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INCREASING FINANCIAL EMPOWERMENT FOR SURVIVORS OF

INTIMATE PARTNER VIOLENCE:

A LONGITUDINAL EVALUATION OF A FINANCIAL KNOWLEDGE

CURRICULUM

by

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ABSTRACT OF THE DISSERTATION

INCREASING FINANCIAL EMPOWERMENT FOR SURVIVORS OF INTIMATE PARTNER VIOLENCE: A LONGITUDINAL EVALUATION OF A FINANCIAL KNOWLEDGE CURRICULUM

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Judy L. Postmus, Ph.D.

One of the most significant barriers that survivors of intimate partner violence (IPV) face when trying to leave an abusive relationship is a lack of financial resources (M. Anderson et al., 2003; Fugate et al., 2005; Meyer, 2012). Further, access to financial resources is a predictor of whether a survivor of IPV will terminate an abusive relationship (D. K. Anderson & Saunders, 2003; Bornstein, 2006). Recognizing that financial insecurity is a significant issue for survivors of IPV in the U.S., several domestic violence organizations have begun implementing financial empowerment programs, such as financial literacy interventions, for their clients. Financial literacy interventions focus on equipping individuals with financial planning and management skills as to improve their financial well-being (Vitt et al., 2000).

There has been particular interest in financial literacy programs within the U.S. because they promote individual fiscal responsibility and well-being. Financial literacy interventions developed for survivors of IPV often focus on providing survivors with the

knowledge and skills needed to navigate financial barriers that arise as a result of their abusive relationships (Peled & Krigel, 2016). Thus far, a few organizations have begun to import financial literacy programs designed for the general population and modify them for use with survivors of IPV. While initial evaluations of these programs have been positive, none have specifically focused on the construct of *psychological empowerment in the financial domain* (PEFD) and whether increasing financial literacy is effective in empowering survivors.

As such, this dissertation aimed to answer one primary research question: For female survivors of IPV, did attending sessions on the *Moving Ahead Through Financial Empowerment (Moving Ahead)* curriculum result in increased PEFD over time? In answering this question, this dissertation aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment; and b) use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD over time among the sample of participants.

To answer this question, this secondary study utilized data from 449 female survivors of IPV who participated in a longitudinal randomized controlled trial evaluating the impact of a financial literacy intervention on survivors of IPV. Survivors were recruited from 14 domestic violence organizations across 7 states plus Puerto Rico between July 2011 and March 2012.

To address the first aim of this dissertation, exploratory factor analysis (EFA) was used to determine the factor structure of the components of PEFD using data from T1. This was followed by longitudinal multi-group confirmatory factor analysis (CFA),

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which was utilized to test for measurement invariance across the treatment and control groups over time. To answer the second aim of this dissertation, latent growth curve modeling (LGCM) was used to determine whether participants who received the intervention experienced changes in PEFD over time.

PEFD was conceptualized using Christens' (2012) nomological network for psychological empowerment and thus had four components: emotional, cognitive, relational, and behavioral. Overall, initial findings were positive, as CFAs utilized to test for longitudinal and multi-group measurement invariance demonstrated an acceptable model fit and partial scalar measurement invariance between the treatment and control groups. Results from the LGCM demonstrated that the intervention contributed to a statistically significant rate of change with the per-protocol analytic sample but not the intent-to-treat analytic sample. However, other factors may moderate the effectiveness of the intervention, specifically for the intent-to-treat analytic sample who did not complete the interviews across all four time points.

In examining the construct of financial empowerment and testing the effectiveness of a financial literacy intervention in increasing PEFD among survivors of IPV, this dissertation furthers conceptualizations of PEFD for both research and practice. The findings also provide practical information to IPV service providers and policy makers on the benefits of financial literacy interventions and the need to invest more resources into their implementation.

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Chapter 1 – Introduction

Statement of the Problem

Intimate partner violence (IPV) is defined as a pattern of coercive control through psychological, financial, physical, and sexual violence used by abusers to subordinate their partners or former partners (Stark, 2007). It is a significant public health issue that disproportionately impacts women. Studies have found that approximately one-third of women experience serious violent crimes, such as sexual violence or physical violence, by an intimate partner (Black et al., 2011; Truman & Morgan, 2014). Comparatively, prevalence rates for men range from one-fourth (Black et al., 2011) to one-tenth (Truman & Morgan, 2014). Women also experience more severe forms of violence, with 25 percent of women experiencing severe physical violence by an intimate partner, compared to 14 percent of men (Black et al., 2011). Annually, IPV results in an estimated 2 million injuries and 1,300 fatalities (Centers for Disease Control & Prevention (CDC), 2003) and intervention efforts are complicated by offenders' high recidivism rates of at least 60 percent (Babcock, Green, & Robie, 2004).

IPV is associated with a range of health risks, which include physical injury (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008), mental health issues (Bonomi et al., 2009; Bonomi et al., 2006), chronic illnesses (Coker et al., 2002), sexually transmitted infections (Campbell, 2002), and death (McFarlane et al., 1999). Given the adverse health effects of IPV, the issue has gained growing attention from both the medical and mental health fields (Alvarez, Fedock, Grace, & Campbell, 2017; Ghandour, Campbell, & Lloyd, 2015; Taket et al., 2003). However, social workers' responses have been less sensitive to the experiences and needs of IPV survivors (Danis, 2003). In 2003, Danis conducted a study to examine current social work practices in this area by surveying 146 licensed social workers on their screening, assessment, and intervention practices. Danis' findings illuminated the fact that social workers were not comfortable initiating discussions about IPV. Crabtree-Nelson, Grossman, & Lundy published a commentary as recently as 2016 highlighting the increased need for education on the assessment and intervention of IPV among social work students. Thus, there is still a necessity for educational opportunities on IPV for social workers, as well as research and intervention in this area to better support survivors as they navigate and try to leave abusive relationships.

"Why Doesn't She Just Leave?" - Barriers to Survivor Independence

A common misconception about IPV is that women can just end abusive relationships. In actuality, a significant number of intimate partner homicides occur around the time in which women¹ attempt to leave (Heise & Garcia-Moreno, 2002), making it the most dangerous time for women in abusive relationships. In addition to the actual danger that women encounter when trying to end an abusive relationship, or seek help, women may also face other barriers, such as concerns about housing (M. Anderson et al., 2003), feelings of guilt or shame associated with their victimization (Fugate, Landis, Riordan, Naureckas, & Engel, 2005), the perceived inability to protect their children after leaving (Meyer, 2012), and their commitment to maintaining the relationship, despite the abuse (Fugate et al., 2005).

¹ Although males may also be survivors of IPV, females are disproportionately affected by this violence (World Health Organization & London School of Hygiene and Tropical Medicine, 2010). Further, data analyzed as part of this dissertation was collected from female survivors abused by male partners. For these reasons, this dissertation uses female-specific nouns and pronouns when referring to survivors.

Perhaps one of the most significant barriers that survivors face when considering whether to stay or leave an abusive relationship is a lack of finances and other resources (M. Anderson et al., 2003; Fugate et al., 2005; Meyer, 2012). Research suggests that poverty is predictive of IPV (Bassuk, Melnick, & Browne, 1998) and access to resources, income, and financial independence have been identified as the most significant predictors of whether a survivor will terminate an abusive relationship (D. Anderson & Saunders, 2003; Bornstein, 2006). Thus, it is imperative that interventions designed to empower survivors of IPV include a focus on the associations between IPV, financial abuse, and financial dependence, and provide survivors with information on how to navigate financial barriers.

Association between IPV, Financial Abuse, and Financial Dependence

Within the U.S., women are vulnerable to financial insecurity. The term *feminization of poverty* emerged to describe the approximately 33 percent increase in needy female-headed families between 1969 and 1978 (J. Peterson, 1987). Even now, U.S. Census Bureau data illustrates that the feminization of poverty persists. In 2015, one in eight women lived in poverty with women 35 percent more likely to experience financial hardship than men (Tucker & Lowell, 2016). This disparity can be attributed to a range of factors, including marital breakdown due to divorce or death of a spouse, and single motherhood (Fonseca, Mullen, Zamarro & Zissimopoulos, 2012). Further, the structure of the U.S. welfare system and labor market continue to leave women in precarious situations. After the 1996 welfare law reform, receipt of welfare benefits became contingent on the engagement of work activities or temporary waivers from them (Josephson, 2002), with the overall goal of increasing women's financial autonomy

(Hoge, 2016). This model suggests that workforce participation will bring about financial self-sufficiency for women (Long, 2001), yet the structure of the U.S. workforce further contributes to women's economic insecurity.

The U.S. employment sector is mostly sex-segregated; thus even when women seek employment they are not competing with men (Pierson, 1997). Further, research suggests that the sex-segregated labor force is largely responsible for the wage gap between men and women (Blau & Khan, 2007), as female-dominated jobs pay lower wages (Hegewisch & Hartmann, 2014). There is also a great lifetime wage penalty for women due to absence from work for caregiving responsibilities. Women may even lose employment opportunities or promotions because of it (Orloff, 2009).

The impact of IPV, compounded with the feminization of poverty and the sexsegregated labor market, further exacerbates the financial vulnerability of women. The most direct way in which IPV affects survivors financially is through financial abuse. Financial abuse most commonly takes one of three forms – financial exploitation, financial control, or employment sabotage (Adams, Sullivan, Bybee, & Greeson, 2008; Postmus, Hetling, & Hoge, 2015; Postmus, Plummer, McMahon, Murshid, & Kim, 2012). Using these tactics, abusers can damage a survivors' credit, control money that survivors have access to, or prevent survivors from obtaining or maintaining employment. Further, through these behaviors, abusers keep their partners financially dependent upon their relationships; thus, prohibiting survivors from leaving (Postmus, 2010).

As a result of IPV, women's employment opportunities are often jeopardized, leaving survivors even more vulnerable to job insecurity or unemployment (Hahn & Postmus, 2014; Moe & Bell, 2004; Tolman & Raphael, 2000). Shepard & Pence (1988) found that survivors in their study often lost their jobs as a result of absences, tardiness, and poor work performance, all as a result of their abusive experiences. IPV is also associated with a range of health effects, which may interfere with survivors' ability to find or maintain employment (Moe & Bell, 2004). In fact, survivors of IPV lose approximately eight million paid work days per year as a result of their abuse experiences (CDC, 2003).

Survivors can also experience financial dependency through other forms of coercive control. For example, isolation is a common control tactic used to increase survivors' emotional dependence on abusers and minimize opportunities for networking (Dutton, 1992) and help-seeking (Fugate et al., 2005). Conversely, connections to outside social supports have been linked to more positive outcomes for survivors, such as mental health (Carlson, McNutt, Choi, & Rose, 2002; Coker et al., 2002), that may reduce the impact that abuse has on survivors' employment.

Immigrant women in abusive relationships have an additional layer of challenges that may keep them dependent on their abuser. These barriers to help-seeking include a lack of English proficiency, difficulties securing employment due to immigration status, and isolation due to relocation from their country of origin (Bauer, Rodriguez, Quiroga, & Flores-Ortez, 2000; Dutton, Orloff, & Hass, 2000; Erez, Adelman, & Gregory, 2009; Raj & Silverman, 2002). Immigrant women may also lack a clear understanding of the U.S. financial system, which leaves them at risk for exploitation (Postmus, 2010).

Notably, the impact of IPV may leave women financially insecure for years, even after the abusive relationship has ended (Voth Schrag, 2015). For example, survivors may

experience immeasurable financial losses over the long term as a result of abusers' interference with their educational and employment opportunities. Damaged credit scores caused by financial sabotage can take years to improve and may cause survivors to incur additional financial costs due to high interest rates imposed by lending institutions as a result of poor credit (Financial Industry Regulatory Authority, 2015). Given the limitations financial burdens place on survivors, there is value in identifying interventions that effectively empower survivors financially by increasing financial security and helpseeking behaviors, and reducing future incidences of abuse.

Increasing Financial Knowledge as an IPV Intervention

The overall objective of empowerment-based practice is to increase sociopolitical power amongst oppressed groups. Empowerment theory has been studied across disciplinary fields, and theorists suggest that empowerment can occur at the individual, psychological, organizational, or community level. As a result, conceptualizations of empowerment vary widely. At the psychological level, empowerment is a process in which individuals increase "personal, interpersonal, or political power so that individuals can take action to improve their life situations" (Gutierrez, 1990, p. 149). Unlike individual empowerment, which is oriented toward personality, psychological empowerment considers contextual factors, such as culture, that are influential when striving to increase one's sociopolitical power (Zimmerman, 1990). At the organizational level, empowerment is promoted through the provision of opportunities for individuals to improve their sociopolitical power through collective action, with the aim of achieving a specific goal, whereas empowerment at the community level focuses on citizen participation and quality of life (N. A. Peterson & Zimmerman, 2004). A focus on

psychological empowerment is fitting for social work research and practice, as the discipline is grounded in an ecological perspective, which considers the contextual factors that influence human behavior (Hutchinson, 2010); psychological empowerment is also the focus of this dissertation.

While financial empowerment² interventions are used globally to address gender inequality, particularly at the policy level, such responses are used much less frequently in the U.S. (Buvinic & Furst-Nichols, 2014). Within the field of social work, financial empowerment is most commonly discussed as a goal of social welfare policy (Hoge, 2016), rather than as an intervention in and of itself. However, empowerment practice has become a guiding component of service provision for helping professionals working with survivors of IPV. Because abusers use coercive control tactics to take power away from their partners, empowerment-based services are designed to give power and control back to survivors (McDermott & Garofalo, 2004). Thus, the underlying objective of survivorfocused financial empowerment programs is to help survivors take control of their finances and obtain financial security. Increased financial freedom provides survivors with a broader range of choices concerning whether to leave their abusive relationships and how to sustain financial freedom once they leave (Correia, 2000).

Recognizing that financial insecurity is a significant issue for survivors of IPV in the U.S., several domestic violence organizations have developed financial empowerment programs for their clients. Types of programs within these organizations vary and include individual development accounts, job training, career development programs, and

² Within this dissertation, the term *financial empowerment* will be used to describe interventions intended to empower survivors, while the term *psychological empowerment in the financial domain (PEFD)* will be used to refer specifically to the nomological network for financial empowerment that was conceptualized.

financial literacy (Collins, 2011; Correia, 2000; Postmus, Plummer, McMahon, & Zurlo, 2013b; Sanders & Schnabel, 2006; Sanders, Weaver, & Schnabel, 2007).

There has been interest in financial literacy programs within the U.S. because they promote individual fiscal responsibility and well-being. Vitt and colleagues (2000) define financial literacy as, "...the ability to read, analyze, manage, and communicate about the personal financial conditions that affect material well-being," (p. 2). As such, financial literacy education "...helps people to develop the skills required to make informed choices and to take action that improves their financial well-being," (Arnone, 1999; as cited in Vitt et al., 2000, p. xii). Financial literacy education programs have been implemented across a diverse range of settings, including the military, faith-based programs, community programs, and the workplace, with 13 percent of the 90 programs reviewed by Vitt and colleagues developed specifically for women. While several financial literacy programs exist for survivors of IPV, only two programs have had more rigorous evaluations to examine their effectiveness in increasing financial knowledge among survivors of IPV.

Sanders and colleagues (2007) evaluated *Redevelopment Opportunities for Women's Economic Action Program (REAP)*, a financial education program that has been implemented with survivors of IPV. Overall, this quasi-experimental study found that while changes to financial knowledge were not statistically significant after controlling for the length of the relationship between survivor and abuser, increases in self-efficacy persisted at statistically significant levels from pretest to posttest.

In 2008, Postmus and Plummer (2010) conducted a longitudinal evaluation of the Moving Ahead Through Financial Management curriculum (hereafter called Moving *Ahead*), created by The Allstate Foundation in partnership with the National Network to End Domestic Violence (NNEDV). Overall, there were significant improvements in financial literacy, financial self-efficacy, and financial self-sufficiency as a result of survivors' participating in the program. Postmus, Hetling, and Hoge (2015) then conducted a more rigorous longitudinal, randomized controlled evaluation of the *Moving Ahead* curriculum beginning in 2010. Results showed that survivors in the treatment group had significantly higher scores on financial attitudes, financial knowledge, financial self-efficacy, financial self-sufficiency, financial intentions, and financial behaviors than those in the control group and these changes were statistically significant over time.

Gaps Identified and Purpose of the Study

Given the limitations financial burdens place on survivors, there is an urgent need to identify interventions that effectively empower survivors financially so as to increase help-seeking behaviors and financial freedom and reduce future incidences of abuse. Thus far, a few organizations have begun to import financial literacy programs designed for the general population and modify them for use with survivors of IPV. While initial evaluations of these programs have been positive, none have specifically focused on the construct of *psychological empowerment in the financial domain* (PEFD) and whether increasing financial literacy is effective in empowering survivors. Because empowerment has been at the forefront of the IPV movement since the 1970s, there is value in examining the intervention from an empowerment framework. As such, the purpose of this dissertation is to determine whether a financial literacy program designed for survivors of IPV is successful at increasing levels of PEFD over time.

Research Questions and Research Aims

For this current study, a quantitative secondary analysis of data collected for the parent study will be utilized to answer one primary research question: For female survivors of IPV, did attending sessions on the *Moving Ahead* curriculum result in increased PEFD over time? In answering this question, this dissertation aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment, and b) use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD over time among the sample of participants.

As a first step in achieving these specific aims, a comprehensive literature review of empowerment theory, with a focus on how this framework relates to survivors of IPV with financial constraints, was conducted. The chapter that follows presents a synthesis of this literature, beginning with a discussion of the theoretical underpinnings of empowerment theory, followed by a review of how the feminist IPV movement has adapted empowerment theory to address the financial burdens associated with IPV. The literature review concludes with a more comprehensive discussion of evaluations of financial literacy programs developed for survivors of IPV.

Chapter 2 – Theoretical Framework

Empowerment-based practice has been a primary intervention strategy within the field of IPV since the beginning of the Battered Women's Movement. At the foundation of empowerment practice is the aim of increasing sociopolitical power amongst oppressed groups at the individual, psychological, organizational, or community level. Empowerment practice is often utilized within the social work field, as the profession itself is grounded in the values of social justice and human rights (Lee & Hudson, 2017). Within the field of IPV, empowerment theory is often guided by feminist principles, which propose that women experience unequal access to power, on a global scale, due to patriarchy and uneven social power relations (Donovan, 1985; Turner and Maschi, 2015). Thus, feminist empowerment is a practical service framework for working with survivors because the use of power and control by one partner to dominate the other is central to IPV.

While extensive research has been conducted on the concept of empowerment, there has yet to be a consensus on the nature of this construct. Scholars have varied perspectives on how empowerment should be conceptualized, namely, whether it should be considered a process or an outcome, and how it should be promoted. While there is some commonality amongst definitions, diverse conceptualizations of empowerment pose issues for the implementation of both research and practice. For example, because empowerment is defined and conceptualized differently throughout the literature, it is difficult for researchers to draw broader implications from studies in this area (Cattaneo & Goodman, 2015).

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This chapter begins with a review of the literature on empowerment theory with a focus on definitions of empowerment at the psychological level, followed by a discussion on how this theoretical orientation has served as a practice framework for feminist services provided to IPV survivors. Financial empowerment will then be highlighted, as it is a valuable intervention for survivors of IPV and the focus of the financial literacy program evaluated as part of this study. The chapter will conclude with a review of studies that have evaluated interventions aimed at the empowerment of survivors of IPV within the U.S. through financial literacy education.

Conceptualizations of Empowerment

The focus of this review is on psychological empowerment. Financial empowerment interventions within the U.S. tend to focus on empowerment at the individual level through consciousness-raising. As part of this exercise, individuals belonging to oppressed groups are encouraged to consider how broader social, cultural, and political systems influence access to power. Further, psychological empowerment is a fitting construct for social work research and practice, as the discipline takes a systems approach to understanding the factors that influence human behavior (Hutchinson, 2010). However, literature from organizational and community-level empowerment theory will be drawn on as well due to the overlap across all three domains.

Defining psychological empowerment within an ecological framework.

Notions of empowerment have a long history. Community-level empowerment is evident as far back as the Protestant Revolution in the 1600s (Christens, in press). Levy-Simon (1994) suggests that social workers adapted an empowerment approach when working with clients in the 1890s. However, the first academic reference to empowerment emerged in 1976, when Barbara Bryant Solomon published the book "Black empowerment: Social work in oppressed communities." Within this work, Bryant discusses the feelings of powerlessness black clients may experience as a result of oppression and ways in which social workers can problem solve with black clients to promote strength and healing through the helping relationship (Solomon, 1976).

In 1981, Rappaport advocated the increased use of empowerment-based approaches over prevention. While the goal of prevention, he explained, is to "...find socalled high risk people and save them from themselves, if they like it or not, by giving them, or even better, their children, programs which we develop, package, sell, operate, or otherwise control," (p. 13), empowerment approaches encourage solutions to individual problems that build on one's strengths and competencies. However, even Rappaport acknowledges that defining empowerment is not an easy task. In 1984 Rappaport stated:

Empowerment is easy to define in its absence: powerlessness, real or imagined; learned helplessness; alienation; loss of sense of control over one's own life. It is more difficult to define positively only because it takes on a different form in different people and contexts (p. 3).

At the psychological level, definitions of empowerment vary widely. However, most definitions acknowledge that empowerment involves supporting individuals who have experienced powerlessness or oppression through mechanisms that result in an increase in power or mastery over their environments. For example, in 1984, Rappaport defined empowerment as "the mechanism by which people, organizations, and communities gain mastery over their lives" (p. 3) and in 1990, Gutierrez suggested, "Empowerment is a process of increasing personal, interpersonal, or political power so that individuals can take action to improve their life situations" (p. 149). Zimmerman (1995) expanded on these conceptualizations by developing a nomological network for psychological empowerment by identifying three primary components to empowerment:(a) intrapersonal, (b) interactional, and (c) behavioral.

Critiques of Empowerment Theory

There have been several critiques of empowerment theory. One commonly discussed limitation to this approach is that there is no consistent language being used to describe it. For example, the intrapersonal component Zimmerman (1995) refers to in his nomological network includes self-efficacy, motivation, competence, and mastery; other scholars have also included self-esteem and the sense of causal importance as crucial elements of empowerment (Kieffer, 1984). The interactional component Zimmerman refers to includes critical awareness, skill development, resource mobilization, and understanding causal agents. Others have discussed similar concepts, such as consciousness raising (Mitchell, 1975) and critical consciousness (Freire, 2005). Lastly, the behavioral component of Zimmerman's nomological network refers to actions taken to achieve a particular goal. Christens (2012) builds on Zimmerman's nomological model by including a relational component to incorporate the more communal elements of empowerment, such as social capital. According to Portes (1998), the concept of social capital "...calls attention to how such nonmonetary forms [of capital] can be important sources of power and influence," (p. 2). In contrast to the nomological networks proposed by Zimmerman and Christens, Prilleltensky and Gonick (1994) suggest three different pillars of empowerment: self-determination, distributive justice, and collaborative and democratic participation.

In addition to the lack of consistent language used in empowerment literature, there is also some debate as to whether empowerment is a process, a goal, or a form of intervention (Gutierrez, DeLois, & GlenMaye, 1995). As a process, empowerment is a *mechanism* in which individuals are given the tools to utilize their competencies, but because empowerment looks different across diverse populations, it is not possible to specify what exactly the mechanism entails (Rappaport, 1984). Cattaneo and Chapman (2010) describe empowerment as:

...an iterative process in which a person who lacks power sets a personally meaningful goal oriented toward increasing power, takes action toward the goal, and observes and reflects on the impact of this action, drawing on his or her evolving self-efficacy, knowledge, and competence related to the goal (p. 647).

As an outcome, or a goal, empowerment can be viewed as the acquisition of power by an oppressed individual (Riger, 1993) or control over resources (Rappaport, 1995) or one's life (McWhirter, 1991). One criticism that has emerged in the empowerment literature is its focus on individual outcomes such as mastery of a task, rather than collaboration and community, which are both viewed as more feminine ideals (Riger, 1993). Finally, empowerment is sometimes described as an intervention (Gutierrez et al., 1995). As part of the feminist movement, organizations have strived to empower individuals by providing services designed to reduce the impact of social inequalities (Riger, 1984). Kasturirangan (2008) cautions that these programs should reflect the priorities of the populations they serve, rather than those set by the organization, as to ensure that individuals feel that they are in control of their own lives.

