

# Domestic Situation Inventory



## Administrator's Guide

By Robert P. Brady, Ed.D.

The *Domestic Situation Inventory* is a sensitive counseling tool to help women consider their situations and take action to protect themselves and their children from abusers. It can be given in groups or individually. The entire *DSI* can be administered in a session that lasts up to an hour. Discussion and additional interaction can be used to constructively structure one or more additional sessions.

### Purpose

The *DSI* is designed to provide an objective, research-based, and statistically sound survey of the elements and risk factors that influence and contribute to domestic violence, specifically a male perpetrating violence against a female partner. The *DSI* was developed for women to provide awareness, stimulate new insights, promote prevention, enhance resiliency, and encourage early intervention in violent relationships.

Characteristics of the families of origin for both women victims and male perpetrators, patterns of violence of male partners, characteristics of women victims, and the influence of community values and mores were also incorporated into the *DSI*.

### Background

Family is a basic social unit and is seen as the cornerstone of human society (Gesell & Ilg, 1943; Goode, 1974). Family can be a powerful force in influencing the development of the individual (Mussen et al, 1969). Family can provide nurturance, safety, and security; promote levels of acceptance and affirmation (Satir, 1972); and contribute to socialization (Birren et al, 1981). Styles of relating and coping (Satir, 1972, 1976), conflict tactics (Straus, 1980), and patterns of violence can also be learned within the family structure (Bach & Wyden, 1968; Cohen, 1984; Paleg, 1989; Walker, 1984).

Reporting of assaults within families has increased significantly over the last two decades (Walker, 1999). It has been estimated that from one-third (Miller et al, 1997) to one-half (Telch & Lindquist, 1984) of all married couples have engaged in some form of spousal assault or violence at least once during their marriages. Carden (1994) reported that women were identified as the victims of domestic violence in 91% of the cases recorded by the Bureau of Justice Statistics over an eight-year period ending in 1981. Lamb (1991), in surveying several studies, concluded that in domestic violence situations, women are the victims of physical harm perpetrated by their male associates at least 95% of the time. Dutton and Golant (1995) reported a survey estimating that 2.5 million wife assaults occur in the United States each year. According to Walker (1999), "The single most powerful risk marker for becoming a victim of violence is to be a woman." Because most victims are female, the *DSI* addresses women.

Stacey and Shupe (1983) reported in one study that up to 75% of women who were battered and assaulted did not seek outside relief immediately and tolerated an abusive situation for one or more years; 26% stayed five or more years before leaving. Apprehension, dependency, denial, perceptions of power, and learned helplessness may be factors (Walker, 2000). Depression, shame, low self-esteem, and guilt are also often part of the dynamics (Miller et al, 1997; Walker, 2000). Some women may be unaware of or underestimate the forces contributing to the milieu of violence and may sometimes entertain false hope that things will improve. Many women finally receive some relief after the violence has escalated to the point that the legal system has become involved. Treatment for male partner perpetrators has received more attention recently (Dutton & Golant, 1995; Deschner, 1984; Peterman & Dixon, 2001; Stosny, 1995); however, this is often *ex post facto*.



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Walker recommends public awareness programs and prevention and early intervention programs using criteria of risk factors and resilience (2000, p. 15). Straus sees increased awareness of the importance of family history, choice patterns, discipline style, conflict tactics, and families of origin as essential elements (1980).

## Description of the *DSI*

### The *DSI* Checklist

The *DSI* consists of a list of 155 statements about the concerns and experiences that women have encountered in their lives and home situations. The items are presented in a checklist format. Statements refer to family relationships, parenting, home life, community, current or past partner(s), family of origin, and feelings. *DSI* users check the statement(s) that apply to them or their situations as they read the item list. This process takes 10 to 15 minutes. A total score is then derived from the checked items. The score's position on a risk factors continuum provides a severity level for the risk of domestic violence.

### *DSI* Supplemental Scales

The Hopelessness/Depression Scale (HDS), the Powerlessness/Helplessness Scale (PHS), the Threatening Behaviors Scale (TBS), and the Violent Behaviors Scale (VBS) are four supplemental scales of the *DSI*. These scales can be used to further explore personal style, emotional status, and conflict dynamics that may impact the domestic situation. Information on scoring these scales appears in this guide.

- The Hopelessness/Depression Scale (HDS) consists of 18 items from the *DSI* that address discouragement and signs of depression. Self-blaming, guilt, low self-confidence, difficulty making decisions, feelings of rejection, isolation, and despair are assessed with the HDS.
- The Powerlessness/Helplessness Scale (PHS) consists of 27 items from the *DSI* that address control issues, dependence, domination, possessiveness, feeling stuck, and struggling to be heard.
- The Threatening Behaviors Scale (TBS) is made up of 10 items from the *DSI*. The TBS items address such perpetrator behaviors as yelling, name-calling, accusing, and threats of bodily harm.
- The Violent Behaviors Scale (VBS) consists of 19 items from the *DSI*. The VBS items address purposeful behaviors perpetrated to harm. These include pushing, shoving, throwing objects, punching, hitting, scratching, choking, burning, running over, and kicking.

