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Assessment of Clinical Partner Violence Screening Tools

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Assessment of Clinical Partner Violence Screening Tools

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Abstract:
Objective: to compare the Women’s Experience with Battering Scale (WEB) with the Index of Spouse Abuse-Physical Scale (ISA-P) as screening tools to identify intimate partner violence (IPV).
Methods: We conducted a large cross-sectional survey of women age 18 to 65 attending one of two family practice clinics from 1997 to 1998. All women completed both the WEB and the ISA-P and a telephone interview. We figured agreement estimates between the two tools, used stratified analyses to evaluate attributes of those more likely to screen as battered or physically assaulted, and compared associations between the WEB and ISA-P and a range of mental and physical health indicators known to be associated with IPV.
Results: 18% of 1152 eligible women surveyed had experienced IPV in a current or most recent intimate relationship with a male partner; 17% had been battered (WEB+), and 10% had been physically assaulted (ISA-P+). Had we used the ISA-P alone to assess IPV, we would have missed almost 45% of IPV. As anticipated, the ISA-P was more strongly associated with IPV-associated injuries and number of physician visits in the last year. The WEB was more strongly associated with self-perceived mental health, anxiety, depression, drug abuse, and low social support.
Conclusion: Clinicians need validated screening tools to rapidly and reliably screen patients for IPV. Most screening tools assess physical violence and injury without considering the more chronic experience of battering and the psychological terror associated with this violence. The WEB may identify more abused women than tools measuring physical assaults.

Article:
Intimate partner violence (IPV) is a leading cause of injury among American women (nearly one million incidents annually) and has been thought to affect as many as 25% of American families. Women who experience IPV are more likely to report their physical and mental health as fair to poor and to have more physician visits, irritable bowel syndrome and frequent dyspepsia; chronic pain; migraine and other frequent headaches; sexually transmitted infections; pelvic inflammatory disease; chronic pelvic pain; and bladder, kidney, or other urinary tract infections than women who do not experience IPV.

The Conflict Tactics Scale, the Index of Spouse Abuse, the Severity of Violence Against Women Scale, HITS and the Woman Abuse Screening Tool are several scales used to identify women in abusive relationships. They assess violence based on the frequency and severity of physical attacks, and although they have subscales to assess threats of violence or psychological abuse, these are rarely used. Only one tool, the Women’s Experience with Battering Scale, assesses battering, which is distinguished from episodic physical assaults by its continuous, chronic nature and by such other forms of abusive behavior as threatening and humiliating, forcing and withholding sexual activity, and isolating women and restricting their access to other people and important resources. We define battering here as the process through which one member of an

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intimate relationship experiences a loss of power and control due to the other member’s patterned use of physical, sexual, and psychological force.  

Prior research with both clinical and population-based samples of women suggests that battering and physical assaults are both conceptually and empirically distinct. Consequently, it is important to identify the various health consequences of each type of IPV. Physical assault results in such obvious outcomes as broken bones, bruises, and head and facial injuries. However, the nonphysical forms of abuse battered women experience, and the coercive, disempowering relationships within which they live are likely to be associated with a range of health problems.

The purpose of this study was to compare two screening tools used to identify IPV: the Index of Spouse Abuse-Physical (ISA-P), which measures physical abuse, and the Women’s Experience with Battering Scale (WEB), which measures battering, to determine whether one measure was more sensitive or more strongly associated with the range of adverse mental and physical health outcomes known to be linked with IPV.

Methods
Sample. In this cross-sectional study, eligible women seeking medical care in one of two university-associated family practice clinics were recruited and screened for IPV from February 1997 through January 1999. Eligible women were those age 18 to 65 who were insured by a managed care organization or Medicaid and had ever been in an intimate, sexual relationship with a man for at least three months. Interviewers invited women in the clinic waiting room to discuss study participation and obtained their informed consent; for safety reasons, we did not
attempt to recruit women whose partners would not leave them alone. Interviewers were female graduate students who had received extensive training in asking these sensitive questions, in active listening, and in providing women with community resources.