The diverse conceptualizations of empowerment pose a number of challenges for both program implementation and research. Concerning the program implementation, service providers cannot adequately incorporate empowerment into their services if there is no consistent definition of empowerment nor a clear understanding of how to empower individuals or measure outcomes. Gutierrez, DeLois, and GlenMaye (1995) interviewed service providers about their understanding of empowerment and found that their definition of empowerment and their practice methods varied. Service providers conceptualized empowerment in terms of individual change, which is a problem since empowerment at an individual level does not necessarily equate to larger societal shifts in power. Another limitation of individualistic program implementation is that it fails to acknowledge that individual-level empowerment may be undesirable for those belonging to communities that value interdependence and communion (Christens, Winn, & Duke, 2016; Kasturirangan, 2008; Riger, 1993).

Scholars that are critical of empowerment approaches also express concern about the structural nature of empowerment programming. Some service providers equate empowerment with survivor protection, offender accountability, or advocacy. While these interventions may be intended to empower survivors, they can be intrusive if survivors are not interested in these outcomes (McDermott & Garofalo, 2004). Further, these interventions can undermine the empowerment process if survivors are not given control over which services they receive (Gruber & Trickett, 1987; Kasturirangan, 2008; McDermott & Garofalo, 2004). Lastly, sometimes success is measured through increases in clients' sense of power, rather than actual increases in power (Cattaneo & Goodman, 2015; Riger, 1994).

Scholars also encounter a series of challenges when engaging in empowerment research. Because empowerment is defined and conceptualized differently throughout the literature, it is difficult for researchers to draw broader implications for studies in this area (Cattaneo & Goodman, 2014; McWhirter, 1991; Rissel, 1995). Researchers have had reservations about developing globalized measures of empowerment because the concept is domain specific (Fawcett et al., 1995). There is also a lack of clarity with regard to how to operationalize empowerment, and whether it should be measured as an independent or an outcome variable (Cattaneo & Chapman, 2010; Cattaeno & Goodman, 2015).

Cattaneo and Goodman (2015) suggest that measures of empowerment require more than just a psychological focus; however, the existing conceptualizations and measures of empowerment often fail to go beyond the individual level. Another limitation in the measurement of empowerment at a psychological level is that the concept is sometimes operationalized as an individual's sense of empowerment, rather than an actual increase in power, and actual control is conflated with a sense of personal control (Riger, 1993).

Nomological models have been developed that conceptualize empowerment as comprising of three (Zimmerman, 1995) or four (Christens, 2012) components. One study to examine empowerment using Zimmerman's three component model was conducted by Speer and N. A. Peterson (2000). They tested a 27-item scale developed to measure empowerment at the individual level using the cognitive, emotional, and behavioral components with a focus on content and construct validity. It was hypothesized that factor analyses would confirm the presence of seven subscales representing the three components of empowerment, but the results of the study confirmed the existence of six subscales instead, still suggesting that empowerment is a complex and multivariate construct. Miguel, Ornelas, and Maroco (2015) later utilized the same three-component conceptualization of psychological empowerment as Speer and N. A. Peterson to test whether the construct should be specified as a formative or a reflective measure.

Rodrigues, Menezes, and Ferreira (2018) were one of the first to utilize Christens' (2012) four-component nomological network for psychological empowerment to test the modeling of the construct and also validate a 49-item instrument measuring these four components. Findings from their study supported a formative operationalization of empowerment using 46 of the 49 instrument items. Despite these few studies, researchers generally study empowerment by focusing on only one or two components of the construct (Christens & N. A. Peterson, 2012; Christens, N. A. Peterson, & Speer, 2011; N. A. Peterson & Hughey, 2004), which most often are the individual or psychological components (Miguel et al., 2015).

There has also been debate as to whether empowerment should be measured as a formative or reflective construct. N. A. Peterson (2014) argued that psychological empowerment may be misspecified when it is tested as a reflective construct, noting that several studies have found the behavioral component of empowerment to be an antecedent of empowerment rather than part of the actual construct itself. As such, N. A. Peterson encouraged the testing of empowerment as a formative construct or the reconsideration of empowerment as a higher order construct that includes both formative and reflective measures. Miguel and colleagues (2015) tested the factor structure of the empowerment model by running two confirmatory factor analyses that examined empowerment both as a reflective model and as a formative model. Despite running into some challenges in interpreting the formative model, the authors concluded that the reflective model fit the data better. Conversely, Rodrigues and colleagues (2018) utilized

partial least squares structural equation modeling to test both a formative and reflective four-component model of empowerment. A confirmatory tetrad analysis was then used to compare the models and determine the appropriateness of fit. Their results suggested that psychological empowerment should be operationalized as a formative measure. Thus, additional research is needed to further evaluate the specification of psychological empowerment.

There is also agreement amongst scholars that there is a significant need for more research studies that evaluate the provision of social services from an empowerment perspective. This research should include an examination of the effectiveness of empowerment-oriented practice and intervention across a variety of contexts, as well as a comparison of strategies and outcomes across settings (Christens, C. H. Peterson, & Speer, 2014). Rappaport (1984) suggests that the only way for researchers to measure empowerment as an outcome is to utilize triangulated methods so as to capture data from multiple sources. However, service providers often have reservations about participating in research activities, due to concerns that participation in research will harm service delivery by taking staff time away from or re-traumatizing clients (Chronister & McWhirter, 2003). This makes collecting data from multiple data sources challenging. As a result, the voices of clients are often absent from research studies, even those examining client-focused program outcomes (Rappaport, 1995).

Finally, there are challenges to capturing empowerment-based outcomes in research. Empowerment outcomes are often delayed (Fawcett et al., 1995), thus necessitating that longitudinal designs be utilized (Christens, 2012). However, longitudinal studies can be challenging to implement, especially with transient or vulnerable populations, because retention may be low (Dutton et al., 2003). It is also possible that, in some marginalized communities, increases in power may be limited due to structural barriers, even after clients obtain the knowledge needed for mobilization (Fawcett et al., 1995).

Incorporating Empowerment Theory into Feminist Practice

Empowerment-based practice is guided by empowerment theory and provides a means by which power and choice can be given back to vulnerable groups (McDermott & Garofalo, 2004). At the root of empowerment practice is the helping relationship between the service provider and the client (Herman, 1997; Turner & Maschi, 2015). As part of this relationship, service providers assist their clients in reclaiming the power and personal control that they have lost as a result of structural inequalities (Gutierrez, 1990; Gutierrez et al., 1995; Levy-Simon, 1994).

When the women's movement emerged in the 1960s as part of the second wave of feminism, feminists were particularly concerned about the power imbalances between women and men (Donovan, 1985; Saulnier, 1996). According to Turner and Maschi (2015):

Central to feminist theory is the belief that the inferior status delegated to women is due to social inequality, that the personal status of women is shaped by political, economic and social power relations and that women should have equal access to all forms of power (p. 152).

While several variants of feminism emerged during this period, one of the most influential to the violence against women's movement was radical feminism. Based on their experiences as civil rights activists, the radical feminists recognized the inequalities faced by women and identified a set of ideals that emphasized this injustice: (a) the personal is political, (b) patriarchy is the root of women's oppression, (c) women collectively need to identify themselves as an oppressed class and work to challenge their oppressors, and (d) women and men are fundamentally different and therefore have a unique set of needs (Donovan, 1985). Because women's inequality is caused by patriarchal practices within society, empowerment-based practice makes an appropriate intervention.

When the Battered Women's Movement began in the 1970s, empowerment-based practice was embraced by IPV service providers. Because resources were limited, shelters for IPV survivors emerged inside the homes of advocates and eventually moved to whatever spaces service providers could afford within the parameters of safety (Stark, 2007). Given the limited resources of both the shelters and the survivors of IPV, themselves, service providers recognized the value of empowerment-based practice, particularly because the intervention has low implementation costs and is action-oriented.

One of the foundational components of empowerment practice in this context is the idea of giving survivors of IPV their voice back and providing space for survivors to make their own decisions (Cattaneo & Goodman, 2015; McDermott & Garofalo, 2004). Also important to empowerment practice is consciousness-raising, a process in which individuals think critically about the injustices they experience as a result of oppressive systems (Christens et al., 2016). By helping survivors to understand patriarchy and the way in which it manifests through their experiences with IPV, and as women more broadly, survivors can begin to identify their needs and access the resources necessary to work toward independence (Busch & Valentine, 2000; Kasturirangan, 2008; Turner & Maschi, 2015).

Financial Empowerment for Survivors of IPV

For survivors of IPV, one of the most significant barriers to independence is financial insecurity. For this reason, service providers have begun to implement interventions focused on empowering survivors of IPV financially (Christy-McMullin, 2003; Correia, 2000; Sanders & Schnabel, 2006; VonDeLinde, 2002). Financial empowerment of women in the global context is more policy focused, while interventions within the U.S. tend to be more individualistic (Calvès, 2009). At the individual level, financial empowerment is a collaborative process between service providers and survivors aimed at increasing financial self-sufficiency by equipping survivors with the knowledge, skills, and confidence to engage in personal financial management (Postmus, 2010). Aside from asset building (Shobe & Dienemann, 2007), other mechanisms for fostering financial empowerment interventions include micro-credit programs, job training, individual savings accounts, and financial literacy education (Buvinic & Furst-Nichols, 2014).

Within the IPV field, financial literacy programs are often used with survivors. The U.S. Government Accountability Office defines financial literacy as "the ability to make informed judgments and to take effective actions regarding current and future use and management of money," (Dodaro, 2011, p. 2). Financial literacy programs geared towards survivors of IPV often focus on providing survivors with the knowledge and skills needed to navigate financial barriers that arise as a result of their abusive relationships (Peled & Krigel, 2016).

Several financial literacy programs have been developed specifically for survivors of IPV. *Hope and Power for Your Personal Finances*, created by the National Coalition Against Domestic Violence, the National Endowment for Financial Education, and Intuit (2002), was developed to help survivors of IPV achieve financial self-sufficiency through financial education. The *Money School – Building Financial Futures* workbook, developed by the American Institute of Economic Research (2014), aims to teach financial skills to both survivors of IPV and sexual violence and includes topics such as budgeting, setting financial goals, and saving for the future. However, there do not appear to be evaluation studies of these programs. Two financial literacy programs that have been evaluated are *REAP*, created by Redevelopment Opportunities for Women (2006), and *Moving Ahead*, developed by The Allstate Foundation and the NNEDV (2009). The overall goal of these two programs is to increase survivors' financial empowerment. However, only one study, which used data from an evaluation of *Moving Ahead* (Postmus et al., 2013b), has even explicitly looked at the construct of financial empowerment as an outcome.

Perhaps research and evaluation on financial empowerment have been stifled by a lack of clarity on how financial empowerment should be operationalized. Globally, the term *economic empowerment* is often used to describe policy-focused interventions that strive to increase women's financial stability on the macro-level. The term *financial empowerment* is often used within the U.S. to describe individual-based interventions which more commonly aim to increase financial knowledge, behaviors, and confidence. As with broader empowerment theory, criticisms around individual-based financial empowerment interventions draw on the true meaning of empowerment, which include fostering actual increases in power rather than perceived increases in power. Given these definitional and operational limitations, the research and evaluation on financial

empowerment interventions, particularly in the field of IPV, has been limited. Unlike studies on empowerment theory more broadly, there have been no studies aimed at operationalizing financial empowerment. Further, no studies have examined the effectiveness of financial empowerment interventions at increasing financial empowerment amongst IPV survivors over time.

Expanding the Construct of Psychological Empowerment to the Financial Domain

Current research on empowerment has centered on the examination of the proposed components of empowerment and its specification as a reflective or formative higher-order construct. However, this research has predominately been situated in the sociopolitical domain within the field of community psychology. Although empowerment is a key component of social work practice, social work researchers have not generally been engaged in this empowerment research nor have they attempted to expand the construct of empowerment into other domains, such as the financial domain. Therefore, the purpose of this dissertation is to extend the construct of empowerment to the financial domain. To guide in this conceptualization, Christens' (2012) nomological network for psychological empowerment will be drawn upon.

In 1995, Zimmerman proposed a nomological network for psychological empowerment that included emotional, cognitive, and behavioral components. In 2012, Christens proposed the expansion of Zimmerman's model so as to also include a relational component (see Figure 1). Christens points out that, while empowerment is often conceptualized as a community-oriented process, Zimmerman's nomological model fails to account for the relational dynamics that are also important to the empowerment process, as these power dynamics underlie the structural inequalities that empowerment
theory strives to challenge. For this reason, it is not enough to simply increase one's perception of control, as this will not change the power imbalances. Rather, empowerment requires that individuals actually increase their power and control, at both the individual and relational levels.



Figure 1. Christens' (2012) Nomological Network for Psychological Empowerment

According to Christens, the relational component of empowerment differs from the traditional conceptualization of sense of community because it involves "...identifying the extent to which different sets of relationships (including those that cut across specific territorial or organizational settings) are facilitating the development and exercise of power at multiple levels" (p. 120). The relational component of empowerment has been intrinsic to feminist empowerment practice with survivors of IPV because the goals of IPV interventions, as with empowerment interventions, often include the development of group critical consciousness (Guttierez, 1990), increasing perceived competence and self-efficacy (Perkins, 1995), and community building (Chronister & McWhirter, 2003).

Summary

The empowerment scholarship has grown substantially since the 1980s. One focus of such literature has been the definition of empowerment as a construct, and the development of a conceptual model to identify its key components. Zimmerman (1995) developed a conceptual model for psychological empowerment, which is comprised of three components: (a) emotional, (b) behavioral, and (c) cognitive. Christens (2012) later suggested that Zimmerman's conceptual model of psychological empowerment should include a fourth component – relational.

The inclusion of the relational component of psychological empowerment is fitting, particularly in the context of feminist empowerment. Primary objectives of feminist empowerment include giving survivors the space to express themselves (Cattaneo & Goodman, 2015; McDermott & Garofalo, 2004), consciousness-raising to help survivors understand the structural factors that contribute to their experiences with violence (Christens et al., 2016), and encouraging survivors to work together to advocate for political and social changes (Donovan, 1985).

The *Moving Ahead* curriculum, which is the focus of this dissertation, aims to empower survivors of IPV to be financially self-sufficient through the use of conventional empowerment-based practices. In the next chapter, the six measures of interest, drawn from Postmus, Hetling, and Hoge's (2013a) study that examine components of financial empowerment will be discussed in greater detail.

Chapter 3 – Literature Review

As part of this study, financial empowerment was conceptualized using Christens' (2012) four-component nomological network for empowerment. The six scales that were selected to represent these four components come from a larger, parent study which evaluated the effectiveness of *Moving Ahead*, financial literacy intervention with survivors of IPV. This literature review will begin with an overview of measures used in this dissertation, as well as a review of prior measures that helped to inform their creation. This will be followed by a summary of studies that have examined the nature of these constructs, their association with each other, and how they are affected by financial empowerment interventions. This chapter will conclude with recommendations on future research in this area and how this dissertation fills gaps in the literature on PEFD.

Nomological Network for Psychological Empowerment in the Financial Domain

Christens' (2012) nomological network for psychological empowerment consists of four components: (a) emotional, (b) cognitive, (c) relational, and (d) behavioral. Figure 2 presents Christens' nomological model for psychological empowerment adapted for use within the financial domain. To more accurately reflect the financial processes that this dissertation examines, the relational component is referred to as *Transformative Power* and the behavioral component is referred to as *Financial Planning and Management Behaviors*. The following section will present an overview of constructs that were used to comprise PEFD using Christens' nomological network for psychological empowerment as a conceptual model.



Figure 2. Nomological Network for Psychological Empowerment in the Financial Domain

Measuring the Constructs that Comprise Psychological Empowerment in the Financial Domain

Emotional component. Within this dissertation, the emotional component of PEFD was comprised of financial attitudes and financial self-efficacy. Fishbein and Ajzen (2010) define attitudes as a "latent disposition or tendency to respond with some degree of favorableness or unfavorableness to a psychological object" (p. 76). Further, the authors suggest that scholars view attitudes as an evaluative response that can be used to reflect current thinking on a particular construct. As such, financial attitudes measures examine the degree to which individuals agree or disagree with financial management practices. Financial attitudes are often measured through assessment of one's beliefs about a psychological object. This is important to understanding human behavior because beliefs can also facilitate or hinder the performance of a particular behavior (Fishbein & Ajzen, 2010). Financial attitudes are a fitting element for inclusion in the emotional

component of Christens' (2012) model because the component is associated with domain-specific perceived control.

Self-efficacy is defined as an individual's confidence in his or her ability to perform a specific behavior (Bandura, 1997). Thus, financial self-efficacy refers to one's confidence in his or her ability to perform behaviors or tasks associated with financial management (Hoge, Stylianou, Hetling, & Postmus, 2017). Financial self-efficacy is similar to the element of domain-specific self-efficacy and the element of perceived competence, both of which appear in Christens' (2012) model. In this section, the literature on the conceptualization and measurement of financial attitudes and financial self-efficacy will be discussed in turn.

Financial attitudes. One of the first studies to utilize a financial attitudes scale was conducted by Godwin and Carroll (1986). The purpose of their study was to gain an understanding of spouses' financial attitudes toward and financial behaviors around family financial management, as well as to identify other factors that affect spouses' financial attitudes and behaviors. To measure financial attitudes, Godwin and Carroll conducted a content analysis of textbooks on family finance and resource management to identify attitudes important to financial management. Overall, 13 items on financial attitudes were included in a survey that was distributed to 73 married couples. The reliability of the scale was found to be acceptable ($\alpha = .78$). However, this was the first time that the scale was utilized. Therefore, additional testing was needed, particularly with a more diverse sample. The majority of participants in the study had some college or post-high school technical training and full-time jobs.

Godwin and Koonce (1992) conducted a study to look at differences between newlyweds from low, middle, and upper incomes regarding their feelings on cash-flow management and patterns of cash-flow management behaviors. To measure financial attitudes, a 15-item Likert scale was used. However, the manuscript does not describe how the measure was developed nor does it indicate which items were included in the scale. The authors also do not present the reliability coefficient for the measure. Therefore, it is difficult to assess whether the scale is a valid and reliable measure of financial attitudes.

In 1994, Godwin conducted another study on cash flow management among newlywed couples. The research study aims were threefold: (1) examine cash flow management using a more comprehensive measure than has been used in the past, (2) explore factors associated with newlywed couples' cash flow management, and (3) investigate the consequences of cash flow management on financial outcomes and financial satisfaction. To achieve the first aim of the study, Godwin conducted an exploratory factor analysis of 20 items that were adapted from a pilot study. The analysis revealed that the measure was comprised of four subscales, of which one was attitudes toward financial planning. The financial attitudes subscale consisted of three items with Likert response options. The reliability of the scale was found to be questionable (α = .63) suggesting a need for further examination of this financial attitudes scale.

One of the studies most influential to the measurement of financial attitudes was conducted by Parrotta and Johnson (1998). The purpose of their study was to identify the impact of both financial attitudes and knowledge on financial management, and satisfaction with financial status. To measure financial attitudes, Parrotta and Johnson combined items from the studies by Godwin and Carroll (1986), Godwin and Koonce (1992), and Godwin (1994). The original scale contained 23 items, but items that correlated at or below .10 were deleted, along with items that lowered the overall reliability coefficient, resulting in a 15 item scale. The reliability of the scale was found to be acceptable ($\alpha = .78$) and principal factor analysis revealed that all the items loaded on one factor.

Postmus, Hetling, and Hoge (2013a) utilized Parrotta and Johnson's Financial Management Attitudes Scale (1998) in their study. However, because the focus of their study was financial empowerment among survivors of IPV, Postmus and colleagues added four additional questions to capture gender norms associated with finances. These four added items came from a study by Amato, Loomis, and Booth (1995) and were: (a) A woman's most important task in life is being a mother, (b) A husband should earn a larger salary than his wife, (c) A husband should share equally in household chores if his wife works full time, and (d) A woman should not be employed if her husband can support her. When Postmus and colleagues conducted an exploratory factor analysis on this 19-item scale, five items were deleted because they did not load. The four subscales identified were: Barriers to Financial Management (7 items; $\alpha = .73$), Attitudes about Financial Planning (3 items; $\alpha = 684$), Gender Attitudes Related to Finances (2 items; $\alpha =$.60), and Future Financial Planning (2 items; $\alpha = .70$). While a limitation of Postmus and colleagues revised financial attitudes scale is that it is a new scale and needs to be tested with a broader audience, this is the only financial attitudes scale developed with survivors of IPV in mind.

Financial self-efficacy. Overall, two financial self-efficacy scales have dominated the field of IPV. The first is the Domestic Violence-Related Financial Issues Scale (DV-FI) of which financial self-efficacy is a subscale (Weaver, Sanders, Campbell, & Schnabel, 2009). The second is the Scale of Economic Self-Efficacy (Hoge et al., 2017).

The DV-FI Scale was developed by Weaver and colleagues (2009) to examine the unique financial experiences of survivors of IPV. Five factors were extracted from the final 24-item scale, which had acceptable internal reliability ($\alpha = .80$). The initial selection of items was made after a comprehensive review of literature on financial issues associated with IPV. A panel of IPV advocates then reviewed the items and provided feedback; the scale items were finalized based on recommendations from the panel.

Overall the DV-FI has five subscales: Financial Self-Efficacy, Financial Security and Future Safety, Perceived Financial Role in Partner Abuse, Economic Abuse, and Financial Distress and Relationship Decisions. The Financial Self-Efficacy subscale contained five items asking participants about their confidence in engaging in financial management behaviors; it showed good internal consistency ($\alpha = .86$). Correlations were used to examine the construct validity of the scale. The Financial Self-Efficacy subscale was found to be positively and significantly correlated to total family resources.

The Scale of Economic Self-Efficacy (Hoge et al., 2017) is a 10-item unidimensional scale that was developed to measure an individual's perceived ability to perform financial tasks. The measure was validated with a sample of IPV survivors. To develop the scale, Hoge and colleagues modified the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) to incorporate financial behaviors. Overall, the scale showed good internal reliability ($\alpha = .88$). Correlations were used to examine the concurrent validity of the scale, which was significantly negatively correlated with financial strain and difficulty living off income and was significantly positively correlated with financial self-sufficiency. These findings suggest that the scale is both reliable and valid. However, a limitation of this study is that 54% of the sample was Latina and almost half were foreign-born. Thus, it is necessary to further test this scale with a more diverse sample, both ethnically and socio-economically.

Cognitive component. The cognitive component of PEFD was comprised of financial knowledge and financial self-sufficiency. One mechanism for empowering vulnerable populations is to provide them with the concrete skills and knowledge needed to become empowered and challenge structural inequalities (Zimmerman, 1995). Financial knowledge, also referred to as financial literacy, is defined as "the ability to make informed judgments and to take effective actions regarding current and future use and management of money," (Dodaro, 2011, p. 2). Financial knowledge is similar to critical awareness, which is one of the elements included in the cognitive component of Christens' (2012) model.

While definitions of financial self-sufficiency vary (Hoge, 2016), it is most often categorized as the ability of an individual or family to avoid poverty and be free from public assistance (Hetling, Hoge, & Postmus, 2016a). However, some scholars have tried to reconceptualize financial self-sufficiency into a transitional and empowering process (Hoge, 2016). Gowdy and Pearlmutter (1993) found that participants utilizing services from the Women's Empowerment Network perceived financial self-sufficiency to exist on a continuum, and that financial self-sufficiency was less related to total income, but rather to one's ability to live off that income. Financial self-sufficiency is included as an element of the cognitive component of empowerment because it mirrors the element of skill transfer across life domains, which Christens (2012) has included in his model. In this section, literature on the conceptualization and measurement of financial knowledge and financial self-sufficiency will each be discussed in turn.

Financial knowledge. The two financial knowledge scales utilized with survivors of IPV were developed based on the content of financial literacy curriculums that were being evaluated. Sanders and colleagues (2007) developed a financial knowledge measure to evaluate the effects of a financial literacy curriculum, *REAP*, on knowledge. The *REAP* curriculum was developed by the Redevelopment Opportunities for Women (2006) program, which provides services to survivors of IPV. Sanders and colleagues' financial knowledge scale was comprised of 35 items and had good internal reliability ($\alpha = .81$).

