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The Revised Scale of Economic Abuse (SEA2): Development and Initial Psychometric Testing of an Updated Measure of Economic Abuse in Intimate Relationships

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Objective: The purpose of this study was to advance the measurement of economic abuse by developing an updated version of the Scale of Economic Abuse that addresses key limitations of existing instruments. Building on the original Scale of Economic Abuse, we constructed a 2-dimensional Revised Scale of Economic Abuse (SEA2) to measure abusers' use of economic restriction and economic exploitation to exert control over the economic domain of their partners' lives. **Method:** Using data collected through a survey of 248 women seeking services for intimate partner violence (IPV), we examined the factor structure of the 14-item SEA2 to test the psychometric soundness of the 2-dimensional conceptualization. We also performed an initial test of the instrument's construct validity by examining its relationship with closely associated constructs, material dependence on the abuser and outstanding debt. **Results:** Confirmatory factor analysis provided support for the 2-factor structure of the SEA2. Regression analysis results suggested that the SEA2 measures an economic dimension of IPV as intended and provided initial evidence that the 2 subscales measure distinct forms of economic abuse. **Conclusion:** The SEA2 appears to be a psychometrically sound instrument for measuring the economic abuse construct. Researchers can use this instrument to further our understanding of the correlates and consequences of this distinct form of IPV. Practitioners could use the SEA2 to assess the types and extent of economic abuse their clients experienced. The substantive findings of the study also have implications for practice and policy.

Keywords: economic abuse, measurement, intimate partner violence, coercive control, domestic violence

Intimate partner violence (IPV) committed against women is a widespread problem and significant public health concern (Black et al., 2011). IPV is "a pattern of abusive behavior used by one partner to gain and maintain power and control over another intimate partner" (U.S. Department of Justice, 2011). The behaviors include physical, sexual, psychological, or economic threats or actions. Decades of research have produced a substantial body of literature on the correlates and consequences of physical and psychological forms of abuse. More

recently, researchers have turned their attention to understanding and addressing economic abuse. Economic abuse involves behaviors that control a person's ability to acquire, use, or maintain economic resources, thus threatening their economic security and potential for self-sufficiency (Adams, Sullivan, Bybee, & Greeson, 2008). These behaviors began to surface in the violence against women literature in the 1970s (Walker, 1979). The term "economic abuse" first appeared in the late 1980s (Pence & Paymar, 1986). In 2008, Adams and colleagues produced the first instrument to measure economic abuse, the Scale of Economic Abuse (SEA). That study and others since have demonstrated that economic abuse is a distinct form of IPV that has severe negative effects on women's lives (Adams, Beeble, & Gregory, 2015; Adams et al., 2008; Stylianou, Postmus, & McMahon, 2013). In 2016, Postmus and colleagues published a revised version of the SEA, called the SEA-12, with fewer items and a different factor structure than the original instrument (Postmus, Plummer, & Stylianou, 2016). Both the original SEA and the SEA-12 have limitations that need to be addressed to move the field forward. The purpose of this study was to advance the measurement of economic abuse by developing and validating an updated version of the SEA.

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Literature Review

Research on economic abuse has burgeoned in the past decade. We now know that economic abuse is distinct from and occurs as frequently in help-seeking samples as physical and psychological abuse (Adams et al., 2008, 2015; Stylianou et al., 2013). We also know that economic abuse has detrimental consequences for victims' economic and psychological well-being. Studies show that economic abuse is associated with reduced economic self-sufficiency, increased financial strain, increased material hardship, and reduced access to financial resources (Adams et al., 2008, 2015; Hetling, Stylianou, & Postmus, 2015; Postmus, Plummer, McMahon, Murshid, & Kim, 2012). Recently, economic abuse has been linked to increased depression and anxiety symptoms and reduced quality of life (Adams & Beeble, 2018; Haj-Yahia, 2000; Postmus, Huang, & Mathisen-Stylianou, 2012; Voth Schrag, 2015).

While the knowledge base is growing, there remains much to learn, and measurement is vital to that endeavor. In 2008, Adams and colleagues developed the first comprehensive measure of economic abuse, the SEA (Adams et al., 2008). They used the IPV literature and conversations with researchers, advocates, and survivors to generate an initial pool of 120 items capturing economically abusive behaviors. With data from a sample of 103 service-seeking IPV survivors, they used an iterative conceptual and statistical process to reduce the initial pool of items to a 28-item scale. Exploratory factor analysis indicated that a two-factor solution was the best fit for the data. One factor, consisting of 17 items, was labeled "economic control." The second factor, consisting of 11 items, was labeled "economic exploitation." In 2016, Postmus and colleagues published a revised version of the SEA (Postmus et al., 2016). They collected data from 120 women participating in a financial literacy program for IPV survivors. After a confirmatory factor analysis (CFA) of the factor structure of the SEA showed poor model fit, they conducted an exploratory factor analysis and arrived at a 12-item scale with three factors: economic control, economic exploitation, and employment sabotage. The current approaches to conceptualizing and measuring economic abuse have two key limitations that warrant attention. First, they do not sufficiently reflect the function of economic abuse as a mechanism of control. Second, they lack adequate conceptual coverage of abusers' use of the consumer credit system.

Economic Abuse as a Mechanism of Control

Coercive control theory posits a type of IPV that is rooted in abusers' desire to control their partners (Crossman & Hardesty, 2018; Dutton & Goodman, 2005; Stark, 2007). Abusers enact control by making demands and tacitly or explicitly threatening harm for failure to comply (Dutton, Goodman, & Schmidt, 2005). Threats deemed credible based on the abusers' past behavior compel victims to comply, subordinating their own interests, desires, and values. In this way, coercive control effectively limits women's autonomy or "space for action" (Sharp-Jeffs, Kelly, & Klein, 2018; Stark, 2007). Dutton and Goodman (2005) explained that resisting abusers' control requires tangible, social, and personal resources. Abusers wear down resistance by limiting and depleting these resources. This "wearing down of resistance" is central to maintaining control over time. As Dutton and Goodman stated, "When resistance is lower, compliance with coercive de-

mands is more likely since there are fewer resources to combat the pressure to comply" (p. 749).

