a combination of factors: cross-loadings, strength of factor loadings, and theoretical fit. Standardized factor loadings were examined and considered appropriate when they were higher than .50 and did not have cross loadings greater than .30 on other factors (Tabachnick & Fidell, 2007). This process involved deletion of single items, for both two- and three-factor solutions simultaneously to help uncover

the best fitting solution. Once the final iterations of both solutions were completed, they were theoretically compared, as were the model fit statistics, and it was determined that the three-factor solution best fit the data. Combined, the three factors explained 70.91% of the variance in the model.

Then missing data analyses were conducted for S2 where a non-significant coefficient on Little’s MCAR test ($\chi^2 = 369.05, p = .61$) indicated that data were missing completely at random. Then a CFA was conducted with S2 in Amos 25 to confirm the emergent factor structure uncovered with the EFA. Model fit was examined with goodness of fit statistics including: the Root Mean Square Error of Approximation (RMSEA), the chi-square/degrees of freedom ratio (χ^2/df ratio), the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI). Reasonable model fit is demonstrated through RMSEA values of less than .08, a χ^2/df ratio between one and three (Browne & Cudeck, 1993; Carmines & McIver, 1981) and when CFI and TLI have values greater than .95 (Bentler & Bonnett, 1980; Hu & Bentler, 1999). Standardized factor loadings were also analyzed, with recommendations from the literature suggesting loadings above .71 are considered excellent, above .63 are considered very good, and above .55 are considered good (Comrey & Lee, 1992). Bivariate correlations (see Table 2.3) were then examined across both samples with multiple indicators of religiosity to assess discriminant validity with well-established and theoretically related constructs.

Table 2.3. Study 1 Bivariate Correlations.

Scales	1	2	3	4	5	6
1. Developing Dependence _a	-	.78**	.81**	.96**	.61**	.61**
2. Communication _a	.70**	-	.82**	.90**	.54**	.52**
3. Managing Habits _a	.71**	.75**	-	.93**	.61**	.57**
4. Relational Sacrifice	.94**	.86**	.89**	-	.65**	.61**
5. FAITHS Frequency	.16	.33**	.22**	.24**	-	.92**
6. FAITHS Importance	.25**	.34**	.27**	.30**	.87**	-
M (EFA)	2.33	2.96	2.74	2.58	2.16	2.37

SD (EFA)	1.18	1.02	1.08	1.00	1.22	1.35
α (EFA)	.92	.87	.87	.89	.96	.97
M (CFA)	3.08	3.24	3.15	3.14	2.98	3.01
SD (CFA)	.97	.82	.86	.84	1.16	1.23
α (CFA)	.92	.76	.82	.92	.96	.95

Note: a = emergent subscales of the RSPS [Relational Sacrifice Processes Scale]; CFA results are above the diagonal in the table and EFA results are below the diagonal * $p < .05$, ** $p < .01$.

Results

Exploratory Factor Analysis

After analyzing cross loadings via factor loadings and theoretical fit, final EFA results suggested a 20-item, three-factor model (see Table 2.4), contrary to expectations. The first factor, conceptualized as *developing dependence*, included nine items with factor loadings ranging from .65-.99, demonstrated a high internal reliability ($\alpha = .96$), and explained 57.64% of the variance of the model. Developing dependence items seemed to reflect how much one person needs another in a given relationship, a concept well-situated within interdependence theory (Rusbult & Buunk, 1993). For example, items such as “I took time to do things with him/her that he/she would find meaningful” and “I spent less time with a friend/family member – in order to have more time with him/her” are instances of how one person in a relationship may sacrifice to increase their need for another or to help increase a perceived felt need from another.

The second factor, conceptualized as *communication*, included five items with factor loadings ranging from .47-.75, demonstrated a high internal reliability ($\alpha = .87$), and explained 8.45% of the variance of the model. Each of the communication items mentioned some aspect of communication: “In a disagreement/argument...” or “I changed the way I said something...” or “I delayed sharing...” or “I communicated...” Within relationships, persons must communicate. It is through communication (both verbal and nonverbal) that persons learn about each other, express needs, and build relationships. Successful communication has been linked with greater

relationship satisfaction (Trillingsgaard et al., 2014), a concept important within interdependence theory (Rusbult & Buunk, 1993). The items in this subscale are examples of how one may sacrifice a desired way of communication to benefit a relationship.

The third factor, conceptualized as *managing habits*, included six items with factor loadings ranging from .45-.82, demonstrated a high internal reliability ($\alpha = .87$), and explained 4.82% of the variance of the model. Items in this factor seemed to reference activities or situations where one might be willing to change what might be a habitual pattern of behavior to obtain or achieve something. For example: “I spent more money – to reduce his/her financial burden” and “I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings” demonstrate how one in a relationship may sacrifice by changing what may be a normal behavior to get a desired outcome.

Table 2.4. Exploratory Factor Analysis Results for Relational Sacrifice Processes Scale.

Item	α	EEVA	M	SD	Factor Loading
Developing Dependence	.92	11.53			
I spent less time with a friend/family member – in order to have more time with him/her			2.26	1.14	.99
I took time to do things with him/her that he/she would find meaningful			2.53	1.41	.92
I missed an activity/event I wanted to attend – in order to spend more time with him/her			2.18	1.36	.89
I spent less time fulfilling a personal responsibility – in order to spend more time with him/her			2.28	1.36	.88
I attended one of his/her activities/obligations that I did not enjoy			2.19	1.35	.88
I completed household tasks I did not enjoy doing – to lighten his/her load or because he/she was busy with other obligations/responsibilities			2.56	1.54	.81
I allowed him/her to choose the location/restaurant for an activity rather than going where I wanted to go			2.62	1.37	.73
I ran errands for him/her even when I did not want to			2.27	1.30	.65
I allowed him/her to add a task to my work load so that he/she would be less stressed			2.59	1.42	.65
Communication	.87	1.69			
In a disagreement/argument, I apologized first even though I was still hurting			2.79	1.32	.75
I changed the way I said something – for the sake of his/her feelings			2.98	1.32	.74
I delayed sharing what was on my mind – in order to listen to him/her			2.84	1.19	.70
I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities			3.07	1.32	.67
I communicated with him/her even when I did not want to			3.35	1.22	.47
Managing Habits	.87	.97			
I spent more money – to reduce his/her financial burden			2.79	1.45	.82
I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings			2.61	1.33	.59
I changed my working/spending behaviors to make/save more money			3.31	1.39	.53
I stopped myself from spending money on something I really wanted			3.09	1.44	.52
I did not celebrate a holiday the way I wanted to – for his/her benefit			2.41	1.20	.48
I refrained from talking about my accomplishments when I knew it could potentially hurt his/her feelings			2.52	1.35	.45

Note: EEVA = eigenvalue.

Second order exploratory factor analyses (Kline, 2016) were conducted and determined that the three subscales (developing dependence, communication, and managing habits) loaded well onto the second order factor of relational sacrifice. The second order factor had high internal reliability ($\alpha = .88$), the subscales had high factor loadings (developing dependence = .81, communication = .86, managing habits = .88), and explained 81.28% of the variance.

Correlations were also conducted between each subscale and the second order factor of relational sacrifice. Developing dependence had a very high correlation of .94, managing habits had a high correlation of .89, and communication had a high correlation of .86 with relational sacrifice.

Confirmatory Factor Analysis

CFA results confirmed the 20-item, three-factor structure of the RSPS with high internal reliabilities for each of the subscales identified during the EFA ($\alpha = .92$ for *developing dependence*, $\alpha = .76$ for *communication*, and $\alpha = .82$ for *managing habits*). When combined, the subscales demonstrated high reliability for the second order factor of RSPS ($\alpha = .92$). All item factor loadings were above .56 and model fit was good ($\chi^2/df = 2.09$; CFI = .96; RMSEA = .05, $p = .57$). See Figure 2.1 for standardized values resulting from the CFA. Two of the standardized loadings for the second order factor are above one and have negative variance estimates, which has been found to be appropriate for standardized regression coefficients (Deegan, 1978). These standardized weights are possibly above one because the subscales are so highly correlated (Bice et al., 2016) and because standardized weights are not bound to an absolute value of one (Hufford et al., 2003). The subscale *developing dependence* was found to be highly correlated with *managing habits* ($\alpha = .81$) and *communication* ($\alpha = .78$). *Managing habits* was also highly correlated with *communication* ($\alpha = .82$). All three subscales were highly

correlated to the second order factor of relational sacrifice (*developing dependence* $\alpha = .96$; *communication* $\alpha = .90$; *managing habits* $\alpha = .93$), consistent with expectations.

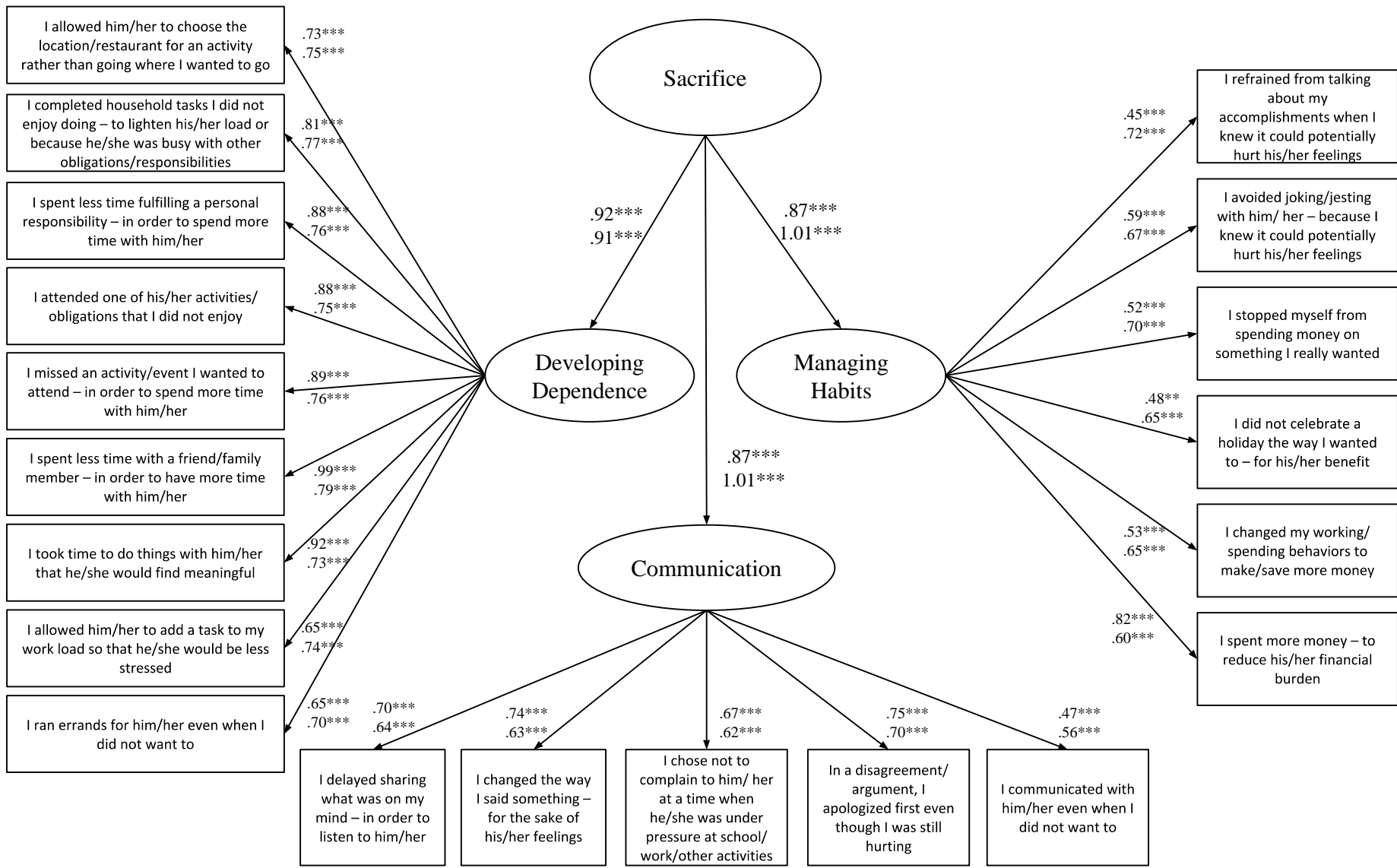


Figure 2.1. Confirmatory Factor Analysis for Relational Sacrifice Processes Scale.

Note: *** $p < .001$. Loadings provided are standardized values.

The association between the RSPS and other indicators. Bivariate correlations were used to assess the relationships between the emergent relational sacrifice factors with subscales of the FAITHS in both S1 and S2 (Lambert & Dollahite, 2010). The *developing dependence* subscale had low correlations with the frequency and importance subscales of the FAITHS scale ($r = .16, p = .05; r = .24, p < .001$ respectively) in S1 and moderate correlations with the frequency and importance subscales of the FAITHS scale ($r = .61, p < .001; r = .61, p < .001$ respectively) in S2. The *communication* subscale was significantly linked with the frequency and importance FAITHS subscales ($r = .33, p = .05; r = .34, p < .001$ respectively) in S1 and significantly correlated with the frequency and importance FAITHS subscales ($r = .54, p < .001; r = .52, p < .001$ respectively) in S2. The *managing habits* subscale was linked significantly to the frequency and importance FAITHS subscales ($r = .22, p = .01; r = .27, p < .001$ respectively) in S1 and significantly correlated with the frequency and importance FAITHS subscales ($r = .61, p < .001; r = .57, p < .001$ respectively) in S2. These findings demonstrate related, yet distinct constructs, supporting discriminant validity.

Discussion

Although H2, H3, and H4 were confirmed, H1 was not supported herein. A second order factor (H2) was confirmed, demonstrating that the revealed subscales are related and contribute to a broader concept of relational sacrifice when considered together. Of the hypothesized 31 items, 20 items were retained, as determined through an iterative process of item reduction with items removed that either statistically or theoretically did not hold with the emergent factor structure (H3). This is common in the process of measurement development and was intentionally considered as part of the process, in the interest of creating a succinct and useful assessment tool. A succinct measure diminishes potential response burden while capturing as

much data as possible and provides practitioners with a more functional, useful assessment option. Validity testing confirmed a significant relationship between relational sacrifice and faith practices (H4). In S1 and S2 there were significant correlations between the frequency and importance of faith practices and the subscales of the RSPS, demonstrating that these concepts are related, yet distinct. For some individuals, there may be times when sacrifice processes and religious practices intersect, combining their influence on an individual or relationship. With or without involvement in religious practices, engaging in sacrifice processes has influence in relationships and on individuals.

Results indicated a three-factor solution for the RSPS, which was contrary to the hypothesized two-factor structure (H1). It was anticipated that items would differentiate on the basis of their relative active or passive nature, as would be suggested by previous literature (Impett et al., 2005). Active and passive sacrifice represent forms of sacrifice, or the ways that one can engage in sacrifice behaviors. The three-factor structure presented through these analyses demonstrates a different perspective of relational sacrifice. The three factors were identified as *developing dependence*, *communication*, and *managing habits*. Each of these factors reflects a concept central to interdependence theory (Kelley & Thibaut, 1978; Rusbult & Bunnk, 1993). *Developing dependence* reflects the concept that those in a close relationship are seeking to build a relationship where they can depend on each other for help, support, love, and connection (Rusbult & Buunk, 1993). There were nine items that loaded onto this subscale. Each item represents a way that one may behave in a relationship to build connection, trust, and reliance on each other, from active and passive approaches. The items “I spent less time with a friend/family member – in order to have more time with him/her,” “I took time to do things with him/her that he/she would find meaningful,” and “I spent less time fulfilling a personal

responsibility – in order to spend more time with him/her” demonstrate various ways in which time can be used to build connection in a relationship. The items “I completed household tasks I did not enjoy doing – to lighten his/her load or because he/she was busy with other obligations/responsibilities,” “I ran errands for him/her even when I did not want to,” and “I allowed him/her to add a task to my work load so that he/she would be less stressed” articulate ways that one may act to build a sense of reliance that can be found in a relationship. The items “I missed an activity/event I wanted to attend – in order to spend more time with him/her,” “I attended one of his/her activities/obligations that I did not enjoy,” and “I allowed him/her to choose the location/restaurant for an activity rather than going where I wanted to go” reflect ways that one can participate in activities with someone else in ways that build and strengthen the relationship. Together, these nine items reveal many avenues through which individuals can sacrifice to increase how they depend on each other in ways that may lead to benefits for both individuals and the relationship (Kelley & Thibaut, 1978; Ruppel & Curran, 2012; Rusbult & Buunk, 1993). In S1 the *developing dependence* subscale was only significantly correlated with the FAITHS importance subscale, while in S2 it was significantly correlated with both the frequency and importance FAITHS subscales. Some religious practices, like praying with someone else, require the efforts of two people, and may require one or both to sacrifice to make it happen. In other words, there is a level of dependence between the two individuals in order for prayer together to take place.

Communication reflects the concept that in order to develop dependence in a relationship, communication is needed in various forms and frequencies (Rusbult & Buunk, 1993). Five of the final 20 items loaded onto the *communication* subscale. Each of these five items touches on a different aspect of striving for healthy communication. The item “In a disagreement/argument, I

apologized first even though I was still hurting” includes apologies, an aspect of forgiveness, which has been found to be critical in healthy communication, contributing to healthy relationships (Merolla, 2017). Each item includes a different take on changing the initial tendency to communicate something for another way that may be more helpful to the other or the relationship. Refraining from complaining was present in the item “I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities.” Deferred communication was evident in the item “I delayed sharing what was on my mind – in order to listen to him/her.” The items “I changed the way I said something – for the sake of his/her feelings” and “I communicated with him/her even when I did not want to” are purposefully broad, allowing participants to take into account a wider range of verbal and nonverbal communication strategies in their responses. This allows for added inclusivity in the possible modes of communication one may use and the influences they have on relationships.

