Assessment

Mediator's Assessment of Safety Issues and Concerns (MASIC): Reliability and Validity of a New Intimate Partner Violence Screen

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Mediator's Assessment of Safety Issues and Concerns (MASIC): Reliability and Validity of a New Intimate Partner Violence Screen

Viktoria Pokman[1], Fernanda S. Rossi[1], Amy Holtzworth-Munroe[1], Amy G. Applegate[1], Connie J. A. Beck[2], and Brian M. D'Onofrio[1]

Abstract

We investigated reliability and validity of the Mediator's Assessment of Safety Issues and Concerns (MASIC), a screening interview for intimate partner violence and abuse (IPV/A) in family mediation settings. Clients at three family mediation clinics in the United States and Australia (*N* = 391) provided reports of the other parent's IPV/A. Internal consistency of the total screen was excellent. A confirmatory factor analysis provided evidence that the MASIC assesses seven types of IPV/A: psychological abuse, coercive controlling behaviors, threats of severe violence, physical violence, severe physical violence, sexual violence, and stalking. Sex differences on differing types of violence victimization were generally consistent with previous research. Higher levels of victimization predicted self-reported consequences of abuse (e.g., fear, injuries). More abusive parties, as identified by their partners on the MASIC, had more Protective Orders and No Contact Orders and criminal convictions and crimes potentially related to IPV/A. Results provide initial evidence of the reliability and validity of the MASIC but more research is needed.

Mediation is characterized as "a process in which a mediator, an impartial third party, facilitates the resolution of family disputes by promoting the participants' voluntary agreement" (Symposium on Standards of Practice, 2001, p. 127). Whether, however, mediation is suitable for separating parties who have a history of intimate partner violence and abuse (IPV/A) is a subject of much debate (Holtzworth-Munroe, 2011; Ver Steegh, 2003). Some experts express doubts, as perpetrators may use mediation as an opportunity to exert control over the other party and may take advantage of power imbalances during negotiations (Tishler, Bartholomae, Katz, & Landry-Meyer, 2004). As a result, victims may feel coerced or fear retaliation from their abuser and not be able to advocate for their own interests and those of their children (Beck & Frost, 2006; N. E. Johnson, Saccuzzo, & Koen, 2005). Victims may accept agreements that do not include sufficient safety provisions (Beck, Walsh, & Weston, 2009; Mathis & Tanner, 1998; Putz, Ballard, Gruber Arany, Applegate, & Holtzworth-Munroe, 2012). Such concerns are likely to be more pronounced in cases with a history of severe IPV/A and a pattern of abuse that includes coercive control (M. P. Johnson, 2006; Stark, 2007).

On the contrary, others argue that general exclusion of IPV/A cases may deprive the parties of potential benefits of mediation, including the chance to avoid traditional adversarial litigation that can exacerbate conflict between the parties (Pruett & Jackson, 1999), having their opinions heard, acquiring conflict resolution skills, and developing individualized safety plans (Edwards, Baron, & Ferrick, 2008). Mediators may protect victims during the mediation process, for example, by allowing support persons to accompany the victim or by conducting telephone mediation where couples do not meet face-to-face. They may also encourage negotiation of outcomes that would limit opportunities for future abuse (e.g., supervised child exchanges; Ellis & Stuckless, 2006).

In order for mediators to address such issues in individual cases, they need to understand the levels and types of IPV/A the mediating parties have experienced. Thus, experts acknowledge that thorough IPV/A screening is important (e.g., Ellis, 2008; Ver Steegh & Dalton, 2008) and should include gathering information about varying types of abuse. Ideally, mediation practitioners might use a

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package of widely researched tools, each with empirical support and assessing differing kinds of abuse, such as the Revised Conflict Tactics Scales (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) for assessing IPV/A, the Danger Assessment (Campbell et al., 2003) for assessing lethality risk, the Psychological Maltreatment of Women Inventory (Tolman, 1989, 1999) for assessing more details regarding psychological abuse, and the Sexual Experiences Survey (Koss & Oros, 1982) for assessing differing forms of sexual violence. Furthermore, optimally mediators would add supplementary items to more fully assess areas of particular concern among separating parties, such as coercive control and stalking. Combining a variety of established measures and additional questions would provide a strong assessment package. But such an assessment package is unlikely to be a viable option for most community-based mediation settings, as time is extremely limited in the mediation context.

First, mediator time is limited. Many mediation programs are required by law to screen and serve clients within a specified time period and have limited staff to do so. In our discussions with practitioners, mediators consistently report that lengthy screening using well-validated screening measures (i.e., Conflict Tactics Scales, Danger Assessment, Psychological Maltreatment of Women Inventory, and Sexual Experiences Survey) and additional questions to ensure coverage of all important issues is unworkable in practice. Mediators are sensitive to the time constraints flowing from the legal mandates for providing services and cannot take hours to screen clients, score measures, develop recommendations for services, and provide parties with detailed assessment feedback. Most mediators we interviewed requested a screening measure that would assess all areas of interest for understanding IPV/A in no more than 15 to 20 minutes on average.

Second, a lengthy assessment could place undue burden on mediation parties. Low-cost, court-sponsored mediation programs, wherein the vast majority of mediation is provided, disproportionately serve low socioeconomic status parents who experience significant hardship in arranging for time off work, childcare, and transportation to mediate disputes. For example, in our discussion with mediation parties, we were repeatedly told that it would be a hardship to ask the parties to take time to complete a lengthy assessment or to return to the clinic for further services on additional days. Comparing the context of mediation with the context of therapy or research, in the latter clients/participants are seeking services or volunteering for a study. In contrast, mediation clients are generally legally mandated to attend mediation and can be held in contempt of court for not attending. Although clients understand that an intake is appropriate, they are unwilling, and often unable, to spend significant amounts of time filling out questionnaires.

As a test of time available for IPV/A screening in mediation, we conducted a pilot study in which mediators assessed parties using two different measures developed to assess IPV/A in mediation settings (i.e., the Domestic Violence Evaluation, Ellis & Stuckless, 2006, and the Relationship Behavior Rating Scale–Revised, Beck, Menke, & Figueredo, 2013; the pilot study is discussed in Holtzworth-Munroe, Beck, & Applegate, 2010). We were unable to obtain the originally planned sample size because mediators and clients expressed significant frustration that the assessment was excessively long and redundant. We discovered additional limitations to these two IPV/A screening measures. One of these tools requires intensive training, whereas the other has costly copyright protections. Mediators in our pilot study reported that the scoring of one measure was too complex to use while actively working with parties. In addition, one of the screens includes nonspecific questions regarding violence and abuse.