Economic abuse is a component of coercive control (Dutton et al., 2005; Hamberger, Larsen, & Lehrner, 2017; Pence & Paymar, 1986; Stark, 2007). Abusers force their partners to make economic decisions that they might not have otherwise. For instance, abusers direct how their partners spend money, make them quit or not take a job, and demand that they put the household bills or credit in their name (Adams et al., 2008; Adams, Littwin, & Javorka, 2019; Chowbey, 2017; Haj-Yahia, 2000; Sanders, 2015). Abusers also control their partners by making economic decisions that affect their victims without their knowledge or consent. For instance, abusers refuse to include their partners' names on assets, take out credit in their partners' names, steal their partners' money and property, and withhold financial information (Adams et al., 2008, in press; Littwin, 2012; Sanders, 2015; Sharp, 2008). Within the broader context of coercive control, abusers create environments in which refusing their demands or questioning their behavior is dangerous. If told to provide receipts or change after making a purchase or "asked" to assume sole responsibility for a lease or utility service, the victim does so or risks harm. If the abuser hides bills that come in the mail or uses his partner's personal information to take out credit in her name without her knowledge and she suspects or discovers the bills or debt, confronting him—as one might do in a nonabusive relationship—means risking harm (Littwin, 2012; Sanders, 2015; Shoener, 2016). Ultimately, economic abuse is an effective control tactic because it limits women's economic resources, thereby restricting their autonomy/space for action and ability to combat the abuse (Dutton & Goodman, 2005; Sharp-Jeffs et al., 2018).

The function of economic abuse as a mechanism of control is reflected in the definition of economic abuse that Adams and colleagues (2008) constructed from the literature—"behaviors that *control* a woman's ability to acquire, use, or maintain economic resources, thus threatening her economic security and potential for self-sufficiency" (p. 565, emphasis added). Put another way, economic abuse involves exerting control over the economic domain of another's life. Despite the centrality of control to economic abuse, this is not well reflected in current conceptualizations. Both the SEA and SEA-12 are conceptualized as multidimensional scales with a distinct "economic control" dimension. This conceptualization suggests that the element of control applies to a subset of economically abusive behaviors when in fact it underlies all economically abusive behavior. Further, the item wording in the SEA and SEA-12 does not adequately capture the controlling nature of economically abusive tactics. Some items may inadvertently tap poor financial management behavior instead of abuse. For example, the measures ask respondents to report how frequently their partners would "spend the money you needed for rent or other bills." This behavior could reflect imprudent spending habits rather than an attempt to control one's partner. To address these limitations, we are proposing a two-dimensional conceptualization of economic abuse that more clearly articulates how both dimensions involve exercising control over the economic domain of another's life.

Economic restriction. The original economic control dimension of economic abuse captured the ways abusers keep their partners from accessing and using economic resources (Adams et al., 2008; Postmus et al., 2016). "Economic restriction" is a more

precise term for this set of tactics. It better distinguishes these tactics from the exploitive tactics abusers use to control their partners. Research shows that abusers restrict their partners' access to and use of a range of economic resources including income, financial information, and property. For instance, abusers limit their partners' access to and use of income by keeping them from working or taking their paychecks, hiding money, denying access to accounts, and dictating and monitoring spending (Adams et al., 2008; Brewster, 2003; Chowbey, 2017; Moe & Bell, 2004; Postmus et al., 2016; Sanders, 2015; Sharp, 2008). Abusers limit their partners' access to financial information about income, debt, and investments by doing things like intercepting and hiding the mail (Adams et al., 2008; Brewster, 2003; Littwin, 2012). Abusers impose limits on the use of property by doing things like hiding car keys or damaging their vehicle to prevent its use (Adams et al., 2008; Sanders, 2015). Economic restriction is an effective mechanism of control because it limits the victim's economic resources and forces her into a position of supplication. By restricting their partners' access to and use of income, financial information, and property, the abuser forcibly establishes an arrangement in which the victim is dependent on the abuser for financial and material resources.

Economic exploitation. In addition to restricting economic resources, abusers also control their partners through economic exploitation. Economic exploitation involves forcibly, coercively, or fraudulently using a partner's economic resources for one's own advantage (Adams et al., 2008, 2019). There are a number of ways abusers take advantage of their partners economically. Abusers "freeload" by demanding that the victim solely pay for household necessities, put their money in a joint bank account so the abuser can spend it freely, or use their money to buy the abuser goods or pay their bills (Adams et al., 2008; Anderson et al., 2003; Chowbey, 2017; Littwin, 2012; Sanders, 2015; Sharp, 2008). Another way abusers economically exploit their partners is by stealing their money or property. This can involve the abuser taking money from their partner's purse or wallet or a joint bank account without consent or taking the victim's property for their own use or liquidation (Adams et al., 2008; Anderson et al., 2003; Brewster, 2003; Chowbey, 2017; Sanders, 2015). In addition to free-loading and stealing, IPV victims also report that their partners exploit them by generating debt in their names through fraud and/or coercion (Adams et al., 2019; Littwin, 2012). Economic exploitation is an effective mechanism of control because it depletes the victim's economic resources. By forcing the victim to use their money or credit for the abuser's benefit or by taking the victim's assets or property for their own use, the abuser coercively establishes an arrangement in which the victim's economic resources are drained to their benefit, diminishing the victim's resources and compromising their economic well-being.