Interdependence theory acknowledges that healthy communication involves verbal and nonverbal means (Rusbult & Van Lange, 2003). Although most items in this subscale refer to verbal means of communication, they include aspects of listening and an assumption that nonverbal cues are being used to make communication decisions. These five items also include both active and passive forms of sacrifice. In both samples, the *communication* subscale was significantly correlated with the frequency and importance subscales of the FAITHS. The items of the FAITHS (Lambert & Dollahite, 2010) include religious practices that can include more than one family member (i.e., praying before a meal, family religious celebrations, family singing). Communication about time, place, and expected participation must take place for these family religious activities to be successful. The one communicating details about these activities

may sacrifice in the way they communicate based on which family member they are speaking with and what the other family member is currently experiencing in the course of life.

Managing habits represents the concept that as relationships develop and last, one may reevaluate their habits or normal patterns of behavior, and as a result may change behaviors. Six of the final 20 items loaded onto the *managing habits* subscale. Of the six items, three refer to the use of money in the relationship: “I spent more money – to reduce his/her financial burden,” “I changed my working/spending behaviors to make/save more money,” and “I stopped myself from spending money on something I really wanted.” Disagreements on finances and spending behaviors is common in relationships, including among those coparenting from different households (Olmstead et al., 2009). These disagreements may lead those in a relationship to come up with a solution that requires one or both individuals to adjust their financial habits. The items “I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings” and “I refrained from talking about my accomplishments when I knew it could potentially hurt his/her feelings” both tap into how one might choose to engage with another in a way contrary to their typical style of interactions that could be considered prideful or lessening of others. The sixth item “I did not celebrate a holiday the way I wanted to – for his/her benefit” reflects instances where two people may have differing rituals and routines in relation to special days and the process of deciding how to handle those differences. These items do not reflect every possible habit or way to manage or adjust patterns of behaviors, but they do demonstrate how active and passive ways of managing habits can both occur in a given relationship. Among all three subscales, active and passive forms were present, proving that the RSPS is differentiated based on concept rather than form. Each of the concepts connect to interdependence theory (Kelley & Thibaut, 1978, Ruppel & Curran, 2012; Rusbult & Buunk, 1993), indicating a

theoretical strength. In S1 and S2 the *managing habits* subscale was significantly correlated with both the frequency and importance FAITHS subscales. Many faiths preach peace, seeing situations through the eyes of another, and forgiveness (Glazier, 2018), all of which may require one to manage or change previous habits of behavior. The FAITHS items (Lambert & Dollahite, 2010) may provide opportunities for family members to sacrifice through managing their habits.

The RSPS was designed to be applicable across relationships and contexts. Sacrifice is typically discussed within the context of heterosexual, romantically involved couples (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). This study explored relational sacrifice among heterosexual parents coparenting apart (whether divorced, divorcing, or otherwise not in a relationship) and their sacrifice for their child's other parent; a relationship where sacrifice processes have not been previously explored. Seeing evidence of sacrifice processes in these relationships suggests that relational sacrifice may indeed represent an intrinsic element that accompanies a vast array of relationships.

Implications

Other sacrifice measures explore what can be considered singular aspects of relational sacrifice: motivations to sacrifice (Impett et al., 2005), ease of a sacrifice (Kogan et al., 2010), types of a sacrifice (Impett et al., 2005), or satisfaction with a sacrifice (Stanley & Markman, 1992). The RSPS takes a more holistic approach to measuring relational sacrifice in close relationships wherein individuals think about themselves, the other, and the relationship as a whole at the same time, supporting the assumption in interdependence theory that individuals and relationships can benefit as one engages in relational sacrifice (Kelley & Thibaut, 1978, Rusbult & Buunk, 1993). The three subscales that emerged herein provide empirical support for the connection between relational sacrifice processes and tenants of interdependence theory

(Rusbult & Van Lange, 2008; Van Lange et al., 1997). According to this theory, dependence, communication, and habits of behavior each influence relationship satisfaction, quality, and success (Rusbult & Van Lange, 2008; Van Lange et al., 1997).

Although interdependence theory has predominantly been utilized in the context of heterosexual romantic relationships, this study lends evidence to the applicability of interdependence theory to other types of close relationships, even those without a romantic element (Emery, 2012). As practitioners come to better understand the applicability of this theory, they will be able to increase the tools at their disposal to help families build and strengthen relationships in healthy ways.

The RSPS will provide practitioners with an avenue to measure sacrifice within a coparenting apart relationship. Not only is this a new tool for practitioners, but the use of some items may aide practitioners as they strive to help clients understand what a healthy coparenting apart relationship could look like for them. For example, assessment through the communication subscale could help practitioners identify issues in how their clients discuss issues with their coparent. Then practitioners could walk their clients through healthy communication strategies and help them practice these strategies, in an effort to increase the client's abilities to communicate in a healthy manner with their coparent. Use of the managing habits subscale could be used to aide practitioners as they strive to help parents identify practical ways that they can contribute to lessening the conflict in their coparenting relationship. The items in the RSPS could also be used by practitioners to help clients better understand the ways in which sacrifice can occur in a coparenting apart relationship (i.e., allowing a coparent to choose the location of a child swap or birthday celebration for a shared child, not having a shared child for a special day so that the other coparent could spend time with that child, refraining from being boastful when

communicating with a coparent). As practitioners use the RSPS with clients who coparent apart, they may be able to help those clients recognize the many simple efforts they make in that relationship.

Limitations and Future Directions

Although this study has a number of strengths, there are some limitations worth noting. Although participants in both samples represent one relationship within one context (the parent-parent relationship—with no romantic element—in a coparenting apart context), the RSPS, by its nature, is meant to be used across contexts. The RSPS still needs to be validated in contexts such as military families, single-parent families, and two-parent families, and within parent-child, sibling, and other parent-parent relationships. As it is validated in these contexts, scholars will be better able to understand the effects that relational sacrifice can have in the lives of individuals and relationships, especially of the role that relational sacrifice can play as individuals strive to build close relationships. Another limitation of this study is that participants might have answered the items on the RSPS to indicate that they were sacrificing more than they were in reality because they may have perceived engaging in sacrifice as being socially desirable. Future studies exploring relational sacrifice should include a measure of social desirability to control for this possible effect.

A limitation of S1 is the small response rate of less than 7%. There may be inherent differences between those who filled out the survey and those who did not, that were not captured in the study. Those coparenting apart are often economically challenged (Waller & Emory, 2014), which may have limited potential participants' access to the Internet, where the survey was available, and are prone to frequent moves (Dudley, 2007). Participants were recruited from two highly transient counties, due to their inclusion of a U.S. Army installation

and a major public university, which may have inhibited potential participants' ability to receive the invitation to participate in the study. Future studies utilizing community-based sampling should consider employing a more diverse set of participant acquisition methodologies that will allow data to be collected from those who do not have Internet access and those that may be more prone to move between the time that court proceedings were initialized and potential study participants were identified.

Based on the previously identified definition of relational sacrifice, the purpose or desired outcome could be positive or negative in nature, allowing for the scale to take into account a variety of possible outcomes. The purpose or desired outcome behind the relational sacrifice may have influence over the ways that those sacrifices positively or negatively influence individuals and relationships. Future research should specifically consider possible purposes such as social desirability, power, or control when exploring relational sacrifice. It is possible that when including measures of social desirability, scholars may find an intercorrelation between social desirability and relational sacrifice that may demonstrate how relational sacrifice may be engaged in as a round-about way to benefit oneself. Engaging in sacrifice may not always be done for the purpose of benefitting someone else or the relationship as a whole. When scholars include measures of relationship power and control when studying relational sacrifice, they may find that in some instances one may engage in relational sacrifice as a method of manipulation in a given relationship. When employed for purposes of manipulation, relational sacrifice may not be a healthy relational process and scholars should explore ways to help individuals recognize healthy and unhealthy purposes for relational sacrifice.

Chapter 3 - Relational Sacrifice Processes among Those Coparenting across Households: Insights from Interdependence

Theory

As interdependence theory suggests, those in close relationships engage with their partner in processes that not only influence their own relationship satisfaction and fulfillment, but also the satisfaction and fulfillment of their partner (Kelley & Thibaut, 1978; Ruppel & Curran, 2012; Rusbult & Buunk, 1993). A common process in close relationships is sacrifice; interdependence theory posits that relational sacrifice can affect the ways in which individuals interact, influencing each other's relational outcomes (e.g., commitment, satisfaction), and their abilities to rely on each other (Ruppel & Curran, 2012; Rusbult & Arriaga, 1997; Rusbult & Buunk, 1993). Sacrifice can be found in many types of relationships, and is especially common within family relationships. The ways that family members sacrifice for each other may change over time as family membership changes and stages of life change (Impett & Gordon, 2010; Kogan et al., 2010). Differences in sacrifice can also be observed among different family structures. Some sacrifices that parents who coparent apart (i.e., divorced, separated, or otherwise not currently in a relationship) have engaged in specifically for their children include career opportunities, repartnering, and other deeply personal sacrifices (Wallerstein et al., 2013). However, the possibility of parents sacrificing specifically for their child(ren)'s other parent has not been discussed in the literature. Just as the ways one engages in sacrifice can change, so can one's motivation to sacrifice (Impett & Gordon, 2010; Ruppel & Curran, 2012). One's motivations may vacillate between being approach or avoidance oriented and can be driven by feelings of dependence or attachment towards another individual (Ruppel & Curran, 2012).

Whereas sacrifice relays an outward-focused relational process with implications for well-being, an individual's fulfillment (Skovholt, Grier, & Hansen, 2001) and their capacity to have the energy and effort required to foster healthy relationships (Vidler, 2005) can also be affected by self-care. When a parent engages in self-care it can increase the quality of life for the whole family (Townsend & Puymbroeck, 2017). However, research about self-care and its effect on family members and processes has not been explored widely across diverse family structures. Despite the importance of both sacrifice and self-care to relationships, the combination has not often been studied in concert. Researchers have found that increasing the priority of self-care may help one to not become too overwhelmed by sacrifices perceived as necessary for family members (King & Ferguson, 2006).

This study will further explore the interconnections between sacrifice and self-care and their influences on relational and personal well-being. Those who coparent apart (i.e., with another adult living in a different household) provide a particularly relevant context through which to study these processes and effects on family members. This context demands for continued interaction between those who share parenting responsibilities and may be potentially connected through a prior union that is now marred by tension and hurt, which is common amongst divorced or dissolved relationships. This study will test the theorized relationships between sacrifice and other family processes within the lens that interdependence theory provides: motivations to engage in interpersonal processes (i.e., sacrifice and self-care) influence engagement in these processes as well as family relationships and practices.

Interdependence Theory

Interdependence theory can be used as a lens through which to view and make sense of relationships. This theory assumes that individuals in close relationships, specifically romantic

relationships, influence each other's experiences and can be mutually beneficial to each other as they collectively strive toward valued relationship outcomes (e.g., support, affection, emotional closeness; Rusbult & Buunk, 1993). Relationships are intrinsically dynamic and these reciprocal processes of influence continue to ebb and flow, affecting the amount of interdependence between the individuals. Interdependence in a close relationship means that the individuals involved need each other and the relationship to obtain desired relational outcomes (Rusbult & Buunk, 1993; Rusbult et al., 1998) and that their experiences within the relationship and relational outcomes become more and more related across time (Kelley & Thibaut, 1978).

An important concept in interdependence theory is the transformation of motivations (Rusbult & Buunk, 1993; Rusbult & Van Lange, 2008). Interdependence theory suggests that in order for relationships to continue, the motivations each person acts upon within the relationship need to move from being self-focused to being other- or relationship-focused (Rusbult & Arriaga, 1997). As one is able to sacrifice for relational reasons, instead of in search of immediate self-interest, commitment levels, satisfaction levels, and the size of investment into the relationship increase (Rusbult & Van Lange, 2008; Van Lange et al., 1997). Within this transformation of motivations, it is important to also remember the self, because as one acts out of a desire to maximize relational outcomes for the other individual and the self, they will actually experience positive outcomes (Kelley & Thibaut, 1978). When the individual does not take into account personal interests, then the likelihood of experiencing poorer outcomes increases (Rusbult & Van Lange, 2003). Relational sacrifice is a method of investing in the relationship for individuals to bind themselves with someone else and increase their commitment to the relationship (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). Self-care then serves as a method for the individual to remember themselves and their personal interests within the context

of the relationship, so that both individuals are able to experience positive relationship outcomes (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003).

Within interdependence theory, relationship outcomes are important indicators of reliance on each other through commitment and satisfaction (Kelley & Thibaut, 1978; Rusbult & Buunk, 1993). Interdependence theory describes commitment as including cognitive and emotional aspects that combine to create feelings of attachment within the relationship and help those committed to think long-term about their relationships (Rusbult & Buunk, 1993). Commitment to a relationship is increased as individuals invest time and resources into their relationships (Rusbult & Buunk, 1993). There are many ways to invest in a given relationship, including engaging in religious practices together. As family members engage in these religious practices, they help each other work toward accomplishing similar goals, which increases relationship commitment and satisfaction (Kelley & Thibaut, 1978). Interdependence theory argues that individuals experience relationship satisfaction as they are able to evaluate their relationship in positive terms and that one's relationship satisfaction includes all associated positive and negative emotions and feelings (Rusbult & Buunk, 1993). Relationship conflict, specifically that among coparents who have divorced, has been shown to decrease life satisfaction and increase negative feelings about the divorce for the coparents (Lamela et al., 2016).

Motivations to Sacrifice

The actual behaviors of individuals can be influential, but so too are the motivations that spurred those actions. Research has often categorized motivations to sacrifice as being either approach or avoidance oriented (Impett & Gordon, 2010), which can be helpful in situating the effect of motivations on relationship outcomes (Burr et al., 2012; Impett & Gordon, 2010). Motivations to sacrifice differ across individuals, can change across time (Impett & Gordon,

2010), and can be either positive or negative in nature; this combination of factors is linked with relationship satisfaction and engagement in family activities together (Pippert et al., 2019). When one sacrifices to avoid conflict with another person or negative reactions such as engaging in *the silent treatment* (avoidance motivations), life satisfaction and relationship well-being tend to decrease (Impett et al., 2005). When one sacrifices to be closer to someone or to learn more about someone else (approach motivations), conflict decreases and life satisfaction increases (Impett et al., 2005; Van Lange et al., 1997). Couple, or relationship, functioning increases as approach motivations are relied upon when choosing to sacrifice for a loved one (Van Lange et al., 1997).

Scholars have begun to explore how self-care and sacrifice can be used in conjunction to provide a more fulfilling life experience, such that sacrificing is not as draining for family members (King & Ferguson, 2006). When one engages in self-care processes, stress can be decreased and strength can be found among family relationships (Dollahite et al., 2018), but when a lack of self-care is evident, maladaptive qualities can take effect, such as experiencing burnout (Skovholt et al., 2001). However, to my knowledge research has not explored how motivations to sacrifice may be related to engaging in self-care processes.

Relational Sacrifice

Within close relationships sacrifice is often present as individuals strive to balance differences between self-interests, sometimes conceding their will for that of the other (Impett & Gordon, 2010). In Study 1 sacrifice was defined as “*voluntarily and deliberately giving up, setting aside, or surrendering some type of self-interest or personal desire for a purpose to obtain or achieve something.*” For example, parents sacrifice for their children when they put aside hanging out with friends to help their child with school projects. Siblings sacrifice for each

other when they stick up for each other in social situations. Coworkers sacrifice for each other when instead of doing working on their own tasks, they take hours to help one another with various tasks. Although sacrifice can be found across many types of human relationships, the sacrifice literature typically focuses on sacrifices that occur exclusively within romantic relationships (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). Some of these sacrifices within romantic relationships include moving, appearance, intimacy, communication, choices of recreation, or errands (Impett et al., 2005).

Not all children live in the same household as both of their parents. Reports suggest that 30-35% of children are raised in a home without both biological parents present (U.S. Census Bureau, 2016; Vespa et al., 2013), representing a substantive proportion of the population. It is important to explore sacrifices among the parents who are not living together, but are working together to raise their children (i.e., coparenting; Feinberg, 2003). Those who coparent apart (e.g., divorced, separated) are not romantically involved, but are still required to communicate and interact with each other if they want to share parenting responsibilities. These interactions can be complicated and often are riddled with conflict (Ahrons, 1994; Emery, 2012), which can hinder child outcomes (Amato, 2010; Lansford, 2009) and decrease a parent's well-being (Lamela et al., 2016). Individuals who are coparenting apart face unique circumstances in interacting with a coparent and raising their children that could benefit from thorough research.

Sacrifice has been found to have direct benefits for the person choosing to sacrifice, including maintaining a good image as a partner, and feeling good about what they have done (Impett & Gordon, 2008; Kogan et al., 2010). Sacrificing has also been found to have benefits for the recipient of the sacrifice, including fulfillment of desires, developed sense of trust, and increased relationship satisfaction and stability (Impett & Gordon, 2008). Furthermore, sacrifice

can have an influence beyond the individuals involved, with research indicating a connection between one's sacrifices and a sense of family connectedness and family identity (Dollahite et al., 2009). Sacrifice has also been found to positively affect marital relationship quality (Stanley et al., 2006). Not all sacrifices, however, yield similar results. Sometimes acts of sacrifice can result in negative outcomes, especially when an individual is resistant to or has a negative attitude about the sacrifice (Impett et al., 2012), or when efforts to sacrifice become one-sided (Rusbult & Buunk, 1993). One can feel lost or silenced when they become the only one sacrificing in a relationship (Impett & Gordon, 2008). Because the same act of sacrifice can result in drastically different outcomes in different relationships or situations, the attitudes and motivations behind engaging in sacrifice are important to consider, in order to better anticipate the effect of the sacrifice.

Self-Care

Self-care is another aspect of daily life that can influence family relationship processes. Self-care processes have been theorized to lessen the effects of relational conflict by allowing one to reflect, process emotions, take a "time out" in conflict to calm down, and become more self-aware (Barker, 2010). Examples of self-care can include engaging in therapy or counseling, exercising, sleeping, serving others, going to lunch, making crafts, etc. (Vidler, 2005). Family recreational activities can also be a form of individual self-care offering quality of life benefits for the entire family (Townsend & Puymbroeck, 2017). Families can become more flexible (Zabriskie & McCormick, 2001), can better develop problem solving skills, and further deepen and strengthen the family support system (Mactavish & Schleien, 1998) through engaging in recreational activities as a family. Increased family functioning and communication skills are another benefit of engaging in recreational activities as a family (Poff et al., 2010).