Similarly, because of time constraints and as an alternative to lengthy available IPV/A screening measures, many mediators we have interviewed conduct a review of available court records and ask the parties a few general questions about IPV/A (e.g., "Have you been abused?"). But research demonstrates that such methods are less likely to uncover mediating parties' reports of IPV/A than a screen asking behaviorally specific questions (Ballard, Holtzworth-Munroe, Applegate, & Beck, 2011). Also, a records review and general questions are unlikely to consistently assess for differing types of IPV/A, but research suggests important differences across varying types of IPV/A in mediation (Beck, Anderson, O'Hara, & Benjamin, 2013; Beck, Walsh, & Weston, 2009; Beck, Walsh, Mechanic, Figueredo, & Chen, 2011; Kelly & Johnson, 2008). For example, stalking predicts increased risk of future violence among parties ending their relationship (Campbell et al., 2003), extreme violent tactics (i.e., strangulation) are associated with a sevenfold increased risk of femicide (Glass et al., 2008), and issues such as coercive control, while not involving physical contact, may affect the mediating parties' levels of power imbalances in the negotiating process and fear of retaliation if they do not agree to an abuser's demands (Beck & Raghavan, 2010).

In summary, discussions among mediation researchers, legal practitioners, judges, and policy makers consistently identify, as critical to addressing the safety of families in mediation, the need for an efficient, easy-to-administer IPV/A screening tool which is not too lengthy, is cost-free, exists in the public domain, and assesses multiple types of abuse (e.g., see recommendations from the Wingspread conference discussion in Ver Steegh & Dalton, 2008). Therefore, Holtzworth-Munroe et al. (2010) designed a screening measure for the mediation setting, the Mediator's Assessment of Safety Issues and Concerns (MASIC). It combines positive features of previous screens (e.g.,

behaviorally specific questions) but is not copyrighted and does not require extensive training to use. It was designed to take an average of 15 to 20 minutes to administer to each mediating party. It assesses differing types of IPV/A with seven subscales: (a) psychological abuse, (b) coercive controlling behaviors, (c) threats of severe violence, (d) physical violence, (e) severe physical violence, (f) sexual violence, and (g) stalking. After its introduction in Holtzworth-Munroe et al. (2010), the MASIC has since been used at various mediation clinics in the United States, Australia, and Canada. But until the current study, the psychometric properties of this new measure had not been examined.

The present study investigated the reliability and initial indications of the validity of the MASIC. To assess reliability, we predicted that various methods of scoring the MASIC would be positively correlated with each other. We predicted that the MASIC would be composed of internally consistent subscales assessing seven differing types of IPV/A (listed above) as opposed to being characterized by a single scale of abusive behavior. To further examine this prediction, we tested three alternative theoretically grounded models (i.e., two-factor, four-factor, and six-factor models). In terms of construct validity, we predicted MASIC scores would replicate findings on sex differences from past studies using other established measures of IPV/A. Thus, we did not anticipate a statistically significant difference on the physical violence subscale scores of men and women (Archer, 2000; Tanha, Beck, Figueredo, & Raghavan, 2010). However, we predicted that women would report having been victims of more sexual violence, having more fear of their partner, and having experienced more physical injuries as a result of IPV/A (Archer, 2000; Ellis & Stuckless; 2006; Tanha et al., 2010; Tjaden & Thoennes, 2000). In other tests of construct validity, we anticipated that MASIC scores would positively correlate with measures of theoretically related variables. Specifically, we predicted a positive association between MASIC scores and self-reported levels of victim fear and injury and between MASIC scores and information on the mediating parties' court records (i.e., IPV/A-related criminal charges, Protective Orders [POs], and No Contact Orders [NCOs]).

Method

Participants

The sample for this study included clients at three family mediation facilities—one in the United States, the Indiana University Maurer School of Law Viola J. Taliaferro Family and Children Mediation Clinic (IU Mediation Clinic), and two in Australia, the Relationships Australia, South Australia (RASA) and the Parramatta Family Relationship Centre (PFRC). All the clinics primarily work with parties

who are required, by the court or the law, to attempt family mediation. The IU Mediation Clinic primarily serves parties living in rural areas, small towns, and a college town in south central Indiana. Mediators include a clinical law professor and law students who are trained in an intensive mediation course, become state registered mediators, and are supervised by the professor. Study participants were recruited between October 2009 and December 2011. At RASA, mediation parties were recruited between October 2010 and February 2011 in Adelaide, a large city that is the capital of South Australia. RASA is a nonprofit organization offering family mediation to adults, families, and children; professional mediators conduct the sessions. PFRC is funded by the Australian government and under the administration of Anglicare, a nongovernmental organization. The center offers professional mediation services to separating families from the regions of Parramatta, Holroyd Local Government Area, Northwest and Outer Western Sydney. MASIC data were gathered at PFRC from April to June 2011.

Informed consent was obtained from all participants. The MASIC was administered during intake procedures at each clinic. Depending on the setting and the needs of the parties, the MASIC was either administered by the mediator as an interview or self-administered by the parties; while we do not know the exact number of parties who completed the MASIC as an interview or questionnaire, the mediators reported that it was administered as an interview in the majority of cases. The gathered information was not shared with the other party. We received MASIC data from each study participant, but some additional data were gathered at some sites and not others; such discrepancies are noted in relevant sections below.