Capturing control with item wording. Along with clearly articulating the element of control in the conceptualization of the dimensions of economic abuse, grounding economic abuse in coercive control theory requires attending to how control is reflected in the measurement of the construct. In economically abusive relationships, abusers make economic decisions unilaterally and impose them on the victim through fraud, force, coercion, or manipulation (Anderson et al., 2003; Brewster, 2003; Littwin, 2012; Sanders, 2015; Stark, 2007). Items used to measure economic abuse need to better reflect this dynamic. For instance, in

the SEA and SEA-12, respondents are asked to report how often their partners "pay bills late or not pay bills that were in your name or in both of your names" and "spend the money you needed for rent or other bills." Such behaviors are potentially damaging, and in the context of abuse, the victim may not be able to intervene out of fear of reprisal (Sanders, 2015). However, absent further context, these items may not distinguish abusive from nonabusive behavior. It is possible that such items tap poor financial management practices rather than tactics to exercise control over the economic domain of a partner's life. To capture the controlling nature of economically abusive behavior, the wording of scale items should reflect the victim's lack of voice in the economic decision or freedom to choose or influence an economic course of action (Dutton & Goodman, 2005; Katz, 1997; Stark, 2007).

Abusers' Use of the Consumer Credit System

The SEA was developed over 10 years ago (Adams et al., 2008). At the time, there was empirical and anecdotal evidence that abusers generate debt in their partners' names. This behavior was captured in the SEA and SEA-12 by an item assessing the frequency with which an abusive partner would "build up debt under your name by doing things like use your credit card or run up the phone bill" and in the SEA with an item assessing the frequency with which an abusive partner would "force you to give him money or let him use your checkbook, ATM card, or credit card." We now know much more about this form of economic exploitation and the measurement should reflect this learning.

In her pioneering article "Coerced debt: The role of consumer credit in domestic violence," Littwin (2012) coined the term "coerced debt" to refer to all nonconsensual, credit-related transactions that occur in an intimate relationship where one partner uses coercive control to dominate the other partner. Through interviews with lawyers, researchers, and advocates, Littwin showed that abusers generate debt through fraudulent and coercive transactions. Abusers use their partners' personal information to fraudulently open credit cards, take out loans, or put leases, utilities, or phone services in their partners' name without their knowledge. They also use coercion to force their partners to use credit cards, take out loans, or put services in their own names when they would not have otherwise done so. Of the 55 professionals interviewed, 93% knew IPV victims who experienced coerced debt. For example, participants shared stories of victims whose partners forged their names on credit card offers or loan documents, coerced them to purchase items on credit, and required that household debts be in their names.

Since Littwin's original work, two other studies have provided evidence of coerced debt. In a qualitative study with 30 low-income IPV survivors participating in an economic development program, Sanders (2015) found a common theme among participants of accumulating debt and damaged credit because of abuse. She reported that, on average, women were US\$9,132 in debt, and in many cases, the abuse played a significant role. In another study, Adams and colleagues (2019) surveyed 1,863 women who called the National Domestic Violence Hotline in response to IPV. They found that 52% of the callers reported that their partner had put debt in their name via a coercive and/or a fraudulent transaction. Forty-three percent reported a coercive transaction; that is, an intimate partner coerced them into borrowing money or buying

something on credit when they did not want to. Twenty-two percent reported a fraudulent transaction; that is, they found out about debt or bills that their intimate partner had put in their name without their knowledge.

Recent research has expanded our understanding of this form of economic exploitation. We now know that the two items used in the SEA and SEA-12 do not adequately capture the concept. The item “build up debt under your name by doing things like use your credit card or run up the phone bill” limits attention to specific types of behavior, namely, using an existing credit card and running up a phone bill. “Force you to give him money or let him use your checkbook, ATM card, or credit card” conflates a debt-generating action with other forms of economic restriction and/or exploitation—taking one’s money. Research suggests that to ensure adequate conceptual coverage, the SEA needs to more fully capture abusers’ use of fraud and coercion to take out loans, buy items on credit, or put bills in their partners’ names.

Current Study

The purpose of the current study is to advance the conceptualization and measurement of economic abuse by addressing key limitations of existing instruments. Building on the original SEA, we constructed a two-dimensional Scale of Economic Abuse (SEA2), capturing economic restriction and economic exploitation. Our research questions and hypotheses are as follows:

Research Question 1: Is the factor structure of the two-dimensional measure psychometrically sound?

Research Question 2: Do the SEA2 and its subscales demonstrate internal consistency reliability?

Research Question 3: Are the SEA2 and its subscales valid measures of the constructs they are designed to measure?

Hypothesis 1: The SEA2 will be significantly positively associated with material dependence on the abuser after controlling for physical and psychological abuse.

Hypothesis 2: After controlling for economic exploitation, economic restriction will have a positive association with material dependence on the abuser.

Hypothesis 3: The SEA2 will be significantly positively associated with outstanding debt, an indicator of resource depletion.

Hypothesis 4: After controlling for economic restriction, economic exploitation will have a significant positive relationship with outstanding debt.

Method

SEA2 Item Pool Generation

An initial pool of 46 items for the SEA2 was generated from several sources. We started with the original 28 items from the SEA and added eight new items with revised wording to better reflect the element of control and ensure universal applicability. For example, the SEA included “pawn your property or shared

property.” We added “pawn your property or shared property when you didn’t want him to” to tap the controlling nature of the act. Also, the SEA included a number of work interference items that would only be applicable to women who were working, such as “do things to keep you from going to your job” and “demand that you quit your job.” Including items that are not applicable to a subgroup of participants detrimentally affects the measure’s construct validity (DeVellis, 2017). We added “keep you from having a job or going to work” to capture work interference in a way that applies regardless of whether the participant had a job. In addition to adding revised versions of original items, we wrote 10 new items based on the literature and conversations with survivors and advocates. The new items largely tapped exploitive tactics not well assessed with the SEA, such as “Make you use your money to buy him things or pay his bills when you didn’t want to” and “Take out a loan or buy something on credit in your name without your permission.” Each of the 46 items was categorized as either economic restriction or economic exploitation. The initial pool included 22 economic restriction items and 24 economic exploitation items rated on a 5-point Likert-type scale with response options of 0 = *never*, 1 = *hardly ever*, 2 = *sometimes*, 3 = *often*, and 4 = *very often*, indicating the frequency with which an intimate partner engaged in the behavior during the relationship.