For those who coparent apart, the pathways to engagement in recreational activities and self-care can look quite different. When couples divorce, parents will often negotiate, with the court's oversight, decisions about parenting time pursuant to what is in the best interest of the child(ren) (Schepard, 2004). The range of possible parenting time arrangements are vast and can fluctuate based on parent or child needs. Sometimes these arrangements are such that parents split parenting time 50/50, other times one parent is granted occasional weekends or holidays. These parenting time stipulations can place restraints on what a parent is able to do with their time – in terms of parenting, working, and self-care. In a qualitative study about coparenting after divorce, Ferraro and colleagues (2016) found that some adults appreciated the divorced life because it gave them time alone, which allowed them to have more energy for parenting responsibilities when it was required. Researchers have also found that when divorced parents are able to share parenting responsibilities, they both experience more general well-being through having time to maintain social relationships (Botterman et al., 2015). Through better understanding how adults take time for themselves, when coparenting apart, scholars will be better able to understand how engaging in self-care may relate to other family and relational processes.

Family Relational Processes

There are many active processes within family relationships. Families are frequently interacting with each other as each member goes about their daily routines, fulfilling their familial responsibilities, and engaging in family rituals. Rituals may be based in religious beliefs, personal values and beliefs, or the talents of particular family members, and as families engage in these relational processes, they can experience strength and connectedness (Dollahite et al., 2009; Poff et al., 2010). Particularly salient examples of these relational processes include

engaging in religious practices and the quality of the coparenting relationship, specifically when trying to understand sacrifice among those coparenting apart who often experience a disruptive coparenting relationship.

Religious Family Processes

Participating in religious practices has been found to be positively associated with engaging in sacrifice processes (Burr et al., 2012; Dew & Wilcox, 2016) and may help build a sense of family connectedness (Dollahite et al., 2009). Religious beliefs have been shown to be transformative within family relationships (Dollahite et al., 2013; Pippert et al., 2019). It has also been shown that religious beliefs are associated with decreased depression and anxiety (Koenig & Larson, 2001). Religious processes can be considered sacred for many individuals and families (Mahoney et al., 2003), and when they become sacred, the potential power or influence of associated family processes is increased (Mahoney, 2013; Pippert et al., 2019). This effect can manifest in ways that can either bring family members closer together or in ways that create hard feelings and disagreements. Research has shown that religious involvement can help individuals engage in self-care habits that are beneficial to their lives and family relationships (Permana et al., 2019; Speedling, 2019; Yamada et al., 2019). It has also been found that families of faith believe they are to sacrifice for family members to build relationships and can often cite examples of how they practice this belief (Dollahite et al., 2009).

Coparenting Quality

There is a great depth of research about communication, support, and conflict between those who coparent apart (e.g., Ahrons, 1981; Ferraro et al., 2018; Petren et al., 2017). Conflictual behaviors amongst coparents can be covert (internally- or externally-regulated) or overt, each influencing the coparenting relationship quality (Ferraro et al., 2018). Although there

is a wide body of literature that explores the influence of coparenting on post-divorce families and the sacrifices that parents make for children, little is known about the sacrifices that coparents make for each other and the effect of those sacrifices on their continued coparental relationship.

Sometimes the coparenting quality between two adults can vary drastically with some relationships marred by conflict and unmet expectations and hopes (Ahrons, 1994; Emery, 2012). The quality of the coparenting relationship has implications for the well-being of children (Lamb, 2010) and parents (Emery, 2012; Pippert et al., forthcoming) in emotional and physical ways including greater depressive symptomology and stress (Fagan & Lee, 2014). Coparents commonly coordinate the following tasks as they mutually share child-rearing responsibilities: a child's daily routines, a child's discipline, teaching the child (appropriate behaviors and school material), and being aware of what activities the child may be involved in when without parental supervision. Navigating these new boundaries and roles that intrinsically accompany a relationship dissolution or change the nature of the relationship can make these processes even more challenging for parents (Emery, 2012).

When parents find themselves coparenting apart, there is greater potential for sacrifice and self-care in their lives. They may have to sacrifice for their children through continued interactions with their coparent when they do not want to or may have to sacrifice and let the children go with a coparent for a special holiday they had hoped to spend with the children. There is not much research about sacrifice among parents who are raising minor children, but are no longer romantically involved. One study found that more sacrifices seemed to be required of women (i.e., hiding their bitter feelings and true reasons for divorce if it would put the other parent down in front of the child(ren)) who had poor coparenting relationship qualities with their

child(ren)'s other parent and that this sacrifice was often influential for their children, once the children were old enough to understand (Wallerstein et al., 2013). However, the effect of these sacrifices on the parents making them is not well understood. It is important for scholars to better understand how those who coparent apart sacrifice for each other, considering the effect of sacrifice noted in other relationships and across other family structures (Impett et al., 2012; Kogan et al., 2010; Stanley et al., 2006).

Covariates

There are many contextual factors that can influence relationship commitment and satisfaction, including gender, race/ethnicity, education-level (Curran et al., 2016), and attending therapy (Knabb & Vogt, 2011). Black and White parents experience coparenting differently, such that Black fathers remain more involved in the lives of their sons and are better able to counterbalance their son's relationship with the mother (Doyle et al., 2014). Gender differences in coparenting have been found to be an important factor to consider when exploring coparenting apart relationships. Gender has been found to moderate affective perceptions of coparenting quality (Bonach et al., 2005) and how parental fitness barriers affect coparenting behaviors (Russell et al., 2016). However, no gender differences have been found in coparenting quality (Bonach et al., 2005) nor in coparenting behaviors affecting time spent coparenting (Russell et al., 2016). Education has been found to negatively influence coparenting satisfaction (Riina & McHale, 2012), and attendance in therapy has been found to mitigate potential impacts of coparenting conflict (Lebow & Rekart, 2007).

Current Study

Scholars have demonstrated that there is a relationship between sacrifice, self-care, and religious and family processes rooted in interdependence theory, specifically for two-parent

religious families, where all members live under the same roof (Pippert et al., 2019). This study seeks to test that model in a more diverse population, with those who are coparenting a minor child with someone with whom they are no longer romantically involved. Those who coparent apart are an important subpopulation among which sacrifice (Wallerstein et al., 2013) and self-care (Vidler, 2005) may have an important effect on family relational processes. This study will thus explore how motivations to sacrifice, relational sacrifice, self-care, and family relational processes influence each other across two waves of data (see Figure 3.1 for conceptual model). The hypotheses for this study are as follows:

H1: It is expected that Wave 1 approach motivations will positively influence Wave 2 relational sacrifice and Wave 2 coparenting support.

H2: It is expected that Wave 1 avoidance motivations will negatively influence Wave 2 relational sacrifice and Wave 2 coparenting support.

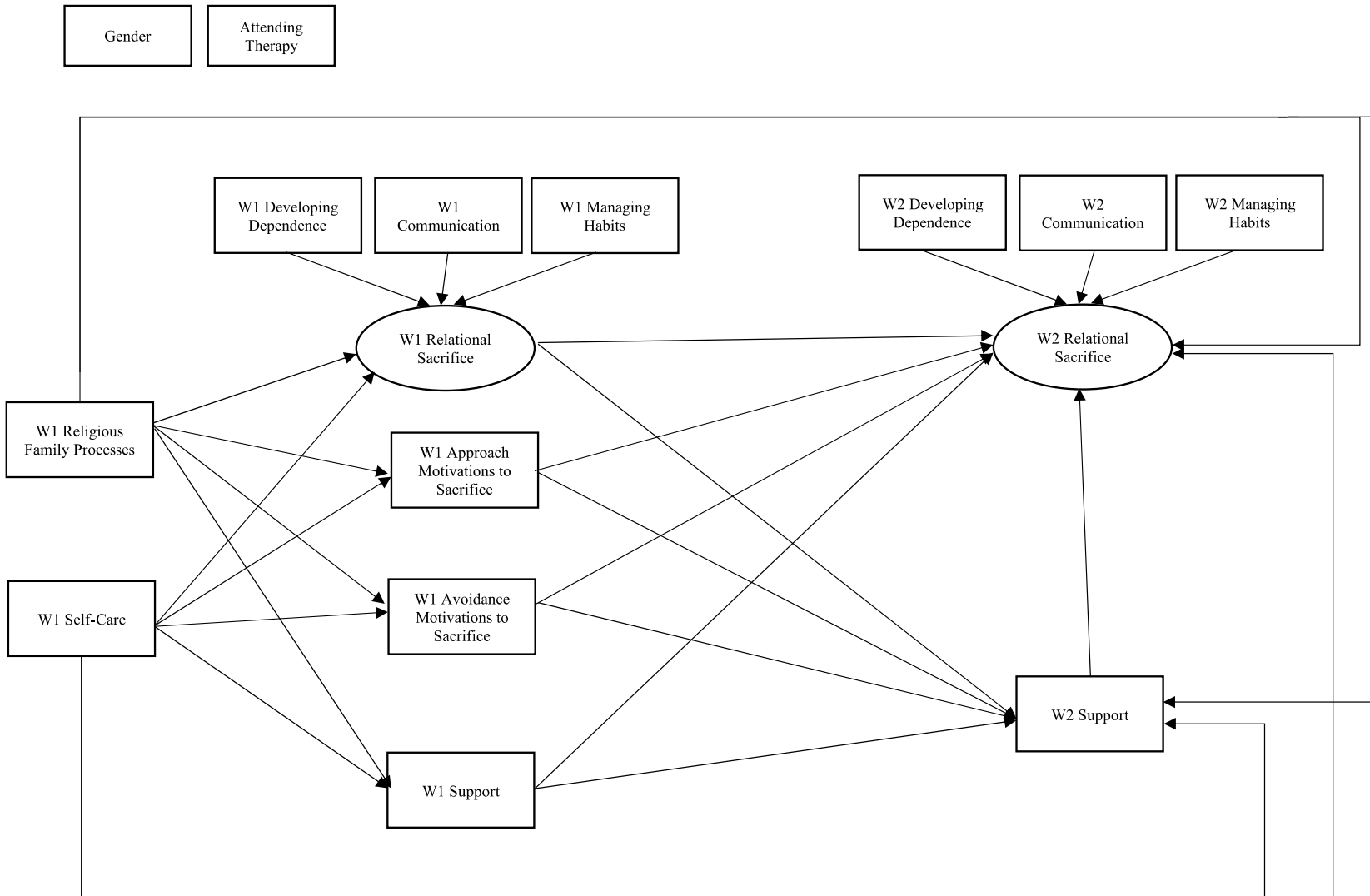


Figure 3.1. Study 2 Conceptual Model.

Methods

Participants

Data were identified through secondary data analysis of the Co-Parenting across Households study, a short-term longitudinal study. The sample was identified using Amazon Mechanical Turk (MTurk) with inclusion criteria requiring that participants were (a) United States residents, (b) had at least one minor child, (c) did not reside with nor were in a romantic relationship with their child's other parent, and (d) had participated in a court filing between 2015 and 2018 that involved their minor child. Specifically, participants had to have been involved in a paternity, divorce with children, change of custody, or change of support action to meet inclusion criteria. Upon entering the MTurk survey at W1, potential participants were first presented with a list of screener questions to determine eligibility for the survey. A total of 1,131 attempts were started; disqualification occurred if potential participants attempted the screener questions multiple times, or if they did not answer the quality check questions appropriately. One quality check consisted of participants being asked to answer a question about if they were divorced or separated multiple times and if answers did not match, they were rejected for inconsistent responses. Another check question first presented potential participants with a paragraph where they were told what color to select on the following question and the next question presented a list of colors. If potential participants selected the wrong color, they were disqualified. Participants were asked if they would be willing to participate in future waves of the study upon completion of the study. Of the 499 completed attempts at W1 of the survey, 455 were deemed usable for analyses, of which 418 identified a willingness to participate in a follow-up survey.

The W2 follow-up survey was made available six months later to only those MTurk ID numbers who had had usable responses at W1 and had expressed an interest in participating in the follow-up survey. Of the possible 418 participants in W2, 148 completed the W2 follow-up survey. In W1, participants were directed to refer to a target child, who was the youngest minor child for whom they shared coparenting responsibilities with someone living in a different household, and answered questions about their coparenting attitudes and experiences, sacrifice, child behaviors, religious behaviors, and mental health. In W2, they were asked to refer to the same target child as in W1 and again answered questions about coparenting attitudes and experiences, sacrifice, child behaviors, and mental health. For conceptual clarity a table outlining the concepts in this study and associated measures are provided in Table 3.1.

Table 3.1. Study 2 Concepts and Associated Measures.

Concept	Measure	Citation
Motivations to Sacrifice	Approach and avoidance subscales of motivation to sacrifice measure	Impett et al., 2005
Relational Sacrifice	Relational Sacrifice Processes Scale	Pippert et al., forthcoming
Self-Care	Pittsburgh Enjoyable Activities Scale	Pressman et al., 2009
Faith activities	Faith Activities in the Home Scale	Lambert & Dollahite, 2010
Coparenting Quality	Multidimensional Co-Parenting Scale for Dissolved Relationships	Ferraro et al., 2018

A total of 148 participants completed both W1 and W2 surveys. Of the 148 participants, 84 (56.80%) were male, 70.30% were White, 16.90% were Black or African American, 6.80% were Hispanic or Latino, and 6.10% were Asian. Participants were 33.55 years-old ($SD = 7.18$) on average with their youngest child averaging 9.66 years-old ($SD = 4.22$). Just over half (52.00%) of the sample had completed at least a four year degree, and 32.40% had completed at least one form of therapy, counseling, or parent/relationship education.

Table 3.2. Study 2 Sample Characteristics.

	<i>M (SD)</i>
Total participants	148

Females	63
Males	84
Ethnicity	
White	104
Black or African American	25
Hispanic or Latino	10
Asian	9
Participant age	33.55 (7.18)
Youngest child's age	9.66 (4.22)
Attended therapy or education course	3.13 (1.31)

Measures

Motivations to sacrifice. The 10-item Motivation to Sacrifice scale includes two subscales, each with five items: approach motivations and avoidance motivations (Impett et al., 2005). Participants were asked to identify how important each item was in their reason to sacrifice on a 7-point Likert scale from (1) *not at all important* to (7) *extremely important*. The items in the subscales were adapted to be applicable to this population of coparents, through changing “my spouse” to “my child’s other parent” for each item. Sample items in the approach scale included “to feel good about myself” and “to make my child’s other parent happy.” Sample items in the avoidance scale included “to avoid feeling guilty” and “to prevent my child’s other parent from becoming upset.” Reliabilities were high at W1 for approach ($\alpha = .85$) and avoidance ($\alpha = .80$) motivations to sacrifice.

Relational sacrifice. The 20-item Relational Sacrifice Processes Scale (RSPS; Study 1) was used to measure relational sacrifices between participants and their child’s other parent across three domains: developing dependence, communication, and managing habits. Participants were asked to indicate how often over the past month they engaged in any of the listed behaviors on a 5-point scale from (1) *never* to (5) *very often*. Sample items in the developing dependence subscale included “I allowed him/her to add a task to my workload so that he/she would be less stressed” and “I attended one of his/her activities/obligations that I did

not enjoy.” Sample items in the communication subscale included “In a disagreement/argument, I apologized first even though I was still hurting” and “I communicated with him/her even when I did not want to.” Sample items in the managing habits subscale included “I spent more money – to reduce his/her financial burden” and “I did not celebrate a holiday the way I wanted to – for his/her benefit.” Reliabilities were high at W1 and W2 for the *developing dependence* ($\alpha = .90$, $\alpha = .91$ respectively), *communication* ($\alpha = .72$, $\alpha = .74$ respectively), and *managing habits* ($\alpha = .80$, $\alpha = .77$ respectively) subscales, as well as the second order factor of relational sacrifice ($\alpha = .94$, $\alpha = .94$ respectively).

Self-Care. The Pittsburgh Enjoyable Activities Test (PEAT; Pressman et al., 2009) was used to measure the leisure activities the participant was able to engage in as a form of self-care. Participants were asked how often over the past month they were able to participate in a list of activities on a 5-point Likert scale from (0) *never* to (4) *every day*. Sample items included “spending quiet time alone” and “engaging in hobbies.” Reliability was high at W1 ($\alpha = .91$).

Faith activities. The frequency subscale of the Faith Activities in the Home Scale (FAITHS; Lambert & Dollahite, 2010) was used to determine the presence of faith activities in the home. Participants were asked to identify the frequency of each of the eight faith activities listed including “family prayer (family together other than at meals)” and “family religious conversations at home.” Participants responded to the frequency subscale on a 5-point Likert scale of (0) *never or not applicable* to (4) *always*. Reliability was high at W1 ($\alpha = .95$).

Coparenting quality. The support subscale of the Multidimensional Co-Parenting Scale for Dissolved Relationships (MCS-DR; Ferraro et al., 2018) was used to assess the quality of coparenting relationships between participants and their target child’s other parent. Participants were asked how often each item listed had happened in their coparenting relationship using a 6-

point Likert scale from (1) *never* to (6) *always*. Sample items in the subscale included “we have similar rules for our child” and “my former partner is a resource to me in raising our child.” Higher scores represent higher coparenting support. Reliabilities were high at W1 and W2 ($\alpha = .87$, $\alpha = .91$ respectively).

Covariates. Several demographic variables were dichotomized and controlled for in the model including female (1) versus male (0), race/ethnicity as measured through White (1) versus non-White (0), education as measured through college educated (1) versus no college degree (0), and attending therapy between waves one and two (1) versus not attending therapy between waves (0).

Analysis

Preliminary analyses consisted of an examination of bivariate correlations, missing data patterns and mechanisms using Little’s Missing Completely At Random chi-square (Little’s MCAR χ^2), and tests of normality using skewness and kurtosis indexes (Curran et al., 1996). Little’s MCAR χ^2 determined if the missing data were missing at random or if there was a pattern to the missing data that needed to be taken into account (Enders, 2010). The skewness index determined if the shape of the distribution was positively or negatively asymmetrical, with the mean in the middle and cutoffs of negative one and one (Kline, 2016). The kurtosis index determined if the data were normally distributed or not, with cutoffs preferably between negative two and two, but acceptable between negative three and three (Kline, 2016).

Then a series of structural equation models were run using AMOS 25, with missing data accounted for through use of full-information maximum likelihood (FIML) estimation.

