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Interpersonal Schemas and Functioning in Women Abused in Childhood: The Role of Revictimization

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Abstract ~ This study compared interpersonal schemas, as measured by the Interpersonal Schema Questionnaire (ISQ), and self-reported interpersonal problems on the Inventory of Interpersonal Problems (IIP) in a sample of women physically and/or sexually abused in childhood. Study participants were divided into childhood abuse only (CA) and revictimized in adulthood (RV) groups. As predicted, a strong negative relationship between number of interpersonal problems reported and affiliation scores on the ISQ was found. Contrary to the hypotheses, the CA group reported a higher number of interpersonal problems than the RV group. The CA group also had a higher mean score of the competitive-mistrusting octant of the

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ISQ than the RV group. Subjects who experienced more frequent abuse were found to report fewer interpersonal problems. The IIP and ISQ were also compared in terms of circumplex overlap. Only the cold and the cold-hostile octants of the IIP and ISQ were found to be positively correlated, suggesting that the two measure substantially different constructs. Implications for understanding and treatment of abused women are discussed.

Introduction

An interpersonal schema approach to understanding psychiatric disorders and the integration of cognitive schema theory into treatment design were recently advanced in the clinical literature (Cloitre, 1998; Janoff-Bulman, 1989; Safran, 1990). Cognitive schema theory, as applied to clinical practice, contends that schemas are developed during childhood, form the core of the self-concept, and guide the way in which interactions within an environment are perceived (McGinn, Young, & Sanderson, 1995). Schemas may be broadly defined as firmly-held beliefs about the self, others and the world. Safran (1990) defines an interpersonal schema as a "generalized representation of self-other relationships." These schemas are often molded by early attachment relationships, such as that between a child and parent. Thus, self-other relationships play an important part in everyday human life, and the quality of interpersonal functioning may be influenced by psychological problems. An important area of research involves the relationship between interpersonal schemas and psychological disorders such as depression (Hill & Safran, 1994; Soygut & Savasir, 2001) and post-traumatic stress disorder (PTSD) (Cloitre, Cohen, & Scarvalone, 2002).

Given that interpersonal schemas are believed to be laid down during an early developmental period and are shaped by interactions with early attachment figures, studying the influence of

childhood abuse on these implicit beliefs is an essential step in understanding the process of the way in which interpersonal relationships are viewed within this population. Janoff-Bulman (1989) describes the challenge that traumatic events bear on core assumptions of safety, the good of the world, and one's own worthiness. In cases of childhood abuse by a trusted caregiver, such as a parent or other close relative, the early schemas of others are tarnished by fear, mistrust, and often guilt. The increased risk for adult sexual revictimization among childhood sexual abuse survivors may be explained by the interpersonal schemas that are developed during the abuse, such that victims of childhood abuse expect to be mistreated by others and in turn seek out others who inevitably will exploit them (Cloitre et al., 2002).

Interpersonal Circumplex Models

The use of trait-descriptive terms to illustrate how people relate to each other is well established both in the psychological literature and public domain. Empirical attempts to create a taxonomy of these terms in the English language for research and clinical purposes stimulated the development of a circumplex model of interpersonal functioning by Leary and colleagues (see Wiggins, 1979). Circumplex models introduced a compelling conceptualization of interpersonal behavior as a two-dimensional construct consisting of the components agency and communion (Wiggins & Trobst, 1999). These models posit that all human behavioral interactions consist of some blend of these two elements. On one end of the agency dimension, there is control and mastery; at the opposite end, there is passivity and submission. For the communion pole, there is intimacy and union at the positive end and dissociation and hostility at the negative end. Interpersonal circumplex theorists administer self-report measures that ask the subject to select adjectives to describe him or herself during interpersonal situations (e.g., the Interpersonal Check List; LaForge & Suczek, 1955).