As shown in Figure 1, the initial sample for this study included 467 individuals who received family mediation services at one of the three mediation facilities. The sample included 180 dyads (i.e., two parties entering mediation together; 360 individuals). The remaining 107 participants took part in this study as individuals because the other mediating party in their case chose not to participate or his/ her data were excluded from analyses as a result of too much missing data (see below). Also as shown on Figure 1, some study participants were excluded from the study sample. First, study participants were excluded if they did not specify their sex or did not fit the MASIC target group (i.e., heterosexual dyads in an intimate relationship or parties who shared children and were negotiating child-related issues). Second, subjects were excluded if their completed MASIC forms were missing responses to more than 20% of the items assessing specific IPV/A behaviors (Items 1-37) or if they were missing responses to more than 20% of the items on at least one of the seven MASIC subscales. After both exclusions, the sample consisted of 391 study participants. For cases with fewer than 20% of the items missing
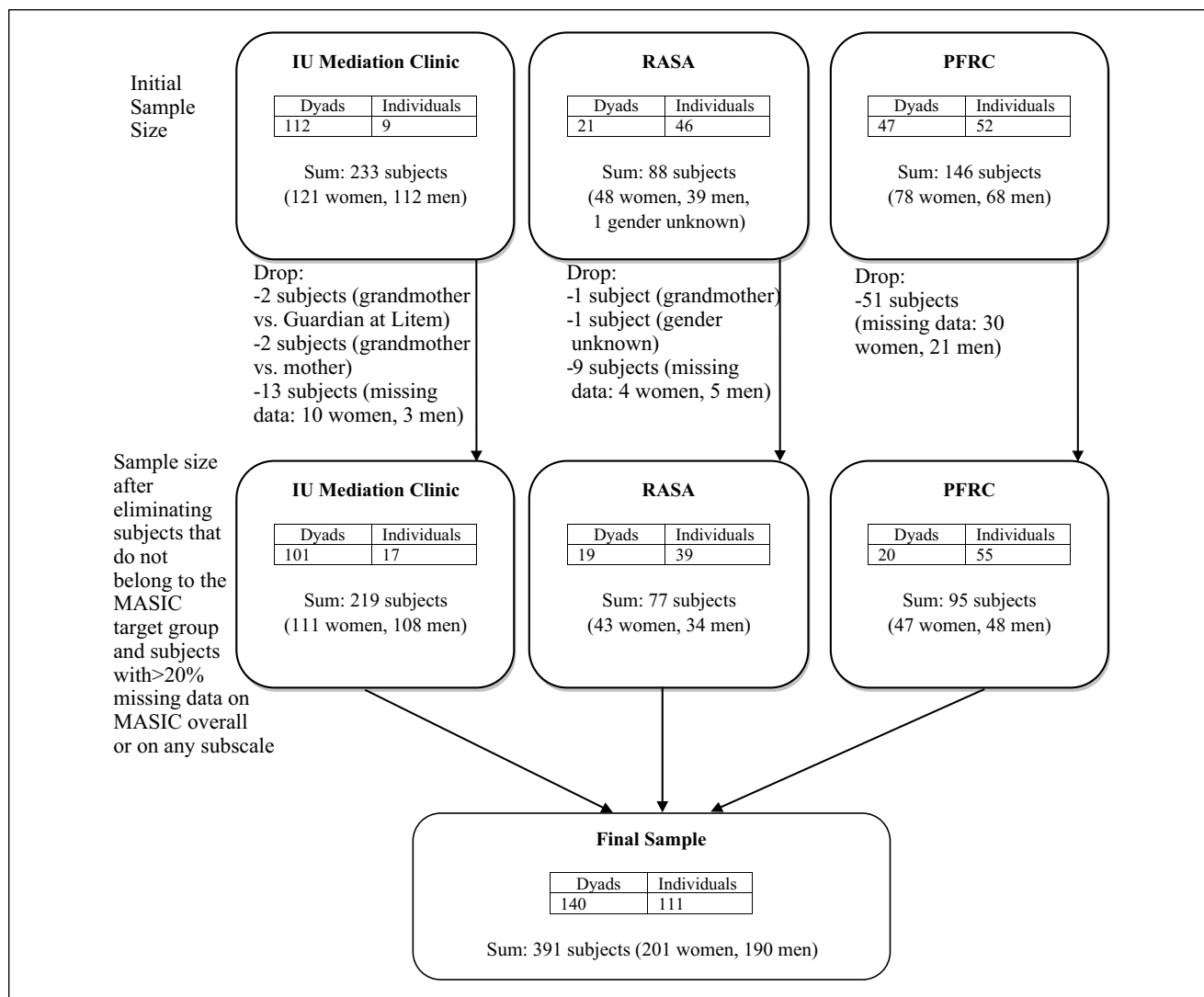
Figure 1. Sample composition.
Note. IU Mediation Clinic = Indiana University Maurer School of Law Viola J. Taliaferro Family and Children Mediation Clinic; RASA = Relationships Australia, South Australia; PFRC = Parramatta Family Relationship Centre; MASIC = Mediator's Assessment of Safety Issues and Concerns.

data, in some analyses, we calculated the missing value(s) as the average of the remaining items of the corresponding subscale. However, for confirmatory factor analyses, missing data were not imputed but estimated with the full information maximum likelihood method.

Measures

Demographics. Mediating parties provided basic demographic information, including their gender, age, and employment status. Participants at the IU Mediation Clinic and PFRC also reported their level of education. We were only able to examine race/ethnicity among parties at the IU Mediation Clinic.

MASIC. The MASIC is described in Holtzworth-Munroe et al. (2010). Within the main section of the measure, there are

37 items listing specific abusive or violent behaviors (see example items below). For each of these items, the MASIC first assesses whether the behaviors have ever been perpetrated by the other party during the relationship (yes or no). If yes, then the MASIC asks how often that behavior occurred in the past year, with responses given on a scale from *never* to *daily*.

Using the full set of 37 items, we computed *total IPV/A scores* in three ways: (a) An IPV/A *ever variety total score* was the sum of the different kinds of violent and abusive behaviors occurring during the relationship. Given 37 items, each "yes" (scored 1) or "no" (scored 0), the ever variety total score can range from 0 to 37. (b) An IPV/A *past year variety total score* was generated with the same method. Each behavior reported in the past year is given a score of 1; this score can range from 0 to 37. (c) An IPV/A *past year frequency total score* was calculated by assigning numbers

for the response options from *never* = 0 to *daily* = 5. A past year frequency score was computed by adding the reported frequencies of all listed violent and abusive behaviors; the past year frequency total score can range from 0 to 185.

In addition, the MASIC was divided into seven a priori defined *subscales*, as proposed by Holtzworth-Munroe et al. (2010): psychological abuse (3 items; e.g., "Yell or scream at you?"), coercive controlling behaviors (14 items; e.g., "Try to control your activities in or outside the home?"), threats of severe violence (5 items; e.g., "Threaten to kill you?"), physical violence (5 items; e.g., "Hit or punch you?"), severe physical violence (4 items; e.g., "Choke or strangle you?"), sexual violence (2 items; e.g., "Physically force you to engage in sexual activities against your will?"), and stalking behavior (4 items; e.g., "Follow or spy on you in a way that made you feel frightened or harassed?"). We calculated ever variety, past year variety, and past year frequency scores for each of the subscales; the ranges of these scores differ as each subscale is composed of a differing number of items. Some analyses presented below use only variety scores, but frequency scores are available on request to the authors. For some analyses, we examined additional MASIC items (Items 38-43) which assess information such as fear and injury.

Court Records. Study participants at the IU Mediation Clinic consented to allow us access to their clinic case file, which contained information on their criminal and civil records in Indiana. This information had been gathered by the mediators as part of preparing for the mediation intake. A system was developed to code the mediation parties' criminal record information, focusing on charges potentially associated with IPV/A (e.g., domestic battery, stalking, criminal confinement). We chose to code IPV/A-related criminal *charges* because a charge entails the offense of which an individual was initially accused. Other information (e.g., convictions) can be affected by processes such as plea bargains or settlements. Similarly, we chose to code all POs and NCOs that had been *petitioned* against a party, not just petitions granted by a court.

Results

There was no statistically significant difference in the proportion of male-to-female participants across the three sites (48.6% males, 51.4% females), $\chi^2(2, N = 391) = 0.80$, $p = .67$. There were also no statistically significant differences among the subsamples in the percent of employed participants (75.5% males, 68.0% females employed), $\chi^2(2, N = 388) = 2.71$, $p = .10$. The three clinic subsamples differed significantly in age; participants at the IU Mediation Clinic ($M = 33.88$, $SD = 9.2$) were significantly younger than RASA participants ($M = 38.41$, $SD = 9.12$), whereas the PFRC participants fell in the middle ($M = 35.62$, $SD = 7.56$), $F(2, 387) = 7.66$, $p = .001$. Examining data from the

two sites that gathered additional demographic data, participants at PFRC had more years of education ($M = 13.91$, $SD = 3.31$; $t(286) = −3.61$, $p < .001$) than participants at the IU Mediation Clinic (education $M = 12.73$ years, $SD = 2.20$). Of 196 participants at the IU Mediation Clinic who provided information on ethnicity/race, 172 (87%) were White, 4 were American Indian/Native American, 7 Black/African American, 4 Hispanic, and 9 biracial/multiracial. Although the subsamples from the three clinics differed on some variables, their data were collapsed in further analyses to increase the sample size and the demographic diversity of our study sample.