Measurement models were fit to examine the fit of the latent variables measuring relational sacrifice and coparenting quality, respectively. Next, a latent variable structural equation model

using data across two waves of data was fit to determine the relationships between motivations to sacrifice, relational sacrifice, self-care, and faith and family relational processes (faith activities and coparenting quality) across two time points. Goodness-of-fit was examined using the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the χ^2/df ratio. Good model fit was indicated by CFI and TLI values greater than .95 (Bentler & Bonnett, 1980; Hu & Bentler, 1999), and RMSEA less than .05 and a non-significant p -value (MacCallum et al., 1996), and χ^2/df ratio less than or equal to 3.0 (Carmines & McIver, 1981). Tests of mediation were conducted using the Monte Carlo Method for assessing mediation to determine indirect effects within the model (Preacher & Selig, 2012; Selig & Preacher, 2008). Significant pathways were determined by the resulting confidence intervals not including zero in their range.

Results

Preliminary Results

Missing data was minimal (averaging 3.04% per item, with no item exceeding 16.20%) and was accounted for through the use of full-information likelihood (FIML) estimation. Little's MCAR demonstrated that the data were missing completely at random ($\chi^2 = 280.03$, $df = 308$, $p = .87$). Tests of normality determined that the data were normally distributed (See Table 3.2; Curran et al., 1996). Correlations demonstrated that the variables of interest were related. W1 approach and W1 avoidance motivations were highly correlated ($r = .78$, $p < .001$), as were one's W1 faith and W1 self-care ($r = .72$, $p < .001$), and W1 approach motivations to sacrifice with W1 relational sacrifice ($r = .72$, $p < .001$). W1 avoidance motivations to sacrifice were also highly related to W1 relational sacrifice ($r = .69$, $p < .001$), W1 faith to W1 relational sacrifice ($r = .65$,

$p < .001$), W1 self-care to W1 relational sacrifice ($r = .65, p < .001$), and W1 approach motivations to sacrifice were related to W1 self-care ($r = .61, p < .001$).

Table 3.3. Study 2 Bivariate Correlations and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10
1. Faith	--									
2. Self-Care	.72***	--								
3. W1 Relational Sacrifice	.65***	.65***	--							
4. Approach motivations	.56***	.61***	.72***	--						
5. Avoidance motivations	.51***	.52***	.69***	.78***	--					
6. W1 Support	.22***	.31***	.34***	.44***	.37***	--				
7. W2 Relational Sacrifice	.32***	.24**	.56***	.51***	.51***	.18*	--			
8. W2 Support	.07	.09	.43	.30***	.24**	.53***	.33***	--		
9. Gender	-.07	.18***	-.14**	-.11*	-.12*	-.07	-.16	-.20*	--	
10. Attend therapy	-.56***	.51***	-.54***	-.48***	-.45***	-.19***	-.22**	-.02	.00	--
Range	1-5	0-37	1-5	1-7	1-7	1-6	1-7	1-6	1-3	1-4
<i>M</i>	2.98	20.97	3.14	4.47	4.70	4.19	2.71	4.17	1.38	2.47
<i>SD</i>	1.16	8.94	.83	1.51	1.36	1.00	.84	1.20	.50	1.41
<i>Alpha</i>	.95	.91	.93	.85	.80	.87	.94	.91		
Skew	-.54	-.26	-.53	-.60	-.76	-.90	-.11	-.97	.60	.07
Kurtosis	-.95	-.97	-.18	-.45	.16	.67	-.56	.68	-1.36	-1.89

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Measurement Models

First, measurement models were conducted using AMOS 25 to verify the latent structure of the relational sacrifice scale at W1 and W2. The measurement models demonstrated good fit at W1 ($\chi^2/df = 1.53$; CFI = .94; TLI = .95; RMSEA = .06, $p = .14$) and at W2 ($\chi^2/df = 1.52$; CFI = .93; TLI = .91; RMSEA = .06, $p = .08$), respectively. Factor loadings were generally high. At W1 first order standardized factor loadings were between .51 and .79. At W2 first order standardized factor loadings were between .44 and .78. All p -values for each factor loading at W1 and W2 were less than .001.

Structural Model

A latent variable structural equation model was fit to determine the relationship between one's faith, their self-care, and their approach and avoidance motivations to sacrifice at W1, and their level of support in their coparenting relationship and their relational sacrifice at W1 and W2. Then a latent variable structural equation model, with data across two time points was fit (see Figure 3.2). Model fit was acceptable ($\chi^2/df = 1.84$; CFI = .96; TLI = .91; RMSEA = .08, $p = .05$). Participants' W1 faith was significantly related to one's W1 relational sacrifice ($\beta = .34$, $p < .001$), and one's W1 approach ($\beta = .28$, $p < .001$) and W1 avoidance ($\beta = .30$, $p < .001$) motivations to sacrifice. One's engagement in self-care at W1 was significantly related to one's W1 relational sacrifice ($\beta = .21$, $p = .01$), as well as one's W1 approach ($\beta = .32$, $p < .001$) and W1 avoidance ($\beta = .23$, $p = .01$) motivations to sacrifice. The level of support in the coparenting relationship at W1 was only significantly related to W1 relational sacrifice ($\beta = .20$, $p = .01$). W1 relational sacrifice was related to W2 relational sacrifice ($\beta = .40$, $p < .001$). W1 avoidance motivations to sacrifice were related to W2 relational sacrifice ($\beta = .22$, $p = .05$). Support in the coparenting relationship at W2 was related to W2 relational sacrifice ($\beta = .22$, $p = .002$).

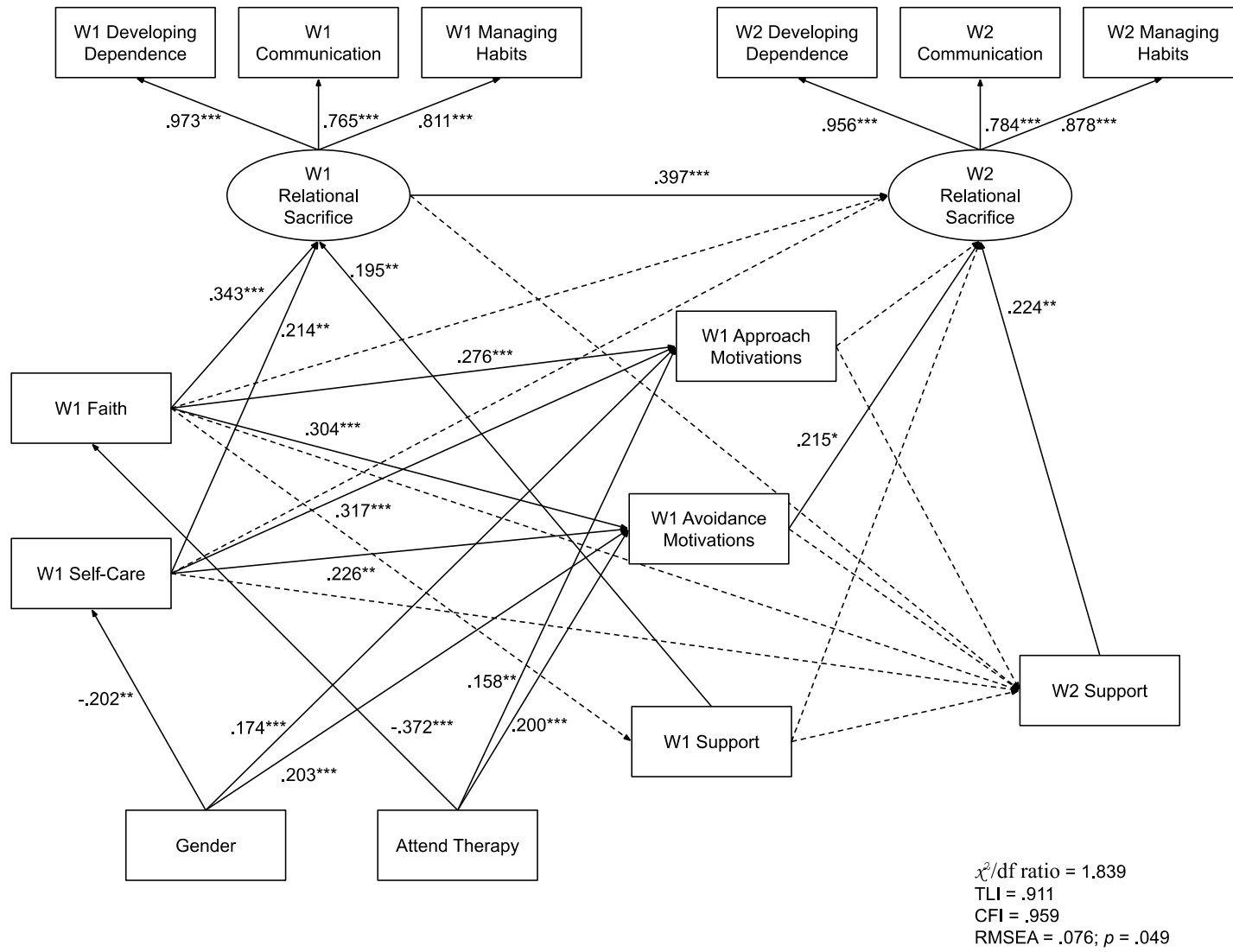


Figure 3.2. Study 2 Final Structural Equation Model.
 Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Tests for Indirect Effects

Tests for indirect effects were conducted using the Monte Carlo Method for assessing mediation (Preacher & Selig, 2012; Selig & Preacher, 2008). Two significant pathways were detected: W1 faith had (1) an indirect relationship with W2 relational sacrifice through W1 relational sacrifice (CI [.05, .20]) and (2) an indirect relationship on W2 relational sacrifice through W1 avoidance motivations to sacrifice (CI [.00, .13]), representing a moderate indirect effect ($z = .246$).

Discussion

The hypotheses for this study were partially supported. Consistent with H1, W1 approach motivations to sacrifice were positively related to W2 relational sacrifice and W2 coparental support. However, H2 was not supported as W1 avoidance motivations were positively related to W2 relational sacrifice and W2 coparental support, contrary to expectations. All significant relationships in the model were positive in nature, suggesting that as one increases efforts personally and relationally, they are more likely to sacrifice in those relationships. W1 faith and W1 self-care were positively related to W1 approach and W1 avoidance motivations to sacrifice. W1 avoidance motivations to sacrifice were positively related to W2 relational sacrifice, despite an expectation of a negative relationship. Further, there was not a significant relationship between W1 approach motivations and W2 relational sacrifice.

Although unanticipated, the nature of these relationships have a number of plausible rationales. First, due to the sample utilized (those who coparent apart), it is possible that the context lends itself more readily to attempts at avoiding negative interactions than seeking out positive interactions with a coparent (Ahrons, 1994). It may be that relationship goals and the ways that individuals operate relative to each other to accomplish these goals could affect

motivations to sacrifice and engagement in relational sacrifice behaviors. Findings from this study suggest that parents operating in a context of divorce or separation may rely more on avoidance motivations to engage in sacrifice. One may refocus on themselves and strive to better care for themselves, and may utilize avoidance motivations with a coparent potentially due to levels of conflict present in the relationship. In other relationships with lower levels of conflict and aversion, such as with continuously married couples, approach motivations to sacrifice may hold a greater influence on engagement in relational sacrifice.

Although this population may be part of the rationale for the non-existent relationship between W1 approach motivations and W2 relational sacrifice, an alternative explanation is that the variance that would be explained by approach motivations is subsumed in the existing significant relationship between W1 avoidance motivation and W2 relational sacrifice. W1 approach and W1 avoidance motivations were highly correlated in our model and it may be that they are interrelated beyond the point of meaningful separation. This finding supports existing research that suggests a need to study the combination of approach and avoidance motivations to sacrifice, as both approach and avoidance motivations to sacrifice have been found to be associated with individual and relational factors in the context of relationships (Fincham & Beach, 2010; Impett et al., 2005). Regardless, this study provides additional empirical support for the theoretical relationship between motivations to sacrifice and engaging in those sacrifices (Akhtar & Varma, 2012).

It is also worth noting that W1 faith was indirectly related to W2 relational sacrifice through W1 relational sacrifice. It may be that as one engages in faith practices, they see their relationships and efforts towards those relationships as being sacred. As those who coparent apart increase personal faith and self-care practices, their engagement in relational sacrifice may

have influence on other areas of the relationship. This may especially be the case when relational sacrifices are perceived as sacred (Burr et al., 2012), because when things are perceived as sacred, the power – positive or negative (Mahoney, 2013) – to influence individuals and relationships increases (Krumrei et al., 2009). W1 self-care was indirectly related to W2 relational sacrifice through W1 avoidance motivations to sacrifice, demonstrating that both personal and relational factors are influential in relational outcomes, a concept central to interdependence theory (Rusbult & Buunk, 1993).

Implications

The findings from this study have important applications for helping professionals. Researchers have argued that sacrifice is a common element across a multitude of relationship types (Ruppel & Curran, 2012; Totenhagen et al., 2013; Wallerstein et al., 2013). In the context of divorce, the notion of sacrifice may be less obvious, but within this context parents may sacrifice their own time with their children so that the other parent can participate in activities with the shared child(ren); additionally, they may sacrifice a desired lifestyle to provide for the needs and wants of their child(ren) or sacrifice aspects of their relationship with each other in order to benefit their child(ren). For those working in divorce education programs, a recognition of the importance of sacrifice, even in these relationships, may be beneficial. Participants in these programs will need to recognize that as they find ways to experience support in their coparenting relationship, engaging in sacrifice will ensue, which may have short- and long-term benefits for them, their children, and their family as a whole. The findings from this study seem to confirm that there may be similarities in the ways that coparental support and relational sacrifice can function within a relationship. Relational sacrifices could be engaged in as a way of providing support for another, or as a way to benefit the self. It may be that when the levels of

support and sacrifice are increased within a relationship across a similar timespan that individuals and their relationship may experience increased benefit, compared to when either relational support or sacrifice are increased without the other.

Relational sacrifices are intrinsically tied to personal relationships and therefore including information about engaging in sacrifice (including best practices) and associated potential benefits or harms in relationship education courses could strengthen their potential to influence positive change in the lives of participants. In divorce education courses, participants may benefit from content about relational sacrifices being presented in conjunction with content about how participants may want to approach taking care of themselves and the benefit that this can have in relation to their own health, perspectives on relationships, and their ability to engage with their children in healthy ways (Hamilton et al., 2013; Skovholt et al., 2001). As those who coparent apart learn how to prioritize and care for themselves, they can experience many personal and relational benefits, as well as positive results from engaging in relational sacrifice (Impett et al., 2005), even with their coparent. Content about how it seems to be that being motivated, more than why one is motivated, is what has a greater influence on subsequent engagement in relational sacrifice and associated effects may help those who experience harsh feelings towards a coparent become more accepting of engaging in sacrifice processes. Interdependence theory argues that the individual is an important part in any close relationship and needs to be harmonized in importance with the relationship as a whole (Rusbult & Buunk, 1993). Engaging in relational sacrifice with a coparent in healthy ways could help build a positive base upon which those who coparent apart can avoid pulling shared children into the coparenting relationship in unhealthy ways (i.e., triangulation), and may help provide children with a healthy coparenting relationship in which to thrive.

The influence of engaging in avoidance motivations on relational sacrifice may have implications related to social desirability for those coparenting apart as well. One may want to be perceived as *the loving coparent*, or *the better coparent* to outsiders, which may influence the why behind a coparent engaging in sacrifice for the other coparent. Social desirability is a strong behavioral motivator (Zemore, 2012), and as such may influence coparents to do more for each other than what might be anticipated among this often volatile population (Ahrons, 1994). Practitioners can use these connections to help clients recognize that sacrificing for a coparent can have impact beyond the family relationship.

Those who are divorced or separated and sharing coparenting responsibilities may struggle with issues of power and control in the coparenting relationship, especially when desiring to spend more time with shared children. An example of an issue of power in a coparenting apart relationship is the issue of coming to a physical custody agreement (Ferraro et al., 2018). Previous research has demonstrated that conflict is present among various types of physical custody arrangements, even though these issues of conflict may vary across agreements (Ferraro et al., 2018). These power and control struggles may influence one's willingness to engage in sacrifice, the number of sacrifices in the relationship, as well as the potential effects of those sacrifices. Future research needs to explore these potential interactions.

Limitations and Future Directions

There are some limitations that must be noted when interpreting results. First, the sample size was only 148 participants, smaller than what would be ideal. Future studies would benefit from larger sample sizes. With larger sample sizes, researchers could further explore the use of more latent variables, rather than relying on predominately observed indicators. For example, using the full Multidimensional Scale for Dissolved Relationships (Ferraro et al., 2018) as a

latent variable would allow researchers to take into account a more holistic perspective of the coparenting apart relationship. Future studies would be able to provide additional insights by using other relationship characteristics and factors, including more robust constructs in the models employed (i.e., multiple dimensions of coparenting), when exploring relationships between personal factors, relational factors, and relational sacrifice, as well as the influence of motivations to sacrifice within these relationships. While beyond the scope of this study, it is possible with more waves of data, a cyclical relationship may be uncovered. Engaging in sacrifice is often seen as a strategy to strengthen a relationship and the satisfaction one feels in that relationship (Impett et al., 2005), suggesting that relational sacrifice may influence the support one feels in a relationship. With more waves of data, more robust longitudinal relationships could be explored to more fully understand the direction of association between constructs. Another limitation of this study is that participants might have answered the items on the RSPS to indicate that they were sacrificing more than they were in reality because they may have perceived engaging in sacrifice as being socially desirable. Future studies exploring aspects of relational sacrifice should include a measure of social desirability to control for this possible effect.

Further knowledge can be gained as researchers explore the relationships between one's faith, self-care, relational sacrifice, motivations to sacrifice, and relational characteristics among other family contexts and relationships. Other family contexts could include military families, single parent families, empty-nesters, or families at different points along the life cycle. Other family relationships could include parent-child, child-child, spouse-spouse, grandparent-grandchild, cousin-cousin, or aunt/uncle-niece/nephew. It was anticipated that by applying the model in this study to different family contexts and relationships, researchers will be able to

learn if the findings presented herein are context specific, if they are subject to specific relationship characteristics, or discover commonalities among relationships that can potentially provide insights to strengthen various relationship education programs. This study specifically explored how motivations to sacrifice were associated with relational sacrifice among adults who were coparenting apart, who tend to approach these relationships in aversive ways and include high levels of conflict (Ahrns, 1994). By exploring the associations between personal factors, motivations to sacrifice, and relational sacrifice among other family relationships and contexts, researchers can learn if the type of relationship being explored influences the way that approach and avoidance motivations influence relational sacrifice.