### Other Information

The *DSI* gives users other information, including facts about domestic violence, where to call for help, and how to create an escape plan and an escape kit.

## Administering the *DSI*

The *DSI* Checklist is designed for both self-administration and clinical use. The *DSI* users are asked to read the list of items and, as they do, check those items that apply to them or their situation. To obtain the most clinically useful results, authentic and forthright responses are encouraged.

## Scoring the *DSI*

Simple instructions in Part 2 help a user to score the *DSI*. The user counts the number of items checked in each color band and writes the number in the right column next to the "# of check marks" box. The user then multiplies the number of items by the appropriate weight (1, 2, 3, 4, or 5) to get a total for the color band. Finally, the user adds the 10 color band totals to get a *DSI* Total Score.

## Interpreting the *DSI*

The *DSI* was designed to elicit responses that can assist the user or clinician in identifying those factors that are associated with domestic violence. In general, the *DSI* can help in stimulating new insights and awareness of those attributes, characteristics, family dynamics, and histories that may need to be addressed. Looking at score ranges in Part 3 can assist users in obtaining some idea of where their score might fall compared to the group of women who participated in the normalization process. The ranges are based on the predictive weights given each item by the panel of experts who worked in the area of domestic violence with women victims and male perpetrators. This *normative approach* to interpretation uses the following ranges of scores on a risk factors continuum:

- **0 to 24: Low Risk for Violence.** Characteristics of a good domestic situation are usually present. Few, if any, risk factors predispose the relationship to violence.
- **25 to 50: Some Risk for Violence.** Family-of-origin conflicts may have been present in the past. Past histories of abuse may be predisposing factors. Conflicts are mostly resolved amicably. User should review items that may pose a concern.
- **51 to 70: Moderate Risk for Violence.** May be a non-violent relationship, but characterized by Telch & Lindquist (1984) as a "distressed" relationship. The NVD (nonviolent distressed) partnership is often plagued with conflict.
- **71 or higher: High Risk for Violence.** This range could be associated with threatening language and behaviors. A past history of violence by the male perpetrator is often present. Multiple risk factors are present.
- **Critical items.** A number of the *DSI* items were identified by the panel of experts as indicating that domestic violence was present at one time or is likely to be currently present. These items were designated as *critical items*. The endorsement of one or more of these 18 items would suggest domestic violence regardless of the user's overall *DSI* score. The following items

were judged to be critical by the expert panel: 24, 25, 26, 50, 51, 52, 76, 77, 78, 102, 103, 104, 128, 129, 130, 153, 154, and 155.

An *ipsative approach* can also be used when interpreting the *DSI*. This procedure allows for items to be compared with each other. Drummond (1996) describes ipsative comparisons as "intraindividual." As Walker (2000, p. 15) suggests, risk and resiliency factors could be more useful elements in the prevention and intervention process than thinking in terms of pathology, illness, and cure. McCloskey and Fraser (1997) seem to encourage a more person-centered, non-pathologizing, and non-normative approach in the initial stages of contact with victims of domestic violence. Selltiz et al (1976) presented the *phenomenological attitude* or orientation to interpretation. This approach emphasizes that individual situations are meaningful in their own right, regardless of whether a classification range or placement on a scale is used in the interpretation process (Selltiz et al, 1976, p. 460).

## Scoring the *DSI* Supplemental Scales

The worksheet that follows provides a form to help score the supplemental scales. If you have purchased copies of the *DSI*, you are authorized to duplicate the worksheet. The items for each scale are listed in a table. The participant should check off the items that she checked when she filled out the *DSI* Checklist. Each item has a corresponding number next to it that indicates its weight. If an item is checked, the woman circles the weighted number for that item. She then adds the weighted numbers for each scale.

You can compare the total score for each of the four supplemental scales to the severity cutoff scores established for each scale: HDS, a weighted score of 8 or higher; PHS, a weighted score of 9 or higher; TBS, a weighted score of 5 or higher; and VBS, a weighted score of 8 or higher. More information on the scores is listed after the worksheet in this guide.

## Interpreting the Supplemental Scales

The **Hopelessness/Depression Scale (HDS)** assesses signs of depression and discouragement. Findings from the standardization process suggest that women from domestic violence situations scored higher on the HDS than women from non-violent situations did. Guilt, isolation, despair, and low self-confidence were also associated with higher scores. Raw scores on the HDS range from 0 to 45, and the cutoff score was established at 8 or above. 91% of the scores that were true positives for domestic violence fell above the threshold cutoff score of 8. 9% were missed positives. 89% of the scores that fell below 8 were true negatives and 11% missed negatives. Since the HDS correlated positively with the Beck Depression Inventory, higher HDS scores suggest the presence of clinical depressive symptoms that may need to be further addressed.