Other Measures

In addition to the initial pool of items for the SEA2, we used measures of psychological abuse, physical abuse, economic well-being, and demographic characteristics to validate the new measure.

Psychological Maltreatment of Women Inventory. We used the 14-item Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1999) to assess the degree of psychological abuse participants experienced in their relationship. Items were rated on a scale ranging from 0 (*never*) to 4 (*very frequently*). Examples of the items included “My partner called me names” and “My partner told me my feelings were irrational or crazy.” We computed a mean score for analyses ($M = 2.97$, $SD = .76$). The PMWI is a valid and reliable measure of psychological abuse used extensively in IPV research (Tolman, 1999). In this study, the instrument had an internal consistency coefficient of .90. Tolman (1999) showed that the PMWI differentiated between women with and without abusive partners, providing evidence of validity.

Modified Conflict Tactics Scale. The Conflict Tactics Scale (CTS) as modified by Sullivan, Basta, Tan, and Davidson (1992) was used to assess the frequency of physical violence experienced during the relationship. The modified CTS (Straus, 1979; Sullivan et al., 1992) contains 23 items rated on a scale ranging from 0 (*never*) to 6 (*more than four times per week*). Example items include “Pushed or shoved you,” “Choked or strangled you,” and “Forced sexual activity.” We computed a mean score for analyses ($M = 1.38$, $SD = 1.14$). This scale has demonstrated good internal consistency in other studies with service-seeking IPV victims (e.g., $\alpha = .92$, Goodkind, Sullivan, & Bybee, 2004; $\alpha = .90$ to .93, Adams et al., 2015). In this sample, the reliability coefficient was .95. The CTS is one of the most widely used measures to assess IPV and has been shown to be valid and reliable across diverse samples (Lucente, Fals-Stewart, Richards, & Goscha, 2001; Strauss & Mickey, 2012).

Material dependence. Material dependence on the abuser was assessed with the item “During your relationship, to what extent did you rely on the financial resources from the person who hurt you in order to have basic necessities (for example, housing, food, transportation)?” Response options were “not at all,” “a little,” “somewhat,” “quite a bit,” and “completely,” coded 0 to 4, respectively ($M = 2.39$, $SD = 1.4$). This item was written for this study. Therefore, its construct validity has not been tested.

Outstanding debt. To assess outstanding debt, participants were asked if they currently owed money (yes/no) for the following: (a) unpaid rent or mortgage, (b) an unpaid utility bill, (c) an unpaid medical bill, (d) a student loan, (e) a credit card bill, (f) a payday loan, and (g) a loan from family or a friend. We operationalized outstanding debt as the number of types of debt the participant owed. “Yes” responses were summed to arrive at a score ranging from 0 to 7 ($M = 2.73$, $SD = 1.9$). This measure was created for this study. Therefore, its construct validity has not been tested.

Control variables. Four demographic variables were included as controls owing to potential associations with the variables of interest. These included the participant’s age in years, whether the participant identified their racial background as “White” (coded 0 = no, 1 = yes), the number of children they had under age 18, and whether the participant ever lived with their abusive partner (coded 0 = no, 1 = yes).

Participants

Participants were recruited from domestic violence (DV) service organizations in a Midwestern state. The state-wide DV coalition provided us with a de-identified list of 26 organizations. The list included the region of the state in which the organization was located, the types of services offered, the number of adult clients served annually, and the monthly income of clients served. Selecting potential sites from the list, we sought diversity in geographic location, types of services provided, and client income. We excluded sites that primarily served non-English-speaking clients owing to resource constraints that prohibited translation of study materials. In total, we identified 14 potential sites. The state coalition sent an e-mail to the executive directors of those organizations to introduce the study. We made contact with those who expressed interest to provide details about the study procedures. In the end, 11 DV service organizations agreed to partner with us on this study.

Using an instruction sheet that we provided, the staff of the DV service organizations told clients about the study, screened for eligibility, and invited them to participate. To be eligible for the study, clients had to be female, at least 18 years old, English-speaking, and in an intimate relationship with someone who was abusive in the past 6 months. The 6-month time frame was chosen to maximize recall of events that took place during the relationship.

A total of 248 women participated in the study. They ranged in age from 19 to 79 years ($M = 36$, $SD = 11.28$). Over half (61%) of the women surveyed had children. The number of children ranged from zero to six ($M = 1.43$, $SD = 1.52$). Forty-three percent reported their race/ethnicity as White, 28% as Black, 18% as Hispanic/Latina, 9% as biracial or multiracial, 1% as Native American, and 0.4% as Asian. Another 0.4% indicated that their

race/ethnicity was not among the options provided. Most participants (83%) had at least a high school education. Thirty-one percent had completed trade school, college, or an advanced degree. Almost half (48%) of the sample was employed at the time of data collection. Twenty-six percent worked full-time, 16% worked part-time, and 6% worked sporadically. Over half (58%) of the sample had a yearly net household income of \$15,000 or less. Another 18% reported an annual household income of \$15,001–\$30,000, and 13% had an annual household income of \$30,001–\$50,000. Eleven percent reported a net household income of \$50,000 or more. The majority (93%) of women surveyed reported that their abusive partner was male, 6% said their partner was female, and 1% reported that their partner was transgender. Their relationship length ranged from 1 month to 45 years (average of 9 years), and almost all (94%) participants had lived with their partners at some point. Almost all of the participants experienced physical abuse (98%), and 100% experienced psychological abuse. Based on the number of latent factors, number of indicators, and the size of the factor loadings, 248 is a sufficient sample size to evaluate overall model fit and individual model parameters in the CFA (based on power of 80% or greater for all parameters; see Monte Carlo work by Wolf, Harrington, Clark, & Miller, 2013).