It seems that being motivated to sacrifice, more so than whether motivations were approach- or avoidance-oriented, may have a greater influence on individuals and relationships. Future research could explore this possibility by utilizing either approach or avoidance motivations in competing models or looking at the presence of motivations versus a lack of motivation to sacrifice.

Chapter 4 - Impact of Military Wives' Motivations to Sacrifice on the Self, Child, and Family

There are many types of close relationships (e.g., romantic relationships, parent-child relationships). As these relationships ebb and flow there are many relational processes occurring simultaneously, influencing each person in the relationship individually, and the relationship as a whole, as explained through interdependence theory (Kelley & Thibaut, 1978; Ruppel & Curran, 2012; Rusbult & Buunk, 1993). Interdependence theory relies heavily upon the idea of sacrificing; relational sacrifice allows those in close relationships to influence each other and is linked with relationship satisfaction (Ruppel & Curran, 2012; Rusbult & Arriaga, 1997; Rusbult & Buunk, 1993). In family life, it is often necessary for parents to sacrifice for their children by giving up personal dreams and goals in order to focus on what they perceive as best for their children (Ashton-James et al., 2013; Warnick, 2014), but this is not the only domain of life in which sacrifice occurs. For military families, sacrifice is often also required, in that military servicemember parents (and their spouses) engage in both normative child-rearing sacrifices and normative military-specific sacrifices (that may be seen as non-normative to the civilian population; Boberiene & Hornback, 2014; Hall, 2011). Military wives often struggle in their role as a de facto single parent while dealing with added behavioral and mental issues their children may experience as a result of military separations (Boberiene & Hornback, 2014). They are often left to complete all the day-to-day tasks relating to the children (DeVoe & Ross, 1012), which includes making many sacrifices for the children while the servicemember father is away. Servicemember fathers often strive to stay psychologically present in parenting their children (MacDermid et al., 2005; Schachman, 2010), but because of the nature of military life, and the demand of being physically in a different place, often many tasks fall to the civilian mother.

Sacrifice can contribute to relationship satisfaction levels (Ruppel & Curran, 2012), which have been associated with better family functioning altogether (Lindahl & Malik, 2011). Therefore, what happens within a dyadic relationship in a family has an effect on the functioning of the entire family unit. Although the sacrifices themselves can be influential, the motivations behind these processes have also been found to influence whether the person sacrificing has positive or negative feelings towards the other person, whether the person receiving the sacrifice feels closer or farther from the person who sacrificed, and whether the relationship is strengthened or weakened (Kelley, 1979; Rusbult & Arriaga, 1997). Motivations to sacrifice are often categorized as either approach- or avoidance-oriented (Ruppel & Curran, 2012), with approach motivations typically providing the most benefit within close relationships (Impett & Gordon, 2010). However, researchers have yet to explore motivations for military wives to sacrifice for their children and how the relational sacrifice processes affect the outcomes for the mother, child, and family as a whole.

Interdependence Theory

Interdependence theory holds that both individuals and the relationship as a whole have importance when exploring relationship outcomes such as support, affection, and emotional closeness (Rusbult & Buunk, 1993; Rusbult et al., 1998). Within these close relationships, interdependence, or the ability and felt need to rely on each other, can develop (Kelley & Thibaut, 1978). In order to build interdependence and enhance the close relationship, motivations to sacrifice and relational sacrifices are important (Rusbult & Van Lange, 2008). Particularly, close relationships tend to continue across time as motivations to sacrifice change from being self-focused to other- or relationship-focused (Rusbult & Arriaga, 1997). Sacrifice is a method

through which one may invest in a relationship and further deepen the meaning that can be found in that relationship (Ruppel & Curran, 2012).

In order for one to experience greater relationship satisfaction, they must acknowledge and attend to their own needs (Kelley, 1979). Among the reasons one may experience stress is a lack of meeting personal needs (Rupert & Dorociak, 2019), which can occur when spending lots of time meeting the needs of others (Skovholt et al., 2001). When stress is not addressed, negative mental health patterns may emerge for the stressed individual (Goldenhar et al., 2001), and may affect their close relationships (Kelley, 1979). Within interdependence theory, scholars have argued that both individuals in a close relationship have influence on each other (Kelley, 1979; Rusbult & Buunk, 1993): they discern and meet each other's needs. When one person feels dissatisfied with their relationship, they have been found to engage in aggressive behaviors (Dimler et al., 2017). Mothers' beliefs about their parenting role have been linked to their children's aggressive behaviors (Evans et al., 2012). Through the aggressive behavior, one may be demonstrating to the other in the relationship that there are unmet needs (e.g., a child exhibiting aggressive behaviors may be signaling to a mother that there are unmet needs). Furthermore, relationship satisfaction is a key determinant in the likelihood of the relationship to last over time (Kelley & Thibaut, 1978; Rusbult & Buunk, 1993).

Military Families and Well-Being

Mental Health

According to the Army demographics for the 2016 fiscal year, there were 471,271 active duty Army personnel, of which 15% were female (U.S. Army, 2016). Of the 85% male active duty personnel, 59% were married with an average of almost two children per couple. U.S. Army spouses often experience long separations from the servicemember that are characterized by

increased responsibility for any children coupled with a high likelihood of mental or emotional strain worrying about the servicemember (Orthner & Rose, 2009). The number and length of deployments a military spouse experiences can influence the likelihood of mental health problems and parenting stress (Creech et al., 2014), and is important in how she experiences military life (Everson et al., 2014). However, the effects of military life are not exclusively reserved for periods of deployment, as scholars have indicated that military wives experience many stressors (e.g., parenting stress), both when their spouses are home and when they are away (Larsen et al., 2015).

Child Well-Being

Military children also feel the effect of a military lifestyle. There are associations between a child's military experiences and stresses with externalizing (e.g., aggressive behaviors) and internalizing (e.g., depression) behaviors (Chandra et al., 2010; Moeller et al., 2015; Tanielian et al., 2014). Deployed military fathers often try to stay as connected and involved as they can from a distance (Schachman, 2010), but there are inherent limitations because of the distance (Willerton et al., 2011). Internet or cell phone connections may be limited depending on where the deployed member is stationed, and schedules can be difficult to work around. Servicemembers may be restricted on computer access or may be subject to blackouts where they are not allowed to contact home, dependent on the type of deployment they have been assigned. Servicemembers may be required to participate in training exercises that make them unavailable to family members for a set time period (Willerton et al., 2011).

Family Relational Health

One of the most helpful ways for military wives to cope with military life, and to help their children cope with its associated stressors, is to maintain routines and rituals both when the

military member is home and when he is not (Osofsky & Chartrand, 2013). Maintaining routines and rituals can be hard, and may require sacrifices of various family members (Coccoma, 2013). Finding purpose, expression of emotion, and being able to acclimate to military life are among the strategies that have been found effective in military wives' abilities to cope with the stresses that military life can bring (Larsen et al., 2015). At a systemic level, family satisfaction is part of a family's ability to adapt and function within military life (Olson et al., 2006; Oshri et al., 2015). As families strive for family relationship satisfaction, they may be motivated to sacrifice. Sacrifice has been shown to increase relationship satisfaction (Ruppel & Curran, 2012). Military families who are able to have greater amounts of cohesion and flexibility or other positive relational processes, and decreased amounts of blaming, or other negative relational processes tend to experience high family satisfaction (Oshri et al., 2015). Positive processes can be achieved through engaging in sacrifice processes (Pippert et al., 2019).

Sacrifice

In Study 1 sacrifice was defined as “*voluntarily and deliberately giving up, setting aside, or surrendering some type of self-interest or personal desire for a purpose to obtain or achieve something.*” Within family life, sacrifice is a way that family members interact and help meet each other's needs. Through engaging in sacrifice processes, family members can build their affection for each other and their bonds with each other (Dollahite et al., 2009). To understand the influence of sacrifice on individuals and their families requires an understanding of both the processes and the motivations that drive those processes. As the processes and motivations of sacrifice are more understood, the effect on family members, their relationships, and the family as a whole can be more fully understood.

When considering sacrifice processes, the first question that must be answered is: for whom is the sacrifice made? Within the family, parents will often engage in sacrifice for each other and for their children (Pippert et al., 2019). Children may sacrifice for each other and for their parents. The recipient of the sacrifice receives benefit through a promotion of relationship satisfaction and stability through having needs met and developing positive perceptions of the one who performed the sacrifice, specifically when the recipient recognizes a sacrifice has been made (Impett & Gordon, 2008). However, sacrifices in family life may be influential for more than only those immediately involved in the sacrifice. Processes of sacrifice have been found to be positively related to relationship satisfaction (Ruppel & Curran, 2012), which has been shown to positively affect family functioning (Feldman et al., 1990). Sacrifices can become stressful in close relationships, especially when they are viewed negatively (Impett et al., 2005) and the one sacrificing does not perceive having social support available (Lin et al., 2017). The motivations behind why one acts the way they do are important in determining the effects of the behavior (Akhtar & Varma, 2012). Motivations to sacrifice can often be categorized as either approach- or avoidance-oriented (Impett et al., 2005; Impett & Gordon, 2010); however, research has shown that the presence of one motivation does not preclude the presence of the other (Impett et al., 2005). Approach motivations are associated with increased relationship satisfaction and quality, and reduced relationship conflict (Impett et al., 2005). Avoidance motivations can hinder relationship satisfaction and may even cause negative feelings, such as resentment, to develop (Impett & Gordon, 2008).

In family life, parents often give of themselves for the benefit of their children (Ashton-James et al., 2013; Warnick, 2014). The ways that they engage in sacrifice processes change throughout their life as the needs of the family change. How mothers engage in sacrifice may

also be dependent on their family situation. Military wives have reported sacrificing their health to be able to attend to other family priorities (Mailey et al., 2018). An emerging literature suggests that personal well-being, family well-being, and life satisfaction may be related to sacrificing for others (Ashton-James et al., 2013; Brown et al., 2003). The motivations that drive sacrifices that parents make for their children are often assumed to be out of love or obligation (Mailey et al., 2018; Warnick, 2014). The exact motivations behind these sacrifices, however, are not clear, and have yet, to the best of our knowledge, to be fully explored within the broader sacrifice literature and more specifically as it relates to a military wife's motivation to sacrifice for her child(ren).

Current Study

It is well known that military lifestyles affect spouses and children respectively (Everson et al, 2014; Moeller et al., 2015), but researchers need to explore more thoroughly the relationship between specific processes a military spouse engages in for a child and how those processes affect the spouse, child, and family more generally. This study seeks to validate the Relational Sacrifice Processes Scale (RSPS), which has previously been validated amongst a sample of parents referencing their sacrifice for their child's other parent (Study 1), with a new sample, in a military family context, and in reference to mother-child relationships. Furthermore, this study will also explore the relationships between a military spouse's motivation to sacrifice for her children, the relational sacrifice processes she engages in, her mental health, the child's outcomes, and the family's relational health (see Figure 4.1). Hypotheses for this study are as follows:

H1: It is expected that the Relational Sacrifice Processes Scale will hold consistent with its previously validated structure.

H2: It is expected that mothers' motivations to sacrifice will moderate the relationship between their sacrifices, and their mental health (as evidenced by stress and coping), their child's behavioral outcomes, and family satisfaction.

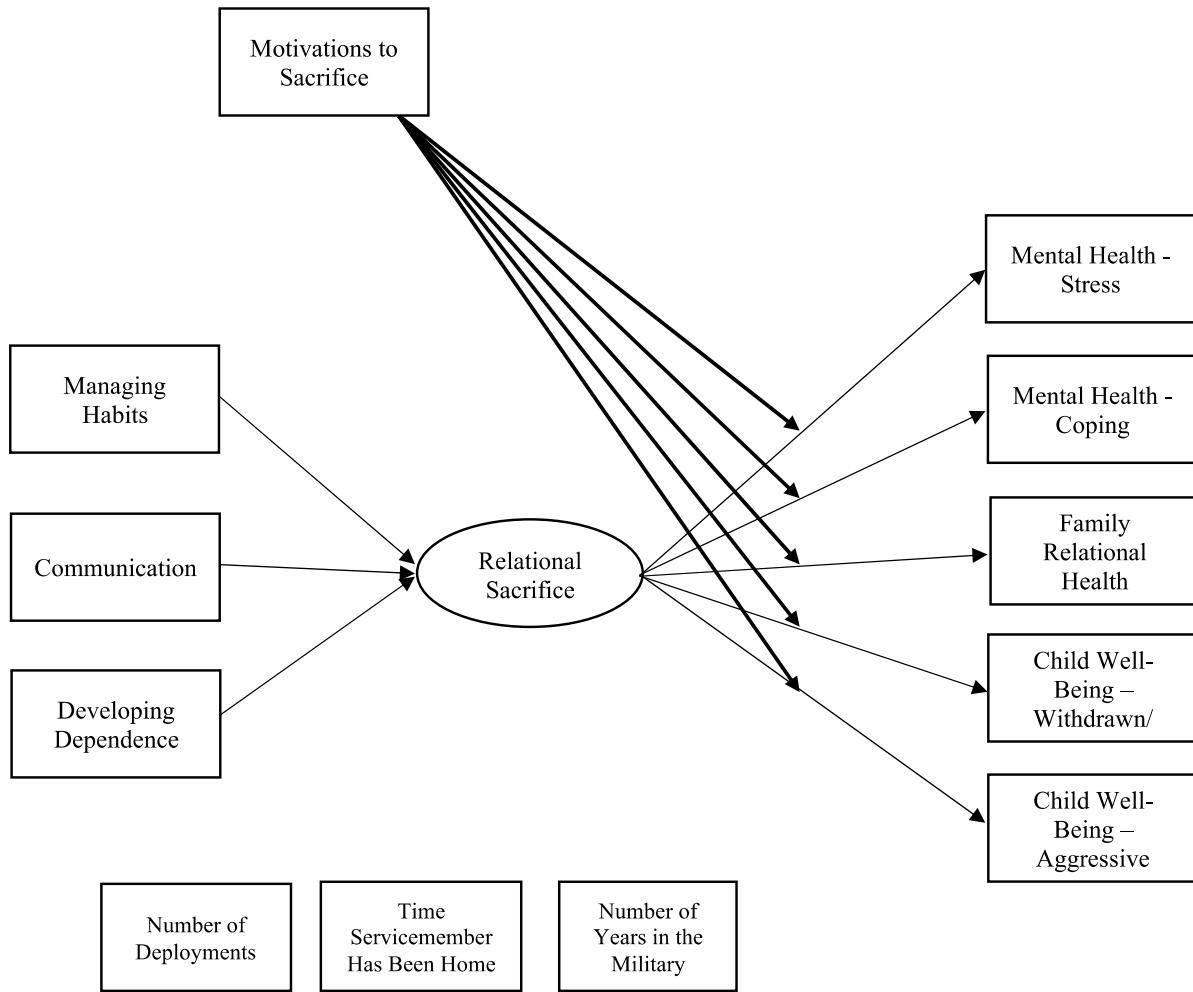


Figure 4.1. Study 3 Conceptual Model.

Methods

Procedures and Participants

The sample was identified using Amazon Mechanical Turk (MTurk). Inclusion criteria for this study required that participants were (a) U.S. Army wives, (b) not military members themselves, (c) had children under 18, and (d) had been affiliated with the U.S. Army for 5 or

more years. There were no restrictions on location of residence as the U.S. Army has installations around the world where U.S. Army spouses could be living. Upon entering the survey, potential participants were first presented with a list of screener questions to determine eligibility for the survey. 2,575 attempts were started with the MTurk survey. Potential participants were disqualified if they attempted the screener questions multiple times, or if they did not answer the quality check questions appropriately. One quality check question first presented potential participants with a paragraph where they were told what color to select on the following question and the next question presented a list of colors. If potential participants selected the wrong color, they were disqualified. Potential participants were also disqualified if they inaccurately answered any of a series of screener qualitative questions. For example, potential participants were asked in what year they became affiliated with the US Military. Individuals who answered with something that was not a year were disqualified. 517 individuals completed the survey, of which 99 were rejected due to incorrectly answering screener or quality check questions. Data were not used from those who were affiliated with a branch other than the U.S. Army, for a total sample of 379 participants. Those who successfully completed the screener questions answered questions about the military experiences they have had, their mental health, their relational sacrifice processes, their child’s well-being, and their family relational health. For all child well-being questions, participants were asked to reference a target child: their youngest minor child. Upon successful completion and after the responses had been approved, each participant was compensated \$2.00 for completing the survey. For conceptual clarity, a table outlining the concepts in this study and associated measures are provided in Table 4.1.

Table 4.1. Study 3 Concepts and Associated Measures.

Concept	Measure	Citation
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Motivations to Sacrifice	Approach and avoidance subscales of motivation to sacrifice measure	Impett et al., 2005
Relational Sacrifice	Relational Sacrifice Processes Scale	Pippert et al., forthcoming
Mother's Mental Health	Rhode Island Stress & Coping Inventory	Fava et al., 1998
Child Outcomes	Child Behavior Checklist – Aggressive behavior subscale and withdrawn/depressed subscale	Nakamura et al., 2006
Family Relational Health	FACES IV - Family Satisfaction subscale	Olson, 1995

A total of 379 participant responses were approved and those data were used in analyses. Of the 379 participants, just over half were White (55.94%) while just over a third were Black or African American (36.68%). Participants on average were 31-years-old ($SD = 5.67$). Their youngest minor child was 5-years-old, on average, ($SD = 3.65$). Most participants had a full time job (79.90%) and about three quarters had at least a 4-year degree (75.20%). Participants had moved an average of 7.51 times since being affiliated with the military, 51.50% of participants' husbands were junior-enlisted Soldiers, 28.20% of husbands were non-commissioned officers, and 15.00% of husbands were commissioned officers. Participants had experienced an average of 4.49 deployments ($SD = 2.01$), and had their husbands home from the last deployment for an average of 11.84 months ($SD = 15.12$). Over half of participants lived off of their local military base (66.20%). See Table 4.2 for sample characteristics.