The **Powerlessness/Helplessness Scale (PHS)** addresses control issues, dominance, experiencing possessiveness, and feeling immobilized. Raw scores at or above the threshold score of 9 were associated with domestic violence victims and their situations. While the women victims sometimes feel they are able to cope and survive on a day-to-day basis, they may feel powerless to change their overall domestic situations. High raw scores on the PHS, 9 or above, have a true positive rate of 89%, with 11% missed positives. Below the raw score of 9 falls the true negative rate of 96%, with only 4% missed negatives. Empowerment, networking, and developing a plan of action are some of the recommendations given to high scorers on the PHS.

The **Threatening Behaviors Scale (TBS)** includes behaviors such as yelling, blaming, name-calling, verbal threats, and verbal abuse. A cutoff score for the TBS was set at 5 or above, which is achieved by checking 2 or more items, with a true positive rate of 91%. Women who score 5 or higher may be experiencing a threat level similar to the surveyed women domestic violence victims. There is a missed positive rate of 9% for the TBS. A raw score below 5 has a true negative rate of 89%. The surveyed women with true negative scores were subjected to few if any threatening behaviors; however, the missed negative rate was 11%. The TBS reliability coefficient does raise a caution regarding consistency when considering TBS scores. The reliability coefficient of the TBS reflects a degree of inconsistency, and it may be in the reporting of threatening behaviors. Some of the women in the test-retest reliability study may not have always consistently reported the threatening behaviors they experienced. One might consider the possibilities that they may have minimized, dismissed, forgotten, or become accustomed to the threatening-behavior episodes they had reported earlier. The possible presence of such dynamics could also be taken into account when interpreting a TBS score.

The **Violent Behaviors Scale (VBS)** assesses a male perpetrator's purposeful violent acts that are meant to harm. With a threshold cutoff raw score of 8 or above, the true positive rate is 100%. Below the raw score threshold of 5 is the true negative rate of 100%. High scores are consistent with high levels of reported violent acts that can lead to bodily harm and/or serious injury. It is usually recommended that women endangered by violent acts develop safety plans for themselves and their children. Women's centers and shelters can provide more direction and local resources.

## False Negatives

Clinician and user should be aware of false negatives. False negatives can occur when test takers overlook or avoid endorsing items that do apply to them. Some individuals may wish to endorse items in a way they feel might be more socially acceptable, or they may wish to appear in a more favorable light. Apprehension, fear, and denial may also contribute to false negative scores. The results and interpretation of the *DSI* are based on the forthright and authentic responses of the test taker.

## Worksheet

### ***The DSI Checklist Can Also Be Scored in Four Scales***

The *DSI* Checklist statements can be organized into four groupings or "scales" to give you more information. Descriptions of the four scales are provided here, along with the numbered statements from the *DSI* Checklist that make up each scale. Mark the statements that make up each scale in the same way you marked them in Part 1 of the *DSI*. In other words, if you checkmarked a statement in Part 1 of the *DSI*, checkmark it here.

Each item has a number next to it that indicates its weight. If an item is checked, circle its weight in the second column. Add the circled numbers to get your total score for each scale. Your counselor can help you interpret these scales.

**The Hopelessness/Depression Scale (HDS):** These items address discouragement and signs of depression. The scale looks at feelings such as self-blaming, guilt, low self-confidence, decision making, isolation, rejection, and despair.

<i>Checklist Item</i>	<i>Item Weight— Circle If Item Is Checked</i>
<input type="checkbox"/> 4. I feel guilty sometimes.	2
<input type="checkbox"/> 5. Feeling stupid.	2
<input type="checkbox"/> 6. I have difficulty making decisions.	2
<input type="checkbox"/> 8. I usually deserve what I get.	2
<input type="checkbox"/> 9. I have little, if any, self-confidence.	2
<input type="checkbox"/> 11. I argue with my partner.	3
<input type="checkbox"/> 14. It's my fault most of the time.	3
<input type="checkbox"/> 15. I blame myself for what goes wrong at home.	3
<input type="checkbox"/> 30. Having the feeling that I'm unlovable.	2
<input type="checkbox"/> 33. I stay to myself most of the time.	2
<input type="checkbox"/> 35. Feeling unwanted.	2
<input type="checkbox"/> 58. I feel lonely much of the time.	2
<input type="checkbox"/> 61. I have felt depressed at times.	2
<input type="checkbox"/> 68. I feel I'm stuck and have no place to go.	3
<input type="checkbox"/> 111. I was made to feel stupid in school.	2
<input type="checkbox"/> 122. Sometimes I'd like to end this.	4
<input type="checkbox"/> 145. I'm usually the cause of his outbursts.	3
<input type="checkbox"/> 148. I have no way out.	4

**Total score for this scale**

**(add circled numbers above):** \_\_\_\_\_

**The Powerlessness/Helplessness Scale (PHS):** These items address control and feelings of dependence. The scale looks at issues such as dominance, possessiveness, struggling to be heard, and feeling stuck.