Postmus and colleagues (2013b) developed a 51-item knowledge scale as part of a longitudinal randomized controlled trial evaluating the effectiveness of The Allstate Foundation and NNEDV's (2009) *Moving Ahead* curriculum. The initial scale, based on the curriculum itself, began with 51 items. Using the first wave of data, the authors conducted an exploratory study seeking to answer the following questions: (1) What is the level of financial literacy among the sample of IPV survivors? (2) Are there significant differences in financial literacy based on key demographic variables? (3) What is the relationship between financial literacy and economic empowerment, economic self-efficacy, and economic self-sufficiency? (4) Does financial literacy predict economic empowerment?

Prior to analysis, the authors conducted an exploratory factor analysis to reduce the number of items and identify factors within the scale. As a result of the analysis, the financial knowledge scale was reduced from 51 items to 13 and consisted of four subscales: Knowledge about Credit (4 items; $\alpha = .86$), Knowledge about Obtaining Resources (3 items; $\alpha = .82$), Knowledge about Investing and Long-Term Planning (4 items; $\alpha = .87$), and Knowledge about Joint Assets with Partner (2 items; $\alpha = .83$). The final scale showed good internal reliability ($\alpha = .88$)

Postmus and colleagues (2013a) then modified their financial knowledge scale for a second evaluation project, which was also a randomized controlled trial of the *Moving Ahead* curriculum. In addition to the 13 items from Postmus and colleagues' prior study, two items were added after a review of the curriculum content. A second exploratory factor analysis was conducted on the 15-item scale. Consistent with the previous study, four subscales were identified, however, the reliability coefficients differed slightly: Knowledge About Credit (5 items; $\alpha = .89$), Knowledge about Obtaining Resources (4 items; $\alpha = .68$), Knowledge about Investing and Long-Term Planning (4 items; $\alpha = .85$), and Knowledge about Joint Assets with Partner (2 items; $\alpha = .83$).

Of course, a limitation to both of these financial knowledge scales is that they were developed for specific financial knowledge curriculums. While they could be used for other projects, researchers would need to review the items to ensure that they match the content of the curriculum they are evaluating and capture the construct that the study is aiming to measure.

Financial self-sufficiency. Few scales have been utilized to measure financial self-sufficiency among survivors of IPV. To date, the only scale currently available was

published by Hetling, Hoge, and Postmus (2016a). Their scale, named the Scale of Economic Self-Sufficiency-14, was developed by modifying a financial self-sufficiency scale developed for use among a sample of low-income women utilizing services at a program named the Women's Empowerment Network (Gowdy & Pearlmutter, 1993).

In 1993, Gowdy and Pearlmutter developed the Women's Empowerment Network Self-Sufficiency Survey to address significant limitations to prior conceptualizations of financial self-sufficiency that they had observed. The first limitation identified was that low income women were generally not included in conversations about how to define financial self-sufficiency, or how it can be achieved. The second limitation they observed was that definitions of financial self-sufficiency tended to be binary. For example, women were perceived as self-sufficient and not on welfare *or* not self-sufficient and utilizing welfare services. This dichotomous conceptualization failed to recognize that financial self-sufficiency can exist on a continuum. Further, this binary representation of self-sufficiency suggested that if a woman was not on welfare, then she must be financially self-sufficient. In actuality, financial self-sufficiency is a much more complicated construct that includes a diverse range of assets and resources.

To address these identified limitations, Gowdy and Pearlmutter (1993) conducted a multi-phase study to gain an understanding of how low-income women defined financial self-sufficiency. As part of the first phase of their study, the authors conducted focus groups with women affiliated with the Women's Employment Network and then analyzed the data for key themes. The key themes identified were utilized to develop a 15-item scale measuring the construct of financial self-sufficiency; this measure was then utilized by the Women's Empowerment Network. Gowdy and Pearlmutter's (1993) scale was completed by 244 individuals who had received services from the Women's Empowerment Network. The authors then conducted a factor analysis of the scale items. Overall, all 15 items in the scale loaded well and the scale was found to have good reliability ($\alpha = .89$). The measure consists of four subscales: Autonomy and Self-Determination, Financial Security and Responsibility, Family and Self-Well-Being, and Basic Assets for Community Living. While this scale served as a strong starting point for measuring financial self-sufficiency, a limitation of this measure was that it was not tested with a sample of IPV survivors.

Postmus and colleagues utilized the Women's Empowerment Network Self-Sufficiency Survey in two of their evaluation studies of the *Moving Ahead* curriculum (Postmus & Plummer, 2010; Postmus et al., 2013a). First, Postmus and Plummer (2010) utilized the scale as part of a longitudinal study to measure the effectiveness of the *Moving Ahead* curriculum across three time points over an 11-month period. After the first data collection point, Postmus, Plummer, McMahon, and Zurlo (2013b) conducted a cross-sectional analysis to examine: (1) participants' baseline level of financial literacy, (2) whether there were any significant differences in financial literacy based on demographic factors, and (3) the relationship among the constructs of financial literacy, financial empowerment, financial self-efficacy, and financial self-sufficiency.

Overall, testing the self-sufficiency scale with 121 survivors of IPV found that the internal reliability of the scale was excellent ($\alpha = .93$). The only modification Postmus and colleagues made to Gowdy and Pearlmutter's (1993) original measure was that the items asked participants to reflect on the past one month, rather than three months as used by Gowdy and Pearlmutter.

In their second study, Postmus and colleagues (2013a) again utilized the Women's Empowerment Network Self-Sufficiency Scale to ask participants about their ability to complete financial-related tasks over the past month. While the overarching goal of the study was to evaluate the *Moving Ahead* curriculum, Hetling, Hoge, and Postmus (2016a) also used data from the first time period of the 14-month longitudinal study to validate the self-sufficiency scale using a sample of survivors of IPV. Listwise deletion was used to remove participants who had missing data on any of the financial self-sufficiency items, reducing the number of participants from 457 to 442. To confirm the factor structure of the scale, the sample was divided into randomly split halves for analysis through exploratory and confirmatory factor analysis.

First, descriptive analyses were completed on the scale items. As a result of these analyses, the decision was made to delete the item "afford decent childcare" from the proposed scale because not all participants had children. Next, three additional items were removed from the scale because participants' responses to these items were skewed. These items were "be free from government programs," "afford to have a reliable car," and "afford decent housing."

After an exploratory factor analysis was conducted, one additional item, "get healthcare for yourself," was deleted because it did not load on either of the two factors identified. A confirmatory factor analysis was then run to confirm the factor structure of this ten-item scale consisting of two factors. However, upon review of the remaining ten items, Hetling and colleagues felt as though the measure failed to capture key components of financial self-sufficiency, and thus named it the Scale of Financial Security-10. Hetling and colleagues (2016a) then reviewed the four items that were initially removed from the scale due to skewness. Recognizing that these four items were important to the conceptualization of financial self-sufficiency, the authors decided to create a third subscale in their financial self-sufficiency measure called Basic Assets for Community Living. A confirmatory factor analysis was run on this revised 14-item, three-factor scale, and the results suggested a moderate fit to the data. The reliability of the subscales was found to be: Ability to Manage Financial Needs ($\alpha = .80$), Ability to Have Discretionary Funds ($\alpha = .75$), and Ability to Maintain Independent Living ($\alpha =$.64). The overall measure, Scale of Economic Self-Sufficiency-14, had good reliability (α = .86) and was determined to be a more accurate assessment of financial self-sufficiency.

While the Scale of Economic Self-Sufficiency-14 (Hetling et al., 2016a) is an important addition to the field of IPV as no other financial self-sufficiency scales exist. Further research is needed to test the scale with a more diverse sample of survivors of IPV to ensure that the measure maintains its validity. The sample from the *Moving Ahead* study was purposive and thus there was an overrepresentation of Latina women (54%), compared to the general U.S. population. In addition, this was an impoverished sample, as almost half had an income of less than \$10,000 per year.

Relational component. Christens' (2012) nomological network differs from Zimmerman's (1995) in that it includes a relational component for psychological empowerment. Christens defines the relational component of psychological empowerment as "the psychological aspects of interpersonal transactions and processes that undergrid the effective exercise of transformative power in the sociopolitical domain," (p. 121). Thus, Christens is suggesting that within the relational context individuals can benefit from a range of resources such as social capital and social networks that can empower them to work collectively, mobilize networks, and facilitate the empowerment of others. The relational component of financial empowerment, referred to in this dissertation as transformative power, will be measured using a scale designed to assess participants' confidence in facilitating the financial empowerment of fellow IPV survivors. In this section, literature on the conceptualization and measurement of the relational component of PEFD will be reviewed.

The Family Empowerment Scale, developed by Koren, DeChillo, and Friesen (1992), has laid a strong framework for assessing empowerment across a range of domains, and has served as the foundation of the only measure available to assess the relational component of PEFD for survivors of IPV. The Family Empowerment Scale was developed to study empowerment within families who have children with emotional disabilities. Researchers have used the Family Empowerment Scale to examine psychological empowerment within a range of domains, including parents who have children with diverse disabilities (Akey, Marquis, & Ross, 2000), family empowerment and children's mental health outcomes (Resendez, Quist, & Matshazi, 2000), the effects of mental health services for families who have children with disabilities (Banach, Iudice, Conway, & Couse, 2009; Vandiver, Jordan, Keopraseuth, & Yu, 1995), and family empowerment as an indicator of service utilization (Singh et al., 1997). Beyond the mental health field, the Family Empowerment Scale has been modified for use with survivors of IPV (Plummer, 2007; Postmus et al., 2013a; Postmus et al., 2013b; Singh et al., 1995).

To develop the Family Empowerment Scale, Koren and colleagues (1992) began by conducting a comprehensive literature review on the topic of empowerment to identify elements that should be included in the measurement of empowerment. They then created an item pool from which a 28-item scale was developed. The scale was then piloted with parents of children with emotional disabilities; 94 parents completed the instrument and 29 of them also agreed to participate in a focus group. Based on the feedback from the focus groups and survey responses, modifications were made to the survey and additional items were added, bringing the item total to 34. The finalized scale was then used with 440 participants to examine empowerment in families whose children have emotional disabilities.

Results from exploratory factor analysis of the final 34-item scale identified three subscales: Family (12 items; $\alpha = .88$), Service System (12 items; $\alpha = .87$), and Community/Political (10 items; $\alpha = .88$). Test-retest reliability of the measure was also evaluated by collecting responses from 107 family members who agreed to complete the measure a second time. Results showed that the scale maintained its reliability over a short period of time.

Plummer (2007) modified the Family Empowerment Scale for a study that examined IPV survivors' perceived sense of empowerment during the process of seeking restraining orders. Plummer modified the language so that it met the particular aims of the study. For example, on the original scale Koren and colleagues (1992) asked participants to identify the degree to which they agreed or disagreed with the statement "I help other families get the services they need" whereas Plummer reworded the item to ask "I help women who are seeking a Protective Order to get the help they need." Overall, 89 women agreed to participate in Plummer's (2007) study and complete the survey. As part of data analysis, Plummer tested the psychometric properties of the newly developed empowerment scale. Exploratory factor analysis found that items did not load on the factors as anticipated based on Koren and colleagues' (1992) study findings. Plummer reviewed the factor loadings and renamed the three subscales to better reflect the overall constructs being represented: Self-Efficacy (15 items), Self-Advocacy (9 items), and Collective Advocacy (10 items). The author notes that the reliability coefficients for the subscales ranged from .82 to .89 but did not specifically indicate what the Cronbach's alpha for each subscale was.

Plummer's (2007) study is illustrative of a creative way of modifying a preexisting scale to better measure an under-researched phenomenon still in need of measures. However, there are some limitations to the study. Because the study was cross-sectional, the author was unable to test the validity of the measure over time. Further, Costello and Osborne (2005) recommend a subject to item ratio of 10:1 for exploratory factor analysis; in their examination of factor ratios commonly reported in the literature, the smallest ratio found was 2:1. Costello and Osborne then conducted analyses to examine the impact of the subject to item ratio on the accuracy of findings reported by exploratory factor analysis. Costello and Osborne found that only 10% of samples using a 2:1 subject to item ratio produced correct solutions. Being that the sample size for Plummer's empowerment scale with a larger sample to ensure accuracy. Lastly, being that the sample for this study was very specific (i.e. women in a courthouse waiting to speak to the judge about a restraining order), future studies should also test this scale with

a more diverse sample of IPV survivors. Further, women's perceptions of empowerment based on restraining orders may differ depending on whether they were surveyed before obtaining the order or after.

Postmus and colleagues (2013b) also modified the Family Empowerment Scale (Koren et al., 1992) for use as part of a longitudinal study examining the impact of a financial literacy curriculum, *Moving Ahead*, with a sample of 121 female survivors of IPV during an 11-month longitudinal study. Items from the Family Empowerment Scale were revised to reflect the nature of the study, which was focused on financial empowerment. For example, on the original scale Koren and colleagues (1992) asked participants to identify the degree to which they agreed or disagreed with the statement "I feel confident in my ability to help my child grow and develop" whereas Postmus and colleagues reworded the item to ask "I feel confident in my ability to help myself grow and develop financially."

After exploratory factor analysis was conducted, the original 34-item scale was reduced to 17 items ($\alpha = .88$) of which four factors were identified: Interpersonal Economic Empowerment (6 items; $\alpha = .84$), Professional Interactional Empowerment (4 items; $\alpha = .73$), Peer Interactional Empowerment (3 items; $\alpha = .77$), and Financial Institution Empowerment (4 items; $\alpha = .84$). The three-item peer interactional empowerment subscale is of interest; however, it is unclear which three items comprise this subscale.

As part of a 14-month longitudinal evaluation of the *Moving Ahead* curriculum, Postmus and colleagues (2013a) utilized five items from the Community/Political subscale of the Family Empowerment Scale (Koren et al., 1992) to measure financial community empowerment. Postmus and colleagues again modified these items to reflect financial empowerment, the construct of interest. The five items modified from the Family Empowerment Scale were: "I know what the rights of parents and children are under the special education laws," "I feel I can have a part in improving services for children in my community," "I believe that other parents and I can have an influence on services for children," "I feel that my knowledge and experience as a parent can be used to improve services for children and families," and lastly, "I help other families get the services they need."

Postmus and colleagues (2013a) conducted an exploratory factor analysis to examine the factor structure of their modified scale. Overall, three of the five items were loaded onto one factor with acceptable internal reliability (α = .78). The three items that remained were: "I feel I can have a part in improving the process of seeking financial self-sufficiency for other women," "I believe that other women and I can have an influence on changing the process of achieving financial self-sufficiency," and "I feel that my knowledge and experience as a woman seeking financial self-sufficiency can be used to improve services for other women who may go through this process." However, the sample that the scale was tested on was purposive; it is possible that these participants felt particularly empowered within their community because they were connected to services for IPV survivors already. Further, the sample was primarily low-income and consisted of a high Latina population. As such, this scale needs to be tested with a more diverse sample of survivors of IPV to determine if it is a reliable measure of relational empowerment among a broader sample.

Behavioral component. Lastly, the behavioral component of PEFD was measured using a scale designed to capture financial management and planning behaviors. Most commonly, these scales are adapted from financial education curriculums as an evaluation tool for capturing behaviors previously documented as best practices for financial management (Godwin, 1994; Godwin & Carroll, 1986; Godwin & Koonce, 1992; Parrotta & Johnson, 1998; Postmus et al., 2013a). However, the study by Postmus and colleagues (2013a) was the only one to examine financial behaviors among survivors of IPV.

To evaluate the Moving Ahead curriculum, Postmus, Hetling, and Hoge (2013a) reviewed the curriculum with the aim of identifying financial planning and management behaviors relevant to the study. As a result of this review, the authors identified 14 behaviors to incorporate into a financial management and planning behaviors scale. These items asked survivors of IPV about the frequency with which they had engaged in a series of financial behaviors in the past month. For example, the scale assessed how often in the last month survivors had... "follow[ed] a weekly or monthly budget," "[made] payments towards [their] debt (credit cards, money owed to friends/family, etc.)," and "[payed] more than the interest on [their] loans, credit etc.?". Because this was a brand new scale, exploratory factor analysis was used to examine its factor structure. Overall, four items were removed because they did not load onto any factor. After the four items were removed, the remaining 10-item scale was comprised of three subscales: Engagement in Personal Financial Planning (4 items; $\alpha = .78$), Budgeting (3 items; $\alpha =$.74), and Extra Funds (3 items; $\alpha = .55$). The reliability coefficient for the entire scale was .80.

As with some of the other scales discussed, the financial behaviors scale included in this study was newly developed to measure behaviors discussed in the *Moving Ahead* financial literacy curriculum. While the overall scale reliability is acceptable, the Extra Funds subscale is lower, suggesting those three items did a poor job of measuring that particular construct. Future work should further review the financial behaviors scale, and more specifically the extra funds subscale, and explore ways to enhance reliability. Another limitation of the study is that the response options for the financial behaviors items ranged from 1 (*never*) to 5 (*always*); there was no way for participants to indicate that they did not engage in a particular behavior because they did not have the opportunity to do so. This may also explain why the reliability coefficient for the extra funds subscale was much lower than the others.

Examining the Relationships between Financial Empowerment Constructs

The notion of financial empowerment as an intervention is not new. While the term is not always utilized, financial empowerment, which is often conceptualized as financial self-sufficiency, has been a longstanding goal of poverty reduction within the U.S. (Hoge, 2016). Given the negative financial impacts that IPV has on survivors, it is not surprising that financial empowerment has also been adopted as a goal of service providers working with survivors of IPV (Sanders & Schnabel, 2006). However, only a limited number of studies have examined the associations between the constructs often used to measure financial empowerment with survivors of IPV; this final section will discuss findings from these studies.

Sanders, Weaver, and Schnabel (2007) were one of the first to implement and evaluate a financial literacy program. The program, *REAP*, was developed for survivors

of IPV and the program comprises of a multi-session curriculum that highlights the connection between poverty, oppression, and violence while educating survivors on financial topical areas such as investing funds and establishing good credit (Sanders et al., 2007). In 2007, Sanders and colleagues evaluated the *REAP* program using a quasi-experimental design. Overall, 67 participants were involved in the study (32 participants in the experimental group and 35 in the comparison group). Survivors in the treatment group participated in the *REAP* program while participants in the control group received services as usual. The study utilized a pretest-posttest design to evaluate the effectiveness of the intervention. Outcome measures included financial literacy and financial self-efficacy. Overall, while there was not a statistically significant change in participants' financial knowledge after controlling for survivors' length of time with their abusers, increases in financial self-efficacy remained statistically significant.

While this was the first evaluative study to look at the effect of financial literacy curriculums with survivors of IPV, the study had some limitations. The study used a quasi-experimental design and had a small sample of self-selected participants, thus more rigorous evaluations are needed. Sanders and colleagues (2007) also point out that the financial knowledge measure utilized was developed specifically for this study based on the *REAP* curriculum and it is possible that the questions did not accurately reflect what was being taught to participants in class.

Sanders (2016) also had the opportunity to evaluate the effectiveness of the *REAP* program curriculum with 288 women who were incarcerated at the South Boise Women's Correctional Center. The curriculum, which was referred to as the *Treasure Valley Economic Action Program (TVEAP)* because it was offered in Treasure Valley, Idaho,

was a modified version of the *REAP* curriculum aimed at better meeting the needs of incarcerated women reintegrating back into society. The 12-hour curriculum discussed topics such as financial empowerment, budgeting and planning financial goals, understanding credit and debt, and financial products and services.

The overall goal of the study was to determine if the *TVEAP* program increased participants' financial literacy. Before each of the four modules, participants were given a pretest survey and at the end of the workshop participants were given a posttest. The instrument included demographic information, a checklist measuring financial abuse, and financial knowledge questions based on the content of each of the four modules. Interestingly, of the 288 women surveyed, only 20 had not previously experienced any financial abuse. The financial abuse scale included 20 items; women had an average of 10 financial indicators with a range of 0 to 18. Sanders (2016) found that participants had significant improvements on financial knowledge as a result of all four modules.

This study provided Sanders (2016) with a unique opportunity to evaluate the effectiveness of a financial literacy program with a sample of incarcerated women, of whom the majority had experienced financial IPV. While results were positive, this study was exploratory in nature. The pretest/posttest design did not allow the author to examine changes in financial knowledge over time. Furthermore, the measures used were simplistic and did not allow for more rigorous analyses.

Another financial literacy curriculum developed for survivors of IPV is the *Moving Ahead* curriculum. This curriculum includes information on how to deal with the misuse of financial records and protect one's finances upon leaving an abusive relationship, as well as day-to-day financial planning (The Allstate Foundation &

NNEDV, 2009). It was first evaluated by Postmus and Plummer (2010) in 2008. As part of this evaluation, female survivors from 15 IPV programs across 10 states were recruited for participation. Overall, 120 participants completed the first interview, 101 participants completed the second, and 93 individuals completed the third. An analysis of data from the second interview to the third interview showed that there were significant increases in participants' financial literacy, financial empowerment at the family, service, and community levels, financial self-efficacy, and economic self-sufficiency as a result of the program.

The initial findings from the study were promising; however, the evaluation had a small and homogenous sample of self-selected participants. Postmus and Plummer (2010) point out that measures utilized in this study were also fairly new and thus the scales used need to be further validated. Lastly, it does not appear that the data was analyzed longitudinally across all three time points.

Postmus and colleagues (2013b) utilized data from this 2008 study to look specifically at financial empowerment among survivors of IPV using a revised version of Koren and colleagues' (1992) family empowerment scale. In this study, the goal was not to evaluate the intervention but rather to look at whether financial literacy was predictive of financial empowerment when controlling for participants' demographic characteristics using cross-sectional data from the first time period. This study is notable because it looked specifically at financial empowerment as an outcome. Results showed that financial literacy, identifying as Latina or "other," and financial self-sufficiency were significant predictors of financial empowerment. However, since the research design was cross-sectional the authors were not able to show the relationship amongst these variables over time.

In 2011, Postmus and colleagues (2015) conducted a second longitudinal study to evaluate the *Moving Ahead* curriculum. For this study, a longitudinal randomized controlled design was used to collect data at four time points over a 14-month period. Participants were recruited from 14 organizations across seven states plus Puerto Rico. As part of the treatment group, survivors were required to participate in four to eight group classes on financial literacy and attend at least one individual session. The control group received treatment as usual. Overall, 195 women completed interviews at each of the four time points. Repeated measure analysis of variance was used to examine outcomes over time. While both groups showed improvements over time, participants in the treatment group scored statistically significantly better on financial knowledge, financial intentions, financial behaviors, and financial strain. Perhaps more importantly, for the treatment group, the effects of the curriculum persisted for the twelve months following exposure to the intervention.

The design of this study is notable, as it is only the second-known randomized controlled trial on financial literacy for survivors of IPV. However, as Postmus, Hetling, and Hoge (2015) point out, the generalizability of the study is still limited, being that the organizations involved in the study self-selected to participate, as did the participants themselves. Further, while participants in the control group were not exposed to the intervention, they were still receiving IPV services at the time of the study, which may have impacted their progress. The demographic sample in this study was also not representative of the entire U.S. population, as there were an above average number of

Latina participants. Lastly, while the manuscript briefly touches on financial empowerment as a goal for service providers working with survivors of IPV, the evaluation itself does not look specifically at the construct of financial empowerment as an outcome.

Hetling, Postmus, and Kaltz (2016b) evaluated the short-term outcomes of the *Moving Ahead* curriculum using the same dataset as Postmus and colleagues (2015). The authors looked at data from 300 participants who completed the first and second interviews per-protocol. In this study, the outcome variable was financial literacy and the independent variables were IPV, depression, and financial attitudes. The grouping variable was membership in either the treatment or control group. Using change in outcome measures from the first interview to the second interview, an ordinary least squares regression was conducted. The analysis showed that both financial literacy and financial behaviors increased for program participants. However, this manuscript also does not look specifically at the construct of financial empowerment. As such, there is still a need for research that looks at the construct of financial empowerment and tests whether financial literacy interventions are effective at increasing financial empowerment for survivors of IPV longitudinally.

Lastly, Warrener, Koivunen, and Postmus (2013) utilized data from a longitudinal study aimed at evaluating the effectiveness of a series of programs being offered by the New Jersey Department of Community Affairs, Division on Women. Just over 500 women were recruited to participate in the study during the summer of 2009. The purpose of this particular study was to explore the associations among participants' demographic characteristics, abuse experiences, depression, financial self-efficacy, and selfsufficiency. The sample utilized in this study was a subsample of separated or divorced women (n = 217) who had participated in a larger study. Overall, regression analysis found that age and financial self-efficacy were positively and statistically significantly associated with financial self-sufficiency. Conversely, difficulty living off of income and experiences with IPV were negatively and statistically significantly associated with financial self-sufficiency.