Table 4.2. Study 3 Sample Characteristics.

	N (%)
Total participants	379
Ethnicity	
White	212 (55.94%)
Black or African American	139 (36.68%)
Hispanic or Latino	10 (2.64%)
Asian	9 (2.37%)
Motivation to sacrifice groups	
High-high	172 (45.38%)
High-low	76 (20.05%)
Low-low	117 (30.87%)

Participant age (M/SD)	31.10 (5.67)
Youngest child's age (M/SD)	5.13 (3.65)

Measures

Relational sacrifice. The 20-item Relational Sacrifice Processes Scale (RSPS; Study 1) was used to measure relational sacrifices between participants and their child across three domains: developing dependence, communication, and managing habits. Participants were asked to indicate how often over the past month they engaged in any of the behaviors listed on a 5-point scale from (1) *never* to (5) *very often*. Sample items in the developing dependence subscale included “I allowed him/her to add a task to my workload so that he/she would be less stressed” and “I attended one of his/her activities/obligations that I did not enjoy.” Sample items in the communication subscale included “In a disagreement/argument, I apologized first even though I was still hurting” and “I communicated with him/her even when I did not want to.” Sample items in the managing habits subscale included “I spent more money – to reduce his/her financial burden” and “I did not celebrate a holiday the way I wanted to – for his/her benefit.” Reliability was high for each subscale ($\alpha = .81-.88$) and for the second order factor of relational sacrifice ($\alpha = .94$).

Well-being.

Mental health. The 12-item Rhode Island Stress and Coping Inventory (Fava et al., 1998) was used to measure participants' mental health. Participants were asked how often in the last month each provided statement was true for their own lives using a 5-point Likert scale from (1) *never* to (5) *frequently*. Sample items for the stress subscale included “I felt overwhelmed” and “I had no time to relax.” Reliability for the stress subscale was good ($\alpha = .81$). Sample items for the coping subscale included “I felt able to meet demands” and “I was able to cope with unexpected problems.” Reliability for the coping subscale was high ($\alpha = .90$).

Family relational health. The 10-item family satisfaction subscale of the Family Adaptability and Cohesion Scale IV (FACES IV) was used to measure family relational health (Olson, 1995). Participants were asked about how satisfied they were with aspects of their family life on a 5-point Likert scale from (1) *very dissatisfied* to (5) *very satisfied*. Sample items included “your family’s ability to cope with stress” and “your family’s ability to resolve conflicts.” Reliability for family satisfaction was good ($\alpha = .77$).

Child well-being. Two subscales from the Child Behavior Checklist (8-item withdrawn/depressed subscale and six items from the aggressive behavior subscale) were used to measure the mother’s perception of the target child’s well-being (Nakamura et al., 2009; Van Widenfelt et al., 2003). Participants determined how often the statements were true of their child on a 3-point Likert scale from (0) *not true* to (2) *very true or often true*. Examples of items in the withdrawn/depressed subscale included “there is very little he/she enjoys” and “underactive, slow moving, or lacks energy.” Reliability for the withdrawn subscale was high ($\alpha = .91$). Examples of items in the aggressive behavior subscale included “disobedient at home” and “temper tantrums or hot temper.” Reliability for the aggressive behavior subscale was also high ($\alpha = .87$).

Motivations to sacrifice. The 10-item Motivation to Sacrifice scale was used to measure participants’ motivations to sacrifice for their children (Impett et al., 2005). Both the approach and avoidance subscales were used. Participants were asked to identify how important each item was in their reason to sacrifice for their target child on a 7-point Likert scales from (1) *not at all important* to (7) *extremely important*. Sample items in the approach scale included “to feel good about myself” and “to make my child’s other parent happy.” Sample items in the avoidance scale

included “to avoid feeling guilty” and “to prevent my child’s other parent from becoming upset.” Both the approach and avoidance subscales had high reliabilities ($\alpha = .77$; $\alpha = .87$ respectively).

The groups for motivations to sacrifice were created by first exploring a two-by-two matrix for high and low approach and avoidance motivations. Mattingly and colleagues (2012) suggest that avoidance motivations are stronger than approach motivations when it comes to sacrifice. Other scholars have divided approach and avoidance motivations based on the mean of the population in their analyses (Cooper et al., 2017). Upon examining the number of participants in this four-group solution, it was determined that there was not a large enough number of participants in each group to achieve the required power for the statistical analyses. Upon further examination, the *high approach and high avoidance (high-high)* group had 172 participants, the *low approach and low avoidance (low-low)* group had 117 participants, and when combined, the two groups that were high in one type of motivation and low in another had 76 participants. It was decided to keep the *high-high* and the *low-low* group and create a third group with the two high-low combinations into the *high low combination (high-low)* group for use in further analyses.

Covariates. Covariates consisted of military demographic information including the number of deployments the civilian spouse has experienced, the year the servicemember joined the military, and the number of months the military spouse had been home from the most recent deployment.

Analysis

Preliminary analyses consisted of an examination of bivariate correlations, missing data patterns and mechanisms using Little’s Missing Completely at Random chi-square (Little’s MCAR χ^2), and tests of normality using skewness and kurtosis indexes (Curran et al., 1996).

Little's MCAR χ^2 determines if the missing data are missing at random or if there is a pattern to the missing data that needs to be taken into account by the researcher (Enders, 2010). The skewness index determines if the shape of the distribution is positively or negatively asymmetrical, with the mean in the middle and cutoffs of negative one and one (Kline, 2016). The kurtosis index determines if the data are normally distributed or not, with cutoffs preferably between negative two and two, but acceptable between negative three and three (Kline, 2016).

Then a confirmatory factor analysis was run for the relational sacrifice processes scale (RSPS) to confirm the RSPS factor structure for mother-child relationships using Amos 25. Model fit was examined using four goodness of fit indicators: The Root Mean Square Error of Approximation (RMSEA), the χ^2/df ratio, the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI). Reasonable model fit was demonstrated through RMSEA values of less than .08, a χ^2/df ratio between one and three (Browne & Cudeck, 1993; Carmines & McIver, 1981), and CFI and TLI values greater than .95 (Bentler & Bonnett, 1980; Hu & Bentler, 1999).

Then a structural equation model was fit to determine the relationship between relational sacrifice and the well-being indicators: mental health of the mother (Rhode Island Stress and Coping Inventory), family relational health (Family Satisfaction scale), and child well-being (Child Behavior Checklist). Missing data were accounted for through the use of full-information likelihood (FIML) estimation. Then a multi-group moderation model was fit to determine the differences in how sacrifice affects well-being (for the participant, family, and child) between the different sacrifice motivation groups. To determine model fit, RMSEA, χ^2/df ratio, TLI and CFI, were used. Both the omnibus test and pathways were examined for significant differences between groups.

Results

Preliminary Results

Missing data was low (averaging .92%, with no item exceeding 8.40%) and was accounted for through the use of full-information maximum likelihood (FIML) estimation. Little's MCAR demonstrated that the data were missing completely at random ($\chi^2 = 292.78$, $df = 351$, $p = .99$). Relational sacrifice was related to mother's coping ($r = .33$, $p < .001$) and stress ($r = .60$, $p < .001$), mother's perception of her child's withdrawn ($r = .59$, $p < .001$) and aggressive behaviors ($r = .56$, $p < .001$), family satisfaction ($r = .37$, $p < .001$), and the number of deployments experienced ($r = .42$, $p < .001$; see Table 4.2). Mother's coping was related to her stress ($r = .32$, $p < .001$), family satisfaction ($r = .49$, $p < .001$), and her perception of her child's withdrawn ($r = .21$, $p < .001$) and aggressive ($r = .24$, $p < .001$) behaviors. Family satisfaction was related to the perceived child's withdrawn ($r = .15$, $p < .001$) and aggressive ($r = .15$, $p < .001$) behaviors. A child's perceived withdrawn behaviors were also related to their aggressive behaviors ($r = .85$, $p < .001$). Normality and skewness demonstrated the data were normally distributed, except for the variable about how long servicemembers had been home from deployment, where data were skewed demonstrating that most had been home less than a year.

Table 4.3. Study 3 Bivariate Correlations and Descriptive Statistics.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Mom's Coping	--												
2. Family Satisfaction	.49***	--											
3. Child Withdrawn	.21***	.15**	--										
4. Child Aggressive	.24***	.15**	.85***	--									
5. Mom's Stress	.32***	.19***	.66***	.66***	--								
6. Developing Dependence	.36***	.41***	.54***	.51***	.55***	--							
7. Communication	.34***	.36***	.52***	.51***	.55***	.84***	--						
8. Managing habits	.27***	.30***	.62***	.59***	.62***	.83***	.83***	--					
9. Relational Sacrifice Process	.33***	.37***	.59***	.56***	.60***	.96***	.93***	.94***	--				
10. Number of Deployments	.29***	.18***	.54***	.50***	.45***	.41***	.38***	.41***	.42***	--			
11. Months Home from Deployment	.07	.07	-.01	.00	-.03	-.01	.02	-.05	.00	-.02	--		
12. Year Joined Military	.03	.05	.01	.03	.04	.04	.03	.03	.04	-.20***	-.11*	--	
13. Ap/Av Groups	-.39***	-.43***	-.37***	-.33***	-.38***	-.59***	-.54***	-.54***	-.59***	-.36***	.05	.04	--
Range	1-5	10-50	1-3	1-3	1-5	1-5	1-5	1-5	1-5	0-7	0-104	1988-2019	1-3
<i>M</i>	3.62	39.11	1.83	1.87	3.19	3.45	3.43	3.36	3.41	4.49	11.84	2010	1.85
<i>SD</i>	.77	6.59	.60	.61	.94	.81	.87	.88	.80	2.01	15.12	5.97	.88
<i>Alpha</i>	.81	.77	.91	.87	.90	.88	.81	.83	.94	--	--	--	--
Skew	-.85	-1.17	-.19	-.21	-.76	-.75	-.70	-.60	-.75	.09	2.99	-1.02	.30
Kurtosis	1.38	1.69	-1.51	-1.46	-.15	.49	.48	-.09	.52	-1.12	10.37	.79	-1.64

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Confirmatory Analysis

CFA results confirmed the 20-item, three factor structure of the RSPS with high internal reliabilities for each of the three subscales previously identified in Study 1 ($\alpha = .88$ for *developing dependence*, $\alpha = .81$ for *communication*, and $\alpha = .83$ for *managing habits*). When combined, the subscales demonstrated high reliability for the second order factor of RSPS ($\alpha = .94$). Factor loadings were above .55 and model fit was good ($\chi^2/df = 1.60$; CFI = .97; TLI = .96; RMSEA = .04, $p = .97$).

Structural Model

Preliminary results suggest good model fit for the structural model of the effect of sacrifice on mother, child, and family outcomes ($\chi^2/df = 2.74$; CFI = .98; TLI = .95; RMSEA = .07, $p = .07$). The relationship between relational sacrifice and the number of deployments was significant ($\beta = .46$, $p < .001$), as was the relationship between when they became affiliated with the military and relational sacrifice ($\beta = .13$, $p = .008$). Relational sacrifice was significantly related to mother's stress ($\beta = .52$, $p < .001$) and coping ($\beta = .27$, $p < .001$). The number of deployments was significantly related to mother's stress ($\beta = .25$, $p < .001$), mother's coping ($\beta = .19$, $p < .001$), perceived child's withdrawn behavior ($\beta = .36$, $p < .001$), and perceived child's aggressive behavior ($\beta = .32$, $p < .001$). Relational sacrifice was significantly related to perceived child's withdrawn behavior ($\beta = .45$, $p < .001$), perceived child's aggressive behavior ($\beta = .45$, $p < .001$), and family satisfaction ($\beta = .38$, $p < .001$).

Multi-Group Moderation

Next, a multi-group moderation model was fit (see Figure 4.2). The moderating variable represents different combinations of motivations to sacrifice in three groups: (a) high approach and high avoidance (*high-high*), (b) either high approach and low avoidance or low approach and

high avoidance (*high-low*), and (c) low approach and low avoidance (*low-low*). The model demonstrated good model fit ($\chi^2/df = 1.85$; RMSEA = .05, $p = .57$; CFI = .96, TLI = .90). The omnibus test, which tests differences between the unconstrained and constrained models, was significant ($\chi^2(32) = 74.49$, $p < .001$), demonstrating that the model was significantly moderated by the motivation to sacrifice groups.

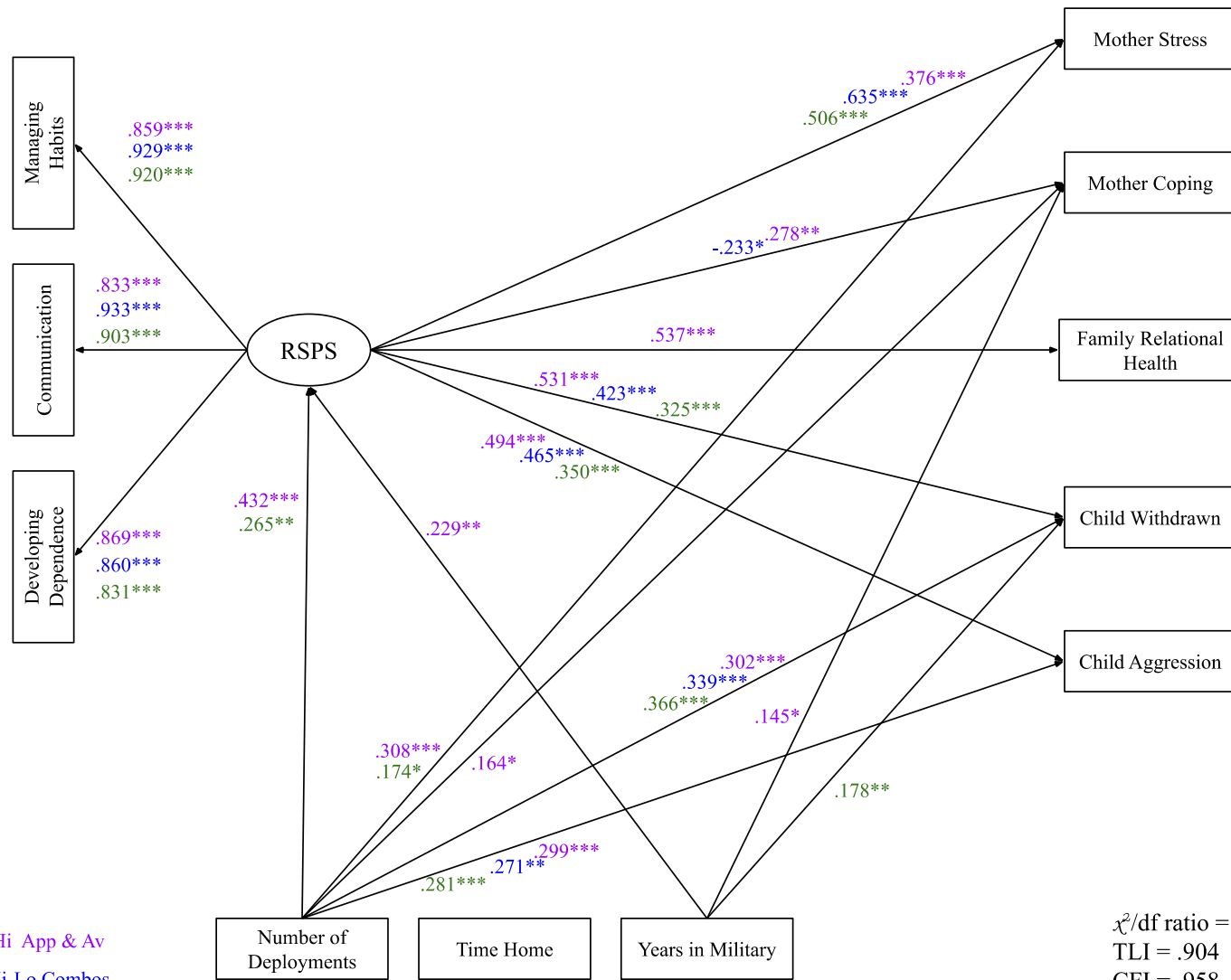


Figure 4.2. Study 3 Final Multi-Group Moderation Model.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Group differences were then identified by examining the critical ratio for differences test for each pathway. For the pathway between relational sacrifice and mother's stress, the critical ratio for differences between the *high-high* group and the *high-low* group was above the cutoff for significance ($z = 1.99$), but the critical ratio between the *high-high* and *low-low* nor the *high-low* and *low-low* groups did not exceed the cutoff for significance for the pathway between relational sacrifice and mother's stress. When examining the pathway between relational sacrifice and mother's coping, the critical ratio exceeded the cutoff for significance between the *high-low* group and the *high-high* group ($z = -3.76$) as well as between the *high-low* group and the *low-low* group ($z = 2.314$), but not between the *high-high* and the *low-low* groups.

When examining the pathway between relational sacrifice and family relational health, the critical ratio for differences test demonstrated significance across all groups. The critical ratio exceeded the cutoff for significance between the *high-high* and the *high-low* groups ($z = -4.50$), between the *high-high* and the *low-low* groups ($z = -2.40$), and the *high-low* and *low-low* groups ($z = 1.99$).

For the pathway between relational sacrifice and perceived child's withdrawn behaviors, the critical ratio test exceeded the cutoff for significance for the *high-high* and *low-low* groups ($z = -3.28$), but not between the *high-high* and *high-low* groups, nor the *high-low* and *low-low* groups. Between relational sacrifice and perceived child's aggression, the critical ratio exceeded the cutoff for significance between the *high-high* and *low-low* groups ($z = -2.49$), but not between the *high-high* and *high-low* groups, nor the *high-low* and *low-low* groups.

Among the covariate pathways, the critical ratio test exceeded the cutoff for significance for the pathway between months home from deployment and mother's stress between the *high-low* and *low-low* groups ($z = -2.14$). It also exceeded significance for the pathway between the

year the servicemember began military service and perceived child's withdrawn behavior between the *high-high* and *low-low* groups ($z = 2.11$) and between the *high-low* and *low-low* groups ($z = 2.69$).