Through mapping out interpersonal behaviors along a continuum, these models postulate that such behaviors are organized in a circular pattern. Kiesler's (1982) Interpersonal Circle consists of two orthogonal axes, control and affiliation (comparable to the traditional agency and communion dichotomy). The affiliation dimension ranges from friendly to hostile behavior and the control dimension ranges from dominant to submissive behavior. Along the circle are sixteen segments, each with its reciprocal segment on the opposite side of the circle. The reciprocal pairings along the Interpersonal Circle are as follows: Dominant-Submissive, Competitive-Deferent, Mistrusting-Trusting, Cold-Warm, Hostile-Friendly, Detached-Sociable, Inhibited-Exhibitionistic, and Unassured-Assured. The distance between any two behaviors along the circle indicates the projected correlation between them (e.g., along the 180 axis of control, dominance is negatively correlated with submissiveness). Kiesler advances the notion of response complementarity, such that specific behaviors of one individual may elicit specific responses from another person. There are two types of complementarity: correspondence for the affliliative dimension (e.g., friendly behavior on the part of one individual pulls for friendliness in the other) and reciprocity for the control axis (e.g., dominant behavior in one pulls for submission in the other).

Wiggins (1979) states that the two-dimensional circumplex provides two distinct advantages over strictly empirical procedures of interpersonal variable selection. First, this system is potentially falsifiable because every interpersonal behavior must fit somewhere along the circle. Second, the circumplex allows for the detection of "gaps" within a given set of variables that are underrepresented in the English language.

Interpersonal Schema Questionnaire

To provide a standardized, objective measure of interpersonal

schemas, Hill and Safran (1994) developed the Interpersonal Schema Questionnaire (ISQ), which is based on Kiesler's 1982 Interpersonal Circle. The ISQ asks the respondent to imagine him or herself in various interpersonal scenarios that represent each of Kiesler's segments. The ISQ typically has the subject rate his or her mother, father, and a significant other in each of the interpersonal scenarios, but can be adapted to a variety of significant role relationships, such as the patient's therapist or doctor. At the Anxiety and Traumatic Stress Program (ATSP) at the Payne Whitney Clinic of New York Presbyterian Hospital, the ISQ has the respondent imagine him or herself in these scenarios with a mother figure, a father figure, and a significant other at his or her best and worst. For each of these scenarios, the participant is to circle how he/she expects the other person to respond in that situation and how desirable that response would be.

Inventory of Interpersonal Problems

A related area of research pertains to clients' perceptions of interpersonal problems. Horowitz, Rosenberg, Baer, Ureno, and Villasenor (1988) developed the Inventory of Interpersonal Problems (IIP), which measures distress related to interpersonal conflict. The IIP is a 127-item set of commonly reported interpersonal problems (e.g., "it is hard for me to trust other people"). Respondents are asked to consider if each item has been a problem and how distressing that problem has been. Horowitz et al.'s (1988) IIP is also based on an interpersonal circumplex model and the items form six subscales: Assertive, Sociable, Intimate, Submissive, Responsible, and Controlling. The Assertive, Sociable, Intimate, and Submissive subscales contain items that reflect deficits in such areas (e.g., "it is hard for me to say 'no' to other people," or "it is hard for me to make friends"). The items from the Responsible and Controlling subscales reflect "too much" of the latter attributes (e.g., "I am too controlling of other people").

Alden, Wiggins, and Pincus (1990) developed another method of scoring the IIP, using the interpersonal circle for theoretical structure. Using factor analysis on the original 127-item IIP, Alden et al. (1990) found two major factors, control and affiliation. Combining these two major factors results in eight octants along the circle, which are complementary to Kiesler's Interpersonal Circle and the ISQ's octants: Domineering, Vindictive, Cold, Socially Avoidant, Nonassertive, Exploitable, Overly Nurturant, and Intrusive (Gurtman, 1992). Each octant is viewed as a personality dimension and as constituting trait rather than state characteristics (Classen, Field, Koopman, Nevill-Manning, & Spiegel, 2001). Using circumplex methodology, Alden et al. (1990) constructed eight-item scales for each octant, yielding a total of 64 items in their revised version of the IIP.