Research Moving Forward

The existing studies that have looked at the impact of financial literacy with survivors of IPV and the association between financial empowerment constructs are significant as they are the only ones of their kind. Despite the emphasis placed on empowerment-based practice within the field of IPV, only one of these studies looked specifically at financial empowerment (Postmus et al., 2013b). The lack of conceptualization of the construct of financial empowerment is a significant gap in the financial empowerment literature. Within the field of empowerment, numerous scholars have developed conceptual models for psychological empowerment (see Christens, 2012; Zimmerman, 1995). However, these models have never been utilized in the financial empowerment field. As such, the utilization of Christens' (2012) nomological network for psychological empowerment to conceptualize financial empowerment fills a significant gap in the social work and financial empowerment fields. Further, none of the of the previous financial empowerment studies used structural equation modeling to test a conceptual framework for PEFD based on empowerment literature nor examined the impact of a financial literacy education on survivors' financial empowerment longitudinally.

To better understand the factor structure of PEFD and whether the *Moving Ahead* curriculum increases PEFD for survivors of IPV over time, this dissertation aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment, and b) use the conceptual model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD among a sample of female IPV survivors over time.

To achieve these aims, data from Postmus and colleagues' longitudinal, randomized controlled trial was analyzed with a specific focus on the operationalization of PEFD. PEFD was operationalized as a latent construct and conceptualized using Christens' (2012) nomological network for psychological empowerment. Using the conceptual model for PEFD developed in the first aim, latent growth curve modeling was used to test the impact of the *Moving Ahead* curriculum on survivors' PEFD over time. In the next chapter, the methodology used for this dissertation is discussed.

Chapter 4 – Research Methods

This quantitative secondary study utilized data collected as part of an evaluation of The Allstate Foundation's *Moving Ahead* curriculum conducted by the Center on Violence Against Women and Children (VAWC) at the School of Social Work at Rutgers, The State University of New Jersey under the leadership of principal investigator Dr. Judy L. Postmus. The overall objective of the parent study was to evaluate the impact of a financial literacy curriculum on survivors of IPV.

The overarching research question of this dissertation was: For female survivors of IPV, did attending sessions on the *Moving Ahead* curriculum result in increased PEFD over time? In answering this question, this study aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment; and b) use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD over time among the sample of participants.

This chapter provides a detailed description of the data source and research methods used for this dissertation, beginning with an overview of the parent study's research methods, specifically recruitment and data collection. This is followed by an overview of the current study, with a particular focus on how missing data in the sample was addressed. Finally, the analytic approach taken for each research aim will be discussed.

Parent Study Theoretical Framework and Research Methods

The *Moving Ahead* curriculum was created by The Allstate Foundation in partnership with the NNEDV to help survivors of IPV to become financially independent (The Allstate Foundation & NNEDV, 2009). The curriculum contains five modules, which are: (a) Understanding Financial Abuse, (b) Learning Financial Fundamentals, (c) Mastering Credit Basics, (d) Building Financial Foundations, and (e) Creating Budgeting Strategies. The evaluation of this program was funded by The Allstate Foundation and consisted of a longitudinal, randomized controlled study.

Theoretical framework. Given that the ultimate goal of financial knowledge curricula is to teach participants to make informed decisions and take smart financial actions, Postmus, Hetling, & Hoge (2015) utilized the Theory of Planned Behavior (TPB) to evaluate the *Moving Ahead* curriculum. Building off of the Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), the TPB suggests that behavioral change is contingent on both an individual's intention to perform a given behavior and perceived behavioral control. According to Ajzen (1991), "Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior" (p. 181).

Perceived behavioral control, also referred to as self-efficacy, is an individual's perception of his or her ability to perform a behavior of interest (Bandura, 1997). Also influential to behavioral change are attitudes toward the behavior and beliefs about the "socially expected mode of conduct" associated with the behavior (Ajzen, 1991, p. 199). The TPB has been used examine a range of behaviors in the field of IPV, including women's intentions to leave abusive relationships (C. Byrne & Arias, 2004; Edwards, Gidycz, & Murphy, 2015) and abuser behaviors (Kernsmith, 2005).

Using TPB as a framework to guide the constructs to be measured, Postmus and colleagues adapted four financial scales previously used with the general population for application with IPV survivors. Another three financial scales were developed specifically for their study. Overall, six financial scales from Postmus' evaluation study were used as part of this dissertation (see Figure 3). These six scales measured: Financial Knowledge, Financial Attitudes, Financial Self-Sufficiency, Financial Self-Efficacy, Transformative Power, and Financial Behaviors. These scales were selected because the constructs they measure were identified as necessary for motivating change and promoting financial empowerment.



Figure 3. Moving Ahead Curriculum Theoretical Model conceptualized by Postmus, Hetling, & Hoge (2015). Variables included in this dissertation are notated in red.

Recruitment. Study participants came from 14 domestic violence organizations

across seven states plus Puerto Rico. Table 1 outlines the number of organizations

involved with the study from each location. Organizations were selected via purposive sampling. The organizations, themselves, were tasked with the responsibility of recruiting participants.

Organization/Location Representation in Parent Study	
	No. of
Location	Organizations
	Involved
New Jersey	3
Iowa	2
New York	2
Puerto Rico	2
Texas	2
Connecticut	1
Rhode Island	1
Wisconsin	1

Table 1

Each domestic violence organization recruited participants through the distribution of a flyer that was approved by the Rutgers University Institutional Review Board. Recruitment began July 2011 and continued on a rolling basis until March 2012. The organizations were responsible for screening to determine participant eligibility. To meet inclusion criteria for the study, participants had to: (a) have experienced at least one form of IPV in the past twelve months, (b) be 18 years of age or older, (c) have been receiving services from the domestic violence organization for more than four weeks but less than six months, (d) not have attended a financial literacy class within the past two years, (e) commit to attending the curriculum sessions if selected into the treatment group, and lastly, (f) commit to participating in the research project regardless of whether they were selected to participate in the treatment group or not. A minor modification to these inclusion criteria was made during the study; this allowed women who had received services for less than four weeks but were not currently in crisis, or who had received

services for more than six months but were currently experiencing abuse, to participate in the study.

Women interested in participating in the research study were asked to provide their contact information. Mechanisms were put into place to ensure that participation would not jeopardize survivors' safety. These mechanisms included asking for a safe way to reach the participant, how the researcher should identify his or herself when calling, and whether it was safe to leave a message.

Data collection process. The first interview (T1) was conducted face-to-face at the domestic violence organization. Follow-up interviews were completed at two months (T2), eight months (T3), and fourteen months (T4) either in-person or by phone based on the participants' preference. When the interviews were conducted by phone, members of the research team entered the data directly into an online survey tool called SNAP. When interviews were conducted in-person, the researcher recorded the participants' responses using a paper and pencil and then entered the survey responses into SPSS.

Participants were randomly assigned to either the treatment or control group prior to beginning the T1 interview. Participants were asked to select one of two closed envelopes – the first envelope provided a letter explaining to the participant that she was assigned to the control group and thus would be asked to participate in a series of four interviews over 14 months, while the second envelope contained a letter explaining that the participant was assigned to the treatment group and was being asked to participate in a financial knowledge group and participate in a series of four interviews over 14 months. To compensate participants for their time, a Visa gift card was provided for each interview (\$20 at T1, \$25 at T2, \$30 at T3, and \$40 at T4). Each interview lasted approximately one hour.

To ensure that survivors gained the maximum benefit of the curriculum and that domestic violence organizations were able to implement the curriculum with ease, the guidelines established by the Allstate Foundation and NNEDV for implementing the curriculum were minimal. The organizations were encouraged to use both group and individual sessions when presenting the curriculum to survivors. To maintain program fidelity, the research team asked the service providers implementing the curriculum to document that they facilitated all five required sessions by completing and submitting a checklist.

Overall, a total of 472 women were screened for eligibility. However, 15 women were removed from the study because they had not experienced abuse, five were removed due to completing their interview too early, and one was removed due to duplicity. Thus, a total of 456 women were randomized at T1.

Current Study

The overarching research question of this dissertation was: For survivors of IPV, did attending sessions on the *Moving Ahead* curriculum result in increased PEFD over time? In answering this question, this study aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment, and b) use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD over time among the sample of participants.

Missing data and analytic sample. Post-assignment attrition is often an issue following random assignment. Participant retention is cited as a challenge to conducting longitudinal research in general (Shadish, Cook, & Campbell, 2002). However, retention becomes even more challenging when conducting research with vulnerable populations, such as survivors of IPV, because they are often faced with safety concerns and may need to move unexpectedly for their own protection (Dutton et al., 2003).

Because post-assignment attrition is often a challenge in longitudinal research, analytic methods have been developed to address missingness in longitudinal data. When individuals participate in a research study in a manner that is consistent with the study protocol, the analytic sample is considered *per-protocol*. In this study, the per-protocol analytic sample consists of the 195 survivors out of 449 who completed interviews at all four time points. Figure 4 presents a CONSORT flow diagram for the per-protocol analytic sample.

Conversely, when individuals' participation in a study deviates from the research protocol the analyses can be conducted using *intent-to-treat* (ITT) methods. As part of an ITT approach, analyses include all participants who were initially given a randomized treatment assignment, even if the participant dropped out or was dropped by the research team during the course of the research study (Shadish et al., 2002). Thus, all participants are included in the analysis regardless of whether they received treatment as specified in the protocol or they withdrew before the study ended (Gupta, 2011; Hollis & Campbell, 1999). Researchers may exclude participants who dropped out of the study due to ineligibility if dropping these individuals will not bias the sample (Shadish et al., 2002). In this study, 254 out of 449 participants did *not* complete the study per-protocol. As
such, an ITT analysis was utilized within this dissertation. Figure 5 provides a

CONSORT flow diagram for the ITT analytic sample.



Figure 4. CONSORT Diagram for Per-Protocol Analytic Sample. Only participants that completed all four time periods were included in analysis. Therefore, the total analytic sample was 195.



Figure 5. CONSORT Diagram for Intent-to-Treat Analytic Sample. The only participants that were removed prior to analysis were the seven participants found to be ineligible for the study at follow up. Therefore, the total analytic sample was 449.

Utilizing an ITT approach has several benefits. Gupta (2011) states that failing to use an ITT analysis may result in biased estimates of the effect of an intervention. Further, results from ITT analyses are of interest to policy makers because treatment fidelity in intervention research is often lost due to human error in implementation (Shadish et al., 2002). However, because participants who dropped out are still included in analysis, ITT datasets may have a significant amount of missing data.

As an initial analytic step in this study, a missing value analysis was conducted using IBM SPSS Statistics 24. This analysis showed that missingness was at 29% across all values. Given this amount of missingness, multiple imputation was utilized to maintain the full sample of participants. Multiple imputation by chained equations (MICE) was utilized to generate independent datasets in which the missing values were replaced by estimated values (Royston & White, 2011). Prior to imputing the data, Little's missing completely at random test was conducted to identify the pattern of missing data. Results from this analysis were non-significant (p = 1.00), indicating that the pattern of missing data was not significantly different from a pattern of randomly missing data. Thus, the data met MICE's assumption that the data was missing-atrandom.

Overall, a total of 60 datasets were imputed, with 30 for the treatment group and 30 for the control group. Little (2013) recommends imputing the treatment and control groups separately because it helps to maintain the between-group differences within the data as much as possible. To minimize bias, it is suggested that predictors of the missing data also be included in the imputation (White, Royston, & Wood, 2011), along with all variables to be included in the planned analysis (Schafer, 2010). For each time period, all

items from all six scales were included in the imputation model, as well as demographics, mental health status, and abuse experiences at T1 as predictors of missing data. It has also been found that in longitudinal datasets, observed values from prior time periods serve as useful predictors of missing values for subsequent time periods (Social Science Computing Cooperative, 2012). Therefore, the scale items from each prior time period were also included in the imputation model. Lastly, research suggests that the number of datasets imputed should be based on the percentage of missing values across the dataset (White et al., 2011). The number of datasets imputed per assignment group was guided by this recommendation.

Analytic strategy. First, descriptive statistics were generated on sample characteristics, such as sociodemographic attributes and IPV experience scores. This was followed by independent sample *t*-tests and chi-square tests of homogeneity on demographic variables to compare differences between the control (n = 215) and treatment (n = 234) groups, as well as between the per-protocol (n = 195) and ITT analytic samples (n = 449). In this context the per-protocol analytic sample represented the 195 participants who completed all four time periods of data collection, whereas the ITT analytic sample represented the 254 participants who did not.

To answer the first aim, exploratory factor analysis (EFA) was used to determine the factor structure of the components of PEFD using data from T1; this was followed by longitudinal multi-group confirmatory factor analysis (CFA), which was utilized to test for measurement invariance across the treatment and control groups over time. To answer the second aim, latent growth curve modeling (LGCM) was used to determine whether survivors who participated in the financial knowledge sessions experienced changes in PEFD over time. In the next section the analytic strategies used to address each specific aim will be outlined.

Research Aim #1: To test a conceptual model for psychological empowerment in the financial domain based on Christens' (2012) nomological network for psychological empowerment

To address this specific aim, this study focused on conceptualizing four components of PEFD: (a) emotional, (b) cognitive, (c) relational, (d) behavioral. The factor structure of the scales comprising these components was tested through EFA and then the full PEFD model was tested through CFA. Table 2 outlines which scales were used per component of PEFD.

Table 2

Component	Scales Used
Emotional	• Scale of Economic Self-Efficacy (ESE;
	Hoge et al., 2017)
	• Financial Attitudes Scale (Postmus et
	al., 2013a)
Cognitive	• Financial Knowledge Scale (Postmus et
	al., 2013b)
	• Scale of Economic Self-Sufficiency-14
	(SESS-14; Hetling et al., 2016a)
Relational (Transformative Power)	Community Economic Empowerment
	Scale (Postmus et al., 2013a)
Behavioral (Financial Management	• Financial Behaviors Scale (Postmus et
and Planning Behaviors)	al., 2015)

Psychological Empowerment in the Financial Domain – Measures per Component

Measures. In this section, each of the six scales that comprised the four components of PEFD will be discussed. The reliability coefficients presented come from the validation studies conducted by the scholars cited.

Emotional component. The emotional component of PEFD was comprised of the

Scale of Economic Self-Efficacy (Hoge et al., 2017), a revised version of the General

Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), and the Financial Attitudes Scale. The Scale of Economic Self-Efficacy was developed during the parent study to measure participants' confidence in managing their finances by adding financial language to the General Self-Efficacy Scale. Participants were asked to indicate to what extent they agreed or disagreed with financial self-efficacy statements by indicating 1 (*not at all*) to 5 (*all the time*) using a five-point scale. Items in the scale included "I can solve most financial problems if I invest the necessary effort," "If I have a financial problem, I can find ways to get what I need," and "I am confident that I could deal efficiently with unexpected financial events." The scale contained ten items (α =.88) (Hoge et al., 2017).

Financial attitudes were measured using a revised version of the Financial Management Attitudes Scale (Parrotta & Johnson, 1998). This was a 15-item scale in which participants indicated to what extent they agreed with financial management attitude statements by indicating 1 (*strongly disagree*) to 5 (*strongly agree*) using a fivepoint scale. Items in the scale included "Having a savings plan is not really necessary in today's world in order to meet one's financial needs," "It is important for a family to develop a regular pattern of savings and stick to it," and "A written budget is absolutely essential for successful financial management." While developing the scale, Parrotta and Johnson had originally included items to capture gender norms related to finances that they dropped after running the EFA. Since the parent study focused on the financial attitudes of female survivors of IPV, the research team added four questions to the Financial Management Attitudes Scale to capture gender norms related to finances (Postmus et al., 2013a). An EFA was conducted which resulted in the scale being reduced from 19 items to 14 items with four subscales: Barriers to Financial Management (7 items; $\alpha = .73$), Attitudes about Financial Planning (3 items; $\alpha = .68$), Gender Attitudes Related to Finances (2 items; $\alpha = .60$), and Future Financial Planning (2 items; $\alpha = .70$) (Postmus et al., 2013a).

Cognitive component. The cognitive component of PEFD was comprised of the Scale of Scale of Financial Security-10 (Hetling et al., 2016a), derived from the Scale of Economic Self-Sufficiency (Gowdy & Pearlmutter, 1993), as well as a financial knowledge scale. The original Scale of Economic Self-Sufficiency consisted of 14 items which asked respondents about their ability to achieve financially-related tasks by indicating 1 (*strongly disagree*) to 5 (*strongly agree*) using a five-point scale. Items in the scale included "Pay your own way without borrowing from family and friends," "Make payments on your debts," and "Put money in a savings account." A revised version of this scale, Scale of Financial Security-10 (Hetling et al., 2016a), was developed using data from the parent study of this dissertation. This scale contained 10 items and consisted of two subscales: Ability to Manage Daily (Immediate) Financial Needs (7 items; $\alpha = .80$) and Ability to Have Discretionary Funds (3 items; $\alpha = .74$) (Hetling et al., 2016a).

To measure financial knowledge, the Financial Knowledge Scale was used (Postmus et al., 2013b). The scale, which was developed during a pilot study prior to the parent study, originally included 51 questions which were developed based on the *Moving Ahead* curriculum. Participants were asked to indicate to what extent they agreed or disagreed with financial knowledge statements by indicating 1 (*strongly disagree*) to 5 (*strongly agree*) using a five-point scale. Items in the scale included "I know how to get public assistance benefits," "I know how to create financial goals," and "I know how to invest my savings through things like savings bonds, mutual funds, and stocks."

The scale was later reduced to 13 items following an EFA. For the parent study, the original 13 items plus an additional two items were utilized; these additional items were added upon review of the content of the curriculum (Postmus et al., 2013a). This scale was tested with a second EFA. The final scale contained 15 items and consisted of four subscales: Knowledge About Credit (5 items; $\alpha = .89$), Knowledge About Obtaining Resources (4 items; $\alpha = .68$), Knowledge About Investing and Long Term Planning (4 items, $\alpha = .85$), and Knowledge About Partner or Joint Assets (2 items; $\alpha = .88$) (Postmus et al., 2015).

Relational component. The relational component was measured using five items from the Family Empowerment Scale (Koren et al., 1992); these items were revised to reflect the financial literacy focus of the parent study (Postmus et al., 2013a). Participants were asked to indicate how strongly the agreed or disagreed with a series of five statements about transformative power by indicating 1 (*strongly disagree*) to 5 (*strongly agree*). Items in the scale included, "I feel that my knowledge and experience as a woman seeking financial self-sufficiency can be used to improve services for other women who may go through this process." As part of the parent study, an EFA was conducted and two of the five items were removed. No reliability coefficient was available for this scale.

Financial management and planning behaviors component. Lastly, financial behaviors were measured through a series of 14 questions that asked participants about their financial behaviors over the past month by indicating 1 (*never*) to 5 (*always*) using a five-point scale. Items in the scale included, "How often in the last month (30 days) did

you review and evaluate your spending habits?" and "How often in the last month (30 days) did you make payments toward your debt?" As a result of a factor analysis completed as part of the parent study, four items were removed resulting in a 10 item scale with three subscales: Engagement in Personal Financial Planning (4 items; $\alpha = .78$), Budgeting (3 items; $\alpha = .74$), and Extra Funds (3 items; $\alpha = .55$ (Postmus et al., 2015).

Exploratory factor analysis. EFA was used to determine whether there were any latent factors across scale items that contributed to the variation in the manifest variables. Through this process the underlying factor structure of each scale was identified (Costello & Osborne, 2005). For each scale, prior to conducting an EFA, the scale means and standard deviations were assessed. Scale descriptive statistics can be found in Appendix A. Analyses were then conducted using Principal Axis Factoring extraction and Direct Oblimin rotation in the statistical analysis program SPSS. Although EFAs were done as part of the parent study, they were repeated as part of this dissertation to determine if there were any variations in results given slight modifications to the sample in this study.

Several indicators were used to assess EFA findings. Indicators of a good fitting EFA model include a factor loading of at least a .32, few crossloading items, and factors with three or more items loading to it (Costello & Osborne, 2005). Overall, the EFAs were guided by these practices, except in one instance, where the factor structure with the best fit included a scale with two items. After a factor structure with a good fit was identified for each of the six scales using data from T1, the internal consistency was assessed through examination of the Cronbach's alpha coefficient.

After finalizing the factor structure for each scale, the items in each of the six scales were then parceled by subscale and then by component to create one indicator for

each of the four components (i.e. emotional, cognitive, relational, and behavioral). Parceling is a process in which two or more items are averaged together to form the manifest indicators of a latent construct (Kline, 2014; Little, 2013). There are a number of benefits to using parcels during structural equation modeling. Parcels have greater reliability and communality than the individual items used to comprise them and require a lower indicator-to-subject ratio (Little, 2013). The entire conceptual model was then tested using longitudinal and multi-group CFA.

Confirmatory factor analysis. CFA is a type of analysis which allows a researcher to test whether a series of observed variables create an accurate measure of a latent construct (B. M. Byrne, 2012). Guidelines regarding sample size requirements for structural equation modeling vary widely from 5 to 10 participants per parameter or more (Bollen, 1989; Boomsma, 1982; Worthington & Whittaker, 2006). However, a recent study Wolf, Harrington, Clark, and Miller (2013) found that the appropriate sample size varies widely based on a number of factors including number of indicators, magnitude of factor loadings, and data missingness. Further, they found that while an increase in factors from one to two within a model required a substantial increase in participants, the number of participants required leveled off as number of factors increased. Given these guidelines, the analysis was conducted with an analytic sample of 449.

One of the key assumptions of CFAs is multivariate normality. The Shapiro-Wilk normality test was used to assess for normality. Overall, results showed that the data was non-normal across all variables. As such, maximum likelihood parameter estimates (MLM) were used for the analyses, as this estimator is robust to non-normality and is available in Mplus Version 8. A series of CFAs were conducted to test for measurement invariance across groups and time. CFAs testing for longitudinal invariance were run for each group separately. The first model tested for configural invariance, which examined whether the configuration of factors was equivalent across time (B. M. Byrne, 2012). The next model tested for metric invariance, which looked at whether the factor loadings were equal across time. Finally, the last model tested for scalar invariance, which requires invariance across factor loadings and intercepts (B. M. Byrne, 2012). Scalar invariance must be found in order to use a measure to make mean comparisons. Next, this process was repeated for the multi-group tests for measurement invariance; these tests followed the same process outlined above, except that both the treatment analytic sample and the control analytic sample were incorporated into the model and compared.

Research Aim #2: To use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing psychological empowerment in the financial domain over time among the sample of participants

To answer the second research aim, random assignment of the treatment condition served as the predictor variable in the LGCM.

Random assignment. The random assignment of participants into the treatment or control group was coded as a binary variable with 1 = Treatment and 0 = Control.

Latent growth curve modeling. Lastly, LGCM was used to examine whether the *Moving Ahead* financial knowledge curriculum increased PEFD over time for survivors of IPV. This analysis was selected as LGCM is useful for answering questions related to individual change in an area of interest over time (B. M. Byrne, 2012). Amos Graphics

24 was utilized to run the analysis. While AMOS does not have the estimator MLM, fixed effect parameters, which are used to measure growth in LGCM, are robust to violations of normality (Grimm, Ram, & Hamagami, 2011).

Three curve models were tested to identify which was the best fit for the ITT data: (a) linear, (b) quadratic, and (c) unspecified (Park & Schultz, 2005). After the best fitting model was identified, a second model was tested with the inclusion of the assignment variable to determine if assignment was a time-invariant predictor of change. This process was then replicated with the per-protocol data to confirm findings. It was hypothesized that assignment would be associated with rate of change, but not initial status.

Chapter 5 – Results

Characteristics of Sample at T1

Descriptive statistics for the full analytic sample (N = 449) are provided in Table

3, along with descriptive statistics for the treatment and control groups individually.