Discussion

Impett et al. (2005) found that when an individual is high (or low) in either approach or avoidance motivations to sacrifice, that that does not discount the possibility of also being high (or low) in the other type of motivation to sacrifice. This notion, of the linked, yet distinctive, impact of both approach and avoidance motivations is well-noted in the literature with scholars arguing that simply assuming a relationship between approach and positive relational outcomes, and avoidance and negative relational outcomes, may be misguided (Fincham & Beach, 2010). In this study, the nuance of the relationship between these motivators and its impact on individual, relational, and family well-being was explored through group-level comparisons of those high in both approach and avoidance motivations (*high-high*), low in both approach and avoidance motivations (*low-low*), or those that were mixed (*high-low*).

Those in the *high-high* group seemed to demonstrate a more holistic approach to sacrifice by embracing multiple attitudes about or styles of relationships. The *high-high* group is in contrast to those in the *low-low* group, who seem to identify as having an overall lack in being motivated to sacrifice. Differences between these two groups were evident for the path between the mother's relational sacrifice and both the child's withdrawn and aggressive behaviors. Although the relationship between mother's sacrifice and a child's withdrawn and aggressive behaviors is significantly positive for all three groups, there is only a significant difference between the *high-high* and *low-low* groups. It seems that those who are more holistically motivated to sacrifice have both higher levels of mother's relational sacrifice and higher levels of

the child's withdrawn and aggressive behaviors. Because this study is not predictive in nature, it could be that as a child's withdrawn and aggressive behaviors may increase a mother's relational sacrifice for that child, but nonetheless it is noteworthy that the strength of association significantly varies across these groups.

Significant differences also existed between all three groups in the relationship between sacrifice and family relationship health; although all groups varied in the strength of association and the *high-low* group differed in directionality, the *high-high* group was the only group that demonstrated a significant relationship between the constructs. Perhaps when holistically motivated to sacrifice, an individual may be better able to discern the needs of others within their family unit and then meet those needs in healthy ways, contributing to positive relational family health. Significant differences also existed between the *high-high* and *high-low* groups for the relationship between relational sacrifice and mother's stress, with the *high-low* group demonstrating a significantly stronger relationship between relational sacrifices and stress. This may mean that for those more holistically motivated to sacrifice, there is a greater buffer between relational sacrifices and associated stress levels.

The *high-low* group does not always align with one of the other motivation groups, however. This may, in part, be due to the fact that it combines two subgroups (high approach versus high avoidance), between which significant differences may exist. For the relationship between the mother's relational sacrifice and her coping, the *high-low* group was significantly different than both the *high-high* and the *low-low* groups. For those in the *high-low* group, mother's relational sacrifice was related to decreases in mother's coping, suggesting that when an intentionality to sacrifice is one-sided, successful coping is harder to accomplish. When a mother employs one type of motivation more so over the other, this imbalance may not provide

mothers with enough motivation to cope as easily with sacrifice-related situations. If a family member experiences only one type of motivation, then it may be harder for family members to adjust or cope when the need to sacrifice arises.

Interdependence theory argues that in order for a relationship to be successful, importance has to be placed on both individuals and the relationship as a whole (Kelley, 1979). This study supports that claim by demonstrating that when one is holistically motivated to sacrifice the individual, the other, and the relationship are influenced. When one's motivations tend towards being one-sided (either approach or avoidance), then they may lose sight of how the combination of the self and the other work together, leading to success of the relationship. Interdependence theory suggests that one's motivations need to be transformed from self- to other-focused (Rusbult & Arriaga, 1997; Rusbult & Buunk, 1993), but it may be that instead of always being solely other- or relationship-focused (Rusbult & Arriaga, 1997), it is important to also take into account the importance of the self, as Kelley (1979) argued, and experience a combination of motivations that are self-, other-, or relationship-focused.

Implications

Military wives may struggle to find a balance or harmony between focusing on themselves and focusing on others in the family. This may particularly be the case when their husbands are unable to be home due to field exercises or deployments, and the wife becomes solely responsible for all the care and household responsibilities that her family needs. As scholars use qualitative methodologies to delve more deeply into sacrifice within military families, they will better understand the nuances that exist and were not captured within the scope of this study. Nuances about the effects of the sacrifices of children and fathers in military families on the family unit still need to be explored. Family members have been found to have

influence on each other's behaviors (Barbot et al., 2014); It seems that children and fathers will also be able to affect themselves, other family members, and the family as a whole through their sacrifices and motivations to sacrifice. As family members each contribute to the family unit through sacrifices, Bahr and Bahr (2001) suggest that they will be able to share in a language of love and shared experience, bringing them together. Just as interdependence theory argues, as those in a close relationship (e.g., a family unit) put forth effort in the relationship, the satisfaction and commitment experienced by those in the relationship will increase (Rusbult & Buunk, 1993).

Avoidance and approach sacrifice motivations could each be associated with self-, other-, and relationship-focused motivations (Visserman et al., 2018). It is important for practitioners working with military families to be aware of how military wives' motivations to sacrifice can involve self- and other-focused rationales and that these rationales can play a role in the well-being and functioning of the family. With this awareness they can work with wives to help them recognize the importance of the self in their family relationships and provide them with tangible tools to help in times when their servicemember spouses are away on field assignments or deployments and unable to help with the daily tasks of family life. Family Readiness Groups (FRGs) can also benefit from lessons learned in this study. They inherently understand the sacrifices military families make, especially because they are an organization set up to help provide military families with access to resources, particularly when servicemembers are deployed. As such, FRGs are in an ideal position to work with other military programs (i.e., to promote readiness or provide family support) and can provide services to help military wives feel more comfortable making sacrifices for their family members.

Limitations & Future Directions

Although there are noteworthy contributions, there are some limitations to this study that need to be taken into account. One such limitation is the limited within group sample size used for moderation analyses. The *high-low* group could have been parsed apart further to explore differences between those with high approach and low avoidance versus those with low approach and high avoidance. With a larger sample size it would have been possible to better explore the interrelationships of these motivations. Previous research has found that approach and avoidance sacrifice motivations are linked to pro-relationship behaviors (Mattingly et al., 2012). They found that when sacrifices were either approach or avoidance motivated, rather than a paradoxical combination, relationships suffered. Relationships may suffer in different ways when sacrifice motivations are either approach- or avoidance-oriented. It may be that those who sacrifice out of mostly avoidance motivations may experience more negative emotions about family relationships and less relationship satisfaction than those who sacrifice for approach motivations (Impett et al., 2013). Another limitation of this study is that participants might have answered the items on the RSPS to indicate that they were sacrificing more than they were in reality because they may have perceived engaging in sacrifice as being socially desirable, or as helping them be seen as strong, independent military wives who are up to the challenge of military life and do not struggle with the challenges that they may encounter. Future studies exploring relational sacrifice should include a measure of social desirability to control for this possible effect.

It is improbable to include all worthwhile demographic information in a given study, because it would be overwhelming to participants and would be cumbersome to analyze. Among the demographic information collected, participants were asked to provide information about husband's rank, the number of times they had moved in their military experience, how many

deployments they had experienced, and to identify a target child to keep in mind as they answered questions about child behaviors. For other demographic questions, inconsistent responses limited our confidence and ultimately challenged the inclusion of those variables in the analyses herein. For example, participants were asked to respond in months when a time frame was required (e.g., how many months since the last deployment?), but occasionally responses were provided in years or alternative formatting that made accuracy in recoding difficult. Furthermore, demographic questions did not take into account if the participant had not been living the military lifestyle as long as her spouse had been enlisted. Future scholars should take into account potential inconsistent responses to these types of demographic questions when designing demographic sections. These demographic variables would provide more insight into participants' living situations and what could influence family perceptions and outcomes.

A dynamic inherent in military families is that servicemembers leave for deployments or field exercises for periods of time and family members at home have to adjust to having the servicemember gone and then having them return (i.e., reintegration; Balderrama-Durbin et al., 2015). Part of reintegration is renegotiating control, power, and responsibilities. This study did not specifically address how sacrifice during different phases of military life may be related to power and control within the family unit. Future research would benefit from exploring this with more detail. Scholars may find when relational sacrifice can be a benefit in struggles of power and when it may exacerbate these struggles.

This study is only able to provide single response data about the participant's perception of stress and coping, the family's relational health, and a child's behaviors. In order to more fully understand these outcomes, it would benefit future scholars to use multiple respondents and collect dyadic or triadic data. These respondents could include the child reporting on his or her

own behaviors, their mother's stress and ability to cope, and the family's relational health.

Another important perspective to gather would be that of the active duty father. His perception of what is going on in the home will be different than his wife's perceptions. With the perspective of the mother and father, scholars will be able to more deeply explore issues of power and control within their family unit. Scholars would more fully be able to understand aspects of family relational health and functioning by using multiple respondents within a family. In order to more wholly capture this information and explore these nuances, scholars may want to employ the use of qualitative methodologies. This would allow scholars to delve deeply into the observations of family members, as well as the whys behind what they observe and how they behave.

Chapter 5 - Conclusion

Within the context of interdependence theory, sacrifice is considered a relational process that when employed in close relationships can contribute to relational satisfaction (Kelley & Thibaut, 1978; Rusbult & Buunk, 1993). This dissertation explored relational sacrifice among different relationships and contexts, through an interdependence theory lens (Kelley & Thibaut, 1978), where the self, other, and relationship each have a role in the success of a healthy relationship (Ruppel & Curran, 2012). In Study 1, a scale to measure relational sacrifice across these various relationship types and contexts was developed. There are many types of relationships that persons can engage in, and depending on the context and relationship of interest, who fills the role of “other” can vary. In Study 2 the relationship of interest was those coparenting apart, with the coparent living in another household filling the role of “other,” whereas in Study 3 the relationship of interest was between a mother and her child, with the child filling the role of “other.” In this dissertation, it was shown that a mother’s relational sacrifice is related to an increase in a mother’s stress and coping, her child’s withdrawn and aggressive behaviors, as well as the overall relational health of the family, demonstrating that sacrifice processes can have both a positive and a negative impact on individuals and relationships. Results demonstrated that one’s personal behaviors, specifically faith practices and self-care, are associated with increased sacrifice at the same time point, and that relational support is positively related to the sacrifice in the relationship. When these findings are considered together, they lend empirical evidence to the claim of interdependence theory that the self, other, and relationship each contribute meaningfully to the quality and success of the close relationship (Kelley & Thibaut, 1978; Ruppel & Curran, 2012).

Interdependence theory has primarily been employed in the study of romantic close relationships (Ruppel & Curran, 2012; Rusbult & Buunk, 1993). This dissertation supports Kelley's (1979) claim that the theory could be used as a lens through which to study many kinds of close relationships, not just romantic ones. Those who coparent apart (e.g., divorced, separated) still have to work together and develop a level of dependence on each other, especially when it comes to taking care of shared children and trusting the other to do what is best for those children (Markham et al., 2017). Coparents communicate with each other about the needs of those shared children through a variety of means (Markham et al., 2017), and may tend towards trying to provide an environment for their children where there are decreased levels of conflict between the coparents (Leclair et al., 2019). In a mother-child relationship, one may argue that the child is supposed to be dependent on the mother, but interdependence theory would argue that a level of interdependence can develop between the two (Boeve et al., 2019). It may be that a mother learns coping skills to handle life's stresses through the relationship with a child. A mother spends lots of time communicating with her child about schedules, school, friends, and how to develop life skills (Levin & Currie, 2010), during which conflict often arises as a normative process (Collins & Laursen, 2004). This dissertation demonstrates that those who coparent apart can have a close relationship with each other. Individual and relational factors influence the ways that they sacrifice for this coparent. Through understanding this, those who coparent apart may be more willing to find the balance between focusing on what they want personally, what the other coparent may need/want, and what is best for the relationship (specifically as they think about their children). No matter the custody arrangement, these coparents need to take time to care for themselves, even in the midst of sacrificing for their particular coparent.

This dissertation strived to provide evidence that Kelley's (1979) views about the applicability of interdependence theory beyond romantic relationships has merit through exploring sacrifice in the contexts of parenting apart and military families. The studies in this dissertation help provide evidence that insights can be gained when using interdependence theory to explore nuances of relationships. Scholars have said that military wives engage in sacrifice frequently due to the demands of a military-affiliated lifestyle (Boberiene & Hornback, 2014; Hall, 2011). Military wives need to be aware that their sacrifices for their family members will impact themselves, as well as those they love. As they are able to be more holistically motivated to sacrifice for their family members, those sacrifices can increase their own abilities to cope with stressful situations, even if they experience a greater amount of stress. The sacrifices military wives make can also increase the family's overall relational health. Military wives may be living a life filled with sacrifice, but there can be benefits to engaging in those sacrifices for themselves and the family as a whole. This positive perspective may help them better cope in their difficult experiences.

Interdependence theory reasons that for close relationships to become most successful, the motivations for one's actions need to shift from being self-focused to being other-focused (Rusbult & Arriaga, 1997; Rusbult & Buunk, 1993). However, the findings of this dissertation revealed that having a more holistic style of being motivated may ultimately be more influential in a number of key relationship processes and family-level outcomes. Approach and avoidance motivations to sacrifice were highly correlated in Study 2, giving support to the idea that there may be utility in exploring the combination of approach and avoidance motivations. The design for Study 3 was constructed to fulfil this suggested future direction. The groups for the moderation model were based on three combinations of approach and avoidance motivations,

representing overall amounts of motivation to sacrifice: (a) high in both approach and avoidance motivations (*high-high*), (b) high in either approach or avoidance motivations and low in the other (*high-low*), and (c) low in both approach and avoidance motivations (*low-low*). Analyses revealed a significant and meaningful model where these amounts of motivation moderated the effect that relational sacrifice had on the mother (the one who sacrificed), child (recipient of the sacrifice), and family as a whole. Visserman and colleagues (2018) suggest that both approach and avoidance motivations to sacrifice should be further delineated based on whether an individual is self-, other-, or relationship-focused, resulting in six possible categories of motivation to sacrifice (e.g., self-focused approach, other-focused approach). The studies in this dissertation support researchers' claims that motivations to sacrifice are more nuanced than solely being either approach- or avoidance-oriented (Impett & Gordon, 2010; Visserman et al., 2018).

Practitioners now have a tool (RSPS) that could be used to help their clients see that sacrifice is present across many areas of one's life. As practitioners use the RSPS with their clients, they can identify target areas in which to support growth with their clients. The RSPS was designed to have utility across multiple contexts and relationships. The three-factor solution was found to hold cross military family contexts, coparenting apart contexts, mother-child relationships, and parent-parent (with no romantic element) relationships. This dissertation is a first step in exploring the utility of the RSPS; future research needs to continue to explore its utility across other relationships and contexts. Grandparents who take on childrearing responsibilities for their grandchildren may experience unanticipated strain on finances (Brandon, 2004), a form of sacrifice. The use of the RSPS among other relationships and

contexts will provide further understanding about its utility and ability to accurately capture relational sacrifice.

Although each study in this dissertation is quantitative in nature, they are part of a larger mixed method approach to the study of sacrifice processes. In the design of the RSPS (with the early stages of the development of Study 1) a comprehensive review of both quantitative and qualitative articles about sacrifice helped to reveal the gap that the RSPS was designed to fill. Study 2 was directly designed to test the accuracy of a theoretical model developed in a qualitative exploration of sacrifice and self-care in religious families (Pippert et al., 2019). Study 3 aimed to further explore sacrifice through the lens of interdependence theory based on findings from Study 1 and Study 2. These studies have implications for future qualitative and quantitative studies about relational sacrifice and interdependence theory. Future studies need to continue to explore the accuracy of Pippert and colleagues' (2019) model about the ways sacrifice processes interact with other family processes. More robust longitudinal assessment will allow for more comprehensive testing and refinement of Pippert and colleagues' (2019) model of sacrifice. Together, further qualitative and quantitative studies (Roberts & Castell, 2016) can provide additional insight on this model and on how interdependence theory can be a lens through which various close relationships can be understood.

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Appendix A - Measure List for Study 1

Measure List

Motivations to Sacrifice

Original Reference:

Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, 89(3), 327-344.

Instructions: Rate importance of each of the following reasons in influencing your decision to sacrifice.

Scale: 7-point Likert scale

- 1 – Not at all important
- 2 –
- 3 –
- 4 –
- 5 –
- 6 –
- 7 – Extremely Important

Items:

Item
Approach ($\alpha = 0.80$)
1 To enhance intimacy in my relationship
2 To express love for my child's other parent
3 To make my child's other parent happy
4 To feel good about myself
5 To gain my child's other parent's appreciation
Avoidance ($\alpha = 0.92$)
1 To avoid conflict in my relationship
2 To prevent my child's other parent from becoming upset
3 To avoid feeling guilty
4 To prevent my child's other parent from getting angry at me
5 To prevent my child's other parent from losing interest in me

Scoring: Aggregate scores for each subscale to get a summary score for each scale.

Relational Sacrifice Processes Scale:

Original Reference:

Pippert, H. D., Ferraro, A. J., & Chalker, J. (forthcoming). A new sacrifice measure: Relational sacrifice processes scale.

Instructions: When thinking about your child’s other parent and your relationship with him/her, in a typical month, how often do you do each of the following?

Scale: Answer using 5-point Likert Scale

- 1 = never
- 2 = rarely
- 3 = sometimes
- 4 = often
- 5 = always

Items:

Item

Developing Dependence

- 1 I spent less time with a friend/family member – in order to have more time with him/her
- 2 I took time to do things with him/her that he/she would find meaningful
- 3 I missed an activity/event I wanted to attend – in order to spend more time with him/her
- 4 I spent less time fulfilling a personal responsibility – in order to spend more time with him/her
- 5 I attended one of his/her activities/obligations that I did not enjoy
- 6 I completed household tasks I did not enjoy doing – to lighten his/her load or because he/she was busy with other obligations/responsibilities
- 7 I allowed him/her to choose the location/restaurant for an activity rather than going where I wanted to go
- 8 I ran errands for him/her even when I did not want to
- 9 I allowed him/her to add a task to my work load so that he/she would be less stressed

Communication

- 10 In a disagreement/argument, I apologized first even though I was still hurting
- 11 I changed the way I said something – for the sake of his/her feelings
- 12 I delayed sharing what was on my mind – in order to listen to him/her
- 13 I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities
- 14 I communicated with him/her even when I did not want to

Managing Habits

- 15 I spent more money – to reduce his/her financial burden
 - 16 I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings
 - 17 I changed my working/spending behaviors to make/save more money
 - 18 I stopped myself from spending money on something I really wanted
 - 19 I did not celebrate a holiday the way I wanted to – for his/her benefit
 - 20 I refrained from talking about my accomplishments when I knew it could potentially hurt his/her feelings
-

Scoring: Average numbers together; higher averages represent higher relational sacrifice (as is the case for each subscale)

The Pittsburgh Enjoyable Activities Test (PEAT)

Reference:

Pressman, S. D., Matthews, K. A., Cohen, S., Martire, L. M., Scheier, M., Baum, A., & Schulz, R. (2009). Association of enjoyable leisure activities with psychological and physical well-being. *Psychosomatic Medicine*, 71(7), 725-732.