The ISQ and the IIP have been used independently in studies of psychotherapeutic efficacy to determine pretreatment interpersonal variables that may influence outcome (Gurtman, 1996; Horowitz et al., 1988; Horowitz, Rosenberg, & Bartholomew, 1993; Katz, 2001; Lovaglia & Matano, 1994; Muran, Segal, Samstag, & Crawford, 1994; Paivio & Bahr, 1998; Riding & Cartwright, 1999; Rosenthal, Muran, Pinsker, Hellerstein, & Winston, 1999; Rozmarin, 2000; Samstag, Batchelder, Muran, Safran, & Winston, 1998; Schauenburg, Kuda, Sammet, & Strack, 2000; Soygut, Nelson, & Safran, 2001; Weiner, 1998). Despite varying results, the general consensus regarding therapeutic outcome and interpersonal problems (measured with the IIP) appears to be rather logical: clients with low levels of interpersonal functioning tend to fare less well in most psychotherapeutic environments, including group therapy (Connelly, Piper, De Carufel, & Debbane, 1986), dynamic therapy (Horowitz et al., 1988; Riding & Cartwright, 1999; Schauenburg et al., 2000), short-term cognitive therapy (Muran et al., 1994), and short-term experiential therapy (Paivio & Bahr, 1998). However, it appears

that interpersonal behavior, as assessed by the IIP, is subject to significant change over time within different clinical populations (Horowitz et al., 1988; Rosenthal et al., 1999; Weiner, 1998).

While the theoretical basis for both the ISQ and the IIP is similar, what the two instruments actually measure is substantially different. The ISQ attempts to uncover interpersonal schemas through investigating clients' expectations of others' behavioral responses. The IIP is a more self-focused instrument, asking the respondent to acknowledge problems he or she may have in interpersonal interactions. We may ask ourselves then, what is the relationship between interpersonal schemas and self-reported interpersonal problems? The ISQ calls for the respondent to imagine a particular scenario with a particular person; the IIP asks for more generalized information - namely, how the person functions during various interpersonal interactions. Perhaps one can even go as far as to say that the ISQ has the client predict interpersonal scenarios, while the IIP has the subject report what actually happens in relationships. Of particular empirical interest is the question of whether the ISQ and the IIP map onto each other in a predictable fashion. Do individuals with negatively skewed interpersonal schemas, for example, also report similarly skewed types of interpersonal problems?

Given that both the ISQ and the IIP are based on the interpersonal circumplex model, it is our goal here to compare the two measures in terms of circumplex dimensions. Octant analysis of IIP and ISQ responses would allow examination of where interpersonal problems and schemas are falling (e.g., on the cold-hostile dimension). The relationship between ISQ and IIP scores should elucidate the effect of biased expectations on real-life interactional behavior, in effect creating a self-fulfilling prophecy of negative interpersonal experiences. Consistent with interpersonal circumplex theory, Baldwin and Keelan (1999) examined response complementarities on the ISQ and found that individu-

als' "if-then" expectations were consistent with two specific complementary patterns that have been identified in real world social behavior: similarity on the affiliation dimension (one can expect a friendly response to friendly behavior) and reciprocity on the dominance dimension (the expectation of a dominant response to submissive behavior).

Thus, the construct of interpersonal schemas in combination with reported interpersonal problems may have more predictive power in terms of interpersonal functioning than either measure alone. Furthermore, exploration of the relationship between these variables in a clinical population such as PTSD, where interpersonal hypervigilance and mistrust are common, should magnify the relationship. To date, a small group of studies have examined pretreatment interpersonal schemas and interpersonal problems (separately) in women sexually abused in childhood.