Study participation included a 5- to 10-minute in-clinic interview to screen for partner violence using both the ISA-P and the WEB and a 30- to 45-minute telephone interview to assess medical history and current health status. Subjects were reimbursed $5 for completing the in-clinic interview and $10 for the longer telephone interview. As a safety measure, women currently in violent relationships were given the option of completing the longer interview in the clinic. We used computer-assisted interviewing for both in-clinic and telephone interviews.
interviews to reduce errors and rapidly provide scale scores for IPV measures. We told all women about community services for battered women, and we were more explicit in providing the local shelter hotline number; talking about safety plans; and describing services for women, children, and batterers for women screened as IPV positive.

The University of South Carolina Institutional Review Board approved this project.

**Measures of IPV.** We used a modified version of the ISA-P, a 25-item scale designed to measure the severity of physical violence inflicted on women by their current or most recent male partners. The Cronbach’s alpha coefficient for the reduced 15-item scale was high (α=0.93). We used the recommended weighted scale score and cutpoint.

We used the 10-item WEB, which measures battering by characterizing women’s perception of their vulnerability to physical and psychological danger or loss of power and control in relationships with male partners. Respondents indicated their level of agreement or disagreement using a six-point Likert scale. The WEB has good construct validity, accurately discriminates battered from nonbattered women, and shows strong internal consistency (α=0.95 in current sample). Although the WEB and ISA-P were designed to be self-administered, we used personal interviewers because of concern with literacy in our population.

The WEB and revised 15-item ISA-P are included as appendices.

We collected the following demographic characteristics: the woman’s marital status, age, race/ethnicity, education, and usual occupation; whether she had an alcohol or drug problem; whether her father was either emotionally or physically abusive toward her mother; her current male partner’s age, race/ethnicity, and occupation; and her perception of his drinking or drug problems, if any.

**Injuries and Health Assessment.** We assessed current mental and physical health status in the 45-minute follow-up

<table>
<thead>
<tr>
<th>Table 3. Associations Between WEB and ISA-P Scores and Partner Violence-Associated Injuries, Adverse Mental Health Outcomes, Poor Perceived Health, and Health Care Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Indicator (Dependent Variable)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>≥10 MD visits in last year</td>
</tr>
<tr>
<td>&gt;1 hospitalizations last year</td>
</tr>
<tr>
<td>Self-reported poor physical health</td>
</tr>
<tr>
<td>Self-reported poor mental health</td>
</tr>
<tr>
<td>Spielberger Anxiety Score</td>
</tr>
<tr>
<td>Currently depressed</td>
</tr>
<tr>
<td>Alcohol abuse (TWEAK&gt;1)</td>
</tr>
<tr>
<td>Drug abuse (DAST&gt;1)</td>
</tr>
<tr>
<td>Low social support</td>
</tr>
</tbody>
</table>

*IPV+ women scored positive on either the WEB or ISA-P; IPV− women scored negative on both.

†WEB included as the dichotomized measure (≥20) with ISA-P in the same model.

‡ISA included as the dichotomized measure (≥2) with WEB in the same model.

§Adjust RR for insurance type and recent pregnancy (all 1152 women included in model).

‖Adjust RR for age and insurance type (all 1152 women included in model).

‡‡Adjust RR for insurance type and partner having a substance abuse problem (all 1152 women included in model).
interview. Measures included the Drug Abuse Screening Test (C=0.76), the TWEAK to measure alcohol abuse (C=0.71), an injury frequency and severity scale specific to partner violence (C=0.76), the Spielberger State-Trait Personality Inventory (C=0.77), the Center for Epidemiologic Studies Depression Scale (C=0.79), and the Social Support Questionnaire-Short Form (C=0.89) to measure current social support. Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria were used to assess symptoms of post-traumatic stress disorder (C=0.87). We assessed current self-perceived mental and physical health with the following standard question: “Compared to others your own age, do you consider your current mental/physical health to be excellent, very good, good, fair or poor?” We asked women the number of times they were seen by physicians and the number of times they were hospitalized in the year before recruitment. All health indicators were dichotomized for stratified analysis.