<i>Checklist Item</i>	<i>Item Weight— Circle If Item Is Checked</i>
<input type="checkbox"/> 12. I feel that I have no independence.	3
<input type="checkbox"/> 38. In our house, he's in charge.	3
<input type="checkbox"/> 42. My partner won't let me go anywhere.	3
<input type="checkbox"/> 43. He hates it if I want to do things with a girlfriend.	3
<input type="checkbox"/> 45. Sometimes I feel so helpless.	4
<input type="checkbox"/> 50. My partner has forced me to have sex.	5
<input type="checkbox"/> 57. I've always been picked on.	2
<input type="checkbox"/> 64. I'm not allowed to go anywhere.	3
<input type="checkbox"/> 66. My partner is possessive.	3
<input type="checkbox"/> 67. I don't think I can make it on my own.	3
<input type="checkbox"/> 68. I feel I'm stuck and have no place to go.	3
<input type="checkbox"/> 73. I'm afraid my partner could hurt me.	4
<input type="checkbox"/> 89. Things have to be his way.	3
<input type="checkbox"/> 94. I can manage some of the most difficult family situations.	3
<input type="checkbox"/> 98. I just want to survive.	4
<input type="checkbox"/> 118. He says no one will believe me.	3
<input type="checkbox"/> 121. Sometimes it's like he is on a power trip.	3
<input type="checkbox"/> 127. I got help, but he still threatens me.	4
<input type="checkbox"/> 130. I've had to obtain restraining orders.	5
<input type="checkbox"/> 131. The courts in our town aren't that fair.	1
<input type="checkbox"/> 136. I don't have anyone I can really count on.	2
<input type="checkbox"/> 141. He treats me like a possession.	3
<input type="checkbox"/> 142. He controls the money.	3
<input type="checkbox"/> 144. I experience feelings of helplessness.	3
<input type="checkbox"/> 147. I'm scared of my partner.	4
<input type="checkbox"/> 148. I have no way out.	4
<input type="checkbox"/> 151. The local police are not all that helpful.	4

**Total score for this scale**

**(add circled numbers above):** \_\_\_\_\_

*(worksheet continues)*

(worksheet continued)

**The Threatening Behaviors Scale (TBS):** These items address the perpetrator's behavior. The scale looks at behaviors such as yelling, name-calling, accusing, and threats.

<i>Checklist Item</i>	<i>Item Weight— Circle If Item Is Checked</i>
<input type="checkbox"/> 46. He has threatened to choke me.	4
<input type="checkbox"/> 63. My partner calls me names.	3
<input type="checkbox"/> 86. My partner has yelled at me.	2
<input type="checkbox"/> 100. My partner has threatened to hurt me.	4
<input type="checkbox"/> 120. My partner has accused me of flirting with other men.	3
<input type="checkbox"/> 126. His outbursts have gotten worse and worse over time.	4
<input type="checkbox"/> 149. He has threatened to harm me.	4
<input type="checkbox"/> 152. He has threatened to run over me with a vehicle.	4
<input type="checkbox"/> 154. He has threatened me with a gun.	5
<input type="checkbox"/> 155. My partner has threatened me with a knife.	5

**Total score for this scale**

**(add circled numbers above):** \_\_\_\_\_

**The Violent Behaviors Scale (VBS):** These items address whether the perpetrator has harmed anyone. The scale looks at behaviors such as pushing, shoving, throwing objects, punching, hitting, scratching, kicking, choking, running over, and burning.

<i>Checklist Item</i>	<i>Item Weight— Circle If Item Is Checked</i>
<input type="checkbox"/> 20. My partner has pushed me.	4
<input type="checkbox"/> 21. My partner has shoved me.	4
<input type="checkbox"/> 24. He has only hit me a couple of times.	5
<input type="checkbox"/> 26. My partner has been in court for his violent behavior.	5
<input type="checkbox"/> 44. He has punched holes in the wall.	4
<input type="checkbox"/> 47. He's been angry enough to break things.	4
<input type="checkbox"/> 51. He has intentionally kicked me.	5
<input type="checkbox"/> 52. My partner has scratched me on purpose.	5
<input type="checkbox"/> 76. My partner has choked me.	5
<input type="checkbox"/> 77. My partner has thrown things at me when he is angry.	5
<input type="checkbox"/> 78. My partner has twisted my arm until it hurts.	5
<input type="checkbox"/> 102. My partner has hit or slapped me.	5
<input type="checkbox"/> 103. My partner has punched me.	5
<input type="checkbox"/> 104. My partner has purposely hit me with an object.	5
<input type="checkbox"/> 124. Sometimes he gets in a rage.	4
<input type="checkbox"/> 128. He has tried to burn me.	5
<input type="checkbox"/> 129. My partner has tried to run over me with a vehicle.	5
<input type="checkbox"/> 150. My partner purposely broke something of mine.	4
<input type="checkbox"/> 153. He has burned me.	5