Descriptive Data

Item Response Distribution. We examined the frequency with which MASIC items were endorsed by the full sample. For reasons of conciseness, only examples are presented in the text, but a table with the item response distribution of every MASIC item is available from the authors. Regarding the entire relationship, some MASIC items were endorsed by the majority of the sample (e.g., calling names: 73%, yelling/screaming: 80%, threats to take or have the children taken away: 53%) and other behaviors were reported by approximately half of the mediation clients, including extreme jealousy (49%), pushing/shoving/shaking/grabbing (46%), and destruction of property (50%). Fewer participants reported extreme forms of abuse and violence: for example, burning (2%), using a weapon/something like a weapon (8%), physically forced sexual activities (5%), and choking/strangling (11%). One third of the sample reported fear of the perpetrator, about 18% had suffered a physical injury, and 23% had called the police.

When mediation clients were asked to report on only the past year, the number of participants reporting IPV/A decreased but still, every MASIC item was endorsed by part of the sample. Again, calling names (63%) and yelling/screaming (68%) were among the most commonly reported. Approximately one third of the sample stated that the other mediation party had tried to/controlled their activities (30%), been very jealous (34%), and/or destroyed property (30%). Of the physically violent behaviors, pushing/shoving/shaking/grabbing were the most frequently reported (23%). Very severe forms of physical violence, such as burning (1%) or physically forced sexual activities (2%), were seldom reported as having occurred in the past year. Approximately, 18% of participants who endorsed physically violent behaviors reported that the behaviors were occurring more often and 16% indicated that the behaviors were getting worse. In the past year, about 20% of the sample had been fearful of the other mediating party, 8% had suffered a physical injury, and 11% had called the police.

Frequency of Specific Types of IPV/A in Mediation Cases. For cases where we have MASIC reports from both parties (i.e.,

Table 1. Reported Victimization in Mediation Cases.

Any item on subscale endorsed by either or both parties?	Ever		Past year	
	No, *n* (%)	Yes, *n* (%)	No, *n* (%)	Yes, *n* (%)
Psychological abuse	5 (3.6)	135 (96.4)	13 (9.3)	127 (90.7)
Coercive controlling behaviors	6 (4.3)	134 (95.7)	22 (15.7)	118 (84.3)
Threats of severe violence	50 (35.7)	90 (64.3)	84 (60.0)	56 (40.0)
Physical violence	51 (36.4)	89 (63.6)	101 (72.1)	39 (27.9)
Severe physical violence	99 (70.7)	41 (29.3)	123 (87.9)	17 (12.1)
Sexual violence	128 (91.4)	12 (8.6)	128 (91.4)	12 (8.6)
Stalking	64 (45.7)	76 (54.3)	81 (57.9)	59 (42.1)

Note. N = A total of 140 dyads in which we had Mediator's Assessment of Safety Issues and Concerns (MASIC) data from both parties.

140 dyads), we provide the percentage of cases with and without a history of each subtype of IPV/A, as reported by either or both parties. These case-level findings can only be provided for cases with data from both parties. See Table 1.

Reliability and Structure of the MASIC

Intercorrelation of MASIC Total Scores. We scored the MASIC in three ways and assumed, given the nonindependence of the ever and past year questions, a positive correlation between the MASIC scores, which we found. In conducting these correlations, we also accounted for the lack of independence of dyadic data. MASIC scores were log-transformed given elevated levels of skewness and kurtosis. MASIC ever variety and past year variety scores correlated $r(391) = .70$, $p < .01$; ever variety and past year frequency correlated $r(391) = .69$, $p < .01$; and past year variety and past year frequency correlated $r(391) = .98$, $p < .01$. Exploration of the data revealed the past year variety score to be less skewed (skewness: 1.28) than the past year frequency score (skewness: 2.29). Thus, the following presentations of findings often do not include past year frequency scores, but such scores are available from the authors.

Intercorrelation of MASIC Subscale Scores. We investigated the correlation between the MASIC subscale scores to determine the necessity for subscales. Analyses accounted for the nonindependence of dyadic data and are based on log-transformed MASIC subscale scores. Table 2 presents the correlation coefficients for the ever variety and past year variety subscale scores. The range of correlations suggests that all the subscales are not assessing identical information.

Confirmatory Factor Analysis. A confirmatory factor analysis (CFA) was computed with Mplus5 and conducted with the past year frequency data for individual items. Past year frequency data, which account for number of times behaviors were reported to have occurred, were used as they provide

more precise and current information on the level of IPV/A within the relationship. Examination of the histograms of the item response distributions revealed that these distributions were positively skewed. Thus, the data were log transformed; they remained not normally distributed. The log-transformed values were used for analyses. For the CFA, missing data were not imputed but estimated with the full information maximum likelihood method with robust standard errors and χ^2, which is considered robust against nonnormal distribution of indicator variables. The data from all 391 participants were included. Given that our sample consists of some dyads and some individuals, we used a complex model type in Mplus5, which uses robust standard errors to adjust for the nonindependence of data among the dyads. The complex model approach, therefore, accounts for the clustering of data. We began by considering Items 1 to 37; however, we excluded Item 30 (i.e., "Did the other parent burn you?") as it was endorsed by only 2 participants.

Several fit statistics were used to test for model differences and determine model fit. For the root mean square error of approximation (RMSEA), values closer to 0 indicate good model fit, though values between .05 and .08 indicate adequate fit (Kenny & McCoach, 2003). When observing the standardized root mean residual (SRMR), values less than .08 indicate good model fit (Kline, 2010). Additionally, comparative fit index (CFI) and Tucker–Lewis index (TLI) estimates that are higher than .90 show adequate model fit (Kline, 2010). Last, since the models examined in the current study are nested, we conducted chi-square difference tests to determine which models better represented the data.

We investigated a one-factor unidimensional model with all 36 MASIC items forming a single latent factor. In this model, the MASIC was assumed to assess one underlying dimension of overall level of IPV/A. Our second model was composed of two latent constructs that corresponded to items inquiring about physical violence versus those inquiring about non–physical violence, a distinction frequently made on measures of IPV/A (e.g., Straus et al., 1996). A third model consisted of four factors. We combined items asking about psychological abuse and coercive controlling behaviors to create one factor as well as items asking about stalking and threats of physical violence to create a second factor; the other two factors in this model corresponded to sexual abuse items and physical violence items. We also tested the proposed seven-factor (i.e., seven a priori subscales) model. Although the model was able to converge, two of the proposed latent variables (i.e., physical violence and severe physical violence) demonstrated a correlation equal to one due to lack of variance in the severe physical violence factor. Thus, we combined these two latent variables to develop a single factor representing physical violence and examined a six-factor model.

Table 2. Intercorrelation Matrix of MASIC Subscales: Ever and Past Year Variety Scores.