Scale: 5pt Likert Scale

- 0 = Never
- 1 = Sometimes
- 2 = About half the time
- 3 = Most of the time
- 4 = Everyday

Instructions: We are interested in how often in the last month you were able to spend time in activities that you enjoyed. Over the past month, how often have you been able to spend time doing the following?

If an item is not applicable to you or you do not enjoy it, select “**Never**” as your response.

Items: (α 's based on four studies/samples: $\alpha = .65-.72$)

Item
1 Spending quiet time alone
2 Spending time unwinding at the end of the day
3 Visiting family and friends
4 Going out for meals with friends and/or relatives
5 Doing fun things with others
6 Participating in club, fellowship, and/or religious groups
7 Taking vacations out of town
8 Being in outdoor settings such as gardens/parks/countryside
9 Engaging in sports
10 Engaging in hobbies

Scoring: Sum all items

Faith Activities In The Home Scale (FAITHS)

Original Reference:

Lambert, N. M. & Dollahite, D. C. (2010). Development of the Faiths Activities in the Home Scale (FAITHS). *Journal of Family Issues*, 31, 1442-1464.

Scale:

Frequency Scale:

- 0 = *never or not applicable*
- 1 = *rarely*
- 2 = *sometimes*
- 3 = *often*
- 4 = *always*

Importance Scale:

- 0 = *not important or not applicable*
- 1 = *somewhat important*
- 2 = *important*
- 3 = *very important*
- 4 = *extremely important*

Instructions: For each item below, please indicate (1) the FREQUENCY you and your child are involved in these various activities and (2) how important that item is to you and your child's religious life.

Items:

Item
Developing Dependence
1 Family prayer (family together other than at meals)
2 Family singing or playing religious music/instruments
3 Family religious gathering/activities/celebrations
4 Family use of religious media (e.g., videos, radio, TV)
5 Family religious conversations at home
6 Saying/singing a blessing/grace/prayer at family meals
7 Parents praying with child or listening to his/her prayers

$\alpha = .88-.92$ for 9 item version

Multidimensional Co-parenting Scale for Dissolved Relationships

Original Reference:

Ferraro, A. J., Lucier-Greer, M., & Oehme, K. (2016, November). *Psychometric evaluation of the Multidimensional Co-parenting Scale for Dissolved Relationships*. Paper presented at the annual conference of the National Council on Family Relations. Minneapolis, MN.

Scale:

1. Never
2. Rarely
3. Infrequently
4. Occasionally
5. Usually
6. Always

Instructions:

The next set of questions asks about your relationship with your child's other parent that you share a minor child or children with. How often does each of these statements describe your relationship and/or interactions with your child's other parent? (If you have been divorce/separated multiple times please reference your most recent divorce/separation)

Items:

Items
Support ($\alpha = .91$)
1 We have similar goals and expectations for our child
2 We agree on general standards for our child's behavior
3 My child's other parent is a resource to me in raising our child
4 We have similar rules for our child
5 We ask each other for advice and/or help in childrearing decisions
6 We support each other during difficult parenting decisions
Overt Conflict ($\alpha = .92$)
7 Conversations between us are tense and/or sarcastic
8 My child's other parent criticizes or belittles me
9 Interactions with my child's other parent are unpleasant and/or uncomfortable
10 During disagreements, my child's other parent yells or screams at me
11 We express contempt or dislike for each other
12 My child's other parent is sarcastic or makes jokes about my parenting
Internally-Regulated Covert Conflict ($\alpha = .77$)
13 I try to show that I am better than my child's other parent with our child
14 I ask our child about my child's other parent's personal life
15 I am sarcastic or make jokes about my child's other parent's parenting
16 Rather than expressing my opinions with him/her directly, I share my frustrations about my child's other parent with our child
17 I criticize or belittle my child's other parent

Externally-Regulated Covert Conflict ($\alpha = .83$)

- 18 When we argue, our child takes sides
 - 19 Rather than expressing his/her opinions with me directly, my child's other parent shares his/her frustrations about me with our child
 - 20 My child's other parent sends messages to me through our child
 - 21 My child's other parent asks our child about my personal life
 - 22 Our child joins in or takes sides when my child's other parent and I disagree
-

Appendix B - Measure List for Study 2

Measure List

Motivations to Sacrifice

Original Reference:

Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, 89(3), 327-344.

Instructions: Rate importance of each of the following reasons in influencing your decision to sacrifice.

Scale: 7-point Likert scale

- 1 – Not at all important
- 2 –
- 3 –
- 4 –
- 5 –
- 6 –
- 7 – Extremely Important

Items:

Item
Approach ($\alpha = 0.80$)
1 To enhance intimacy in my relationship
2 To express love for my child's other parent
3 To make my child's other parent happy
4 To feel good about myself
5 To gain my child's other parent's appreciation
Avoidance ($\alpha = 0.92$)
1 To avoid conflict in my relationship
2 To prevent my child's other parent from becoming upset
3 To avoid feeling guilty
4 To prevent my child's other parent from getting angry at me
5 To prevent my child's other parent from losing interest in me

Scoring: Aggregate scores for each subscale to get a summary score for each scale.

Relational Sacrifice Processes Scale:

Original Reference:

Pippert, H. D., Ferraro, A. J., & Chalker, J. (forthcoming). A new sacrifice measure: Relational sacrifice processes scale.

Instructions: When thinking about your child's other parent and your relationship with him/her, in a typical month, how often do you do each of the following?

Scale: Answer using 5-point Likert Scale

- 1 = never
- 2 = rarely
- 3 = sometimes
- 4 = often
- 5 = always

Items:

Item

Developing Dependence

- 1 I spent less time with a friend/family member – in order to have more time with him/her
- 2 I took time to do things with him/her that he/she would find meaningful
- 3 I missed an activity/event I wanted to attend – in order to spend more time with him/her
- 4 I spent less time fulfilling a personal responsibility – in order to spend more time with him/her
- 5 I attended one of his/her activities/obligations that I did not enjoy
- 6 I completed household tasks I did not enjoy doing – to lighten his/her load or because he/she was busy with other obligations/responsibilities
- 7 I allowed him/her to choose the location/restaurant for an activity rather than going where I wanted to go
- 8 I ran errands for him/her even when I did not want to
- 9 I allowed him/her to add a task to my work load so that he/she would be less stressed

Communication

- 10 In a disagreement/argument, I apologized first even though I was still hurting
- 11 I changed the way I said something – for the sake of his/her feelings
- 12 I delayed sharing what was on my mind – in order to listen to him/her
- 13 I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities
- 14 I communicated with him/her even when I did not want to

Managing Habits

- 15 I spent more money – to reduce his/her financial burden
 - 16 I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings
 - 17 I changed my working/spending behaviors to make/save more money
 - 18 I stopped myself from spending money on something I really wanted
 - 19 I did not celebrate a holiday the way I wanted to – for his/her benefit
 - 20 I refrained from talking about my accomplishments when I knew it could potentially hurt his/her feelings
-

Scoring: Average numbers together; higher averages represent higher relational sacrifice (as is the case for each subscale)

The Pittsburgh Enjoyable Activities Test (PEAT)

Reference:

Pressman, S. D., Matthews, K. A., Cohen, S., Martire, L. M., Scheier, M., Baum, A., & Schulz, R. (2009). Association of enjoyable leisure activities with psychological and physical well-being. *Psychosomatic Medicine*, 71(7), 725-732.

Scale: 5pt Likert Scale

- 0 = Never
- 1 = Sometimes
- 2 = About half the time
- 3 = Most of the time
- 4 = Everyday

Instructions: We are interested in how often in the last month you were able to spend time in activities that you enjoyed. Over the past month, how often have you been able to spend time doing the following?

If an item is not applicable to you or you do not enjoy it, select “**Never**” as your response.

Items: (α 's based on four studies/samples: $\alpha = .65-.72$)

Item
1 Spending quiet time alone
2 Spending time unwinding at the end of the day
3 Visiting family and friends
4 Going out for meals with friends and/or relatives
5 Doing fun things with others
6 Participating in club, fellowship, and/or religious groups
7 Taking vacations out of town
8 Being in outdoor settings such as gardens/parks/countryside
9 Engaging in sports
10 Engaging in hobbies

Scoring: Sum all items

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Scale:

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- 4 = *always*

Importance Scale:

- 0 = *not important or not applicable*
- 1 = *somewhat important*
- 2 = *important*
- 3 = *very important*
- 4 = *extremely important*

Instructions: For each item below, please indicate (1) the FREQUENCY you and your child are involved in these various activities and (2) how important that item is to you and your child's religious life.

Items:

Item
Developing Dependence
1 Family prayer (family together other than at meals)
2 Family singing or playing religious music/instruments
3 Family religious gathering/activities/celebrations
4 Family use of religious media (e.g., videos, radio, TV)
5 Family religious conversations at home
6 Saying/singing a blessing/grace/prayer at family meals
7 Parents praying with child or listening to his/her prayers

$\alpha = .88-.92$ for 9 item version

Multidimensional Co-parenting Scale for Dissolved Relationships

Original Reference:

Ferraro, A. J., Lucier-Greer, M., & Oehme, K. (2016, November). *Psychometric evaluation of the Multidimensional Co-parenting Scale for Dissolved Relationships*. Paper presented at the annual conference of the National Council on Family Relations. Minneapolis, MN.

Scale:

7. Never
8. Rarely
9. Infrequently
10. Occasionally
11. Usually
12. Always

Instructions:

The next set of questions asks about your relationship with your child's other parent that you share a minor child or children with. How often does each of these statements describe your relationship and/or interactions with your child's other parent? (If you have been divorce/separated multiple times please reference your most recent divorce/separation)

Items:

Items
Support ($\alpha = .91$)
23 We have similar goals and expectations for our child
24 We agree on general standards for our child's behavior
25 My child's other parent is a resource to me in raising our child
26 We have similar rules for our child
27 We ask each other for advice and/or help in childrearing decisions
28 We support each other during difficult parenting decisions
Overt Conflict ($\alpha = .92$)
29 Conversations between us are tense and/or sarcastic
30 My child's other parent criticizes or belittles me
31 Interactions with my child's other parent are unpleasant and/or uncomfortable
32 During disagreements, my child's other parent yells or screams at me
33 We express contempt or dislike for each other
34 My child's other parent is sarcastic or makes jokes about my parenting
Internally-Regulated Covert Conflict ($\alpha = .77$)
35 I try to show that I am better than my child's other parent with our child
36 I ask our child about my child's other parent's personal life
37 I am sarcastic or make jokes about my child's other parent's parenting
38 Rather than expressing my opinions with him/her directly, I share my frustrations about my child's other parent with our child
39 I criticize or belittle my child's other parent

Externally-Regulated Covert Conflict ($\alpha = .83$)

- 40 When we argue, our child takes sides
 - 41 Rather than expressing his/her opinions with me directly, my child's other parent shares his/her frustrations about me with our child
 - 42 My child's other parent sends messages to me through our child
 - 43 My child's other parent asks our child about my personal life
 - 44 Our child joins in or takes sides when my child's other parent and I disagree
-

Appendix C - Measure List for Study 3

Motivations to Sacrifice

Original Reference:

Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, 89(3), 327-344.

Instructions: Rate importance of each of the following reasons in influencing your decision to sacrifice.

Scale: 7-point Likert scale

- 1 – Not at all important
- 2 –
- 3 –
- 4 –
- 5 –
- 6 –
- 7 – Extremely Important

Items:

Item
Approach ($\alpha = 0.80$)
1 To enhance intimacy in my relationship
2 To express love for my child's other parent
3 To make my child's other parent happy
4 To feel good about myself
5 To gain my child's other parent's appreciation
Avoidance ($\alpha = 0.92$)
1 To avoid conflict in my relationship
2 To prevent my child's other parent from becoming upset
3 To avoid feeling guilty
4 To prevent my child's other parent from getting angry at me
5 To prevent my child's other parent from losing interest in me

Scoring: **Aggregate scores for each subscale to get a summary score for each scale.**

Relational Sacrifice Processes Scale:

Original Reference:

Pippert, H. D., Ferraro, A. J., & Chalker, J. (forthcoming). A new sacrifice measure: Relational sacrifice processes scale.

Instructions: When thinking about your child's other parent and your relationship with him/her, in a typical month, how often do you do each of the following?

Scale: Answer using 5-point Likert Scale

- 1 = never
- 2 = rarely
- 3 = sometimes
- 4 = often
- 5 = always

Items:

Item

Developing Dependence

- 1 I spent less time with a friend/family member – in order to have more time with him/her
- 2 I took time to do things with him/her that he/she would find meaningful
- 3 I missed an activity/event I wanted to attend – in order to spend more time with him/her
- 4 I spent less time fulfilling a personal responsibility – in order to spend more time with him/her
- 5 I attended one of his/her activities/obligations that I did not enjoy
- 6 I completed household tasks I did not enjoy doing – to lighten his/her load or because he/she was busy with other obligations/responsibilities
- 7 I allowed him/her to choose the location/restaurant for an activity rather than going where I wanted to go
- 8 I ran errands for him/her even when I did not want to
- 9 I allowed him/her to add a task to my work load so that he/she would be less stressed

Communication

- 10 In a disagreement/argument, I apologized first even though I was still hurting
- 11 I changed the way I said something – for the sake of his/her feelings
- 12 I delayed sharing what was on my mind – in order to listen to him/her
- 13 I chose not to complain to him/her at a time when he/she was under pressure at school/work/other activities
- 14 I communicated with him/her even when I did not want to

Managing Habits

- 15 I spent more money – to reduce his/her financial burden
 - 16 I avoided joking/jesting with him/her – because I knew it could potentially hurt his/her feelings
 - 17 I changed my working/spending behaviors to make/save more money
 - 18 I stopped myself from spending money on something I really wanted
 - 19 I did not celebrate a holiday the way I wanted to – for his/her benefit
 - 20 I refrained from talking about my accomplishments when I knew it could potentially hurt his/her feelings
-

Scoring: Average numbers together; higher averages represent higher relational sacrifice (as is the case for each subscale)

Rhode Island Stress and Coping Inventory

Original Reference:

Fava, J. L., Ruggiero, L., & Grimley, D. M. (1998). The Development and Structural Confirmation of the Rhode Island Stress and Coping Inventory. *Journal of Behavioral Medicine*, 21(6), p. 601-611

Scale:

5 pt. Likert Scale

1. Never
2. Seldom
3. Occasionally
4. Often
5. Frequently

Instructions: In the last month, how often was each statement true of your own life? Please rate the frequency using the 5-point scale below.

Items:

Item

Stress

- 1 I felt there was not enough time to complete my daily tasks
 - 2 I felt I had more stress than usual
 - 3 I took on more than I could handle
 - 4 I felt overwhelmed
 - 5 I was pressured by others
 - 6 I felt stressed by unexpected events
 - 7 I had no time to relax
-

Child Behavior Checklist (CBCL)

Original Reference:

- Van Widenfelt, B. M., Goedhart, A. W., Treffers, P. D. A., & Goodman, R. (2003). Dutch version of the Strengths and Difficulties Questionnaire (SDQ). *European Child & Adolescent Psychiatry, 12*, 281-289, doi: 10.1007/s00787-003-0341-3
- Nakamura, B. J., Ebesutani, C., Bernstein, A., & Chorpita, B. F. (2009). A Psychometric Analysis of the Child Behavior Checklist DSM-Oriented Scales. *Psychopathological Behavior Assessment, 31*, 178-189. doi: 10.1007/s10862-008-9119-8

Reference for Subscales:

Retrieved from <http://www.aseba.org/forms/cbclprofile.pdf>

Scale:

3 point Likert scale

0. Not True
1. Somewhat or Sometimes True
2. Very True or Often True

Instructions:

Below is a list of items that describe children and youths. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

Items:

Items	
Withdrawn/ Depressed ($\alpha = 0.68/0.74$)	
5	There is very little he/she enjoys
42	Would rather be alone than with others
65	Refuses to talk
69	Secretive, keeps things to self
75	Too shy or timid
102	Underactive, slow moving, or lacks energy
103	Unhappy, sad, or depressed
111	Withdrawn, doesn't get involved with others
Aggressive Behavior ($\alpha = 0.82/0.84$)	
21	Destroys things belonging to his/her family or others
22	Disobedient at home
37	Gets in many fights
86	Stubborn, sullen, or irritable
95	Temper tantrums or hot temper
97	Threatens people

No reverse scoring

FACES IV (Family Satisfaction Subscale)

Original Reference:

Olson, D. H. (1995). *Family satisfaction scale*. Minneapolis, MN: Life Innovations.

Olson, D.H., & Gorall, D.M. (2006). FACES IV & The Circumplex Model. Retrieved from <http://www.facesiv.com/pdf/3.innovations.pdf>

Scale:

5pt. Likert Scale

1. Very Dissatisfied
2. Dissatisfied
3. Undecided
4. Satisfied
5. Very Satisfied

Instructions: Please indicate how satisfied you are with the following aspects of your family.

Item
1 The degrees of closeness between family members
2 Your family's ability to cope with stress
3 Your family's ability to be flexible
4 Your family's ability to share positive experiences
5 The quality of communications between family members
6 Your family's ability to resolve conflicts
7 The amount of time you spend together as a family
8 The way problems are discussed
9 The fairness of criticism in your family
10 Family members' concern for each other