**Total score for this scale**

**(add circled numbers above):** \_\_\_\_\_

## Content Validity

Content validity is the extent to which a test measures an intended content area or defined body of knowledge. It is determined by expert judgment and requires analysis of the domain of content and item validation (Drummond, 1996; Gay & Airasian, 2000; Lemke & Wiersma, 1976). The content of items for the *DSI* was based on findings presented in the current body of research literature (Aldarondo, 1996; Bograd, 1984; Bograd, 1994; Brems, 2000; Browne, 1993; Browne & Bassuk, 1997; Cardin, 1994; Deschner, 1984; Dutton, 1995; Dutton & Golant, 1995; Herman, 1986; Kempe & Helfer, 1972; Lamb, 1991; Metheny, 2000; Miller et al, 1997; Ornduff et al, 2001; Paleg, 1989; Palmer et al, 1992; Rieker & Carmen, 1986; Rutter, 1987; Simoni, 2002; Stratton, 1985; Straus et al, 1980; Telch & Lindquist, 1984; Walker, 1984; Walker, 1999; Walker, 2000; Widom, 1989). Items for the *DSI* were developed in four areas: characteristics of women victims; characteristics of male perpetrators; characteristics of their families of origin; and community structure, standards, and mores.

A panel of five expert judges was selected. The panel consisted of professionals experienced in treating victims and perpetrators in settings that included women's shelter treatment programs, male perpetrator treatment programs, chemical dependence and substance abuse programs, and family and domestic relations court. The panel members were asked to independently judge each item using the following content criteria: victim characteristics, perpetrator characteristics, characteristics of their families of origin, and community characteristics. Ambiguous items were then either discarded or clarified.

## Concurrent-Criterion Validity

Concurrent validity is a criterion-related validity (Gay & Airasian, 2000). Concurrent validity is the ability of a test or other measure to produce results in keeping with those of some criterion observed within the same time frame (Sellitz et al, 1976). In the case of the *DSI*, it was hypothesized that women who identified themselves as domestic violence (DV) victims would have significantly higher scores than women who had identified themselves as being from nonviolent (NV) domestic situations. A study was initiated in April 2002. Over the next several months, women who self-identified as NV and DV were given the *DSI*. The differences between the *DSI* total scores of the two groups were assessed using inferential statistics. In this case, a t-test was used. A t equal to 9.476 ( $t=9.476$ ) was obtained that exceeded the critical t value of 3.109 with 31 degrees of freedom ( $df=31$ ) and a probability of .004 ( $p<.004$ ). The hypothesis that DV victims would score significantly higher than NV women on the *DSI* was therefore supported. In other words, 99.6% of the variability in scores could be accounted for by the domestic situation status of the women in the study, and .4% or less of the variability in scores could be attributed to chance.

A replication of the above concurrent validity study was conducted in September and October of 2002. Women who had identified themselves as being from nonviolent

(NV) domestic situations and women who were either self-identified or identified by the staff of women's shelters and domestic violence treatment programs as domestic violence (DV) victims were tested. The differences between the *DSI* total scores of the NV and DV groups were assessed using a t test (Table 1). A t value of 12.975 ( $t=12.975$ ) was obtained that exceeds the critical t value of 4.243 with 48 degrees of freedom ( $df=48$ ) and a probability of less than .0001 ( $p < .0001$ ). Results showed that the DV group scored significantly higher on the *DSI* than the NV group, that a negligible amount of variability in the scores—1 in 10,000—could be attributed to chance, and that a preponderance of variability in scores could be attributed to the domestic status of the women participants. In this, as in the previous concurrent validity study, the *DSI* demonstrated the power to discriminate between the NV and DV groups.

## Item Values

Item weights or values were established using a modification of the Thurstone method (Roberts et al, 1999). The panel of expert judges was asked to independently weight or value each item on the *DSI* using the following criteria:

- A weight of 1 for "No or Low Risk" items
- A weight of 2 for "Predisposed" items
- A weight of 3 for "Moderate Risk" items
- A weight of 4 for "High Risk" items
- A weight of 5 for "Critical" items, which indicated that domestic violence is present or is likely to be present

The final value or weight for each item was then determined by the mode weight or, in some cases, the median weight given by panel members.

## Norms

A cross-section of women that included working mothers, housewives, and students from urban, rural, suburban, and small-town settings with current or past partners was given the *DSI* to establish some preliminary norms. Scores were then converted to standard scores, in this case T scores. T scores, with a mean of 50 and a standard deviation of 10, were then used to establish preliminary norms for the *DSI*.

## Reliability

A reliability study was conducted for the *DSI* by using the test-retest method. This study was conducted from May to July 2002 with a sample of women ( $n=20$ ). A Pearson Product Moment correlation coefficient was computed for the test-retest scores (Table 2). Results yielded a reliability coefficient of .94 ( $r=.94$ ).

## Standard Error of Measurement

To help determine a level of confidence that can be placed on any given score obtained in using the *DSI*, the standard error of measurement (SEm) was computed for raw scores (Table 3). The standard error of measurement for scores of the *DSI* was 4.36 ( $SEm=4.36$ ).