A priori MASIC subscale	1	2	3	4	5	6	7
1. Psychological abuse	__	.64**	.41**	.48**	.30**	.16**	.34**
2. Coercive controlling behaviors	.62**	__	.54**	.67**	.45**	.24**	.49**
3. Threats of severe violence	.41**	.57**	__	.54**	.54**	.25**	.49**
4. Physical violence	.26**	.38**	.54**	__	.62**	.26**	.40**
5. Severe physical violence	.26**	.38**	.54**	a	__	.21**	.38**
6. Sexual violence	.14**	.25**	.22*	.22*	.22*	__	.19**
7. Stalking	.37**	.53**	.51**	.34**	.34**	.23**	__

Note. N = 391. MASIC = Mediator's Assessment of Safety Issues and Concerns. Ever variety subscales above diagonal; past year variety subscales below diagonal.
a. Unable to calculate because of low covariance coverage.
*Correlation significant at the .05 level (two-tailed).
**Correlation significant at the .01 level (two-tailed).

Table 3. Model Variation and Fit Analyses.

Model	χ^2	df	CFI	TLI	RMSEA	SRMR	Difference tests			
One-factor	1494.239	594	.706	.688	.062	.077	TRd = 42.96*			
Two-factor	1344.120	593	.755	.740	.057	.075	df = 1 (one-factor vs. two-factor)	TRd = 48*		
Four-factor	1211.285	588	.797	.782	.052	.069		df = 5 (two-factor vs. four-factor)	TRd = 90.826*	
Six-factor	1099.993	579	.830	.815	.048	.066			df = 9 (four-factor vs. six-factor)	TRd = 11.182
Seven-factor	1089.267	573	.832	.815	.048	.065				df = 6 (six-factor vs. seven-factor)

Note. χ^2 = chi-square value; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean residual; TRd = Satorra–Bentler scaled chi-square difference test.
* p < .05.

An examination of the goodness-of-fit statistics demonstrated that as models increased in complexity, they presented increasingly better fit to the data; see Table 3. An exception was the seven-factor model, which illustrated fit indices that were comparable or only marginally better than those of the six-factor model. Our model of interest demonstrated the most complexity with seven factors and an overall good fit to the data. Chi-square difference tests were conducted to statistically examine for differences in fit between models. Given that analyses were performed using the maximum likelihood estimator, chi-square values could not be used to conduct the difference tests. Instead, we replaced chi-square values with log-likelihood values as indicated by Muthén and Muthén (2005). Results of such tests supported our observation that models with greater numbers of factors were significantly better representations of the data when compared with models with fewer factors.

Results support our hypothesis that the seven-factor model more adequately fits the data compared with a unidimensional model. The difference tests provide additional support to our hypothesis in indicating that the data are better explained by seven subtypes of IPV/A as opposed to either the four-factor or two-factor models. However, results suggest that the seven-factor model is not significantly better at representing the data than the six-factor model.[1]

Given these findings, the fact that the MASIC was designed to have seven subscales, and the potentially important clinical implications of severe physical violence versus physical violence, we will present the CFA model corresponding to seven factors; the model corresponding to six factors is available from the authors. For the seven-factor model, see Figure 2. All factors were significantly correlated, with one exception: *severe physical violence* and *sexual violence* were not statistically significantly
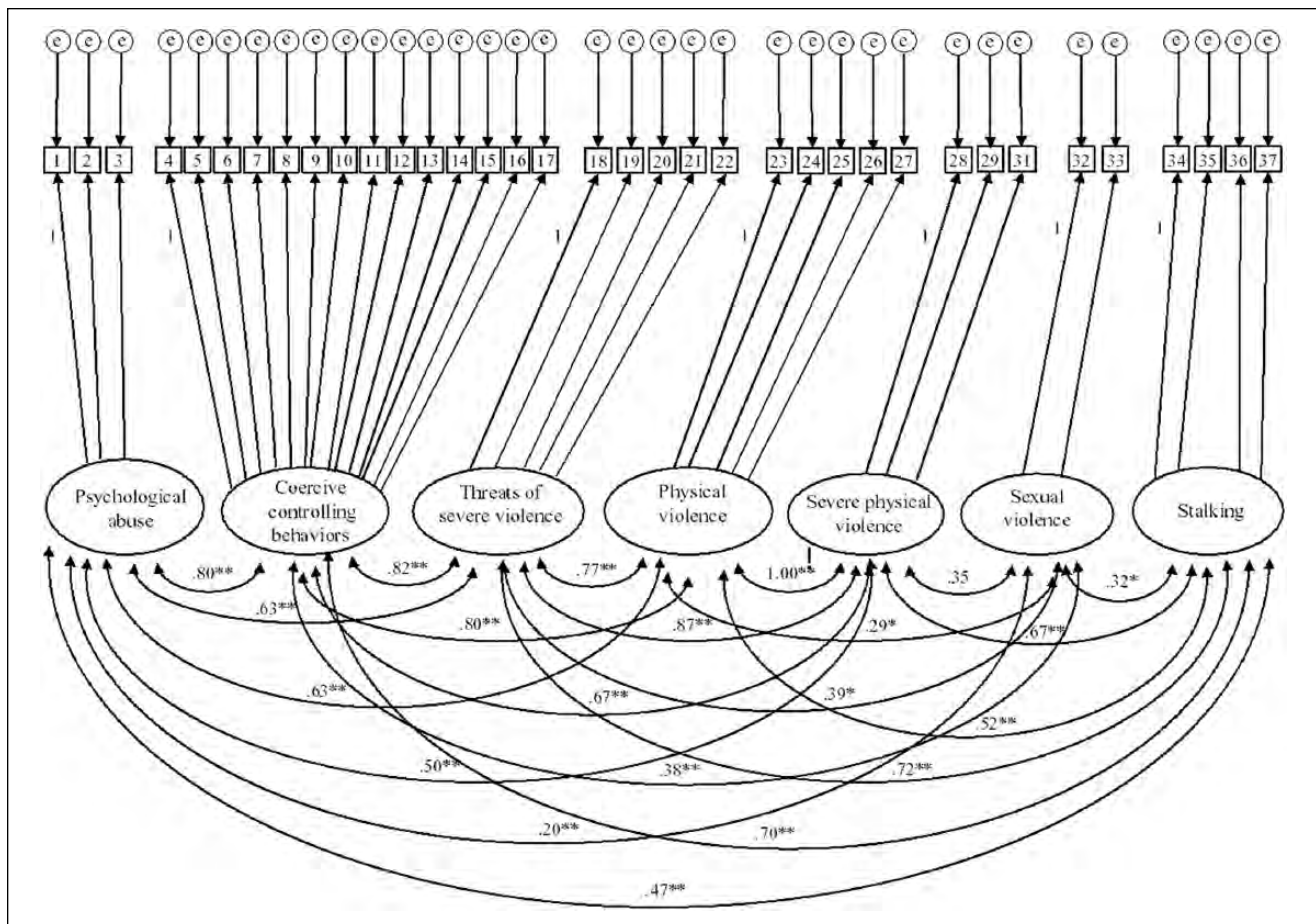
Figure 2. Seven-factor confirmatory factor analysis model for MASIC.
Note. MASIC = Mediator's Assessment of Safety Issues and Concerns; e = error. Numbers in boxes represent the MASIC item number.
*Correlation significant at the .05 level (two-tailed).
**Correlation significant at the .01 level (two-tailed).

correlated. The standardized and unstandardized estimates of the factor loadings for the seven-factor model are demonstrated in Table 5, as well as the standard error and amount of variance explained by a factor in an indicator variable (R^2). Some factors explained a substantial amount of the variance in each observed variable (e.g., *psychological abuse* explained at least 54.9% of the variance among all three indicator variables) and other factors yielded mixed results (e.g., *threats of severe violence* explained 68.2% of the Item 19 variance but only 16.2% of the variance in Item 20).