Cloitre et al. (2002) administered the ISQ to three groups of women: those who were sexually abused as children and revictimized as adults, those who were sexually abused as children but experienced no revictimization as adults, and those who experienced no sexual trauma in childhood or adulthood. Results of the ISQ demonstrated a tendency for the revictimized women and the women without trauma histories to generalize from childhood experiences to adult expectations of behavioral response. Revictimized women generally expected negative responses from others despite variations in their own behavior. Women sexually abused in childhood but not in adulthood had moderate levels of negative expectations, yet did not expect their current relationships to be similar to the hostile relationship with a caregiver. Never victimized women expected predominantly positive responses from others. Cloitre et al. (2002) discussed their findings as they relate to attachment theory as well as the utility of the schema perspective in working with a PTSD population.

Classen et al. (2001) administered the IIP to women sexually abused in childhood and revictimized in adulthood and women only abused in childhood. Revictimized women reported overall more interpersonal problems than did nonvictimized subjects, and scored significantly higher on the Hard to be Assertive and Too Responsible subscales of the IIP. Classen et al. (2001) found that women in the revictimized group were more socially avoidant, nonassertive, and overly nurturant. Women who described themselves as having difficulty in being assertive and who were more socially avoidant were also more likely to be sexually revictimized. In another study, Regehr and Marziali (1999) found significant correlations between measures of relational capacity and scores on the IIP in a sample of female rape survivors. Finally, Roche (2000) examined the relationship between child sexual abuse, interpersonal relationship capacity, and psychological adjustment in women sexually abused in childhood and in women without a history of childhood sexual abuse. Results indicated that attachment mediated the relationship between childhood sexual abuse and interpersonal problems, as measured by the IIP.

In this study the relationship between pretreatment interpersonal schemas (as assessed by the ISQ) and interpersonal problems (as reported in the IIP) in a sample of women who were abused in childhood was explored. On the basis of the above findings, it was hypothesized that women who hold predominantly negative schemas (low affiliation, low control or low affiliation, high control) of others (as assessed by the ISQ) will report being more distressed by interpersonal problems (as identified by the IIP). Furthermore, revictimization is expected to be a predictor of ISQ and IIP responses (i.e., women who were abused in childhood and revictimized as adults will be more likely to report a greater number of interpersonal problems as well as more negative interpersonal schemas than will women abused in childhood only). The nature of the abuse suffered (e.g., rape, battery, etc.), both in

childhood and in adulthood, will also predict scores on the ISQ and IIP. Furthermore, to replicate Cloitre et al.'s (2002) findings, it was hypothesized that revictimized women will generalize negative interpersonal schemas to current relationships more than women who were abused in childhood only. Finally, octant analysis of where interpersonal problems and schemas are falling was expected to reveal that responses on the IIP map onto the ISQ in a similar way.

Method

Participants

Sixty-one women who reported a history of childhood physical or sexual abuse and who met criteria for PTSD were assessed for participation in a treatment study at the ATSP (of Payne Whitney Clinic at New York Presbyterian Hospital). Participants were women between the ages of 23 and 65 and must have experienced physical or sexual abuse prior to age 18 by a caregiver (i.e., an individual who was at least five years older than the participant and was a trusted figure such as a parent or other relative, babysitter, or close family friend). Women were considered eligible to participate in the treatment study if they met Diagnostic and Statistical Manual (DSM)-IV criteria for current PTSD. Exclusion criteria included active suicidal ideation, meeting current criteria for drug or alcohol dependence, a psychotic disorder, bipolar disorder, borderline personality disorder, an eating disorder, and current self-mutilation.

Materials

Following informed written consent to participate in the study, participants were administered the Module 1, Module 2, Module 3, and the Structured Clinical Interview for the DSM-IV (SCID-I for Axis I disorders and SCID-II for Axis II disorders) by a trained evaluator. The participants were then given a number of self-report measures to complete, including the Beck Depression

Inventory (BDI; Beck, 1978), the Symptom Checklist-90 (SCL-90; Derogatis, Lipman, & Covi, 1973), the IIP, and ISQ.