## Severity Cut Scores and Clinical Decision Analysis

An individual's overall score for the entire 155-item *DSI* can be used to estimate overall risk factors related to domestic violence. Using a modification of the Receiver Operating Characteristic (ROC) Analysis method (Murphy et al, 1987), a range of threshold scores was set. Severity levels for *DSI* raw scores were then designated in the following way: 71 or above, High Risk for Violence; 51 to 70, Moderate Risk for Violence; 25 to 50, Some Risk for Violence; and 0 to 24, Low Risk for Violence. Based on the scores of the domestic violence (DV) victims in the sample group, a threshold raw score cutoff with a true positive rate of 96.5% was set at 71 or above. In other words, it could be said that 96.5% of those individuals with *DSI* scores of 71 or higher would "test positive" for domestic violence situations. Although 3.5% were missed positives, almost all the scores from that 3.5% of missed positives would fall between 51 and 70, a range with a designated severity of moderate risk. A threshold cutoff raw score was set at 50 or below using the *DSI* scores of individuals from non-violent (NV) domestic situations. The "tested negative" or true negative rate was 98%, with a missed negative rate of 2%. The overwhelming majority of this 2% of missed negative scores would fall in the 25 to 50 range designated as Some Risk for Violence.

## Psychometric Characteristics of the *DSI* Supplemental Scales

### Concurrent-Criterion Validity

Concurrent validity studies were conducted for each of the four *DSI* supplemental scales. The four scales were given to a group of women from nonviolent (NV) domestic situations and to women identified as domestic violence (DV) victims. It was hypothesized that the DV group would score significantly higher than the NV women on the Hopelessness/Depression Scale (HDS), the Powerlessness/Helplessness Scale (PHS), the Threatening Behaviors Scale (TBS), and the Violent Behaviors Scale (VBS). A t test was used in each instance to test the significance of the differences between the NV and DV groups (Table 1).

For the HDS, a t of 8.113 ( $t=8.113$ ) was obtained that exceeded the critical t value of 4.243 with 48 degrees of freedom ( $df=48$ ) and  $p<.0001$ . For the PHS, a t of 7.828 ( $t=7.828$ ) was obtained that exceeded the critical t value of 4.243 with 48 degrees of freedom ( $df=48$ ) and  $p<.0001$ . A t of 15.969 ( $t=15.969$ ) was obtained for the TBS that exceeded the critical t value of 4.243 with 48 degrees of freedom ( $df=48$ ) and a  $p<.0001$ . For the VBS, a t of 9.895 ( $t=9.895$ ) was obtained that exceeded the critical t value of 4.243 with 48 degrees of freedom ( $df=48$ ) and a  $p<.0001$ . Findings were statistically significant, and the hypothesis that DV victims score higher than women from NV situations on the supplemental scales was supported. Results of each study demonstrated the power of each of the supplemental scales to discriminate between the scores of NV and DV respondents.

### Construct Validity

The Hopelessness/Depression Scale (HDS) was developed to identify elements of clinical depression, such as self-blame and despair, and the presence of depressive risk factors in the violent domestic situation. In the concurrent validity study, the discriminatory and predictive powers of the HDS were demonstrated. The purpose of this construct validity study was to determine to what degree the HDS measures what it intends to measure: depression and hopelessness. In this study, a group of women ( $n=15$ ), both NV and DV, were given the Hopelessness/Depression Scale (HDS) and the Beck Depression Scale (BDI). A Pearson Product Moment correlation was used to compare the paired HDS and BDI raw scores of the study participants. A correlation coefficient of .852 ( $r=.852$ ) with a probability of less than .01 ( $p<.01$ ) was obtained. Findings suggest a statistically significant relationship between the HDS and BDI, and it could be concluded that the HDS does measure elements of depression.

### Reliability

Reliability studies were completed for all four supplemental scales using the test-retest method. Pearson Product Moment correlations were computed for each scale. The time that elapsed between test and retest ranged from three weeks to two months. The following reliability coefficients were obtained:  $r=.7388$  ( $p<.01$ ) for the Hopelessness/Depression Scale;  $r=.9773$  ( $p<.01$ ) for the Powerlessness/Helplessness Scale;  $r=.5136$  ( $p<.05$ ) for the Threatening Behaviors Scale; and  $r=.91$  ( $p<.01$ ) for the Violent Behaviors Scale.

### Standard Error of Measurement

Standard errors of measurement (SEm) for the raw scores of each of the *DSI* Supplemental Scales were computed as follows: SEm=2.10 for the Hopelessness/Depression Scale, SEm=0.908 for the Powerlessness/Helplessness Scale, SEm=1.03 for the Threatening Behaviors Scale, and SEm=0.6462 for the Violent Behaviors Scale (Table 3).

### Establishing Threshold Scores

The threshold score, sometimes called the positivity criterion, can assist test users and clinicians in their analysis of test results. ROC (Receiver Operating Characteristic) Analysis (Murphy et al, 1987; Hsiao et al 1989) was employed to provide a standard method of prediction for each of the supplemental scales. Using ROC Analysis, the threshold or cutoff scores were established and decision-making criteria determined for each of the supplemental scales. The true positive rates, or test sensitivity values, were then calculated for each of the scales. The true positive rates fall above the threshold scores, and in a practical sense, these rates would determine individuals who "tested positive" for domestic violence characteristics. False negative rates, or test specificity values, were also determined. These rates could be described as the estimated rates for the missed positives.