**Statistical Analysis.** All analyses were conducted in SAS version 6.12. We compared women’s responses to the WEB and the ISA-P using dichotomous cut-points (WEB >_20 and ISA-P >2).

We used Cohen’s kappa statistic to measure correlation between the two dichotomized measures, adjusting for chance agreement and Pearson correlation coefficient for the continuous WEB and ISA-P scales.

We next assessed the association between the WEB and ISA-P and a range of current mental and physical health indicators. We used stratified analyses to provide Mantel-Haenszel adjusted relative risk estimates for each of the ten dichotomized health indicators as the dependent variables, adjusting for the confounders noted in the table. Additionally, because there was overlap between the WEB and ISA-P, and because we wanted to identify which of the two measures was more strongly associated with the health indicator of interest, we included both the WEB and the ISA-P as dichotomous variables in stratified analyses. The referent group was women who scored negative on both the WEB and the ISA-P.

**Results**

Forty women had never had intimate relationships with men and were thus ineligible. Of the 1503 eligible women approached for participation, 174 refused (12%), 97 did not complete the health assessment interview (6%), and 80 had missing data on several response variables (5%), leaving 1152 women for this analysis (77%). Refusers (32%) were more likely than respondents (25%) to be Medicaid recipients; we have no additional demographic data to compare refusers and respondents. Women who did not complete the health assessment interview were younger and more likely to have recently experienced IPV than were women who completed the health assessment.

Table 1 presents the demographic characteristics of the study participants. The mean age was 38.1 years (SD±11.2). The majority (62%) of women screened were African American, insured by a managed care provider (78%), and currently employed (86%). Almost one-third (32%) of women had been in physically abusive intimate relationships in the past, and 30% had fathers who were abusive to the respondents’ mothers.

Table 2 provides the comparison of ISA-P and WEB scores. Eighty-two percent (946) of the 1152 women did not test positive on either screening tool. The kappa statistic of 60% indicates good agreement between the two measures. The Pearson correlation coefficient for the continuous WEB and ISA-P scales (r=0.67) also indicates good agreement. The mean and standard deviation for continuous IPV scores were 15.4 ± 11.2 (range 10-60) for the WEB and 1.7 + 6.8 (range 0-84) for the ISA-P.

Table 3 provides a summary of our analyses comparing the dichotomized ISA-P and WEB with a range of self-reported dichotomous health indicators for all 1152 women in the study. Relative risk estimates (RR) and 95% confidence intervals (CI) are presented. Prevalence of each health outcome is presented for those who were currently experiencing IPV (IPV+) and those who had not experienced IPV (IPV–). When controlling for the ISA-P, the WEB score was significantly associated with poor mental health, anxiety, depression, drug abuse, post-traumatic stress disorder (PTSD), and low social support. When controlling for the WEB, the ISA-P score...
was associated only with more physician visits. Among women currently experiencing physical IPV only (n=154), the continuous ISA-P score (adjusting for the continuous WEB score) was significantly associated with having an IPV-associated injury requiring medical care (RR=1.06), and the WEB was not (RR=0.99).

Among women reporting an event that could lead to PTSD (n=356), the WEB score was associated with higher PTSD symptom scores (RR=2.02), and the ISA-P score was not (RR=0.93).

Discussion
This is the first study to evaluate how the WEB correlates with the ISA-P in terms of absolute frequency of IPV and health indicators. Our findings indicate that the WEB may have greater clinical and public health relevance because it is more strongly associated with the more prevalent IPV-associated health outcomes and may have longer term health consequences. In short, these data provide support for the WEB Scale as a tool for IPV screening and intervention alone or in combination with other measures of physical assault.