	Treatn	nent	Contr	rol	Full Sample	e
	(<i>n</i> = 2	34)	(<i>n</i> = 2	15)	(N = 449)	
	% or M	SD	% or M	SD	$\frac{\% \text{ or }}{M}$ SI)
Age	36.1	9.1	36.1	9.2	36.1 9.1	2
Race/Ethnicity						
White, Non-	17.2		18 1		17.6	
Hispanic	17.2		10.1		17.0	
Black or African-						
American, Non-	20.2		20.9		20.5	
Hispanic						
Latina or Hispanic	54.9		53.0		54.0	
Other	7.7		7.9		7.8	
Born in the U.S.	51.3		54.4		52.8	
In a relationship	44.6		44.2		44.4	
Employed	48.7		41.4		45.2	
Student	12.5		15.0		13.7	
Financially responsible for children	80.7		80.0		80.4	
Has health insurance	56.0		55.6		55.8	
Receiving social services	67.9		74.9		71.3	
Average annual income						
\$0 - \$10,000	45.9		50.5		48.1	
\$10,001 - \$15,000	23.4		24.8		24.0	
\$15,001 - \$25,000	12.6		12.4		12.5	
\$25,001 - \$35,000	7.8		5.7		6.8	
More than \$35,000	10.4		6.7		8.6	
Abuse experiences						
Psychological	3.5	1.0	3.6	1.0	3.5 1.	0
Physical	2.4	1.1	2.5	1.2	2.5 1.	1
Sexual	2.2	1.3	2.2	1.2	2.2 1.	3
Financial	2.6	1.0	2.7	1.0	2.6 1.	0

Sample Characteristics

Table 3

Note. Abuse scales ranged from 1 (never) to 5 (quite often).

The average age of participants was 36 years old (SD = 9.2). Forty-four percent were in a relationship and the majority (80.4%) were financially responsible for children.

Over half of participants (54%) identified as Latina and 52.8% of the sample was born in the U.S. While 45% reported being employed in some capacity, almost half of participants (48.1%) had an average annual income under \$10,000. Approximately onetenth of participants (13.7%) were students. Almost three-fourths of the sample (71.3%) were receiving social services and about 56% had health insurance. Overall, psychological abuse was the form of IPV most frequently experienced by participants (M= 3.5; SD = 1.0). This was followed by financial abuse (M = 2.6; SD = 1.0), physical abuse (M = 2.5; SD = 1.1), and then sexual abuse (M = 2.2, SD = 1.3). This suggests that survivors were experiencing a moderate level of abuse during the 12 months prior to T1.

Group Differences by Sample Characteristics

Group differences were examined using chi-square tests and independent sample *t*-tests. Statistically significant findings are presented within this section; non-significant test results can be found in Appendix A. The first set of analyses looked at differences between the control group and the treatment group based on demographic characteristics and abuse experiences at T1. There were no statistically significant differences between the treatment and control group.

The second set of analyses looked at differences between those survivors who participated in data collection during all four time periods (per-protocol analytic sample) versus those who did not based on demographic characteristics and abuse experiences at T1. For the purpose of analysis, the group that did not complete the study per-protocol will be referred to as the ITT analytic sample. Overall, there were statistically significant differences between the per-protocol and ITT samples based on age, abuse experiences, race/ethnicity, and relationship status. Independent-samples *t*-tests were conducted to examine group differences in age and abuse experiences, as they were measured continuously. Participants in the ITT sample (M = 35.03) were slightly younger than the per-protocol sample (M = 37.54), t(445) = -2.899, p = .004. Overall, participants in the ITT sample experienced higher levels of all forms of violence except for financial abuse. Participants in the ITT sample (M = 3.66) reported more frequent experiences of psychological abuse than the per-protocol sample (M = 3.66) reported more frequent experiences of the per-protocol sample (M = 2.13), t(445) = 5.499, p = .000. In addition, participants in the ITT sample (M = 2.26) reported more frequent experiences of sexual abuse compared to the per-protocol sample (M = 2.01), t(445) = 2.083, p = .038. These results are presented in Table 4.

Table 4

	Per-j	protocol = 195)	Intent (n =	-to-treat = 254)	_	
	n	М	п	М	t	<i>p</i> value
Age	195	37.54	253	35.03	-2.899	.004
Abuse experiences						
Psychological	194	3.32	253	3.66	3.601	.000
Physical	194	2.13	253	2.71	5.499	.000
Sexual	194	2.01	253	2.26	2.083	.038
Financial	195	2.57	253	2.71	1.487	.138

Independent Samples t-tests – Per-Protocol versus Intent-to-Treat Sample - Age and Abuse Experiences

Note. Abuse scales ranged from 1 (*never*) to 5 (*quite often*).

A chi-square test of homogeneity was used to examine group differences between the per-protocol and ITT analytic samples based on race/ethnicity. The chi-square test of homogeneity showed that there is a statistically significant difference in ethnicity across groups, $\chi^2(3) = 8.946$, p = .030. However, post hoc analysis involving pairwise comparisons using the z-test of two proportions with a Bonferroni correction showed that all pairwise comparisons were not statistically significant. These results are presented in Table 5.

Table 5Chi-square Test of Homogeneity - Per-Protocol versus Intent-to-Treat Sample -Race/Ethnicity

	White	Black	Hispanic/ Latina	Other	Total <i>n</i>	χ^2	<i>p</i> value
Per-protocol	51	51	125	26	253	9.046	020
Intent-to-treat	28	41	117	9	195	0.940	.030

Lastly, a chi-square test of homogeneity was used to examine group differences between the per-protocol and ITT samples based on relationship status. The chi-square test showed that there is a statistically significant difference in relationship status between the two groups, with a higher percentage of participants in the per-protocol sample in a relationship, $\chi^2(1) = 3.964$, p = .046. These results are presented in Table 6.

Table 6Chi-Square Test for Homogeneity - Per-Protocol versus Intent-to-Treat Sample - In aRelationship

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Per-protocol	97	98	195	2 064	046
Intent-to-treat	102	151	253	5.904	.040

Exploratory Factor Analysis

As a first step in answering Aim 1 of this dissertation, EFAs were conducted on each of the six scales chosen to comprise the four components of PEFD. For each scale, the factor or pattern matrix and Cronbach's reliability coefficients for the scale and any subscales are provided. Descriptive statistics for all six scales can be found in Appendix B. The factor or pattern matrix includes the factor loadings for each item as well as the percent of variance explained by the scale or subscale.

Financial self-efficacy. The Financial Self-Efficacy scale was found to have a one factor solution utilizing all ten items, (*KMO* = .906; χ^2 (45) = 1802.940, *p* < .001) which accounted for a total of 49.23 percent of the total variance, with factor loadings ranging from .579 to .750. The factor matrix for financial self-efficacy is presented in Table 7. The internal consistency among this full sample of participants was assessed by examining the Cronbach's alpha coefficient. The overall scale demonstrated acceptable internal consistency (α = .884).

	Item	Factor Loading
1.	I can solve most financial problems if I invest the necessary effort.	.601
2.	I can always manage to solve difficult financial problems if I try hard enough.	.579
3.	If I am in financial trouble, I can usually think of something to do.	.592
4.	If I have a financial problem, I can find ways to get what I need.	.708
5.	When I am confronted with a financial problem, I can usually find several solutions.	.713
6.	No matter what financial problem comes my way, I'm usually able to handle it.	.635
7.	Thanks to my resourcefulness, I know how to handle unforeseen financial situations.	.665
8.	I can remain calm when facing financial difficulties because I can rely on my financial abilities.	.702
9.	I am confident that I could deal efficiently with unexpected financial events.	.643
10.	It is easy for me to stick to and accomplish my financial goals.	.750
	% of Total Variance Explained	49.23

Table 7Factor Matrix Factor Loadings for Financial Self-Efficacy Items

Financial attitudes. The Financial Attitudes scale was found to have a two factor solution utilizing 7 of the 15 original items, (*KMO* = .769; χ^2 (21) = 622.146, *p* < .001),

which accounted for a total of 55.31 percent of the total variance. The pattern matrix for Financial Attitudes is presented in Table 8. The first subscale contained four items and accounted for 39.75 percent of the total variance, with factor loadings ranging from .366 to .866. The second subscale contained three items and accounted for 15.57 percent of the total variance, with factor loadings ranging from .388 to .759. The overall scale demonstrated acceptable internal consistency ($\alpha = .733$). The first subscale had a Cronbach's reliability coefficient of .632 and the second subscale had a coefficient of .674.

Ta	bl	le	8
			-

Pattern M	latrix	Factor	Loadings	for I	Financial	Attitudes	Items
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	Item	Factor 1	Factor 2
1.	Planning for spending money is essential to successfully managing one's life.	.108	.388
2.	Planning for the future is the best way of getting ahead.	021	.725
3.	Thinking about where you will be financially in 5 or 10 years in the future is essential for financial success.	032	.759
4.	It is important for a family to develop a regular pattern of savings and stick to it.	.488	.106
5.	Families should have written financial goals that help them determine priorities in spending.	.866	114
6.	A written budget is absolutely essential for successful financial management.	.628	015
7.	It is really essential to plan for the possible disability of a family wage earner.	.366	.113
	% of Total Variance Explained	39.75	15.57

Financial self-sufficiency. Consistent with the findings from Hetling and

colleagues (2016a), the Financial Self-Sufficiency scale was found to have a two factor solution utilizing 10 of the 15 original items, (*KMO* = .878; χ^2 (45) = 1275.566, *p* < .001), which accounted for a total of 52.06 percent of the total variance. The pattern matrix for

Financial Self-Sufficiency is presented in Table 9. The first subscale contained four items and accounted for 41.47 percent of the total variance, with factor loadings ranging from .413 to .729. The second subscale contained three items and accounted for 10.60 percent of the total variance, with factor loadings ranging from -.455 to -.771. The overall scale demonstrated good internal consistency ($\alpha = .824$). The first subscale had a Cronbach's reliability coefficient of .768 and the second subscale had a coefficient of .736.

Table 9

	Item	Factor 1	Factor 2
1.	Afford to take trips.	031	771
2.	Buy extras for your family and yourself.	.047	730
3.	Put money in a savings account.	.213	455
4.	Meet your obligations.	.729	.162
5.	Do what you want to do, when you want to do it.	.504	109
6.	Pay your own way without borrowing from family or friends.	.543	070
7.	Buy the kind and amount of food you like.	.413	253
8.	Pursue your own interests and goals.	.441	187
9.	Stay on budget.	.644	001
10.	Make payments on your debts.	.579	049
	% of Total Variance Explained	41.47	10.60

Pattern Matrix Factor Loadings for Financial Self-Sufficiency Items

Financial knowledge. The Financial Knowledge scale was found to have a four factor solution utilizing 13 of the 17 original items, (*KMO* = .865; χ^2 (78) = 2975.799, *p* < .001), which accounted for a total of 72.01 percent of the total variance. The pattern matrix for Financial Knowledge is presented in Table 10.

	Item	Factor 1	Factor 2	Factor 3	Factor 4
1.	I know how to access my credit card report.	045	005	001	861
2.	I know how to understand my credit report and credit history.	003	.035	029	929
3.	I know how to improve my credit rating.	.178	045	001	732
4.	I know how to create a budget.	.070	.056	.153	488
5.	I know how to identify my partner's assets (savings accounts, property, etc.) and financial responsibilities.	.017	005	.868	.041
6.	I know how to identify joint or combined financial responsibilities and assets (savings accounts, property, etc.).	007	.007	.897	065
7.	I know how to get the resources that are available in my community to help me leave my abuser (emergency shelter, hotline, etc.).	093	.706	001	113
8.	I know how to get public assistance benefits (TANF, food stamps, etc.).	.037	.515	- .034	.032
9.	I know how to get legal assistance in my community (legal aid, restraining orders, etc.).	.054	.638	.056	.050
10.	things like savings bonds, mutual funds, and stocks.	.629	.018	.094	070
11.	I know about community programs such as IDA's (individual development accounts) and EITC's (federal and state earned-income-tax credits) that can help me with my financial goals.	.547	.051	004	118
12.	I know how to plan for retirement and the different types of plans available.	.923	011	041	.027
13.	I know how to plan for my estate (such as planning a will or a trust fund).	.854	004	.020	.031
	% of Total Variance Explained	42.74	11.84	8.93	8.50

Table 10Pattern Matrix Factor Loadings for Financial Knowledge Items

The first subscale contained four items and accounted for 42.74 percent of the total variance, with factor loadings ranging from .547 to .923. The second subscale contained three items and accounted for 11.84 percent of the total variance, with factor loadings ranging from .515 to .706. The third subscale contained two items and accounted for 8.93 percent of the total variance, with factor loadings of .868 and .897. The fourth subscale

contained four items and accounted for 8.50 percent of the total variance, with factor loadings ranging from -.488 to -.929. The internal consistency among this full sample of participants was assessed by examining the Cronbach's alpha coefficient. The overall scale demonstrated good internal consistency ($\alpha = .881$). The first subscale had a Cronbach's reliability coefficient of .854, the second subscale had a coefficient of .650, the third had a coefficient of .884, and the fourth had a coefficient of .877.

Transformative power. The Transformative Power scale was found to have a one factor solution utilizing four of the five original items, (*KMO* = .756; χ^2 (6) = 488.507, *p* < .001), which accounted for a total of 59.46 percent of the total variance. The factor matrix for Transformative Power presented in Table 11 demonstrates that factor loadings were moderate, ranging from .468 to .784. The scale demonstrated good internal consistency (α = .884).

Table 11	
Factor Matrix Factor Loadings for Transformative Power	Items

	Item	Factor Loading
1.	I feel I can have a part in improving the process of seeking financial self- sufficiency for other women.	.782
2.	I believe that other women and I can have an influence on changing the process of achieving financial self-sufficiency.	.784
3.	I feel that my knowledge and experience as a woman seeking financial self-sufficiency can be used to improve services for other women who may go through this process.	.671
4.	I help other women get the financial services they need.	.468
	% of Total Variance Explained	59.46

Financial management and planning behaviors. The Financial Management

and Behaviors Scale was found to have a three factor solution utilizing 10 of the 14 original items, (*KMO* = .849; χ^2 (45) = 1221.922, *p* < .001), which accounted for a total

of 61.81 percent of the total variance. The pattern matrix for Financial Management and Planning Behaviors is presented in Table 12. The first subscale contained four items and accounted for 37.97 percent of the total variance, with factor loadings ranging from .464 to .772. The second subscale contained three items and accounted for 13.65 percent of the total variance, with factor loadings ranging from .492 to .554. The third subscale also contained three items and accounted for 10.19 percent of the total variance, with factor loadings of -.582 and -.643. The overall scale demonstrated good internal consistency (α = .806). The first subscale had a Cronbach's reliability coefficient of .777, the second subscale had a coefficient of .558, and the third had a coefficient of .737.

Table 12Pattern Matrix Factor Loadings for Financial Management and Planning BehaviorsItems

	Item	Factor 1	Factor 2	Factor 3
1.	Pay your bills on time.	089	.104	643
2.	Follow a weekly or monthly budget.	.232	085	582
3.	Follow your financial goals.	.241	011	643
4.	Use a bank account (checking or savings).	.075	.554	.027
5.	Make payments towards your debt (credit cards, money owed to friends/family, etc.).	009	.492	303
6.	Pay more than the interest on your loans, credit, etc.	009	.507	.034
7.	Review and evaluate your spending habits.	.664	024	080
8.	Identify your own financial goals for the future (pay off credit card, save money, etc.).	.464	.019	275
9.	Estimate your monthly household income and expenses.	.634	.072	059
10.	Track down where money was spent (on paper, on the computer, on a spreadsheet, etc.).	.772	.043	.108
	% of Total Variance Explained	37.97	13.65	10.19

Group Differences by Four Components of Psychological Empowerment in the Financial Domain

Group differences on the four components of PEFD were examined using independent sample *t*-tests. Statistically significant findings are presented within this section; non-significant test results can be found in Appendix C. The first set of analyses looked at differences between the control group and the treatment group based on the four components of PEFD at T1. There were no statistically significant differences between the treatment and control groups.

The second set of analyses looked at differences between the per-protocol analytic sample and the ITT analytic sample. Overall, the only statistically significant difference between the per-protocol and ITT samples was the cognitive component score at T1. Participants in the ITT sample (M = 2.75) had a slightly higher score on the cognitive component of PEFD compared to the per-protocol sample (M = 2.54), t(447) = 3.318, p = .001. Findings from this analysis can be found in Table 13.

Table 13

Components of Psychological Empowerment in the Financial Domain at 11										
	Per-l	Protocol	Intent	-to-Treat						
	(<i>n</i> = 195)		(<i>n</i> =	= 254)						
	п	Mean	п	Mean	t	р				
						value				
Emotional	195	3.83	254	3.87	1.178	.240				
Cognitive	195	2.54	254	2.75	3.318	.001				
Relational	195	3.62	254	3.69	.943	.346				
Behavioral	195	2.77	254	2.87	1.217	.224				

Independent Samples t-tests – Per-Protocol versus Intent-to-Treat Sample – Four Components of Psychological Empowerment in the Financial Domain at T1

Note. Scale means range from 1 to 5.

Confirmatory Factor Analysis

As a second step in answering Aim 1 of this dissertation, a series of CFAs were run on the data to test for measurement invariance both longitudinally and across the treatment and control groups.

Longitudinal CFA for control group. Table 14 presents the fit indices of the models that were tested for longitudinal measurement invariance across the control group. A combination of goodness-of-fit indices were used to assess these models. As per Worthington and Whittaker's (2006) guidance, absolute fit indices used were the chi-square test statistic with the degrees of freedom and significance level, as well as the root mean-square error of approximation (RMSEA). According to Browne & Cudek (1992) guidelines for interpreting the RMSEA are: < .05 = good fit, .05 to .08 = acceptable fit, .08 to .10 = marginal fit, and > .10 = poor fit. Incremental fit indices utilized were the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI). While .90 was once considered an acceptable cutoff for these indices, more recently .95 has been identified as the preferred value (Worthington & Whittaker, 2006). The predictive fit index used was the Akaike Information Criterion (AIC); lower AIC values are more desirable when comparing models.

The first model assessed the data for configural invariance (Model A). Configural invariance requires that the configuration of factors be the same across time periods. The configural model included the first-order PEFD model at four time points with auto-correlated errors specified and two covarying items. Fit indices for this model suggested an acceptable fit, ($\chi^2(72) = 118.748$, RMSEA = .055, CFI = .992, TLI = .987, AIC = 256.260), therefore configural invariance was achieved.

The second model assessed the data for metric invariance (Model B). Metric invariance requires that factor loadings are constrained equal across time points. Fit indices for this model suggested an acceptable fit, ($\chi^2(81) = 134.884$, RMSEA = .056, CFI = .991, TLI = .986, AIC = 253.280, $\Delta\chi^2(9) = 16.330$, *ns*), and therefore metric invariance was achieved.

The third model assessed the data for scalar invariance (Model C). Scalar invariance requires that item intercepts and factor loadings are constrained equal across time points. The initial scalar invariance model failed the chi-square difference test, $(\chi^2(90) = 280.006, \text{RMSEA} = .099, \text{CFI} = .967, \text{TLI} = .956, \text{AIC} = 383.927, \Delta\chi^2(90) = 174.647,$ *p* $< .05). After freely estimating three intercepts the model fit improved, (<math>\chi^2(86) = 144.407, \text{RMSEA} = .055, \text{CFI} = .990, \text{TLI} = .986, \text{AIC} = 250.821, \Delta\chi^2(15) = 25.749,$ *p*< .05). However, some scholars have suggested that the chi-square difference test is too stringent for invariance testing; as such Cheung and Rensvold (2002) suggested the utilization of a CFI-difference test instead. As part of the CFI-difference test, measurement invariance is met if the difference between the nested and comparison model CFI values are smaller than or equal to -.01. Thus, the CFI-difference test suggested that partial scalar invariance was met because the difference between the nested model (Model D) and the comparison model (Model A) was -.002.

Longitudinal CFA for treatment group. Table 15 presents the fit indices of the models that were tested for longitudinal measurement invariance across the treatment group. The first model assessed the data for configural invariance (Model E). The configural model included the first-order PEFD model at four time points with auto-correlated errors specified and three covarying items. Fit indices for this model suggested

an acceptable fit ($\chi^2(71) = 135.840$, RMSEA = .062, CFI = .969, TLI = .948, AIC = 5014.776), and therefore configural invariance was achieved.

The second model assessed the data for metric invariance (Model F). The initial metric invariance model failed the chi-square difference and CFI-difference tests, ($\chi^2(80) = 196.398$, RMSEA = .079, CFI = .945, TLI = .917, AIC = 5064.193, $\Delta\chi^2(9) = 57.613$, p < .05). After freely estimating three additional factor loadings the model fit improved, ($\chi^2(77) = 153.442$, RMSEA = .065, CFI = .964, TLI = .943, AIC = 5022.983, $\Delta\chi^2(6) = 16.857$, p < .05) (Model G). While the critical value suggested a non-significant finding, the CFI-difference test suggest partial metric invariance, as the difference between the nested model (Model G) and the comparison model (Model E) was -.005.

The third model assessed the data for scalar invariance (Model H). The scalar invariance model failed the chi-square difference test, ($\chi^2(86) = 234.736$, RMSEA = .086, CFI = .929, TLI = .901, AIC = 5092.111, $\Delta\chi^2(86) = 106.028$, p < .05). Despite efforts to improve the model, partial scalar invariance was not met.

Multi-group longitudinal CFA. Table 16 presents the fit indices of the models that were used to test for longitudinal measurement invariance across both groups. The first model assessed the data for configural invariance (Model I). The configural model included the first-order PEFD model at four time points with auto-correlated errors specified; additionally, the control group had three covarying items and the treatment group had four covarying items. Fit indices for this model suggested an acceptable fit $(\chi^2(141) = 231.241, RMSEA = .053, CFI = .988, TLI = .980, AIC = 5249.698)$, therefore configural invariance was met.

Table 14Longitudinal Measurement Invariance – Control Group

	Model Tested	Scaling Correction MLM	χ^2	df	р	$\Delta\chi^2$	Δdf	RMSEA	RMSEA 90% CI	CFI	ΔCFI	TLI	AIC	Models Compared
А	Configural	1.0545	118.748	72	.001	-	-	.055	(.036072)	.992	-	.987	256.260	-
В	Metric	1.0376	134.884	81	.000	16.330	9	.056	(.038072)	.991	001	.986	253.280	B versus A
С	Scalar	1.0307	280.006	90	.000	174.647	18	.099	(.086112)	.967	025	.956	383.927	C versus A
D	Scalar – Partial	1.0353	144.407	87	.000	25.749	15	.055	(.039071)	.990	002	.986	250.821	D versus A

Note. Cheung & Rensvold (2002) suggest that a value of Δ CFI smaller than or equal to -.01 indicates that the null hypothesis of invariance should not be rejected. MLM = maximum likelihood; RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker – Lewis Index; AIC = Akaike Information Criterion.

Table 15Longitudinal Measurement Invariance – Treatment Group

	Model Tested	Scaling Correction MLM	χ^2	df	р	$\Delta \chi^2$	Δdf	RMSEA	RMSEA 90% CI	CFI	ΔCFI	TLI	AIC	Models Compared
Е	Configural	1.0722	135.840	71	.000	-	-	.062	(.046078)	.969	-	.948	5014.776	-
F	Metric	1.0849	196.398	80	.000	57.613	9	.079	(.065093)	.945	024	.917	5064.193	F versus E
G	Metric – Partial	1.0811	153.422	77	.000	16.857	6	.065	(.050080)	.964	005	.943	5022.983	G versus E
Н	Scalar	1.0777	234.736	86	.000	106.028	15	.086	(.073099)	.929	04	.901	5092.111	H versus E

Note. Cheung & Rensvold (2002) suggest that a value of Δ CFI smaller than or equal to -.01 indicates that the null hypothesis of invariance should not be rejected. MLM = maximum likelihood; RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker – Lewis Index; AIC = Akaike Information Criterion.

	Model Tested	Scaling Correction MLM	χ^2	df	р	$\Delta\chi^2$	Δdf	RMSEA	RMSEA 90% CI	CFI	ΔCFI	TLI	AIC	Models Compared
Ι	Configural	1.0606	231.241	141	.000	-	-	.053	(.041066)	.988	-	.980	5249.698	-
J	Metric	1.0630	265.530	153	.000	33.912	12	.057	(.046069)	.985	003	.977	5262.96	J versus I
K	Scalar	1.0569	457.897	169	.000	231.241	28	.087	(.078097)	.963	025	.947	5432.385	K versus I
L	Scalar - Partial	1.0587	333.463	165	.000	102.736	24	.067	(.057078)	.978	01	.968	5309.493	L versus I

Table 16Multi-Group Measurement Invariance

Note. Cheung & Rensvold (2002) suggest that a value of Δ CFI smaller than or equal to -.01 indicates that the null hypothesis of invariance should not be rejected. MLM = maximum likelihood; RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker – Lewis Index; AIC = Akaike Information Criterion. The second model assessed the data for metric invariance (Model J), ($\chi^2(153) = 265.530$, RMSEA = .057, CFI = .985, TLI = .977, AIC = 5262.96, $\Delta\chi^2(12) = 33.912$, p > .05). While the critical value suggested a non-significant finding, the CFI-difference test suggested partial metric invariance, as the difference between the nested model (Model J) and the comparison model (Model I) was -.003.