McDonald's Omega. McDonald's omega was computed to assess the internal consistency of the MASIC subscales. Item 30 (i.e., "Did the other parent burn you?") was excluded from analyses as the latent factors within the models tested also excluded this item. Results, illustrated in Table 4 indicated that the internal consistency of the seven a priori subscales was variable. The internal consistency of

participants' reports of victimization ranged from lower omega estimates for the severe physical violence (0.44) and sexual violence (0.47) subscales to adequate or good internal consistency (0.66-0.88) for the remaining subscales (e.g., coercive controlling behaviors, psychological abuse, physical violence). The total MASIC scale omega estimate was excellent (0.94). Average interitem correlations were also conducted for each subscale. Correlations ranged from 0.27 (severe physical violence subscale) to 0.63 (psychological abuse subscale). The total MASIC scale average interitem correlation was 0.31.

Validity

MASIC Scores by Sex. We examined if our MASIC findings were similar to previous research results using other IPV/A screens. These analyses were not conducted to comment on sex differences in IPV/A victimization, as the question of the comparability of male versus female IPV/A is quite

Table 4. Internal Consistency of MASIC Scales.

MASIC scale (n items)	McDonald's ω	Average interitem correlations
Total MASIC scale (36 items)	0.94	0.31
Psychological abuse subscale (3 items)	0.69	0.63
Coercive controlling behaviors subscale (14 items)	0.88	0.37
Threats of severe violence subscale (5 items)	0.71	0.37
Physical violence subscale (5 items)	0.86	0.58
Severe physical violence subscale (4 items)	0.44	0.27
Sexual violence subscale (2 items)	0.47	0.59
Stalking subscale (4 items)	0.66	0.49

Note: MASIC = Mediator's Assessment of Safety Issues and Concerns.

Table 5. Factor Loadings for Seven-Factor Model.

MASIC item	Unstandardized factor loading	Standardized factor loading	SE	R^2
Psychological abuse				
Item 1	1.000	.741	.000	.549
Item 2	0.994	.775	.076	.601
Item 3	1.019	.774	.052	.600
Coercive controlling behaviors				
Item 4	1.000	.544	.000	.296
Item 5	1.540	.599	.202	.358
Item 6	1.694	.639	.253	.409
Item 7	1.563	.610	.213	.372
Item 8	1.780	.642	.243	.413
Item 9	1.520	.634	.227	.402
Item 10	0.732	.508	.186	.258
Item 11	0.966	.464	.199	.216
Item 12	1.854	.768	.281	.590
Item 13	1.346	.528	.213	.279
Item 14	1.452	.671	.241	.451
Item 15	0.560	.432	.128	.186
Item 16	1.109	.681	.189	.464
Item 17	1.046	.673	.195	.452
Threats of severe violence				
Item 18	1.000	.432	.000	.187
Item 19	2.572	.826	.784	.682
Item 20	1.005	.402	.355	.162
Item 21	1.116	.638	.200	.407
Item 22	1.136	.610	.418	.372
Physical violence				
Item 23	1.000	.595	.000	.354
Item 24	2.199	.835	.400	.697
Item 25	1.544	.798	.306	.636
Item 26	1.291	.703	.360	.495
Item 27	1.735	.840	.343	.706
Severe physical violence				
Item 28	1.000	.704	.000	.496
Item 29	0.581	.527	.194	.278
Item 31	0.333	.365	.167	.133
Sexual abuse				
Item 32	1.000	.830	.000	.688
Item 33	0.557	.715	.289	.512
Stalking				
Item 34	1.000	.765	.000	.586
Item 35	1.051	.584	.170	.341
Item 36	0.796	.718	.107	.515
Item 37	0.470	.623	.123	.389

Note. MASIC = Mediator's Assessment of Safety Issues and Concerns.

controversial and beyond the scope of this study. Instead, these analyses were conducted as an initial examination of the construct validity of the MASIC. First, we regressed MASIC physical violence scores on sex while accounting for the nonindependence of dyadic data. We use the term *predictor* to describe findings from the regression analyses in the common terminology. As hypothesized, results indicated that being male ($n = 190$) or female ($n = 201$) did not significantly predict higher reported levels of physical violence victimization (Table 6). Ever variety physical violence scores: women $M = 1.38$ ($SD = 1.68$); men $M = 1.36$ ($SD = 1.59$). For past year variety physical violence scores: women $M = 0.64$ ($SD = 1.29$); men $M = 0.61$ ($SD = 1.18$). But as predicted, women, compared with men, were significantly more likely to report sexual violence victimization (Table 6). Ever variety sexual violence scores: women $M = 0.22$ ($SD = 0.58$); men $M = 0.03$ ($SD = 0.19$). For past year variety sexual violence scores: women $M = 0.12$ ($SD = 0.43$); men $M = 0.01$ ($SD = 0.10$). We also had predicted that women would report higher levels of fear and physical injury than men (Table 7). Part of this hypothesis was confirmed, as a significantly larger percentage of women reported fear of their partner than men, ever and in the past year. Contrary to our predictions, there were no statistically significant gender differences on the injury question.

Linking Fear and Physical Injuries to Reported Victimization. We conducted binary logistic regressions on the link between self-reported victimization, fear, and physical injuries. As before, we use the term *predictor* to describe findings from the regression analyses in the common terminology. However, these analyses were cross-sectional in nature, as all the information was gathered during the same intake session. Because men and women differed in self-reported levels of fear in the current study and have differed in rates of injury in past research, we conducted the regression analyses separately for men and women.

Both the ever variety total score and the past year variety total score, reflecting a participant's reported level of IPV/A

victimization, were significant predictors of whether that participant reported fear of the partner. For women, ever variety total score B = 0.25, odds ratio (*OR*) = 1.29, $p < .001$ (95% confidence interval [CI] = [1.20, 1.38]) and past year variety total score B = 0.25, *OR* = 1.29, $p < .001$ (95% CI = [1.19, 1.40]). For men, ever variety total score B = 0.18, *OR*

Table 6. Comparison Between Women and Men Regarding Reported Victimization on MASIC Subscale Scores and Total Scores.