Modules 1, 2, and 3 are clinician-administered questionnaires that ask the patient about her physical, sexual, and psychological abuse and neglect history. The SCID is a semi-structured interview to make Axis I and II diagnoses based on the DSM-IV. The BDI is a 21-item, forced-choice, self-report questionnaire that assesses severity of depression and depressive symptomatology. The SCL-90 is a 90-item self-report inventory that contains 10 symptom subscales: Depression, Anxiety, Psychoticism, Somatization, Hostility, Phobic Anxiety, Obsessive-Compulsive, Paranoia, Interpersonal Sensitivity, and Dissociation.

The IIP (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988) is a 127-item self-report inventory that assesses interpersonal problems that people may experience and the level of accompanying distress. The selection of items for the inventory was based on the self-reports of interpersonal problems by a large sample of psychiatric patients. Intercorrelations of the 127 problems revealed six subscales: Assertive, Sociable, Intimate, Submissive, Responsible, and Controlling. The first 99 items of the IIP require the respondent to consider the level of distress involved in various interpersonal circumstances (e.g., "it is hard for me to join in on groups"). The respondent may choose one of five answers for each statement: not at all, a little bit, moderately, quite a bit, or extremely distressing. Items 100-127 have the respondent identify "things you do too much," such as "I am too gullible." For practical utility in comparing IIP and ISQ circumplexes, only 64 of the 127 items were analyzed according to Alden et al.'s (1990) revised version of the IIP so that each of the measures yielded eight octants.

The ISQ (Hill & Safran, 1994) asks the respondent to imagine herself in various interpersonal scenarios with her mother, father,

and a friend. For each scenario, the respondent is to choose how she thinks the other person would respond to her feelings or behavior (e.g., "Imagine yourself feeling angry and argumentative towards your mother"). The format of the responses is forced-choice, such that the client must choose one of nine responses listed (e.g., "would take charge, or try to influence me"). The respondent then rates how desirable that response would be, on a scale from 1 (undesirable) to 7 (desirable). On the friend section of the questionnaire, the respondent is to rate the friend twice - first, as she imagines her friend at his or her best, and then again at his or her worst.

Procedure

In order to recruit participants, an advertisement describing a free sixteen-week treatment study for women with a history of childhood physical or sexual abuse was placed in a local newspaper. Respondents were screened over the telephone on demographic information, prior abuse history, PTSD symptoms, previous psychiatric history, drug and alcohol use, history of self-mutilation, history of eating disorders, and history of suicidality. Women not eligible to participate in the study were offered referrals to other clinics in the community. If it was determined that the caller seemed appropriate for the study, she was scheduled to come into the clinic for two further assessments.

Results

Twenty-five of the women were abused in childhood only (CA) and 36 were abused in both childhood and physically or sexually revictimized in adulthood (RV). Women meeting criteria for the RV group reported either physical or sexual assault after age 18 as an adult (not including domestic violence) in addition to childhood physical or sexual abuse. Half of the sample (50.8%) reported domestic violence in adulthood (52% of the CA group and 50% of the RV group). Thus, domestic violence was not

included as a criterion for revictimization unless the participant reported physical or sexual assault occurring within that context.

Across all subjects, 50 (82%) were sexually abused in childhood and 41 (67.2%) were physically abused as a child. In the CA group, 19 (76%) experienced childhood sexual abuse and 15 (60%) were physically abused. In the RV group, 31 (86.1%) were sexually abused and 26 (72.2%) were physically abused in childhood. The two groups did not differ significantly in terms of these percentages of childhood sexual or physical abuse experienced, $2(1, N = 60) = .500$, $p > .48$ and $2(1, N = 60) = .629$, $p > .428$, respectively.