The third model assessed the data for scalar invariance (Model K). The scalar invariance model failed the chi-square and CFI difference tests, $(\chi^2(169) = 457.897, RMSEA = .087, CFI = .963, TLI = .947, AIC = 5432.385, \Delta\chi^2(28) = 231.241, p < .05).$ After freely estimating four intercepts the model fit improved, $(\chi^2(165) = 333.463, RMSEA = .067, CFI = .978, TLI = .968, AIC = 5309.493, \Delta\chi^2(24) = 102.736, p > .01).$ Again, while the critical value suggested a non-significant finding, the CFI-difference test suggests partial scalar invariance, as the difference between the nested model (Model L) and the comparison model (Model I) was -.01.

Latent Growth Curve Modeling

Latent growth curve with intent-to-treat sample. Three different curve models were fitted to the ITT analytic sample and compared: (a) linear, (b) quadratic, and (c) unspecified. The goodness-of-fit indices for these three models can be found in Table 17. The linear model was assigned factor loadings of 0, 1, 2 and 3 for the slope. The quadratic model (Model N) was assigned factor loadings of 0, 1, 4 and 9 for the slope. The unspecified model (Model O) was assigned factor loadings of 0 and 1 with the last two slope factors freely estimated as suggested by Kline (2011). Both the linear and quadratic models were rejected, as the goodness-of-fit indices for both of these models were similar and suggested that these models showed only an acceptable fit. The RMSEA for both were .086, which suggested a marginal fit; the CFI and TLI were both under .95. The AIC values for both of these models were also higher than the AIC value for the unspecified curve.

In comparison, the unspecified model had improved fit on all indices. The chisquare difference test revealed a significant difference between the unspecified model and the linear model ($\Delta \chi^2(2) = 53$, p < .001). Other fit indices also demonstrated a more acceptable fit, ($\chi^2(77) = 294.329$, RMSEA = .079, CFI = .957, TLI = .934, AIC = 444.329). This model (Model O) is presented in Figure 6.

Table 17Multivariate Latent Growth Curve Model for Intent-to-Treat Sample

	Model Tested	χ^2	df	р	RMSEA	RMSEA 90% CI	CFI	TLI	AIC	Models Compared
Μ	Linear	339.477	79	.000	.086	(.077095)	.949	.922	485.477	-
N	Quadratic	341.649	79	.000	.086	(.077096)	.949	.922	487.649	N versus M
0	Unspecified curve	294.329	77	.000	.079	(.070089)	.957	.934	444.329	O versus M

Note. RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker – Lewis Index; AIC = Akaike Information Criterion.

Parameter estimates for the unspecified curve model are presented in Figure 6. In this model, the estimated covariance between the intercept and slope factor was statistically significant (p < .001). The positive estimate of .100 suggests that participants whose PEFD scores were high at T1 demonstrated a higher rate of increase in scores over the 14-month study than those who were less financially empowered at T1. The variances for both the intercept and the slope were not statistically significant, suggesting weak inter-individual differences in both initial scores and change over time. All except one random measurement error term was statistically significant (p < .05).



Figure 6. Unspecified Latent Growth Curve Model with Intent-to-Treat Sample. FE = psychological empowerment in the financial domain; E = emotional component; C = cognitive component; R = relational component; B = behavioral component.

Despite insignificant variances for the intercept and slope, random assignment was tested as a time-invariant predictor of change. This model was found to have a less adequate fit than the unspecified curve model without the predictor, ($\chi^2(91) = 424.042$, RMSEA = .090, CFI = .937, TLI = .906, AIC = 582.042). Assignment was found to be a statistically significant predictor of initial status (.172) at *p* < .001 but not rate of change. These findings suggest that participants in the treatment group had, on average, higher levels of financial empowerment by a value of .172. This model is presented in Appendix C.

Latent growth curve with per-protocol sample. Given that the per-protocol sample was much smaller than the ITT sample (n = 195 versus n = 449, respectively), the three curve models were again fitted and compared to ensure that the unspecified model was still the best fitting curve for the per-protocol analytic sample. The goodness-of-fit indices for three these models can be found in Table 18.

	$\begin{array}{c c} \mathbf{Model} & & \\ \hline \mathbf{Tested} & & \chi^2 & d \end{pmatrix}$		df	р	RMSEA	RMSEA 90% CI	RMSEA 90% CI CFI		AIC	Models Compared
Р	Linear	185.901	79	.000	.084	(.068099)	.957	.934	331.901	-
Q	Quadratic	188.012	78	.000	.084	(.069100)	.956	.933	334.012	Q versus P
R	Unspecified curve	166.023	77	.000	.077	(.061093)	.964	.944	316.023	R versus P

Table 18Multivariate Latent Growth Curve Model for Per-Protocol Sample

Although all three models fitted the per-protocol analytic sample data better than the ITT data, the unspecified model was still found to have the best fit. Both the linear and quadratic models had similar fit indexes. The RMSEA was .084 for the linear model and the quadratic model which suggests a marginal fit; the CFI for both were between .955 and .960 and the TLI for both were .934 and .933, respectively. The AIC values for both of these models were also higher than the AIC value for the unspecified curve.

The unspecified model had an improved fit on all model assessment indices. The chi-square difference test revealed a significant difference between the unspecified model and the linear model ($\Delta \chi^2(1) = 16$, p < .001). Other fit indices also demonstrated a more acceptable fit, ($\chi^2(77) = 166.023$, RMSEA = .077, CFI = .964, TLI = .944, AIC = 316.023).

Parameter estimates for the unspecified curve model are presented in Figure 7. The estimated covariance between the intercept and slope factor was not statistically significant in this model. However, the variances for intercept and the slope were both statistically significant (p < .05). These findings suggest strong inter-individual differences in both initial scores on PEFD and change over the 14-month study period. Within this model, all except one random error measurement term were statistically significant.

A second model was then tested to determine if assignment was a time-invariant predictor of change among the per-protocol sample. This model is presented in Appendix C. The model had a fairly similar fit compared to the initial per-protocol unspecified model, ($\chi^2(91) = 182.419$, RMSEA = .072, CFI = .963, TLI = .945, AIC = 340.419). Within the per-protocol data, assignment was found to be a statistically significant predictor of rate of change .286 (p < .001) but not initial status. These findings suggest that participants in the treatment group had, on average, a higher rate of change on PEFD compared to the control group.





Chapter 6 – Discussion

The overarching research question that this dissertation sought to answer was: For female survivors of IPV, did attending sessions on the *Moving Ahead* curriculum result in increased psychological empowerment in the financial domain (PEFD) over time? In answering this question, this dissertation aimed to: a) test a conceptual model for PEFD based on Christens' (2012) nomological network for psychological empowerment, and b) use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing PEFD over time among the sample of participants who were survivors of IPV. Each of these two specific aims will be discussed in turn.

Research Aim #1: To test a conceptual model for psychological empowerment in the financial domain based on Christens' (2012) nomological network for psychological empowerment

To address the first aim of this dissertation, EFAs and CFAs were run to conceptualize and test a measurement model for PEFD. Because the sample in this study was slightly different from the sample used to conduct EFAs in the parent study, EFAs were run on this dissertation's modified sample to identify the best factor structure for each of the six scales used to conceptualize financial empowerment.

The emotional component of PEFD consisted of two scales: Financial Self-Efficacy and Financial Attitudes. Results from the EFA on Financial Self-Efficacy were consistent with the Scale of Economic Self-Efficacy published by Hoge and colleagues (2017), suggesting that the factor structure continued to load as anticipated. The original Financial Attitudes measure utilized 19 items; 15 were specific to attitudes on financial management and planning and four focused on gendered financial attitudes. Additionally, 10 of these 19 items were reverse coded. In a study by Hetling, Postmus, and Kaltz (2016b), a 14-item version of this scale was used. However, for this dissertation substantial modifications to the Financial Attitudes factor structure were made. It was determined that the reverse coded items loaded together due to their response patterns rather than conceptual commonalities; therefore, the decision was made to remove all reverse coded items from the scale. After the reverse coded items were removed, only one gendered financial attitudes item remained. This item was removed because it did not load in the absence of the other gendered financial attitude items. The final seven-item Financial Attitudes scale showed acceptable internal consistency.

The cognitive component of PEFD also consisted of two scales: Financial Self-Sufficiency and Financial Knowledge. The factor structure of the Financial Self-Sufficiency scale mirrored the Scale of Financial Security-10 (Helting et al., 2016a) and the factor structure of Financial Knowledge was consistent with the Financial Knowledge scale utilized by Hetling, Kaltz, and Postmus in a study they conducted (2016b). The Financial Knowledge scale was the only scale to have a two item sub-scale; while this is generally not regarded as a best practice, the factor pattern that included the two-item subscale generated the best fitting factor structure.

To date, nothing has been published on the Transformative Power scale utilized in this study to encompass the relational component of PEFD. While the parent study identified a three-item factor structure for this scale, which was adapted from Family Empowerment Scale (Koren et al., 1992), the EFA conducted for this dissertation found that the four-item factor structure showed good internal consistency.
Finally, the factor structure of the Financial Management and Planning Behaviors scale mirrored findings from the parent study (Postmus et al., 2013a). The internal consistency for the Financial Management and Planning Behaviors scale had a very slightly improved internal consistency ($\alpha = .81$) compared to the scale in the parent study that had a reliability coefficient of .80.

Following the EFAs, longitudinal and multi-group CFAs were conducted to test for measurement invariance. It is necessary to demonstrate scalar measurement invariance in order to compare means across groups and time. The first series of CFA models tested for longitudinal measurement invariance across the control group and the second series of models tested for longitudinal measurement invariance across the treatment group. While partial *scalar* invariance was achieved for the control group, only partial *metric* invariance was demonstrated for the treatment group. These findings suggest that the PEFD construct performed more consistently across time for the control group.

It is not surprising that the PEFD construct performed more consistently across time for the control group, as the treatment group received an intervention intended to influence the exact components that the nomological network for PEFD measured. More specifically, the aim of the *Moving Ahead* financial literacy intervention was to promote PEFD by increasing survivors' financial knowledge, as well as positively influencing their financial behaviors and financial self-sufficiency. To accomplish this aim, the *Moving Ahead* curriculum covered topics including: resources available to survivors, strategies for addressing financial challenges associated with leaving an abusive relationship, and information on financial management (The Allstate Foundation & NNEDV, 2009). As such, variations in the performance of the PEFD measure within the treatment group may be attributed to the intervention, itself.

After conducting the CFAs for longitudinal measurement invariance, a longitudinal multi-group CFA was tested. The purpose of this test was to determine whether the PEFD model held across groups. Findings from this analysis suggest that partial scalar invariance existed across groups. As noted previously, the testing of measurement invariance across groups in intervention research is complex, as early intervention will likely result in changes across groups and time (Pentz & Chou, 1994). Given the nature of intervention research, B. M. Byrne, Shavelson, and Muthen (1989) suggest that partial measurement invariance may be an acceptable goal of analysis.

Additionally, this dissertation was the first to test a conceptual model for financial empowerment. Christens' (2012) nomological network for psychological empowerment was utilized to guide the measurement of PEFD. In conducting these analyses, there was uncertainty as to whether a four-component model would demonstrate good fit, as well as whether the four components utilized to comprise the model (i.e., emotional, cognitive, relational, behavioral) would generate an accurate conceptualization of PEFD. Overall, preliminary findings of this model were positive, as fit indices (e.g., CFI, TLI, and RMSEA) were all generally acceptable. However, future testing is needed to further examine and validate this nomological network for PEFD.

Research Aim #2: To use the measurement model developed in the first aim to evaluate the effectiveness of the *Moving Ahead* curriculum in increasing psychological empowerment in the financial domain over time among the sample of participants

Thus far, only one research study, the parent study to this dissertation, has collected longitudinal data on the effectiveness of a financial literacy curriculum with survivors of IPV over four time periods. Data collected over three or more time periods in a longitudinal study allows for more advanced statistical testing methods. While repeated measures analysis of variance were used to examine financial knowledge, financial intentions, financial behaviors, and financial strain across all four time periods as part of the parent study (Postmus et al., 2015a), a LGCM was not run nor was a PEFD model tested. While repeated measures analyses are useful for looking at change over time, they cannot capture individual differences in change trajectories, they do not have the capacity to measure the fit of an entire longitudinal model, nor are they able to incorporate latent variables as outcomes (Kline, 2011). Therefore, there is value in testing longitudinal data using LGCM.

To address the second aim of this dissertation, LGCM was used to test whether the *Moving Ahead* curriculum increased participants' PEFD across a 14-month time period. First, three growth curve models were fit to the ITT analytic sample to determine which curve best fit the data. Fit indices supported the use of the unspecified curve, suggesting growth was not linear in nature. Results from the unspecified growth curve model using the ITT sample found that participants with higher levels of PEFD at T1 also demonstrated a higher rate of increase in PEFD in time. When random assignment was added to the model as a time-invariant predictor of change, assignment was found to be significantly associated with initial status but not rate of change.

To confirm these findings, the same methods were used to test a LGCM on the per-protocol sample. Findings indicated that the unspecified curve model remained the best fitting for the data. Results from this model suggested strong inter-individual differences in both initial status and rate of change, which supported the testing of assignment as a covariate. For the next model, assignment was added to the per-protocol model as a time-invariant predictor of change. For the per-protocol analytic sample assignment was a statistically significant predictor of rate of change but not initial status. This suggests that individuals in the treatment group experienced a higher rate of change than the control group, as one would anticipate in intervention research.

While results from the ITT analytic sample did not demonstrate differences between the treatment and control group on rate of change over time, analyses of the perprotocol data did suggest that rate of change was higher for individuals in the treatment group. There are a range of factors that may contribute to the difference in findings between the ITT analytic sample and the per-protocol analytic sample. Analyses of group differences showed that, while there were no significant differences between the treatment and control groups, there were statistically significant differences between the per-protocol and ITT samples on both sociodemographic characteristics, abuse experiences, and the cognitive component of PEFD. Participants from the ITT group had slightly higher scores on the cognitive component of PEFD at T1; however, it is unclear whether this influenced their study participation. Participants from the per-protocol sample were slightly older, less likely to have experienced psychological, physical, and sexual abuse at T1, and were more likely to be in a relationship. It is possible that participants who dropped out of the study were either unable to continue due to ongoing abuse, the need to quickly relocate, or the impact of prior abuse. It is also possible that individuals coping with significant abuse experiences were less equipped with the resources necessary to implement the strategies learned through the *Moving Ahead* curriculum. Thus, the inclusion of these participants in the ITT sample may have diluted the effects of the intervention.

Limitations

While this dissertation contributes to the social work field, there are several limitations worth noting that may also serve to guide future research in this area. There is a growing body of literature that supports the use of causal indicators to measure formatively modeled latent constructs (e.g. Bainter & Bollen, 2015; Hardin, Chang, Fuller, & Torkzadeh, 2011). However, for this dissertation, the construct of PEFD was tested using a reflective model. Future research should explore utilizing causal indicators to test a formatively specified PEFD model.

The generalizability of this study is limited because this is a purposive sample. Participants self-selected to become involved with the parent study and were already connected to IPV resources at T1. Thus, this sample is not representative of all women experiencing IPV. Similarly, this sample may not be reflective of all women who seek IPV services. There is also an especially large representation of Latina women, as well as non-U.S. born individuals, within the sample given the locations in which recruitment occurred (i.e. New Jersey, New York, Puerto Rico, Texas). This sample thus differs from the general U.S. population. Future research in this area might consider evaluating the effectiveness of a financial literacy curriculum on increasing PEFD with survivors from other diverse backgrounds.

While agencies who participated in the parent study only received modest compensation for their assistance in the evaluation, these domestic violence organizations had the opportunity to send staff members who would be facilitating the *Moving Ahead* curriculum to a specialized training. There may have been increased efforts by the organizations to teach the curriculum more comprehensively due to the fact that the agencies involved were part of an evaluation study. Alternatively, because the program guidelines were flexible as to increase the ease in which the organizations could implement the program fidelity may have varied.

Being that financial empowerment is still an emerging intervention for survivors of IPV within the U.S., there are limited instruments available for measuring financial constructs. Thus, most of the scales used in this dissertation were developed as part of the evaluation of the *Moving Ahead* curriculum. The Scale of Economic Self-Efficacy (Hoge et al., 2017) and the Scale of Self-Sufficiency-14 (Hetling et al., 2016a) were both validated using data from the parent study. The Financial Knowledge scale was initially validated using data from a pilot evaluation of the curriculum but was modified for the parent study (Postmus & Plummer, 2010). The adapted Financial Attitudes scale and the Financial Management and Planning Behaviors scale have not yet been validated. Future studies should continue to evaluate the reliability of these scales with survivors of IPV. Further, the scales utilized to construct PEFD as part of this dissertation required selfreporting from participants. As a result, social desirability may bias participant responses.

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It is also important to note that two of the coefficients in the LGCM conducted with the ITT analytic sample exceeded one. According to Jöreskog (1999), "...if the factors are *correlated* (*oblique*), the factor loadings are *regression coefficients and not correlations* and as such they can be larger than one in magnitude" (p. 1). While a factor loading greater than one may suggest an issue such as multicollinearity in the model, it does not automatically signify a problem. Future research should explore this finding in greater depth.

In addition, participants completing the financial behaviors scale were not able to indicate if a behavior was not applicable to them, as their only response option was that they *never* implemented the behavior. However, survivors may have had limited opportunities to engage in these behaviors due to their current financial situations or power and control dynamics within their relationships. Future studies should include a *not applicable* category for this scale as to better reflect which behaviors survivors chose not to engage in versus what they were not able to engage in.

As is common in longitudinal studies, post-assignment attrition occurred. A total of 67 participants were dropped from the study after T1 due to ineligibility, intervention contamination, or failing to complete the intervention. Ideally, in an ITT analysis, participants who did not complete the intervention (n = 45) or experienced intervention contamination (n = 11) would have continued to be interviewed. The decision to drop them from the study inadvertently could have biased the sample.

Lastly, there were also some statistically significant differences between the perprotocol analytic sample and the ITT analytic sample, the most notable of which was abuse experiences at T1. This may suggest that abuse experiences moderate the effectiveness of the intervention as well as participants' ability to remain in the research study. Despite these limitations, the per-protocol sample findings suggest that financial literacy interventions can be effective in empowering survivors of IPV. Future research could look at the role that abuse experiences play in survivors' ability to implement such an intervention, as well as ways the intervention could perhaps be modified to better serve survivors with more extensive abuse histories.

Implications for Policy and Practice

There are a number of challenges to the implementation of financial empowerment interventions. As with empowerment-based practices more broadly, there is limited information available to guide the provision of these services. Given the ambiguous nature of PEFD practices, the nomological network for PEFD conceptualized as part of this dissertation serves as an initial step toward clarifying the nature of financial empowerment practice. Findings suggest that PEFD is comprised of emotional, cognitive, relational, and behavioral dimensions. Financial empowerment programming may need to engage all four of these components collectively in order to increase PEFD among IPV survivors.

Findings from the LGCM indicated that *Moving Ahead* increased PEFD at higher rates for survivors of IPV in the per-protocol analytic sample as compared to the ITT analytic sample. Survivors often do not seek IPV services until the abuse escalates (Liang, Goodman, Tummala-Narra, & Weintraub, 2005). As such, by the time some survivors seek IPV services, there may be additional barriers, such as increased monitoring by the abuser, present that prohibit the survivor from implementing the knowledge and skills acquired from the *Moving Ahead* intervention. Increases in PEFD

may be moderated by the extensiveness of the abuse a survivor has experienced or the impact that the abuse has had on a survivor's well-being and access to resources. These findings suggest that survivors may benefit from the availability of financial empowerment programming, such as financial literacy, as an IPV prevention strategy, a crisis intervention, or as a resource available from IPV service providers.

According to the Financial Literacy and Education Commission (2016), as of 2015, less than one-third of Americans had the opportunity to participate in financial literacy education within a school or work setting. This suggests that there is a significant portion of the U.S. population who has most likely never received formal financial education. The advantages of making financial literacy available to broader audiences are two-fold. First, financial literacy interventions can supplement other federal interventions designed to promote financial self-sufficiency, such as Temporary Assistance for Needy Families. Further, many see the promotion of financial literacy as a federal responsibility (Government Accountability Office, 2004).

Second, financial literacy interventions can also aid in the prevention of IPV. Financial abuse tactics are far less discussed than other forms of IPV, and as a result, survivors may be less likely to recognize this form of abuse. In addition to promoting positive financial management attitudes and behaviors, financial literacy interventions can also educate individuals on healthy cash-flow management behaviors among couples and how to recognize predatory financial practices within the broader community. Perhaps if survivors receive this information at an earlier point in time they will be better equipped to recognize signs of financial power and control within their relationships. This prevention strategy may also equip women with strategies for maintaining some financial independence while in relationships as well.

In addition to serving as a primary prevention strategy, an abbreviated version of financial literacy education can also serve as a crisis intervention. Given the significant impact that trauma has on the brain, it is not reasonable to expect survivors to be receptive to financial literacy programming immediately following traumatic incidences. However, it has become common practice for service providers to implement safety planning with IPV survivors in crisis. As part of this safety planning, service providers help survivors to identify IPV-related safety concerns and explore potential strategies for reducing violence (Davies, 2017). Far fewer organizations are conducting a parallel safety planning may include actions taken to: protect important documents, safely accumulate financial resources, and identify financial exploitation (New York City Domestic Violence Economic Justice Taskforce, n.d.). As part of this process, service providers can help survivors to recognize significant financial safety concerns and provide survivors with guidance on how to address them as part of a larger safety planning process.

Lastly, financial literacy curriculums, such as *Moving Ahead*, serve as a useful resource for survivors seeking IPV services. In addition to the educational benefits of financial literacy programming, this intervention also creates a unique opportunity for survivors to reflect on the way that patriarchal values and other oppressive systems have influenced their learned financial management attitudes and behaviors. Empowerment-based practices have long been utilized to foster critical consciousness among vulnerable groups. Within the Battered Women's Movement, empowerment interventions were

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implemented to help survivors regain power and control through individual and collective action. As an empowerment-based intervention, financial empowerment interventions designed for survivors provide a space for survivors to challenge financial injustices they have experienced and increase their PEFD through macro-level advocacy efforts. In the global arena, economic empowerment interventions have been found to increase social networks and promote collective action among women. Through these connections, women have challenged land rights policies, gender-based violence, and other social issues (Kabeer, 2012).

It is important to note that, while there are many benefits to increasing survivors PEFD, there has been debate within the IPV field regarding whether financial empowerment interventions increase or decrease survivors' abuse experiences. Vyas and Watts (2009) conducted a systematic review of financial empowerment literature from low and middle income countries globally to determine the association between empowerment and IPV. Findings from their review demonstrated that, in some instances, women's increased access to finances were associated with lower incidences of IPV for survivors, while in other situations increases in women's access to finances increased IPV. There is a need for increased longitudinal research in this area, particularly within the U.S., to better understand women's experiences with violence following participation in financial empowerment programming. It is important to understand how women experience this financial empowerment, as well as how abusers perceive and interpret it.

There have also been increased efforts to identify factors beyond the individual level that may support PEFD among survivors. Perhaps the component most critical to the effective implementation of financial literacy interventions is the financial knowledge of the service providers tasked with facilitating them. IPV service providers may find it challenging to engage with all four components of PEFD due to their own lack of an understanding of the concepts. In a previous study, service providers administering the *Moving Ahead* intervention to survivors shared that they too learned a lot about finances from the curriculum (Silva-Martinez et al., 2016). Thus, the service providers themselves may benefit from participation in the *Moving Ahead* intervention as well as an orientation to the four components that comprise PEFD prior to facilitating sessions on the curriculum for survivors.