On the other hand, the true negative rates fall below the threshold scores of each of the supplemental scales. True negative rates determine those individuals who could be said

to have "tested negative" for domestic violence characteristics. False positives rates were also calculated to determine the estimated rates for missed negatives.

Applying ROC Analysis, a raw score cutoff, or threshold score, of 8 and above was set for the Hopelessness/Depression Scale (HDS). ROC analysis yielded a true positive rate of 91%, a true negative rate of 89%, a false negative rate of 9%, and a false positive rate of 11%. For the Powerlessness/Helplessness Scale (PHS), the raw score cutoff, or threshold score, was established at 9 and above. The PHS true positive

rate was calculated to be 91%, the true negative rate was 96%, the false negative rate was 9%, and the false positive rate was 4%. The threshold score, or cutoff raw score, for the Threatening Behaviors Scale (TBS) was set at 5 and above. Rates for the TBS were then calculated. Results were a true positive rate of 91%, a true negative rate of 89%, a false negative rate of 9%, and a false positive rate of 11%. The Violent Behaviors Scale (VBS) cutoff raw score, or threshold score, was established as 8 and above. The true positive rate was 100% and the true negative rate 100% for the VBS. False negative and false positive rates were 0 (Table 4).

**Table 1: Concurrent-Criterion Validity Studies**

<i>Test</i>	<i>n</i>	<i>t score</i>	<i>critical t value</i>	<i>df</i>	<i>level of significance</i>
DSI	50	12.975	4.243	48	p<.0001
HDS	50	8.113	4.243	48	p<.0001
PHS	50	7.828	4.243	48	p<.0001
TBS	50	15.969	4.243	48	p<.0001
VBS	50	9.895	4.243	48	p<.0001

**Table 2: Test-Retest Reliability**

<i>Test</i>	<i>Coefficient</i>
DSI	r=.94
HDS	r=.738
PHS	r=.9773
TBS	r=.5136
VBS	r=.91

**Table 3: Standard Error of Measurement**

<i>Test</i>	<i>SEm</i>
DSI	4.36
HDS	2.10
PHS	0.91
TBS	1.03
VBS	0.65

**Table 4: Severity Scores and ROC Analysis for DSI Scales**

	<i>HDS</i>	<i>PHS</i>	<i>TBS</i>	<i>VBS</i>
raw score threshold	8+	9+	5+	8+
true positive rate	91%	91%	91%	100%
missed positive rate	9%	9%	9%	0%
true negative rate	89%	96%	89%	100%
missed negative rate	11%	4%	11%	0%

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## References

- Aldarondo, E. (1996). Cessation and persistence of wife assault: a longitudinal analysis. *American Journal of Orthopsychiatry*, 66 (1), 141–151.
- Bach, G.R., & Wyden, P. (1968). *The intimate enemy*. New York: Avon.
- Birren, J.E., Kinney, D.K., Schaie, K.W., & Woodruff, D.S. (1981). *Developmental psychology: a life span approach*. Boston: Houghton Mifflin.
- Bograd, M. (1984). Family systems approaches to wife battering: a feminist critique. *American Journal of Orthopsychiatry*, 54 (4), 558–568.
- Bograd, M. (1994). Battering, competing clinical models, and paucity of research: notes to those in the trenches. *The Counseling Psychologist*, 22 (4), 593–602.
- Brems, C. (2000). *Dealing with challenges in psychotherapy and counseling*. Belmont, CA: Wadsworth/Thomson Learning.
- Browne, A. (1993). Family violence and homelessness: the relevance of trauma histories in the lives of homeless women. *American Journal of Orthopsychiatry*, 63 (3), 370–384.
- Browne, A., & Bassuk, S.S. (1997). Intimate violence in the lives of homeless and poor housed women: prevalence and patterns in an ethnically diverse sample. *American Journal of Orthopsychiatry*, 67 (2), 261–277.
- Cardin, A.D. (1994). Wife abuse and wife abuser: review and recommendations. *The Counseling Psychologist*, 22 (4), 539–582.
- Cohen, P. (1984). Violence in the family—an act of loyalty? *Psychotherapy*, 21 (4), 249–253.
- Deschner, J.P. (1984). *The hitting habit: anger control for battering couples*. New York: The Free Press/Macmillan.
- Drummond, R.J. (1996). *Appraisal procedures for counselors and helping professionals*. Englewood Cliffs: Prentice Hall.
- Dutton, D.G., (1995). *The domestic assault of women: psychological and criminal justice perspectives*. Vancouver: UBC Press.
- Dutton, D.G., & Golant, S.K. (1995). *The batterer: a psychological profile*. New York: Basic Books.
- Gay, L.R., & Airasian, P. (2000). *Educational research*. Upper Saddle River, N.J.: Prentice-Hall.
- Gesell, A., & Ilg, F.L. (1943). *Infant and child in the culture today*. New York: Harper Bros.
- Goode, W.J. (1974). The many forms of family. In: H.M. Hughes, ed., *Life in families*, (pp.10–22). Boston: Holbrook.
- Herman, J.L. (1986). Histories of violence in an outpatient population: an exploratory study. *American Journal of Orthopsychiatry*, 56 (1), 137–146.
- Hsiao, J.K., Bartko, J.J., & Potter, W.Z. (1989). Diagnosing diagnoses: receiver operating characteristic methods and psychiatry. *Archives of General Psychiatry*, 46, 664–667.
- Kempe, C.H., & Helfer, R.E. (1972). *Helping the battered child and his family*. Philadelphia: Lippincott.
- Lamb, S. (1991). Acts without agents: an analysis of linguistic avoidance in journal articles on men who batter women. *American Journal of Orthopsychiatry*, 61 (2), 250–257.
- Lemke, E., & Wiersma, W. (1976). *Principles of psychological measurement*. Chicago: Rand McNally.
- McCloskey, K.A., & Fraser, S. (1997). Using feminist MRI brief therapy during initial contact with victims of domestic violence. *Psychotherapy*, 34 (4), 433–446.
- Metheny, W.P. (2000). An OSCE to test domestic violence detection skills of medical students. *Annals of Behavioral Science and Medical Education*, 7 (1), 29–32.
- Miller, T.W., Veltkamp, L.J., & Kraus, R.F. (1997). Clinical pathways for diagnosing and treating victims of domestic violence. *Psychotherapy*, 34 (4), 425–446.