MASIC subscale	Ever variety score				Past year variety score			
	B	SE B	β	R^2	B	SE B	β	R^2
Psychological abuse	−0.06	0.04	−0.07	0.01	−0.07	0.05	−0.07	0.00
Coercive controlling behaviors	−0.06	0.07	−0.04	0.00	−0.09	0.07	−0.05	0.00
Threats of severe violence	−0.08	0.05	−0.07	0.00	−0.06	0.04	−0.06	0.01
Physical violence	0.01	0.05	0.00	0.00	−0.00	0.02	−0.00	0.00
Severe physical violence	0.01	0.03	0.01	0.00	−0.00	0.02	−0.00	0.00
Sexual violence	−0.12	0.03	−0.22	0.05**	−0.06	0.02	−0.02	0.03**
Stalking	−0.07	0.05	−0.07	0.00	−0.07	0.04	−0.08	0.01
Total score	−1.00	0.07	−0.05	0.00	−0.11	0.08	−0.06	0.00

Note: MASIC = Mediator's Assessment of Safety Issues and Concerns.
*$p < .01$.

Table 7. Comparison of Women and Men Regarding Reported Consequences of IPV/A.

MASIC item	Response	Item endorsed?	Women	Men	Significant group difference?
Fear of partner	Ever, *n* (%)	No	100 (54.4)	134 (80.2)	$\chi^2(1, N = 351) = 25.26, p < .001$
		Yes	84 (45.6)	33 (19.8)	
	Past year, *n* (%)	No	123 (71.5)	144 (87.8)	$\chi^2(1, N = 336) = 12.68, p < .001$
		Yes	49 (28.5)	20 (12.2)	
Physical injury experienced	Ever, *n* (%)	No	149 (79.3)	148 (85.1)	$\chi^2(1, N = 362) = 1.69, p = .15$
		Yes	39 (20.7)	26 (14.9)	
	Past year, *n* (%)	No	165 (907)	160 (93.0)	$\chi^2(1, N = 354) = 0.38, p = .53$
		Yes	17 (9.3)	12 (7.0)	

Note. MASIC = Mediator's Assessment of Safety Issues and Concerns; IPV/A = intimate partner violence and abuse.

= 1.20, $p < .001$ (95% CI = [1.13, 1.28]) and past year variety total score B = 0.29, *OR* = 1.34, $p < .001$ (95% CI = [1.20, 1.49]). Similarly, both the ever variety total and past year variety total scores were significant predictors of whether that participant reported injuries inflicted by the partner. For women, ever variety total score B = 0.22, *OR* = 1.24, $p < .001$ (95% CI = [1.16, 1.34]) and past year variety total score B = 0.23, *OR* = 1.26, $p < .001$ (95% CI = [1.15, 1.39]). For men, ever variety total score B = 0.24, *OR* = 1.27, $p < .001$ (95% CI = [1.17, 1.38]) and past year variety total score B = 0.30, *OR* = 1.35, $p < .001$ (95% CI = [1.19, 1.53]).

Criminal Records and IPV/A. As part of our examination of the MASIC's construct validity, we predicted a positive correlation between IPV/A associated entries on the participants' court records (i.e., another source of data about possible violence) and the IPV/A victimization that the participant's mediation counterpart reported on the MASIC. Because access to criminal records was only given by the U.S. clinic sample and the statistical analyses required information on both the victim (i.e., report of IPV/A victimization on the MASIC) and the alleged perpetrator (i.e.,

criminal records), the sample was restricted to dyads from the IU Mediation Clinic. The majority of participants (*n* = 202) had never faced a PO or NCO (85.1% or *n* = 172 had no such orders) or criminal charge (92.6% or *n* = 187 had no charges) in the State of Indiana. The count of POs/NCOs filed against a party ranged from 0 to 4 (*M* = 0.20, *SD* = 0.56) and the number of criminal charges filed against a party ranged from 0 to 13 (*M* = 0.17, *SD* = 1.02). One male criminal offender who had been charged with 13 crimes was considered an outlier, and his data were not included in the following analyses. While accounting for the nonindependence of dyadic data, there was a significant correlation between the sum of the number of POs/NCOs filed against a party and criminal charges issued and the partner's report of IPV/A victimization by that same party on the MASIC ever variety total score (*r* = .28; $p ≤ .001$). Our hypothesis was thus confirmed.

Discussion

The current study was conducted to examine the reliability and initial indications of the validity of a self-report measure (MASIC) designed to screen for IPV/A victimization

among parties seeking family mediation (Holtzworth-Munroe et al., 2010). The findings provide initial evidence that the MASIC is a reliable and possibly valid measure. It suggests both strengths and potential limitations of the MASIC.

The high prevalence of IPV/A reported on the MASIC in the current study sample is consistent with previous research in mediation clinics (e.g., Ballard et al., 2011; Beck et al., 2011), suggesting that the MASIC adequately detects self-reported IPV/A victimization, while highlighting the importance of conducting IPV/A screening in mediation. Further emphasizing the need to systematically screen for IPV/A, a disturbing portion (up to one fifth) of the mediating parties reported that recently the physically violent behaviors they experienced were happening more frequently or getting worse and that they were fearful of the other party; around one tenth had been injured or called the police in the past year. Such information is important for mediators considering how to proceed with such cases.

Findings also suggest that both time frames captured by the MASIC (i.e., ever and past year) should be assessed. The total scores derived from these two time frames, although not independent and thus positively correlated, were not identical and provide complementary information. On one hand, previous research indicates that separation from an abusive partner is a crucial risk factor for femicide within a year of separation (Campbell et al., 2003), justifying the inclusion of a past year scale. Also, because mediation is often linked to recent family dissolution, recent behavior may be the best predictor of the future risk of IPV/A. On the other hand, not asking about victimization experiences throughout the course of the entire relationship may lead to underdetection of violence and abuse, as demonstrated by higher IPV/A reports on the ever scale than on the past year scale. And theoretically, even past behaviors could still affect relationship dynamics (e.g., fear, coercion, threats) relevant to mediation negotiations. Therefore, we recommend assessing both time periods. In contrast, the two past year total scores, variety and frequency, were so highly correlated that it may be unnecessary to retain both.

We examined the structure of the MASIC in various ways. The high internal consistency scores (using McDonald's Omega coefficient) for the MASIC total scale suggests that the MASIC items are assessing the same basic construct. However, as discussed more below, the CFA results also suggested that deriving one total score is not as good a fit to the data as using the subscale scores. Indeed, while the total MASIC scores can provide an overall sense of the level of IPV/A between mediation parties, the MASIC was designed to assess differing types of violence and abuse. We found that the seven a priori subscales were moderately positively correlated, indicating that they capture different but related dimensions. The lower internal consistency of some of the subscales is likely because of the

limited number of items on some subscales along with the infrequent endorsement of some items (e.g., only 9 participants endorsed being physically forced to engage in sexual activity in the past year). Furthermore, the items on each subscale intentionally represent a range of behaviors within the same category, to represent a more varied sampling of behaviors; this diversity potentially affects measures of internal consistency (Straus et al., 1996). Future work should apply more stringent tests of reliability, such as test–retest reliability, to the MASIC.