This also illuminates the need for social workers to receive more education around financial literacy to support the clients they work with. Indeed, the Financial Social Work Initiative at the University of Maryland School of Social Work was founded in 2008 to better equip social workers with the knowledge and skills to promote economic justice and increase financial well-being among individuals and families being served (Financial Social Work Initiative, n.d.). Social work programs must recognize the value in equipping students with financial knowledge education, since clients will likely prioritize obtaining concrete resources necessary for survival above exploring more complex personal or social issues.

There is also a need for community partnerships aimed at promoting financial empowerment. In 2004, the Government Accountability Office released a report outlining key recommendations from a federal forum on financial literacy. Forum participants suggested that the federal government serve as a leader in the promotion of financial literacy; this could be achieved through increased public-private partnerships and interagency coordination in this field. However, over 10 years later, the need for such programs persists. One partnership that could be beneficial to survivors of IPV is between IPV service providers and the welfare system.

Survivors in this dissertation study had limited financial resources; over twothirds of the sample had an annual income at or below \$15,000. Some survivors may have been interested in implementing the skills they learned from the *Moving Ahead* curriculum, but lacked the resources to do so. Conversely, one of the priorities of the welfare system is to promote financial self-sufficiency among recipients. Yet, research has found that IPV rates are higher for women seeking TANF benefits compared to the general population and that IPV poses a challenge to financial self-sufficiency (Tolman & Raphael, 2000). Therefore, there is value in IPV service providers and the welfare system partnering in order to achieve their organizational objectives. Through collaborative service provision, survivors would have an opportunity to gain IPV-specific financial education while also practicing the skills using resources provided by the welfare system, so as to increase overall PEFD among survivors.

Directions for Future Research

Within the research field, scholars have acknowledged that there are a number of challenges to conducting research on empowerment. Researchers have had reservations about developing global measures of empowerment because the construct is domain specific (Fawcett et al., 1995). There has also been debate as to what components comprise empowerment. This conceptual model thus provides a domain-specific framework for psychological empowerment as it relates to finances. The decision was made to conceptualize financial empowerment as comprising of four components, as Christens (2012) recommends. This four-component model was selected because the

relational component, referred to as transformative power within this dissertation, is particularly relevant to financial empowerment; social capital serves as an important source of power for some (Christens, 2012; Portes, 1998). Individuals with higher levels of transformative power may also be better equipped to engage in empowerment activities at the community level and may have access to other important resources beyond their own financial capital (Christens, 2012). However, the relational component was also the least measured in the nomological network. Future research should include the development of a more comprehensive measure of transformative power to be used when measuring PEFD. Potential areas for inclusion in this revised measure include critical consciousness, collective action, and social capital.

Scholars from the empowerment field have suggested that there is a need for studies to test the construct of empowerment over time (Christens, 2012; Rappaport, 1987; Rissel, 1994), as well as to ask questions about the empowerment process itself (Cattaneo & Chapman, 2010). This dissertation represents an initial step toward further examination of the empowerment process by constructing a PEFD model and then using it to test the effectiveness of a financial literacy intervention on PEFD over time. However, research on the area of financial empowerment with survivors of IPV is still a growing field. This dissertation utilized secondary data from the parent study to assess PEFD quantitatively; future research might also include interviews with survivors to uncover their interpretation of the PEFD scale items, what the empowerment process means to them, and whether these scales adequately capture elements of PEFD that are important to their experiences. Future research could also include validation studies of this model with non-survivor samples of individuals receiving a financial literacy intervention, as the content of this measure is not IPV specific.

Lastly, although the majority of participants in this sample had low incomes, study findings showed that survivors' levels of financial empowerment increased as a result of this intervention. This is notable as one might assume that survivors with limited resources would have difficulty implementing some of the financial skills taught within the *Moving Ahead* curriculum, such as budgeting and saving, understanding banking options, improving your credit score, and saving strategies. Future research might explore the factors that facilitate or hinder survivors' implementation of the knowledge and strategies gained from the intervention. In addition, future research could look at which specific financial management and planning behaviors survivors, particularly those with lower incomes, were most successful in implementing.

Summary

This dissertation builds upon prior research in the fields of empowerment theory and IPV to test the effectiveness of the financial literacy intervention, *Moving Ahead*, in increasing PEFD among a sample of 449 IPV survivors over time. There is an array of literature on empowerment theory, particularly in the field of community psychology. Given that research on IPV is produced by scholars from a multitude of disciplines, empowerment literature from community psychology is sometimes drawn upon to guide research and practice with survivors. This is particularly true of social work practice with IPV survivors; indeed, the empowerment of vulnerable individuals is a primary mission of the profession. One of the most significant barriers that survivors face when trying to leave an abusive relationship is a lack of financial resources (M. Anderson et al., 2003; Fugate et al., 2005; Meyer, 2012). Further, access to resources is a predictor of whether a survivor will terminate an abusive relationship (D. K. Anderson & Saunders, 2003; Bornstein, 2006). Financial literacy interventions can help survivors to take control of their financial resources and work toward financial independence, which may ultimately enable survivors to escape abuse. For these reasons, financial empowerment interventions have been identified as one of the most essential services for supporting survivors (Goodman & Epstein, 2009).

Despite the establishment of a nomological network for psychological empowerment, efforts to conceptualize financial empowerment have been limited. Even evaluation studies of programs specifically aimed at financially empowering survivors of IPV have had minimal engagement with empowerment theory or measures. Postmus and colleagues (2013b) conducted the only study on a financial literacy intervention that included a financial empowerment measure as an outcome. As such, this dissertation study fills a recognized gap in financial empowerment literature by proposing a model for PEFD. The development of a conceptual model for financial empowerment is important for research and practice, as it guides the measurement of this latent construct and informs the components necessary for effective empowerment-based practice.

Overall, the conceptualization of PEFD using Christens' (2012) nomological network was positive, as CFAs utilized to test for longitudinal and multi-group measurement invariance demonstrated an acceptable model fit and partial scalar measurement invariance between the treatment and control groups. Results from the LGCM demonstrated that the intervention contributed to a statistically significant rate of change with the per-protocol analytic sample but not the ITT analytic sample. These findings suggest that other factors may moderate the effectiveness of the intervention, specifically for the ITT analytic sample who did not complete the study across all four time points. Findings from this dissertation are encouraging, as research suggests that lack of financial resources serve as a significant barrier to leaving for survivors of IPV. In examining the construct of PEFD and testing the effectiveness of a financial literacy intervention in increasing PEFD for both research and practice and provides practical information to IPV service providers and policy makers on the benefits of financial literacy interventions and the need to invest more resources into their implementation.

Appendix A – Non-Significant Group Comparisons by

Sample Characteristics

Control versus Treatment Group

Table 19

Independent Samples t-tests - Continuous Items – Age and Abuse Experiences

	Control (n=195)		Treatment (n=254)			
	п	М	п	М	t	<i>p</i> value
Age	214	36.14	234	36.10	.043	.965
Abuse experiences						
Psychological	215	3.55	232	3.48	.746	.456
Physical	215	2.48	232	2.44	.369	.712
Sexual	215	2.15	232	2.15	.046	.963
Financial	215	2.67	244	2.62	.506	.613

Note. Abuse experience scales ranged from 1 (never) to 5 (quite often).

Table 20

10010 =0									
Chi-Square Test of Homogeneity – Race/Ethnicity									
	White	Black	Hispanic/	Other	Total	χ^2	р		
	winte	DIACK	Latina	Oulei	п	χ	value		
Control	39	45	114	17	215	172	087		
Treatment	40	47	128	18	233	.1/2	.762		

Table 21

Chi-Square Test of Homogeneity - Average Annual Income

	\$0 – \$10,000	\$10,001 – \$15,000	\$15,001 – \$25,000	\$25,001 - \$35,000	More than \$35,000	Total <i>n</i>	χ^2	<i>p</i> value
Control	106	52	26	12	14	210	2 0 4 0	551
Treatment	806	54	29	18	24	231	5.040	.331

Table 22

Chi-Square Test of Homogeneity - Average Annual Income

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Control	117	98	215	127	509
Treatment	119	113	232	.437	.308

Table 23Chi-Square Test of Homogeneity – In a Relationship

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Control	95	120	215	000	024
Treatment	104	129	233	.009	.924

Table 24

Chi-Square Test of Homogeneity – Employed								
	Yes	No	Total	χ^2	<i>p</i>			
			n		value			
Control	89	126	215	2 100	121			
Treatment	113	119	232	2.408	.121			

Table 25

Chi-Square Test of Homogeneity – Student								
	Ves	No	Total	v^2	р			
	103	140	п	λ	value			
Control	32	182	214	567	451			
Treatment	29	203	232	.307	.431			

Table 26

Chi-Square Test of Homogeneity – Financially Responsible for Children

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Control	172	43	215	022	955
Treatment	188	45	233	.055	.035

Table 27

Chi-Square Test of Homogeneity – Has Health Insurance

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Control	119	95	214	000	0.20
Treatment	130	102	232	.008	.928

Table 28

Chi-Square Test of Homogeneity – Receiving Social Services

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Control	161	54	215	2 622	105
Treatment	159	75	234	2.032	.105

Note. For the receiving social services variable, the categories were "yes" or "no or missing."

Per-Protocol versus Intent-to-Treat Group

Table 29

Chi-Square Test of Homogeneity – Average Annual Income

	\$0 – \$10,000	\$10,001 – \$15,000	\$15,001 – \$25,000	\$25,001 - \$35,000	More than \$35,000	Total <i>n</i>	χ^2	<i>p</i> value
Per-protocol	126	52	29	16	24	247	4.20	270
Intent-to-treat	86	54	26	14	14	232	5	.379

Table 30

Chi-Square Test for Homogeneity – Born in the U.S.								
	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value			
Per-protocol	129	123	252	509	420			
Intent-to-treat	107	88	195	.398	.439			

Table 31

Chi-Square Test for Homogeneity – Financially Responsible for Children

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Per-protocol	200	53	253	679	170
Intent-to-treat	160	35	195	.028	.420

Table 32

Chi-Square Test for Homogeneity – Employed						
	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value	
Per protocol	107	146	253	1.976	160	
Intent-to treat	95	99	194	1.770		

Table 33

Chi-Square Test for Homogeneity – Student					
	Ves	No	Total	\mathbf{v}^2	р
	105	140	n	χ	value
Per-protocol	34	218	252	017	907
Intent-to-treat	27	167	194	.017	.897

Table 34

Chi-Square Test for Homogeneity – Has Health Insurance

	Yes	No	Total <i>n</i>	χ^2	<i>p</i> value
Per-protocol	132	120	252	2 704	005
Intent to-treat	117	77	194	2.794	.095

1 4010 35						
Chi-Square Test for Homogeneity – Receiving Social Service.						
	Ves	No^1	Total	v^2	р	
	105	INU	n	X	value	
Per-protocol	184	70	254	202	521	
Intent- to-treat	136	59	195	.392	.551	

Table 35 ?S

Note. For the receiving social services variable, the categories were "yes" or "no or missing."

Appendix 1	B – 1	Descrip	tive	Statis	stics	for	Scal	les
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Table 36

Descriptive Statistics for Financial Self-Efficacy Items

	Item	M(SD)
1.	I can solve most financial problems if I invest the necessary effort.	3.50 (1.09)
2.	I can always manage to solve difficult financial problems if I try hard enough.	3.43 (1.04)
3.	If I am in financial trouble, I can usually think of something to do.	2.75 (1.06)
4.	If I have a financial problem, I can find ways to get what I need.	2.84 (1.05)
5.	When I am confronted with a financial problem, I can usually find several solutions.	3.15 (1.06)
6.	No matter what financial problem comes my way, I'm usually able to handle it.	3.67 (.91)
7.	Thanks to my resourcefulness, I know how to handle unforeseen financial situations.	2.92 (1.09)
8.	I can remain calm when facing financial difficulties because I can rely on my financial abilities.	3.19 (1.01)
9.	I am confident that I could deal efficiently with unexpected financial events.	3.50 (.94)
10.	It is easy for me to stick to and accomplish my financial goals.	3.17 (.98)

Note. Scale of 1-5; 1 (not at all) 2 (occasionally) 3 (sometimes) 4 (most of the time) or 5 (all the time).

Table 37

Descriptive Statistics for Financial Attitudes Items

	Item	M(SD)
1.	Planning for spending money is essential to successfully managing one's life.	3.92 (.98)
2.	Planning for the future is the best way of getting ahead.	4.27 (.69)
3.	Thinking about where you will be financially in 5 or 10 years in the future is essential for financial success.	4.13 (.78)
4.	It is important for a family to develop a regular pattern of savings and stick to it.	4.49 (.62)
5.	Families should have written financial goals that help them determine priorities in spending.	4.30 (.70)
6.	A written budget is absolutely essential for successful financial management.	4.11 (.77)
7.	It is really essential to plan for the possible disability of a family wage earner.	4.09 (.85)

Note. Scale of 1-5; 1 (strongly disagree) 2 (disagree) 3 (neutral) 4 (agree) or 5 (strongly agree).

	Item	M (SD)
1.	Afford to take trips.	1.43 (.88)
2.	Buy extras for your family and yourself.	1.88 (1.08)
3.	Put money in a savings account.	1.61 (1.07)
4.	Meet your obligations.	3.43 (1.20)
5.	Do what you want to do, when you want to do it.	2.60 (1.28)
6.	Pay your own way without borrowing from family or friends.	2.94 (1.53)
7.	Buy the kind and amount of food you like.	3.22 (1.38)
8.	Pursue your own interests and goals.	2.69 (1.36)
9.	Stay on budget.	2.44 (1.41)
10.	Make payments on your debts.	2.62 (1.50)

Table 38Descriptive Statistics for Financial Self-Sufficiency Items

Note. Scale of 1-5; 1 (strongly disagree) 2 (disagree) 3 (neutral) 4 (agree) or 5 (strongly agree).

M (*SD*) 2.91 (1.51) 2.64 (1.41)

Desc	riptive Statistics for Financial Knowledge Items
	Item
1.	I know how to access my credit card report.
2.	I know how to understand my credit report and credit history.
3.	I know how to improve my credit rating.
4.	I know how to create a budget.
5.	I know how to identify my partner's assets (savings accounts, property, etc.) and financial responsibilities.

Table 39Descriptive Statistics for Financial Knowledge Items

3	I know how to improve my credit reting	2.54
5.	T know now to improve my credit rating.	(1.34)
4	I know how to create a hudget	3.10
4.	T Know now to create a budget.	(1.32)
5	I know how to identify my partner's assets (savings accounts, property,	2.62
5.	etc.) and financial responsibilities.	(1.38)
6	I know how to identify joint or combined financial responsibilities and	2.77
0.	assets (savings accounts, property, etc.).	(1.38)
7	I know how to get the resources that are available in my community to help	3.89
7.	me leave my abuser (emergency shelter, hotline, etc.).	(1.07)
0	Urnew how to get mublic aggistance hanafits (TANE food stamps, etc.)	3.96
0.	T know now to get public assistance benefits (TANF, food stamps, etc.).	(1.08)
0	I know how to get legal assistance in my community (legal aid, restraining	3.59
9.	orders, etc.).	(1.19)
10	I know how to invest my savings through things like savings bonds, mutual	2.28
10.	funds, and stocks.	(1.24)
	I know about community programs such as IDA's (individual development	2.00
11.	accounts) and EITC's (federal and state earned-income-tax credits) that can	(1.14)
	help me with my financial goals.	(1.1.1)
12	I know how to plan for retirement and the different types of plans available	2.15
12.	This who was plan for rearonnell and the anterent types of plans available.	(1.21)
13	I know how to plan for my estate (such as planning a will or a trust fund)	2.15
15.	T know now to plan for my estate (such as planning a win of a trust fund).	(1.20)

Note. Scale of 1-5; 1 (strongly disagree) 2 (disagree) 3 (neutral) 4 (agree) or 5 (strongly agree).

Table 40		
Descriptive Statistics for	Transformative	Power Items

	Item	M(SD)
1.	I feel I can have a part in improving the process of seeking financial self- sufficiency for other women.	3.44 (1.08)
2.	I believe that other women and I can have an influence on changing the process of achieving financial self-sufficiency.	4.03 (.83)
3.	I feel that my knowledge and experience as a woman seeking financial self- sufficiency can be used to improve services for other women who may go through this process.	4.08 (.80)
4.	I help other women get the financial services they need.	3.08 (1.11)

Note. Scale of 1-5; 1 (strongly disagree) 2 (disagree) 3 (neutral) 4 (agree) or 5 (strongly agree).

Table 41

Descriptive Statistics for Financial Management and Planning Behavior Items

	Item	M (SD)
1.	Pay your bills on time.	3.43 (1.32)
2.	Follow a weekly or monthly budget.	2.81 (1.49)
3.	Follow your financial goals.	2.81 (1.40)
4.	Use a bank account (checking or savings).	2.73 (1.59)
5.	Make payments towards your debt (credit cards, money owed to friends/family, etc.).	2.92 (1.54)
6.	Pay more than the interest on your loans, credit, etc.	1.63 (1.22)
7.	Review and evaluate your spending habits.	3.11 (1.45)
8.	Identify your own financial goals for the future (pay off credit card, save money, etc.).	2.95 (1.45)
9.	Estimate your monthly household income and expenses.	3.01 (1.54)
10.	Track down where money was spent (on paper, on the computer, on a spreadsheet, etc.).	3.10 (1.51)

Note. Scale of 1-5; 1 (never) 2 (rarely) 3 (sometimes) 4 (often) or 5 (always).

Appendix C – Non-Significant Group Comparisons by

Four Components of Psychological Empowerment in the Financial Domain

Control versus Treatment Group

Table 42

Independent Samples t-tests – Four Components of Psychological Empowerment in the Financial Domain

	Control $(n = 215)$		Treatment $(n = 234)$			
	п	М	п	М	t	<i>p</i> value
Emotional	215	3.83	234	3.88	-1.345	.179
Cognitive	215	2.68	234	2.63	.721	.476
Relational	215	3.63	234	3.68	685	.494
Behavioral	215	2.78	234	2.88	-1.180	.239

Note. Scale means range from 1 to 5.



Appendix D – Latent Growth Curve Models with Assignment as a Covariate

Figure 8. Unspecified Latent Growth Curve Model with Intent-to-Treat Sample. FE = psychological empowerment in the financial domain; E = emotional component; C = cognitive component; R = relational component; B = behavioral component.



Figure 9. Unspecified Latent Growth Curve Model with Per-Protocol Sample. Note. FE = psychological empowerment in the financial domain; E = emotional component; C = cognitive component; R = relational component; B = behavioral component.

References

- Adams, A. E., Sullivan, C. M., Bybee, D., & Greeson, M. R. (2008). Development of the Scale of Economic Abuse. *Violence Against Women*, 14(5), 563-588.
- The Allstate Foundation and the National Network to End Domestic Violence (NNEDV). (2009). *Moving ahead through financial management*. Northbrook, IL: The Allstate Foundation.
- Alvarez, C., Fedock, G., Grace, K.T. and Campbell, J., (2017). Provider screening and counseling for intimate partner violence: A systematic review of practices and influencing factors. *Trauma, Violence, & Abuse, 18*(5), 479-495.
- Amato, P. R., Loomis, L. S., & Booth, A. (1995). Parental divorce, marital conflict, and offspring well-being during early adulthood. *Social Forces*, 73(3), 895-915.
- American Institute of Economic Research (2014). *Money school: Building financial futures*. Great Barrington, MA: Author.
- Anderson, M. A., Gillig, P. M., Sitaker, M., McCloskey, K., Malloy, K., & Grigsby, N. (2003). "Why doesn't she just leave?": A descriptive study of victim reported impediments to her safety. *Journal of Family Violence*, 18(3), 151-155.
- Anderson, D. K., & Saunders, D. G. (2003). Leaving an abusive partner: An empirical review of predictors, the process of leaving, and psychological well-being. *Trauma, Violence, & Abuse*, 4(2), 163-191.
- Akey, T. M., Marquis, J. G., & Ross, M. E. (2000). Validation of scores on the Psychological Empowerment Scale: A measure of empowerment for parents of children with a disability. *Educational and Psychological Measurement*, 60(3), 419-438.
- Ajzen, I. (1991). The Theory of Planned Behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211.
- Ajzen, I. & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.
- Babcock, J. C., Green, C. E., & Robie, C. (2004). Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clinical Psychology Review*, 23(8), 1023-1053.
- Bainter, S. A. & Bollen, K. A. (2015). Moving forward in the debate on causal indicators: Rejoinder to comments. *Measurement: Interdisciplinary Research and Perspectives*, 13(1), 63-74.

- Bandura, A. (1997). *Self-efficacy: The exercise of control.* London, UK: Macmillan Publishers.
- Bassuk, E. L., Melnick, S., & Browne, A. (1998). Responding to the needs of low-income and homeless women who are survivors of family violence. *Journal of the American Medical Women's Association*, 53(2), 57-64.
- Bauer, H. M., Rodriguez, M. A., Quiroga, S. S., & Flores-Ortiz, Y. G. (2000). Barriers to health care for abused Latina and Asian immigrant women. *Journal of Health Care for the Poor and Underserved*, 11(1), 33-44.
- Banach, M., Iudice, J., Conway, L., & Couse, L. J. (2010). Family support and empowerment: Post autism diagnosis support group for parents. *Social Work with Groups*, 33(1), 69-83.
- Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., & Stevens, M. R. (2011). *The National intimate partner and sexual violence survey: 2010 summary report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Blau, F. D., & Kahn, L. M. (2007). The gender pay gap: Have women gone as far as they can? *The Academy of Management Perspectives*, 21(1), 7-23.
- Bollen, K. A. (1989). Structural equations with latent variables. New York, NY: Wiley.
- Bonomi, A. E., Anderson, M. L., Reid, R. J., Rivara, F. P., Carrell, D., & Thompson, R. S. (2009). Medical and psychosocial diagnoses in women with a history of intimate partner violence. *Archives of Internal Medicine*, 169(18), 1692-1697.
- Bonomi, A. E., Thompson, R. S., Anderson, M., Reid. R. J., Carrell, D., Dimer, J. A., & Rivara, F. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventive Medicine*, 30(6), 458-466.
- Boomsma A. (1982). Robustness of LISREL against small sample sizes in factor analysis models. In K. G. Joreskog & H. Wold, (Eds.) Systems under indirection observation: Causality, structure, prediction. Amsterdam, Netherlands: North Holland.
- Bornstein, R. F. (2006). The complex relationship between dependency and domestic violence: Converging psychological factors and social forces. *American Psychologist*, 61(6), 595-606.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. Sociological Methods & Research, 21(2), 230-258.

- Busch, N. B. & Valentine, D. (2000). Empowerment practice: A focus on battered women. Affilia, 15(1), 82-95.
- Buvinic, M. & Furst-Nichols, R. (2014). Promoting women's economic empowerment: What works? *The World Bank Research Observer*, *31*(1), 59-101.
- Byrne, C. A. & Arias, I. (2004). Predicting women's intentions to leave abusive relationships: An application of the Theory of Planned Behavior. *Journal of Applied Social Psychology*, *34*(12), 2586-2601.
- Byrne, B. M. (2012). Structural equation modeling with Mplus: Basic concepts, applications, and programming. New York, NY: Routledge.
- Byrne, B. M., Shavelson, R. J., & Muthen, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin*, *105*(3), 456-466.
- Calvès, A. E. (2009). Empowerment: the history of a key concept in contemporary development discourse. *Revue Tiers Monde*, *4*, 735-749.
- Campbell, J. (2002). Health consequences of intimate partner violence. *The Lancet*, *359*(9314), 1331-1336.
- Carlson, B. E., McNutt, L. A., Choi, D. Y., & Rose, I. M. (2002). Intimate partner abuse and mental health: The role of social support and other protective factors. *Violence Against Women*, 8(6), 720-745.
- Cattaneo, L. B. & Chapman, A. R. (2010). The process of empowerment: A model for use in research and practice. *American Psychologist*, 65(7), 646-659.
- Cattaneo, L. B. & Goodman, L. A. (2015). What is empowerment anyway? A model for domestic violence practice, research, and evaluation. *Psychology of Violence*, *5*(1), 84-94.
- Centers for Disease Control and Prevention (2003). *Costs of intimate partner violence against women in the United States*. Atlanta, GA: Author.
- Cheung, G. W. & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, 9(2), 233-255.
- Christens, B. D. (in press). *Community power and empowerment*. New York: Oxford University Press.
- Christens, B. D. (2012). Toward relational empowerment. *American Journal of Community Psychology*, 50(1-2), 114-128.