- Murphy, J.M., Berwick, D.M., Weinstein, M.C., Borus, J.F., Budman, S.H., & Klerman, G.L. (1987). Performance of screening and diagnostic tests. *Archives of General Psychiatry*, 44, 550–555.
- Mussen, P.H., Conger, J.J., & Kagan, J. (1969). *Child development and personality*. New York: Harper & Row.
- Ornduff, S.R., Kelsey, R.M., & O'Leary, K.D. (2001). Childhood physical abuse, personality, and adult relationship violence: a model of vulnerability to victimization. *American Journal of Orthopsychiatry*, 71 (3), 322–331.
- Paleg, K. (1989). Spouse abuse. In: M. McKay, P. Rogers, & J. McCay, *When anger hurts: quieting the storm within* (pp. 269–301). Oakland, CA: New Harbinger Publications.
- Palmer, S.E., Brown, R.A., & Barrera, M.E. (1992). Group treatment program for abusive husbands: long-term evaluation. *American Journal of Orthopsychiatry*, 62 (2), 276–283.
- Peterman, L.M., & Dixon, C.G. (2001). Assessment and evaluation of men who batter women. *The Journal of Rehabilitation*, 67 (4), 38–43.
- Rieker, P.P., & Carmen, E.H. (1986). The victim-to-patient process: the disconfirmation and transformation of abuse. *American Journal of Orthopsychiatry*, 56 (3), 360–370.
- Roberts, J.S., Laughlin, J.E., & Wedell, D.H. (1999). Validity issues in the Likert and Thurstone approaches to attitude measurement. *Educational and Psychological Measurement*, 59 (2), 211–233.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57 (3), 316–331.
- Satir, V. (1972). *Peoplemaking*. Palo Alto: Science & Behavior Books.
- Satir, V. (1976). *Making contact*. Millbrae, CA: Celestial Arts.
- Selltiz, C., Wrightsman, L.S., & Cook, S.W. (1976). *Research methods in social relations*. New York: Holt, Rinehart & Winston.
- Simoni, J.M. (2002). Abuse, health locus of control, and perceived health among HIV-positive women. *Health Psychology*, 21 (1), 89–93.
- Stacey, W., & Shupe, A. (1983). *The family secret: domestic violence in America*. Boston: Beacon.
- Stosny, S. (1995). *Treating attachment abuse: a compassionate approach*. New York: Springer.
- Stratton, C.W. (1985). Comparison of abusive and nonabusive families with conduct-disordered children. *American Journal of Orthopsychiatry*, 55 (1), 59–69.
- Straus, M.A., Gelles, R.J., & Steinmetz, S.K. (1980). *Behind closed doors: violence in the American family*. Garden City, NY: Anchor Press/Doubleday.
- Telch, C.F., & Lindquist, C.U. (1984). Violent versus nonviolent couples: a comparison of patterns. *Psychotherapy*, 21 (2), 242–248.
- Walker, L.E. (1984). *The battered woman syndrome*. New York: Springer Publishing.
- Walker, L.E. (1999). Psychology and domestic violence around the world. *American Psychologist*, 54 (1), 21–29.
- Walker, L.E. (2000). *The battered woman syndrome*, 2nd Ed. New York: Springer Publishing.
- Widom, C.S. (1989). Child abuse, neglect, and adult behavior: research design and findings on criminality, violence, and child abuse. *American Journal of Orthopsychiatry*, 59 (3), 355–357.