Our assessment of a range of health outcomes associated with IPV is important from a clinical and public health perspective. Although injuries are frequently a result of IPV, IPV also has a negative impact on women’s physical and mental health. Screening for battering using the WEB and intervening early could reduce the health impact of this violence.

As do most studies, this one had limitations. Because our sample included insured women, we cannot generalize to uninsured women. As is true for all cross-sectional studies, we cannot establish that IPV preceded the health outcome. Because we were measuring current physical and mental health outcomes not routinely collected from all patients, we could not rely on medical records to provide validation of health outcomes. Because we did not have chart audit data for all women in the study and the agreement between our chart audit for 238 women and their recall of number of clinic visits in the last year was good (r=0.69), we opted to use the self-report data.

Study strengths included the relatively large (n=1152) sample size, which provided us with sufficient power to address the question. We controlled for potential confounding by including the identified covariates in all stratified analyses.

We conclude that the WEB Scale may identify more women experiencing both physical and psychological battering. Further, the WEB is more strongly associated with the wide range of health outcomes associated with IPV. From a practical standpoint, the 10-item, self-administered WEB can be completed much more rapidly than the 25-item ISA-P or the longer Conflict Tactics Scale without any loss of effectiveness. Clinicians in busy primary care settings can provide the WEB to women in the private examination room, and it can be scored by clinic staff to provide a rapid assessment of battering. Alternatively, the clinic assistant could administer the WEB, calculate the score, and provide it to the clinician for follow-up and referral. We recommend that all women be screened annually for battering independent of any clinical indicators. Clinicians must talk with each woman who screens positive and offer resources. Expressing concern for her safety and well-being is an important intervention and may help her seek services to address IPV.

References

### Appendix A. Women’s Experience with Battering Scale

<table>
<thead>
<tr>
<th>Description of how your partner makes you feel</th>
<th>Agree Strongly</th>
<th>Agree Somewhat</th>
<th>Agree a Little</th>
<th>Disagree a Little</th>
<th>Disagree Somewhat</th>
<th>Disagree Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. He makes me feel unsafe even in my own home.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. I feel ashamed of the things he does to me.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. I try not to rock the boat because I am afraid of what he might do.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I feel like I am programmed to react a certain way to him.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. I feel like he keeps me prisoner.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. He makes me feel like I have no control over my life, no power, no protection.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. I hide the truth from others because I am afraid not to.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8. I feel owned and controlled by him.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9. He can scare me without laying a hand on me.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. He has a look that goes straight through me and terrifies me.</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scoring:** To score WEB scale, sum responses for items 1-10. Range of scores is 10-60. Score ≥20 indicates battering.

### Appendix B. Index of Spouse Abuse, Partner Abuse Scale: Physical

<table>
<thead>
<tr>
<th>All of the time</th>
<th>Most of the time</th>
<th>A good part of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>Very rarely</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My partner pushes and shoves me around violently.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2. My partner hits and punches my arms and body.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>3. My partner threatens me with a weapon like a gun or knife.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4. My partner beats me so hard I must seek medical help.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5. My partner beats me when he drinks.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>6. My partner hits, punches, or kicks my face and head.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7. My partner beats me in the face so badly that I’m ashamed to be seen in public.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>8. My partner tries to choke, strangle or suffocate me.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9. My partner knocks me down and then kicks or stomps me.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10. My partner throws dangerous objects at me.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>11. My partner has injured me with a weapon like a gun, knife or other object.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>12. My partner has broken one or more of my bones.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>13. My partner physically forces me to have sex.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>14. My partner badly hurts me while we are having sex.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>15. My partner injures my breasts or genitals.</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

**Scoring:** Sum the responses, subtract the number of questions actually answered (n=15) and multiply by 100, then divide by 90. Scores >2 indicate physical IPV.