- Christens, B. D., & Peterson, N. A. (2012). The role of empowerment in youth development: A study of sociopolitical control as mediator of ecological systems' influence on developmental outcomes. *Journal of Youth and Adolescence*, 41(5), 623-635.
- Christens, B. D., Peterson, C. H., & Speer, P. W. (2014). Psychological empowerment in adulthood. In *Encyclopedia of primary prevention and health promotion* (pp. 1766-1776). New York: Springer US.
- Christens, B. D., Peterson, N. A., & Speer, P. W. (2011). Community participation and psychological empowerment: Testing reciprocal causality using a cross-lagged panel design and latent constructs. *Health Education & Behavior*, 38(4), 339-347.
- Christens, B. D., Winn, L. T., & Duke, A. M. (2016). Empowerment and critical consciousness: A conceptual cross-fertilization. *Adolescent Research Review*, 1(1), 15-27.
- Christy-McMullin, K. (2003). Asset-building policies and safety for women: Stretching social work's conceptual framework. *The Social Policy Journal*, 2(4), 19-37.
- Chronister, K. M. & McWhirter, E. H. (2003). Applying Social Cognitive Career Theory to the empowerment of battered women. *Journal of Counseling & Development*, 81(4), 418-425.
- Coker, A. L., Davis, K. E., Arias, I., Desai, S., Sanderson, M., Brandt, H. M., & Smith, P. H. (2002). Physical and mental health effects of intimate partner violence for men and women. *American Journal of Preventive Medicine*, 23(4), 260-268.
- Collins, J. C. (2011). Strategy of career interventions for battered women. *Human Resource Development Review*, *10*(3), 246-263.
- Correia, A. (2000). Strategies to expand battered women's economic opportunities. Building Comprehensive Solutions to Domestic Violence, Publication 9. Harrisburg, PA: National Resource Center on Domestic Violence.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10*(7), 1-9.
- Crabtree-Nelson, S., Grossman, S. F., & Lundy, M. (2016). A call to action: Domestic violence education in social work. *Social Work*, *61*(4), 359-362.
- Danis, F. S. (2003). Social work response to domestic violence: Encouraging news from a new look. *Affilia*, 18(2), 177-191.

- Davies, J. (2017). *Victim-defined safety planning: A summary*. Hartford, CT: Greater Hartford Legal Aid.
- Dodaro, G. L. (2011). *The federal government's role in empowering Americans to make sound financial choices.* Washington, DC: U.S. Government Accountability Office.
- Donovan, J. (1985). *Feminist theory: The intellectual traditions*. New York, NY: Bloomsbury.
- Dutton, M.A. (1992). Empowering and healing the battered woman: A model for assessment and intervention. New York, NY: Springer.
- Dutton, M. A., Holtzworth-Munroe, A., Jouriles, E., McDonald, R., Krishnan, S., McFarlane, J., & Sullivan, C. (2003). *Recruitment and retention in intimate partner violence research*. Rockville, MD: Department of Justice.
- Dutton, M.A., Orloff, L.E., & Hass, G. A. (2000). Characteristics of help-seeking behaviors, resources and service needs of battered immigrant Latinas: Legal and policy implications. *Georgetown Journal on Poverty Law & Policy*, 7(2), 245-305.
- Edwards, K. M., Gidycz, C. A., & Murphy, M. J. (2015). Leaving an abusive dating relationship: A prospective analysis of the investment model and theory of planned behavior. *Journal of Interpersonal Violence*, *30*(16), 2908-2927.
- Ellsberg, M., Jansen, H. A., Heise, L., Watts, C. H., & Garcia-Moreno, C. (2008). Intimate partner violence and women's and physical and mental health in the WHO multi-country study on women's health and domestic violence: An observational study. *The Lancet*, 371(9619), 1165-1172.
- Erez, E., Adelman, M., & Gregory, C. (2009). Intersections of immigration and domestic violence: Voices of battered immigrant women. *Feminist Criminology*, 4(1), 32-56.
- Fawcett, S. B., Paine-Andrews, A., Francisco, V. T., Schultz, J. A., Richter, K. P., Lewis, R. K., ..., Lopez, C. M. (1995). Using empowerment theory in collaborative partnerships for community health and development. *American Journal of Community Psychology*, 23, 677–697.
- Financial Industry Regulatory Authority. (2015). *How your credit score impacts your financial future*. Retrieved from http://www.finra.org/investors/how-your-credit-score-impacts-your-financial-future

- Financial Literacy and Education Commission. (2016). *Promoting financial success in the United States: National strategy for financial literacy 2016 update.* Washington, DC: Author.
- Financial Social Work Initiative. (n.d.). *About financial social work*. Retrieved from http://www.ssw.umaryland.edu/fsw/about-fsw/
- Fishbein, M. & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. New York, NY: Psychology Press.
- Fonseca, R., Mullen, K. J., Zamarro, G., & Zissimopoulos, J. (2012). What explains the gender gap in financial literacy? The role of household decision making. *The Journal of Consumer Affairs*, 46(1), 90-106.
- Fugate, M., Landis, L., Riordan, K., Naureckas, S., & Engel, B. (2005). Barriers to domestic violence help seeking: Implications for intervention. *Violence Against Women*, 11(3), 290–310.
- Freire, P. (2005). *Pedagogy of the oppressed* (30th anniversary ed.). New York, NY: Continuum International Publishing Group Inc.
- Ghandour, R. M., Campbell, J. C., & Lloyd, J. (2015). Screening and counseling for intimate partner violence: A vision for the future. *Journal of Women's Health*, 24(1), 57-61.
- Godwin, D. D., & Carroll, D. D. (1986). Financial management attitudes and behaviour of husbands and wives. *International Journal of Consumer Studies*, 10(1), 77-96.
- Godwin, D. D., & Koonce, J. C. (1992). Cash flow management of low-income newlyweds. *Financial Counseling and Planning*, *3*, 17-42.
- Godwin, D. D. (1994). Antecedents and consequences of newlyweds' cash flow management. *Financial Counseling and Planning*, *5*, 161–190.
- Goodman, L. A. & Epstein, D. (2009). *Listening to battered women: A survivor-centered approach to advocacy, mental health, and justice*. Washington, DC: American Psychological Association.
- Government Accountability Office. (2004). Highlights of a GAO forum: The federal government's role in improving financial literacy. Washington, DC: Author.
- Gowdy, E. A., & Pearlmutter, S. (1993). Economic self-sufficiency: It's not just money. *Affilia*, 8(4), 368-387.
- Gupta, S. K. (2011). Intention-to-treat concept: A review. *Perspectives in Clinical Research*, 2(3), 109-112.

- Gutierrez, L. M. (1990). A theology of liberation: History, politics, and salvation. Maryknoll, NY: Orbis.
- Gutierrez, L. M., DeLois, K. A., & GlenMaye, L. (1995). Understanding empowerment practice: Building on practitioner-based knowledge. *Families in Society*, 76(9), 534-542.
- Grimm, K. J., Ram, N., & Hamagami. F. (2011). Nonlinear growth curves in developmental research. *Child Development*, 82(5), 1357-1371.
- Gruber, J., & Trickett, E. J. (1987). Can we empower others? The paradox of empowerment in the governing of an alternative public school. *American Journal of Community Psychology*, *15*(3), 353-371.
- Hahn, S. A. & Postmus, J. L. (2014). Economic empowerment of impoverished IPV survivors: A review of best practice literature and implications for policy. *Trauma, Violence, & Abuse, 15*(2), 79-93.
- Hardin, A. M., Chang, J. C., Fuller, M. A., & Torkzadeh, G. (2011). Formative measurement and academic research: In search of measurement theory. *Educational and Psychological Measurement*, *71*(2), 281-305.
- Hegewisch, A., & Hartmann, H. (2014). *Occupational segregation and the gender wage gap: A job half done*. Washington, DC: Institute for Women's Policy Research.
- Heise, L. & Garcia-Moreno, C. (2002). Violence by intimate partners. In E. G. Krug et al. (Eds.), World report on violence and health (pp. 87-121). Geneva: World Health Organization.
- Herman, J. (1997). Trauma and recovery: The aftermath of violence from domestic abuse to political terror. New York, NY: Basic Books.
- Hetling, A., Hoge, G. L., & Postmus, J. L. (2016a). What is economic self-sufficiency? Validating a measurement scale for policy, practice, and research. *Journal of Poverty*, 20(2), 214-235.
- Hetling, A., Postmus, J. L., & Kaltz, C. (2016b). A randomized controlled trial of a financial literacy curriculum for survivors of intimate partner violence. *Journal of Family and Economic Issues*, *37*(4), 672-685.
- Hoge, G. L. (2016). Understanding and measuring economic self-sufficiency in the context of intimate partner violence and immigration: A mixed-method study (Unpublished doctoral dissertation). Rutgers, The State University of New Jersey, New Brunswick, NJ.

- Hoge, G. L., Stylianou, A. M., Hetling, A. & Postmus, J. L. (2017). Developing and validating the Scale of Economic Self-Efficacy. *Journal of Interpersonal Violence*.
- Hollis, S., & Campbell, F. (1999). What is meant by intention to treat analysis? Survey of published randomised controlled trials. *BMJ*, *319*(7211), 670-674.
- Hutchinson, E. D. (2010). *Dimensions of human behavior: Person and environment* (4th Ed.). Thousand Oaks, CA: SAGE Publications.
- Josephson, J. (2002). The intersectionality of domestic violence and welfare in the lives of poor women. *Journal of Poverty*, 6(1), 1-20.
- Jöreskog, K. G. (1999). *How large can a standardized coefficient be*? Retrieved from http://www.ssicentral.com/lisrel/techdocs/HowLargeCanaStandardizedCoefficient be.pdf
- Kabeer, N. (2012). *Women's economic empowerment and inclusive growth: Labour markets and enterprise development*. London: International Development Research Centre & UK Department for International Development.
- Kasturirangan, A. (2008). Empowerment and programs designed to address domestic violence. *Violence Against Women, 14*(12), 1465-1475.
- Kernsmith, P. (2005). Treating perpetrators of domestic violence: Gender differences in the applicability of the Theory of Planned Behavior. *Sex Roles*, *52*(11-12), 757-770.
- Kieffer, C. H. (1984). Citizen empowerment: A developmental perspective. *Prevention in Human Services*, 3(2-3), 9-36.
- Kline, R. (2014). *Principles and practice of structural equation modeling* (3rd Ed.). New York: Guilford Publications.
- Koren, P. E., DeChillo, N., & Friesen, B. J. (1992). Measuring empowerment in families whose children have emotional disabilities: A brief questionnaire. *Rehabilitation Psychology*, 37(4), 305-321.
- Lee, J. A. B. & Hudson, R. E. (2017). Empowerment approach to social work treatment. In F. J. Turner (Ed.), Social Work Treatment: Interlocking Theoretical Approaches (6th Ed.). New York: Oxford University Press.
- Levy-Simon, B. (1994). *The empowerment tradition in American social work: A history*. New York: Columbia University Press.
- Liang, B., Goodman, L., Tummala-Narra, P., & Weintraub, S. (2005). A theoretical framework for understanding help-seeking processes among survivors of intimate partner violence. *American Journal of Community Psychology*, 36(1-2), 71-84.
- Little, T. D. (2013). *Longitudinal structural equation modeling*. New York: Guilford Press.
- Long, D. A. (2001). From support to self-sufficiency: how successful are programs in advancing the financial independence and well-being of welfare recipients? *Evaluation and Program Planning*, 24(4), 389-408.
- McDermott, M. J. & Garofalo, J. (2004). When advocacy for domestic violence victims backfires: Types and sources of victim disempowerment. *Violence Against Women, 10*(11), 1245-1266.
- McFarlane, J. M., Campbell, J. C., Wilt, S., Sachs, C. J., Ulrich, Y., & Xu, X. (1999). Stalking and intimate partner femicide. *Homicide Studies*, *3*(4), 300-316.
- McWhirter, E. H. (1991). Empowerment in counseling. *Journal of Counseling & Development*, 69(3), 222-227.
- Meyer, S. (2012). Why women stay: A theoretical examination of rational choice and moral reasoning in the context of intimate partner violence. *Australian & New Zealand Journal of Criminology*, 45(2), 179-193.
- Miguel, M. C., Ornelas, J. H., & Maroco, J. P. (2015). Defining psychological empowerment construct: Analysis of three empowerment scales. *Journal of Community Psychology*, 43(7), 900-919.
- Mitchell, J. (1975). Psychoanalysis and feminism. New York, NY: Vintage.
- Moe, A. M. & Bell, M. P. (2004). Abject economics: The effects of battering and violence on women's work and employability. *Violence Against Women*, 10(1), 29-55.
- National Coalition Against Domestic Violence, National Endowment for Financial Education, & Intuit (2002). *Hope and power for your personal finances: A rebuilding guide following domestic violence*. Washington, DC: National Coalition Against Domestic Violence.
- New York City Domestic Violence Economic Justice Taskforce. (n.d.). *Financial safety planning: Best practices for domestic violence service providers*. New York, NY: Author.
- Orloff, A. S. (2009). Gendering a comparative analysis of welfare states: an unfinished agenda. *Sociological Theory*, 27(3), 317-343.

- Park, I. & Schutz, R. W. (2005). An introduction to latent growth models: Analysis of repeated measures of physical performance data. *Research Quarterly for Exercise* and Sport, 76(2), 176-192.
- Parrotta, J. L. & Johnson, P. J. (1998). The impact of financial attitudes and knowledge on financial management and satisfaction of recently married individuals. *Journal* of Financial Counseling and Planning, 9(2), 59-75.
- Peled, E. & Krigel, K. (2016). The path to economic independence among survivors of intimate partner violence: A critical review of literature and courses for action. *Aggression and Violent Behavior*, 31, 127-135.
- Pentz, M. A. & Chou, C. P. (1994). Measurement invariance in longitudinal clinical research assuming change from development and intervention. *Journal of Consulting and Clinical Psychology*, 62(3), 450-462.
- Perkins, D. D. (1995). Speaking truth to power: Empowerment ideology as social intervention and policy. *American Journal of Community Psychology*, 23(5), 765-794.
- Peterson, J. (1987). The feminization of poverty. *Journal of Economic Issues*, 21(1), 329-337.
- Peterson, N. A. (2014). Empowerment theory: Clarifying the nature of higher-order multidimensional constructs. *American Journal of Community Psychology*, 53(1-2), 96-108.
- Peterson, N. A. & Hughey, J. (2004). Social cohesion and intrapersonal empowerment: Gender as moderator. *Health Education Research*, *19*(5), 533-542.
- Peterson, N. A., & Zimmerman, M. A. (2004). Beyond the individual: Toward a nomological network of organizational empowerment. *American Journal of Community Psychology*, 34(1-2), 129-145.
- Pierson, C. (1997). *Beyond the welfare state: The new political economy of welfare* (3rd ed.). University Park, PA: The Pennsylvania State University Press.
- Plummer, S. B. (2007). Victims' perspectives on the process of seeking a protective order: Predictors of perceived empowerment. (Unpublished doctoral dissertation). Virginia Commonwealth University, Richmond, VA.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24(1), 1-24.

- Postmus, J. L. (2010). Economic empowerment of domestic violence survivors.
 Harrisburg, PA: VAWnet, a project of the National Resource Center on Domestic Violence, Pennsylvania Coalition Against Domestic Violence.
- Postmus, J. L., Hetling, A., & Hoge, G. L. (2013a). Evaluating the impact of the "Moving Ahead Through Financial Management" curriculum: A randomized control study: Final report – Survivor interview data. New Brunswick, NJ: Rutgers University, School of Social Work, Center on Violence Against Women & Children.
- Postmus, J. L. & Plummer, S. B. (2010). Validating the Allstate Foundation's national model on helping survivors of violence achieve economic self-sufficiency: Final Report. New Brunswick, NJ: Rutgers University, School of Social Work, Center on Violence Against Women & Children.
- Postmus, J. L., Plummer, S., McMahon, S., Murshid, N. S. & Kim, M. S. (2012). Understanding economic abuse in the lives of survivors. *Journal of Interpersonal Violence*, 27(3), 411-430.
- Postmus, J. L., Plummer, S., McMahon, S., & Zurlo, K. A. (2013b). Financial literacy: Building economic empowerment with survivors of violence. *Journal of Family Economic Issues*, 34(3), 275-284.
- Postmus, J. L., Hetling, A., & Hoge, G. L. (2015). Evaluating a financial education curriculum as an intervention to improve financial behaviors and financial wellbeing of survivors of domestic violence: Results from a longitudinal randomized controlled study. *Journal of Consumer Affairs*, 49(1), 250-266.
- Prilleltensky, I., & Gonick, L. S. (1994). The discourse of oppression in the social sciences: Past, present, and future. In E. J. Trickett (Ed.), *Human diversity: Perspectives on people in context* (pp. 145-177). San Francisco: Jossey-Bass.
- Raj, A. & Silverman, J. (2002). Violence against immigrant women: The roles of culture, context, and legal immigrant status on intimate partner violence. *Violence Against Women*, 8(3), 367-398.
- Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*, 9(1), 1–25.
- Rappaport, J. (1984). Studies in empowerment: Introduction to the issue. *Prevention in Human Services*, *3*(2-3), 1-7.
- Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology*, 15(2), 121-148.

- Rappaport, J. (1995). Empowerment meets narrative: Listening to stories and creating settings. *American Journal of Community Psychology*, 23(5) 795–807.
- Redevelopment Opportunities for Women (2006). *Realizing your economic action plan.* Saint Louis, MO: Family Resource Center.
- Resendez, M. G., Quist, R. M., & Matshazi, D. G. (2000). A longitudinal analysis of family empowerment and client outcomes. *Journal of Child and Family Studies*, 9(4), 449-460.
- Riger, S. (1984). Vehicles for empowerment: The case of feminist movement organizations. *Prevention in Human Services*, *3*(2-3), 99-117.
- Riger, S. (1993). What's wrong with empowerment? *American Journal of Community Psychology*, *21*(3), 279-292.
- Rissel, C. (1994). Empowerment: The holy grail of health promotion? *Health Promotion International*, 9(1), 39-47.
- Rodrigues, M., Menezes, I., & Ferreira, P. D. (2018). Validating the formative nature of psychological empowerment construct: Testing cognitive, emotional, behavioral, and relational empowerment components. *Journal of Community Psychology*, 46(1), 58-78.
- Royston, P., & White, I. R. (2011). Multiple imputation by chained equations (MICE): implementation in Stata. *Journal of Statistical Software*, 45(4), 1-20.
- Sanders, C. K. (2016). Promoting financial capability of incarcerated women for community reentry: A call to social workers. *Journal of Community Practice*, 24(4), 389-409.
- Sanders, C. K., & Schnabel, M. (2006). Organizing for economic empowerment of battered women: Women's savings accounts. *Journal of Community Practice*, 14(3), 47–68.
- Sanders, C. K., Weaver, T. L., & Schnabel, M. (2007). Economic education for battered women: An evaluation of outcomes. *Affilia*, 22(3), 240-254.
- Saulnier, C. F. (1996). *Feminist theories and social work: Approaches and applications*. Binghamton, NY: Haworth Press.
- Schafer, J. L. (2010). Analysis of incomplete multivariate data. Boca Raton, FL: CRC Press.

- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright & M. Johnston (Eds.), Measures in health psychology: A user's portfolio. Causal and control beliefs (pp. 35-37). Windsor, England: NFER-NELSON.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasiexperimental designs for generalized causal inference. Belmont, CA: Wadsworth Cengage Learning.
- Shepard, M., & Pence, E. (1988). The effect of battering on the employment status of women. *Affilia*, *3*(2), 55-61.
- Shobe, M. A., & Dienemann, J. (2007). Intimate partner violence in the United States: An ecological approach to prevention and treatment. *Social Policy and Society*, 7(2), 185–195.
- Silva-Martinez, E., Stylianou, A. M., Hoge, G. L., Plummer, S., McMahon, S., & Postmus, J. L. (2016). Implementing a financial management curriculum with survivors of IPV: Exploring advocates' experiences. *Affilia*, 31(1), 112-128.
- Singh, N. N., Curtis, W. J., Ellis, C. R., Nicholson, M. W., Villani, T. M., & Wechsler, H. A. (1995). Psychometric analysis of the family empowerment scale. *Journal of Emotional and Behavioral Disorders*, 3(2), 85-91.
- Singh, N. N., Curtis, W. J., Ellis, C. R., Wechsler, H. A., Best, A. M., & Cohen, R. (1997). Empowerment status of families whose children have serious emotional disturbance and attention-deficit/hyperactivity disorder. *Journal of Emotional and Behavioral Disorders*, 5(4), 223-229.
- Solomon, B. B. (1976). *Black empowerment: Social work in oppressed communities*. New York, New York: Columbia University Press.
- Social Science Computing Cooperative. (2012). Multiple imputation in Stata: Introduction. Retrieved from University of Wisconsin, Madison – SSCC Knowledge Base: http://www.ssc.wisc.edu/sscc/pubs/stata_mi_intro.htm
- Speer, P. W., & Peterson, N. A. (2000). Psychometric properties of an empowerment scale: Testing cognitive, emotional, and behavioral domains. *Social Work Research*, 24(2), 109-118.
- Stark, E. (2007). *Coercive control: How men entrap women in personal life*. New York, NY: Oxford University Press.

- Taket, A., Nurse, J., Smith, K., Watson, J., Shakespeare, J., Lavis, V., ... & Feder, G. (2003). Routinely asking women about domestic violence in health settings. *BMJ*, 327(7416), 673-676.
- Tolman, R. M., & Raphael, J. (2000). A review of research on welfare and domestic violence. *Journal of Social Issues*, *56*(4), 655-682.
- Truman, J. L. & Morgan, R. E. (2014). Special report: Nonfatal domestic violence, 2003-2012. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- Tucker, J. & Lowell, C. (2016). *National snapshot: Poverty among women and families*, 2015. Washington, DC: National Women's Law Center.
- Turner, S. G. and Maschi, T. M. (2015). Feminist and empowerment theory and social work practice. *Journal of Social Work Practice*, 29(2), 151-162.
- Vandiver, V. L., Jordan, C., Keopraseuth, K. O., & Yu, M. (1995). Family empowerment and service satisfaction: An exploratory study of Laotian families who care for a family member with mental illness. *Psychiatric Rehabilitation Journal*, 19(1), 47-54.
- Vitt, L. A., Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, J. K., & Ward, J. (2000). Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S. Middleburg, VA: Institute for Socio-Financial Studies.
- VonDeLinde, K. M. C. (2002). How are domestic violence programs meeting the economic needs of battered women in Iowa? An assessment and recommendations. Building Comprehensive Solutions to Domestic Violence Publication, 16. Harrisburg, PA: National Resource Center on Domestic Violence.
- Voth Schrag, R. J. (2015). Economic abuse and later material hardship: Is depression a mediator? *Affilia*, *30*(3), 341-351.
- Vyas, S., & Watts, C. (2009). How does economic empowerment affect women's risk of intimate partner violence in low and middle income countries? A systematic review of published evidence. *Journal of International Development*, 21(5), 577-602.
- Warrener, C., Koivunen, J. M., & Postmus, J. L. (2013). Economic self-sufficiency among divorced women: Impact of depression, abuse, and efficacy. *Journal of Divorce & Remarriage*, 54(2), 163-175.

- Weaver, T. L., Sanders, C. K., Campbell, C. L., & Schnabel, M. (2009). Development and preliminary psychometric evaluation of the domestic violence—related financial issues scale (DV-FI). *Journal of Interpersonal Violence*, 24(4), 569-585.
- White, I. R., Royston, P., & Wood, A. M. (2011). Multiple imputation using chained equations: Issues and guidance for practice. *Statistics in Medicine*, *30*(4), 377-399.
- Wolf, E. J., Harrington, K. M., Clark, S. L., & Miller, M. W. (2013). Sample size requirements for structural equation models: An evaluation of power, bias, and solution propriety. *Educational and Psychological Measurement*, 73(6), 913-934.
- World Health Organization & London School of Hygiene and Tropical Medicine. (2010). Preventing intimate partner and sexual violence against women: Taking action and generating evidence. Geneva: Author.
- Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, *34*(6), 806-838.
- Zimmerman, M. A. (1990). Taking aim on empowerment research: On the distinction between individual and psychological conceptions. *American Journal of Community Psychology*, 18(1), 169-177.
- Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, 23(5), 581-599.