Frequency of childhood physical or sexual abuse and revictimization in adulthood and severity of childhood abuse were then calculated and the two groups were compared. The RV group reported a significantly higher frequency of abuse, rape, and physical or sexual assault than did the CA group, $t(44.747) = -12.886$, $p < .000$ (equal variances not assumed). To operationalize severity of abuse, a total score was calculated by adding the self-perceived likelihood of injury or death during the childhood trauma(s), physical injuries sustained, and occurrence of coitus, oral sex, and anal sex. The RV group again reported significantly greater severity of abuse, $t(53.359) = -4.641$, $p < .000$ (equal variances not assumed).

Chi square analyses demonstrated that there were no significant differences between the groups on any sociodemographic variables. The mean age of the sample was 32.82 (SD = 7.49; range: 21-52). There was not a significant difference between the average ages of the two groups ($M = 31.76$; $SD = 7.47$ for the CA group and $M = 33.56$; $SD = 7.52$ for the RV group), $t(59) = -.919$, $p > .362$.

Pearson chi-square tests revealed no significant differences

between the CA and RV groups on frequency of any of the comorbid psychiatric disorders.

There was not a significant difference between groups on mean BDI scores (the CA group's mean was 25.16 (SD = 9.26) and the mean score for the RV group was 20.58 (SD = 9.39)), although analyses suggest a trend toward significance, $t(59) = 1.882$, $p > .065$. It should be noted that scores of 21-30 on the BDI suggest moderate depression. The SCL-90 revealed a significant difference between groups on the Phobic Anxiety subscale, with the CA group scoring higher on this subscale ($M = 1.43$; $SD = 1.02$) than the RV group ($M = .94$; $SD = .77$), $t(57) = 2.099$, $p < .04$. The CA group also scored higher on the Obsessive-Compulsive subscale ($M = 2.61$; $SD = .76$) than the RV group ($M = 2.14$; $SD = .85$), $t(57) = 2.154$, $p < .036$. The CA group scored higher than the RV group on all of the SCL-90 subscales, and group differences on the Anxiety, Psychoticism, Hostility, and Paranoia subscales neared significance (Table 1).

IIP total scores and ISQ mean control and affiliation scores were compared across all subjects. There was a trend toward significance between total IIP score and ISQ average control score, Pearson $r = .248$, $p > .061$. A stronger negative correlation was found between total IIP score and ISQ mean affiliation score, Pearson $r = -.344$, $p < .008$.

Raw IIP scores were translated into values along the eight-octant circumplex (autocratic, expressive, nurturant, exploitable, subassertive, introverted, cold, and competitve), yielding values ranging from 0 (not at all true) to 4 (very true) on each octant as well as a mean IIP score. A one-way ANOVA comparing IIP octant scores was performed across all subjects and a significant between-groups difference was found, $F(7, 480) = 12.175$, $p < .000$. Post-hoc Tukey HSD tests demonstrated that mean scores on the overly cold, introverted, subassertive, exploitable, and

nurturant octants were significantly higher than the mean scores on the overly autocratic, competitive, and expressive octants (see Table 2 for significance levels).

There was a significant difference between groups on the mean IIP score, with those in the CA group reporting a higher number of interpersonal problems (M = 1.85; SD = .58) than those in the RV group (M = 1.51; SD = .44), t(59) = 2.615, p < .011. The CA

Table 1: Mean Scores on Self-Report Measures for All Subjects and by Group

		All Subjects (N = 61)		CA Group (N = 25)		RV Group (N = 36)		
		M	SD	M	SD	M	SD	t
Beck Depression Inventory (BDI)		22.46	9.54	25.16	9.26	20.58	9.39	1.88#
Symptom Checklist (SCL-90); Subscales	**Depression**	2.67	.88	2.87	.77	2.53	.93	1.46
	Anxiety	2.08	.84	2.33	.88	1.91	.79	1.89#
	Psychoticism	1.46	.79	1.70	.81	1.32	.75	1.85#
	Somatization	1.47	.80	1.64	.80	1.36	.79	1.30
	Hostility	1.61	.92	1.90	.90	1.43	.90	1.95#
	Phobic Anxiety	1.13	.90	1.43	1.02	.94	.77	2.10*
	Obsessive Compulsive	2.32	.84	2.61	.76	2.14	.85	2.15*
	Paranoia	1.92	.99	2.21	1.08	1.73	.90	1.87#
	Interpersonal Sensitivity	2.25	1.00	2.53	1.07	2.08	.93	1.69
	Dissociation	1.58	.96	1.83	1.10	1.41	.83	1.68