Procedures

Staff provided eligible clients with private space in which to complete a self-administered, paper questionnaire. The consent form appeared on the face-page of the questionnaire. The form instructed women who did not want to participate to place their blank questionnaire in the envelope, seal it, and return it to the staff person. The form directed women who were willing to participate to proceed to the first page of the questionnaire. The end of the questionnaire instructed participants to put the completed questionnaire in the envelope provided, seal it, and return it to the staff person. When the participant returned the questionnaire, the staff person gave her a \$5 gift card to thank her for her time. The lead author’s university institutional review board approved the study procedures.

Results

Final Scale Construction

We used an iterative statistical and conceptual process to construct the final SEA2. Our aim was to produce a brief measure that maintained conceptual coverage. We also sought to ensure that items were widely applicable. Five items were excluded because they did not apply to all participants, resulting in a high degree of missingness. For example, “steal your car keys or take your car so you couldn’t go look for a job or go to a job interview” was excluded because almost 20% of the sample marked “not applicable” or left the question blank. Fifteen items were excluded owing to a lack of clear conceptual fit or weak statistical fit with one of the subscales. For example, “take your paycheck, financial aid check, tax refund check, disability payment or other support payments from you” and “take money from you without your permission” were excluded because these behaviors could be classified as economic restriction or economic exploitation. Twelve items were excluded owing to conceptual redundancy with better performing

items. For example, “demand to know how money was spent” was dropped because it was conceptually similar to “demand that you give him/her receipts or change when you spent money,” which had a higher item-total correlation. Through this process, we reduced the initial pool of 46 items to the 14-item SEA2.

Participants' Experiences of Economic Abuse as Measured by the SEA2

Of the 248 women surveyed, 96% had an abusive partner who perpetrated at least one tactic of economic abuse as measured by the 14-item SEA2. Ninety-one percent experienced economic restriction. The most commonly used economic restriction tactics were “decide how you could spend money rather than letting you spend it how you saw fit” (74%), “make you ask him/her for money” (73%), and “keep financial information from you” (67%). Eighty-three percent experienced economic exploitation. The three most common exploitive tactics were “spend his/her money however he/she wanted while your money went to pay for necessities” (71%), “make you use your money to buy him/her things or pay his/her bills when you didn't want to” (54%), and “steal your property” (54%). The descriptive statistics for the SEA2 items are presented in Table 1.

Psychometric Assessment of the SEA2

To prepare the data for the psychometric analysis, we performed missing data analysis and imputed missing data. The amount of missing data was low. Only 1.50% of values were missing for the 46 potential SEA2 items and 1.45% of values were missing for the full dataset. Missing data were imputed using expectation maximization (Schafer & Graham, 2002). Other variables that were not analyzed in the study were also included in the matrix to assist in imputation. Little's missing completely at random test was not significant, $\chi^2(9396) = 9386.76, p = .53$, suggesting that the data could be treated as missing completely at random.

Factor structure (Research Question 1). After reducing the item pool to the 14-item SEA2, we conducted a CFA to test the proposed two-factor structure. A two-factor CFA model was tested in Amos Version 23 using maximum likelihood estimation. Economic restriction and economic exploitation were modeled as correlated, latent constructs, each with seven indicators (see Table 1 for the final 14 items and the subscale they were assigned to). Model fit was assessed by chi-square, root mean square error of approximation (RMSEA), and standardized root mean squared residual (SRMR) statistics. The chi-square likelihood ratio test was used to compare relative fit of alternative nested models.

The CFA provided support for the proposed two-factor structure of the SEA2. We tested an initial two-factor model, $\chi^2(76) = 215.52, p = .00, RMSEA = .086, SRMR = .05$, and then conducted post hoc modifications to improve model fit. Specifically, covariances were added between four pairs of residuals when there was solid conceptual justification for doing so, owing to shared item wording (e.g., multiple items about loans, shared wording applied to three pairs of residuals) or shared tactics across the items (multiple items involving hiding something, one pair of residuals). The final model demonstrated strong model fit, $\chi^2(72) = 125.84, p = .00, RMSEA = .055, SRMR = .044$. See Table 1 for CFA results. This model represented a statistically significant improvement in model fit over and above a one-factor model, suggesting the two-factor model is preferable (change in $\chi^2(1) = 153.46, p = .00$).

Reliability (Research Question 2). Internal consistency was assessed by Cronbach's α and by standardized loadings from the CFA. The SEA2 and both subscales showed strong internal consistency. Cronbach's α was .89 for the seven-item Economic Exploitation subscale, .91 for the seven-item Economic Restriction subscale, and .93 for the full scale. Standardized regression loadings in the CFA were all high, indicating strong, positive relationships between each item and its respective factor. Standardized

Table 1
Descriptive Statistics and Standardized Factor Loadings From CFA of the SEA2

Item	%	<i>M</i>	<i>SD</i>	β	<i>SE</i>
Economic Restriction	91	1.82	1.30	NA	NA
Decide how you could spend money rather than letting you spend it how you saw fit ^b	74	2.10	1.55	.782	.084
Make you ask him or her for money ^b	73	2.13	1.58	.674	.091
Keep financial information from you ^a	67	2.03	1.69	.720	.095
Keep you from having the money you needed to buy food, clothing, or other necessities	63	1.72	1.58	.889	.080
Hide money so that you could not find it ^a	60	1.74	1.66	.809	.089
Demand that you give him/her receipts or change when you spent money	60	1.59	1.60	.816	.085
Keep you from having a job or going to work	52	1.41	1.57	.696	.089
Economic Exploitation	83	1.26	1.15	NA	NA
Spend his/her money however he/she wanted while your money went to pay for necessities ^c	71	2.13	1.63	.672	.097
Make you use your money to buy him/her things or pay his/her bills when you didn't want to ^c	54	1.41	1.54	.787	.085
Steal your property	54	1.36	1.50	.655	.089
Put bills in your name, leaving you to pay them	44	1.13	1.48	.730	.084
Force or pressure you to give him/her your savings or other assets	42	1.13	1.53	.739	.087
Make you take out a loan or buy something on credit when you didn't want to ^d	37	.93	1.39	.688	.081
Take out a loan or buy something on credit in your name without your permission ^d	29	.73	1.31	.778	.073