Also consistent with our goal of determining whether the MASIC assesses different types of IPV/A, we compared a seven-factor CFA model to various other multidimensional models (i.e., six-factor, four-factor, and two-factor) as well as a unidimensional model. Relative to the one-factor model, the multidimensional models proved a better fit to the data with more complex models demonstrating increasingly better fit, although the seven-factor model was not significantly better than the six-factor model. A larger sample size with greater variation in severe physically violent behavior is necessary to adequately determine if the MASIC is better explained by seven or six subtypes of IPV/A. Until then, there are reasons to be cautious with regard to collapsing the physical violence and severe physical violence subscales into one, as the types of physical violence assessed on these subscales span a wide range (e.g., combining pushing and shoving with using a weapon or strangulation). Clinically there is an argument that level of risk of injury associated with each subtype of physical violence is vastly different. For example, in terms of the safety of victims and their children, levels of violence may be important to consider when making appropriate custody and parenting time arrangements. Furthermore, another study of mediation clients found statistically significant sex differences in frequencies of victimization by severe physical violence but not by physical violence, and severe violence was predictive of calls to the police (Beck et al., 2011). In general, results pertaining to the more complex four-factor, six-factor, and seven-factor models should be interpreted with caution as power analyses indicated that CFA characterized by patterns of missing data, nonnormally distributed samples, and greater number of parameters may require larger sample sizes (Muthén & Muthén, 2002).

To study the construct validity of the MASIC, we assessed if the MASIC scores replicate findings from previous studies using already established IPV/A measures. They generally did. For example, similar to past research, female and male self-reports of physical violence victimization did not differ significantly (e.g., Archer, 2000; Ballard et al., 2011), but females did report higher levels of sexual violence victimization and fear of their partners (e.g., Beck, Menke, O'Hara Brewster, & Figueredo, 2009; Tjaden & Thoennes, 2000). Contrary to predictions, there were no sex differences in reported injuries sustained. Unfortunately,

the MASIC did not ask mediation clients for details regarding the type or level of injury experienced. For example, although women suffered injuries as often as men, the physical injuries women experienced may have been more severe (e.g., broken bones vs. scratches; Tjaden & Thoennes, 2000). We, therefore, recommend adding follow-up questions about the types of injuries sustained.

In addition, some of the controversy surrounding potential sex differences in violence relate to concerns about equating male and female perpetrated violence based on behavioral checklist assessment instruments that do not fully assess the relationship context of the violence (e.g., motivation, who initiated it; e.g., M. P. Johnson, 2006; Stark, 2007). Although the full MASIC, including questions beyond Items 1 to 37 examined in this study, contains some questions relevant to this debate (e.g., fear, injury, who makes family decisions and satisfaction with the way decisions are made), it can be faulted for this same lack of detailed attention to the assessment of relationship dynamics. Given that the current study results support the MASIC as an IPV/A screen, future work should further develop the most efficient ways to assess these additional issues. Finally, in the current study, the lack of statistically significant differences between males' and females' reports, whether predicted (i.e., physical violence scores) or not (i.e., injuries), could be due to lack of statistical power or untested hypotheses.

In further tests of the validity of the MASIC, links between the participants' reports of level of IPV/A experienced and both level of fear of the partner and physical injuries sustained suggest that the IPV/A behaviors assessed by the MASIC are meaningfully connected with potential consequences of those behaviors. Also as hypothesized, parties identified, by their partners, as more violent and abusive on the MASIC had more POs/NCOs and criminal charges potentially related to IPV/A. Even though these findings suggest that the MASIC is capturing phenomena of interest, it is important to note the severe limitations of this method of validation. We only had access to criminal charges and petitions issued in Indiana, and many incidents of IPV/A are not reported to authorities (e.g., Tjaden & Thoennes, 2000). In future research, it would be ideal to directly compare results from the MASIC with results from other IPV/A measures, such as the Revised Conflict Tactics Scales. Unfortunately, in the clinics where we have been able to gather research data, the mediators and parties have been unable or unwilling to devote more time to IPV/A screening precluding our ability to do so.

As with all research, the current study had limitations. Most important, MASIC results may not accurately reflect true rates and levels of IPV/A in mediation cases because the MASIC is a self-report measure. To further determine the validity of the MASIC, it will be crucial to conduct studies comparing the MASIC to other validated measures of

IPV/A (e.g., calls to the police, partner reports of IPV/A, interviews with possible witnesses such as friends or family; Dutton, Hamel, & Aaronson, 2010). In addition, it will be important to link violence/abuse, as reported on the MASIC, to other short-term and long-term consequences than those examined in this study (e.g., PTSD; Babcock, Roseman, Green, & Ross, 2008; Hathaway et al., 2000; Sutherland, Bybee, & Sullivan, 2002). These are fundamental problems with all self-report IPV/A screening measures.

With regard to the sample, we dropped more than 70 participants because of missing data. It is unclear why IPV/A assessments were incomplete and may reflect parties' discomfort reporting particular IPV/A behaviors. The fact that the MASIC was sometimes administered in different ways (i.e., interview vs. self-administered) might have affected the outcomes and requires further study. Data for this study were gathered at three sites, which is both a strength and a limitation of the study. On one hand, it allowed us to recruit a more diverse sample, although the generalizability of the study findings still may be restricted to certain areas in the United States and Australia. On the other hand, the sites differed in various ways, including different cultures and legal systems. Future research, with larger samples from each setting, will be needed to further explore questions of cultural and setting differences in MASIC findings.

One of the strengths of the MASIC is the diverse scores that may be computed and that allow mediators to gain an in-depth understanding of the IPV/A that has occurred. However, given a lack of empirical research on outcomes for cases with varying levels of IPV/A, it would be premature to define IPV/A cutoff values for mediators to use in determining whether a case is inappropriate for mediation or to make strong recommendations for procedural accommodations based on MASIC scores. Additional questions first need to be addressed such as the following: What are the repercussions of labeling cases as "violent" and referring them back to court? Which accommodations to mediation procedures (e.g., shuttle, telephone, or videoconferencing) are effective for cases with differing levels and types of IPV/A? Do the potential benefits of mediation over litigation apply to all separating families or only to those with no or low levels of IPV/A? For the field to progress, future researchers must conduct studies to address these issue as no such work currently exists. In the meantime, mediators may compare individual MASIC scores of their clients with the mean values and frequencies in the current study to get a general idea of where their cases fall relative to others. We also recommend that mediators pay special attention to the review section at the end of the MASIC, which includes a list of critical items, such as empirically derived risk factors for lethality (e.g., weapons, reasons for ending the relationship), potential procedural accommodations for safety (e.g., staggered arrival and

departure times for the parties), and a space to record mediator concerns. This section, provided in Holtzworth-Munroe et al. (2010), can assist mediators in decision making on a case-by-case basis, but how to use these items has not yet been empirically established. While waiting for additional research to be conducted, the current study presents psychometric data on a new IPV/A screen for family mediation settings, and the findings should encourage mediators to adopt standardized screening for IPV/A using behaviorally specific questions.

Note

1. The same set of analyses was conducted using non–log-transformed values, which yielded similar findings. That is, models with greater complexity demonstrated better fit to the data, though the seven-factor model did not present a significantly better fit of the data than the six-factor model. Furthermore, in this set of analyses, we were unable to test the two-factor model because the physical violence factor did not demonstrate sufficient variance. Correlations between the latent factors did not differ significantly from the comparable correlations obtained in analyses of the log-transformed data and ranged from 0.25 to 0.94. Results of these analyses can be obtained from the authors.

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