Note. SEA2 = Revised Scale of Economic Abuse; CFA = confirmatory factor analysis. Items rated on a 5-point Likert-type scale with response options of 0 = *never*, 1 = *hardly ever*, 2 = *sometimes*, 3 = *often*, and 4 = *very often*. The percentage (%) reflects the percent who responded 1 (*hardly ever*) to 4 (*very often*). Descriptive statistics were calculated with raw data. Factor loadings and error terms were calculated with imputed data. All factor loadings were statistically significant at $p < .01$. Shared superscripts indicate that the residuals for those items were allowed to covary in the final CFA model.

loadings ranged from .67 to .89 for Economic Restriction items and .66 to .79 for Economic Exploitation items (Table 1).

Validity (Research Question 3). Construct validity was assessed via the CFA, as well as additional correlation and regression analyses. The CFA provides evidence of construct validity by demonstrating that the hypothesized two-factor structure was sound. The CFA also showed a moderately high positive correlation between the economic restriction and economic exploitation latent variables, $r = .76$, $p = .00$, suggesting that they represent distinct, but strongly related, constructs. Furthermore, bivariate correlations that examined relationships between measures of economic abuse (the SEA2 and the subscales) and other forms of abuse (i.e., physical and psychological abuse) provide evidence of discriminant validity. The moderate correlations (r s range from .48 to .68) suggest the SEA2 and its subscales are related to, but distinct from, other forms of abuse (Table 2).

Regression analyses were also conducted to assess convergent validity by examining whether the full SEA2 and the Economic Restriction and Economic Exploitation subscales were associated with financial outcomes with which we would expect them to correlate: outstanding debt and material dependence on the abuser. We examined bivariate correlations between the outcome variables and demographic variables (ever lived with the abuser, participant age, race/ethnicity, and number of children under 18). Demographic variables that were significantly related to the outcome variables were included as control variables in the respective analyses. All regressions also controlled for physical and psychological abuse.

Regressions were conducted in SPSS on the imputed data set. Correlations between all variables used in the regressions are presented in Table 2. Findings provide support for the convergent validity of the subscales and the full SEA2.

Full SEA2 and Economic Restriction subscale predicting material dependence. We expected that the SEA2 would be significantly positively associated with material dependence (Hypothesis 1), and that economic restriction would be significantly positively associated with material dependence after accounting for the effects of economic exploitation (Hypothesis 2). Therefore, the first regression model (Regression 1) examined whether the SEA2 was associated with material dependence, and the second model (Regression 2) examined whether economic restriction was

associated with material dependence after controlling for economic exploitation. Data were inspected for outliers, linearity, heteroscedasticity, normality of residuals, multicollinearity, and influential cases. Data violated the assumptions of heteroscedasticity and normality of residuals. Therefore, we conducted bootstrapped regression using bias-corrected confidence intervals (CIs; Wright, London, & Field, 2011). Contrary to our hypothesis, higher scores on the SEA2 were not significantly associated with higher ratings of material dependence on the abuser (Regression 1; $b = .221$, 95% CI [.003, .451], $p = .05$). However, consistent with our hypothesis, we found that economic restriction was significantly positively associated with material dependence after controlling for economic exploitation (Regression 2; $b = .545$, 95% CI [.335, .746], $p = .00$). We also found that after controlling for economic restriction, the unique variance left over in economic exploitation was negatively associated with material dependence on the abuser (Regression 2; $b = -.362$, 95% CI [-.597, -.140], $p = .00$; Tables 3 and 4).

Full SEA2 and Economic Exploitation subscale predicting outstanding debt. We expected that the full SEA2 would be significantly positively associated with outstanding debt (Hypothesis 3), and that economic exploitation would be significantly positively associated with outstanding debt after accounting for the effects of economic restriction (Hypothesis 4). Therefore, the third model (Regression 3) examined whether the SEA2 was associated with outstanding debt, and the fourth model (Regression 4) examined whether economic exploitation was associated with outstanding debt after controlling for economic restriction. Data were inspected for outliers, linearity, heteroscedasticity, normality of residuals, multicollinearity, and influential cases. Both regressions had cases with high leverage values, and therefore, models were rerun without high leverage cases. The pattern of statistically significant results did not change, and therefore, all cases were retained in the analyses. All other assumptions were met. Results supported our hypotheses, providing evidence of the construct validity of the SEA2 and the Economic Exploitation subscale. Specifically, the SEA2 was significantly positively associated with outstanding debt (Regression 3; $b = .359$, $SE = .15$, $p = .01$), and economic exploitation was significantly positively associated with outstanding debt after controlling for economic restriction (Regression 4; $b = .554$, $SE = .15$, $p = .00$; Tables 5 and 6).

Table 2
Bivariate Correlations Among Variables Used to Assess the Construct Validity of the SEA2 and the Subscales

Variables	1	2	3	4	5	6	7	8	9	10
1. SEA2										
2. SEA2-Restriction	.928**									
3. SEA2-Exploitation	.906**	.683**								
4. Outstanding debt	.169**	.094	.224**							
5. Material dependence	.187**	.290**	.038	.139*						
6. Physical abuse	.554**	.480**	.540**	.047	.050					
7. Psychological abuse	.620**	.632**	.499**	.086	.145*	.516**				
8. Participant age	.064	.119	-.008	-.007	.090	-.160*	-.018			
9. Number of children <18	-.094	-.098	-.073	.037	.007	-.108	-.097	-.112		
10. Race	.006	.018	-.009	.021	.143*	-.223**	.005	.121	-.104	
11. Ever lived with abuser	.080	.071	.077	.044	.070	.118	.069	-.116	.065	.084

Note. SEA2 = Revised Scale of Economic Abuse. Race was coded as 0 = racial/ethnic minority, 1 = White. Ever lived with abuser was coded as 0 = never lived with the abuser, 1 = did live with the abuser.

* $p < .05$. ** $p < .01$.

Table 3
Results of Bootstrapped Regression Analysis Examining SEA2 as Predictor of Material Dependence on the Abuser

Variables	<i>b</i>	<i>SE</i>	95% bias-corrected CI	<i>p</i>
SEA2	.221	.113	.003, .451	.050
Physical abuse	-.061	.097	-.253, .133	.534
Psychological abuse	.111	.164	-.215, .404	.499
Race	.369	.189	-.005, .742	.052

Note. SEA2 = Revised Scale of Economic Abuse; CI = confidence interval. Race was coded as 0 = racial/ethnic minority, 1 = White. $R^2 = .058$.

Discussion

The purpose of this study was to develop the SEA2, an updated version of the SEA (Adams et al., 2008). We developed an initial pool of items from the original SEA, the literature, and conversations with survivors, advocates, and researchers. With data from 248 women seeking services for IPV, we used an iterative conceptual and statistical process to arrive at a 14-item scale with two dimensions: economic restriction and economic exploitation. The Economic Restriction subscale included seven items that capture control tactics abusers use to impose limits on their partners' economic resources. The Economic Exploitation subscale consisted of seven items that capture ways that abusers exert control by using their partners' economic resources for their own advantage. CFA supported the proposed two-factor structure (Research Question 1). This means economic abuse tactics can be meaningfully categorized into two distinct dimensions, economic restriction and economic exploitation, which belong to the higher order economic abuse construct. The measures of internal consistency indicated that the full SEA2 and its subscales are reliable measures of economic abuse and its dimensions (Research Question 2). It is also important to note that, consistent with prior studies, this research shows that economic abuse is associated with yet distinct from physical and psychological forms of IPV (Adams et al., 2008; Stylianou et al., 2013).

Prior research shows that economic abuse is related to negative economic outcomes for victims (Adams et al., 2008, 2015; Hetling et al., 2015; Postmus et al., 2012). If the SEA2 is a measure of economic abuse, then it should be related to economic variables. The current study provided initial evidence of the construct validity of the SEA2 and the two subscales (Research Question 3). We

Table 4
Results of Bootstrapped Regression Analysis Examining Economic Restriction as Predictor of Material Dependence on the Abuser

Variables	<i>B</i>	<i>SE</i>	95% bias-corrected CI	<i>p</i>
Economic restriction	.545	.097	.335, .746	.000
Economic exploitation	-.362	.115	-.597, -.140	.002
Physical abuse	.020	.101	-.183, .228	.841
Psychological abuse	-.063	.163	-.386, .228	.695
Race	.381	.178	.032, .725	.032

Note. Race was coded as 0 = racial/ethnic minority, 1 = White. $R^2 = .150$. CI = confidence interval.

Table 5
Results of Regression Analysis Examining SEA2 as Predictor of Outstanding Debt

Variables	<i>b</i>	<i>SE</i>	β	<i>p</i>
SEA2	.359	.145	.212	.014
Physical abuse	-.107	.131	-.064	.414
Psychological abuse	-.030	.207	-.012	.885

Note. SEA2 = Revised Scale of Economic Abuse. $R^2 = .032$.

expected a significant relationship between the full SEA2 and material dependence on the abuser (Hypothesis 1). The finding showed a trend-level relationship ($p = .050$) between the two variables. Examination of the relationships between the two subscales and material dependence sheds some light on this finding. Bivariate correlations indicated that economic restriction was positively related to material dependence but showed no relationship between economic exploitation and material dependence. As hypothesized, with both subscales in the regression model, we found that economic restriction was still significantly positively related to material dependence on the abuser after accounting for the effects of economic exploitation (Hypothesis 2). However, after removing the shared variance with economic restriction, economic exploitation was significantly negatively associated with material dependence, with more exploitation related to less material dependence on the abuser. Although not hypothesized, this finding is logical. If an abuser is exploiting their partner's resources, the direction of the dependence is reversed—the abuser is relying on the victim's resources rather than the other way around. This dynamic may explain why the full SEA2 is not significantly related to material dependence.

We also tested the construct validity of the SEA2 by examining its relationship with outstanding debt as an indicator of resource depletion. We expected that the full SEA2 would be significantly positively related to outstanding debt after controlling for the effects of physical and psychological abuse (Hypothesis 3). The findings supported this hypothesis. The more economic abuse women experienced, the more types of debt they owed. We further hypothesized that economic exploitation would be significantly positively related to outstanding debt after controlling for economic restriction (Hypothesis 4). The findings supported this hypothesis. The more abusers used their partners' economic resources for their own advantage, the more types of debt their participants owed.

Overall, these findings suggest that the SEA2 measures an economic dimension of IPV as intended. Further, these results

Table 6
Results of Regression Analysis Examining Economic Exploitation as Predictor of Outstanding Debt

Variables	<i>b</i>	<i>SE</i>	β	<i>p</i>
Economic exploitation	.554	.149	.334	.000
Economic restriction	-.165	.140	-.113	.240
Physical abuse	-.169	.131	-.102	.196
Psychological abuse	.108	.210	.043	.608

Note. $R^2 = .063$.

provide initial evidence that the two SEA2 subscales measure distinct forms of economic abuse, one capturing restriction of economic resources and one capturing exploitation of economic resources.

Limitations

The study findings need to be considered in light of its limitations. First, the CFA was conducted on the same sample of data that was used to reduce the item pool. Future research should continue to examine the factor structure and validity of the scale, particularly by attempting to replicate the factor structure within a new sample. Second, a number of sampling issues affect the generalizability of the study findings. The study participants were all seeking services for IPV in one Midwestern U.S. state. It is possible that the nature and effects of economic abuse differ for women who have not sought formal help, or those who seek help from organizations in other parts of the United States or elsewhere in the world. Also, all of the study participants were women and almost all were in heterosexual relationships. We do not know how the SEA2 performs for IPV victims who do not identify as women or whose abusive partners do not identify as men. Further, while participants' household incomes ranged from \$0 to \$50,000 or more, a large proportion lived in households with a net annual income of \$15,000 or less. Additional research is needed to understand economic abuse perpetrated in households with greater economic resources. Finally, owing to resource constraints that made translation services prohibitive, the sample was entirely English-speaking women. To be used with ethnically diverse samples, the SEA2 needs to be validated with IPV victims who speak languages other than English. Although the sample was limited in these ways, it is important to note that the demographics of this sample were similar to the demographics reported in a study with a national sample of help-seeking IPV survivors (Lyon, Bradshaw, & Menard, 2011). This suggests that the SEA2 may be more widely generalizable to women seeking help for IPV.

Implications for Research

With the development of SEA2, there are now three versions of the SEA. The SEA2 reflects conceptual and methodological enhancements that have important implications for the construct validity of the instrument. We improved the conceptual clarity of the subscales by recasting the "Economic Control" subscale as "Economic Restriction." Now, the subscales are linked more clearly to the definition of economic abuse as a mechanism of control and capture methods by which control is exerted: economic restriction and economic exploitation. In addition, to ensure the instrument captures abusive tactics as opposed to financial management behaviors, we included items with wording that directly reflect the victim's lack of choice. We also included items that more accurately and discretely capture the use of coercion and fraud to generate debt in another person's name and excluded items that systematically did not apply to unemployed respondents.

The SEA2 appears to be a psychometrically sound instrument for measuring economic abuse. Researchers can also use this

instrument to further our understanding of the correlates and consequences of this distinct form of IPV. At this stage, longitudinal research on the cumulative, lasting, and/or rippling effects of economic abuse is of particular importance. The field would also benefit from further psychometric work on the SEA2. A limitation of the current study is that the CFA was conducted on the same sample that was used in item reduction. The CFA should be replicated on an independent sample to strengthen conclusions that can be drawn about the instrument and its factor structure. It would also be beneficial to use a longitudinal design to examine the predictive validity of the scale and test whether the scale is biased for particular groups by examining measurement invariance based on demographic variables such as gender, age, and ethnicity. In addition, researchers might take a closer look at the instrument's two subscales. Are there differences in who perpetrates or experiences one or both forms of economic abuse? What are the differential effects of these two forms of economic abuse in victims' lives? Any such research would advance the study of this distinct form of IPV.

Implications for Practice and Policy

The methodological and substantive findings of this study have important practice and policy implications. This research provides further evidence that economic abuse is as common as physical and psychological abuse among women seeking help for IPV. It also shows that abusive partners use a range of economically abusive tactics to control their partners and that the SEA2 is a reliable and valid instrument to detect IPV involving economic abuse. Practitioners in DV service organizations, legal services agencies, financial counseling programs, and other service settings where people with abusive partners seek help could use the SEA2 to assess the tactics and extent of economic abuse their clients experienced. This information could then be used to guide safety planning to reduce the risk of further economic abuse. As with all safety planning, the process should be collaborative, ongoing, and focused on strategies that meet the victim's self-defined needs and minimize the risk of retaliation or other harms (Davies & Lyon, 2014). An economic abuse assessment could also help frame a conversation about ways to address damage stemming from past and ongoing abuse. This study indicates that material dependence on the abuser and owing debt are two potential consequences of economic abuse. For victims currently in a relationship with an abusive partner, the conversation might center on strategies for increasing resources for independence from the abuser and safely disputing and/or managing the debt when abuse is ongoing. The conversation would be similar for victims no longer in a relationship with their abusive partner. Practitioners could help victims identify and address the lasting and rippling effects of material dependence and safely dispute and/or manage their debt going forward.

Practitioners' efforts would be aided by policy targeting economic abuse. A first step is to recognize economic abuse as a form of IPV in legislation, such as the Violence Against Women Act in the United States. Definitions of the problem ought to have three elements. They should reflect the function of economic abuse as a mechanism of control. They should capture key ways abusers exert control, including through the restriction and exploitation of eco-

conomic resources. And they should identify common targets of that control, including income, credit, assets, expenditures, and financial information. A second step is to allocate funds specifically for services to prevent and help victims recover from economic abuse. Funds could be directed to prepare generalist advocates to address economic abuse effectively, as well as support the work of advocates who specialize in economic issues. A third step is to ensure that legal remedies exist to combat economic abuse. For instance, state/provincial personal protection order laws and local implementation of those laws ought to offer an avenue for financial relief from economic abuse. States/provinces could adopt DV-specific tort laws through which victims can get restitution for the abuse. Law-reform organizations could draft a uniform law to address coerced debt for adoption by states/provinces. Targeted practice and policy responses such as these are warranted given the remarkably high rate at which economic abuse appears to occur among service-seeking IPV victims and its detrimental effects on victims' lives.

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Appendix

The Revised Scale of Economic Abuse (SEA2)

Using the 0–4 scale below, during your relationship, how often did your partner do the following:	0 Never	1 Hardly ever	2 Sometimes	3 Often	4 Very often
1. Keep you from having the money you needed to buy food, clothes, or other necessities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Keep financial information from you	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Decide how you could spend money rather than letting you spend it how you saw fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Make you ask him/her for money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Hide money so that you could not find it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Demand that you give him/her receipts or change when you spent money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Keep you from having a job or going to work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Make you use your money to buy him/her things or pay his/her bills when you didn't want to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Spend his/her money however he/she wanted while your money went to pay for necessities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Take out a loan or buy something on credit in your name without your permission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Make you take out a loan or buy something on credit when you didn't want to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Put bills in your name, leaving you to pay them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Force or pressure you to give him/her your savings or other assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Steal your property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note. Researchers and practitioners should contact the lead author for permission to use the SEA2.

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