Note: * indicates significant difference between groups, p < .05;
# indicates near significant difference, p = .07

Table 2: Differences Between Mean Scores on the Inventory for Interpersonal Problems (IIP) Across All Subjects (N = 61)

Subscale		Mean	SD	Mean Difference	p
Overly Autocratic (PA)		1.11	.58		
	Overly Competitive			-.26	.644
	Overly Cold			-.64	.001**
	Overly Introverted			-.86	.000**
	Overly Subassertive			-.81	.000**
	Overly Exploitable			-.73	.000**
	Overly Nurturant			-.93	.000**
	Overly Expressive			-.10	.997
Overly Competitive (BC)		1.37	.59		
	Overly Cold			-.38	.180
	Overly Introverted			-.60	.002**
	Overly Subassertive			-.55	.006**
	Overly Exploitable			-.47	.036*
	OverlyNurturant			-.67	.000**
	Overly Expressive			.16	.963
Overly Cold (DE)		1.75	.91		
	Overly Introverted			-.22	.807
	Overly Subassertive			-.17	.944
	Overly Exploitable			-.09	.999
	Overly Nurturant			-.29	.491
	Overly Expressive			.53	.008**

Note: * indicates significant difference, $p < .05$;
** indicates significant difference, $p < .01$

Table 2, continued: Differences Between Mean Scores on the Inventory for Interpersonal Problems (IIP) Across All Subjects (N = 61)

Subscale		Mean	SD	Mean Difference	p
Overly Introverted (FG)		1.97	.84		
	Overly Subassertive			.05	1.00
	Overly Exploitable			.13	.987
	Overly Nurturant			-.07	1.00
	Overly Expressive			.75	.000**
Overly Subassertive (HI)		1.92	1.02		
	Overly Exploitable			.08	.999
	OverlyNurturant			-.12	.991
	Overly Expressive			.70	.000**
Overly Exploitable (JK)		1.84	.91		
	Overly Nurturant			-.20	.868
	Overly Expressive			.62	.001**
Overly Nurturant		2.04	.92		
	Overly Expressive			.83	.000**
Overly Expressive		1.21	1.21		

Note: * indicates significant difference, $p < .05$;
** indicates significant difference, $p < .01$

group had a mean score of 1.58 (SD = .64) on the overly competitive dimension, which was significantly greater than the RV group which had a mean score of 1.23 (SD = .51), $t(59) = 2.34$, $p < .022$. The CA group also scored higher on the overly subassertive octant, with a mean score of 2.39 (SD = 1.03), while the RV had a mean score of 1.58 (SD = .87), $t(59) = 3.309$, $p < .002$.

On the overly exploitable dimension, the CA group had a mean score of 2.19 (SD = .94), which was significantly higher than the RV group's mean score of 1.59 (SD = .80), $t(59) = 2.666$, $p < .01$. For the overly nurturant octant, the CA group had a mean score of 2.34 (SD = .91) and the RV group had an average score of 1.83 (SD = .88), $t(59) = 2.203$, $p < .032$.

Frequencies of responses for mother, father, friend at best, and friend at worst on the ISQ were examined for all subjects and then separately for CA and RV groups. Across all subjects, there were differences in frequency of responses for mother, father, and friend at best and at worst. When imagining interacting with mother, participants' most frequent responses fell within the competitive-mistrusting (14.3% of responses), detached-inhibited (13.9%), and warm-friendly (14.7%) areas of the interpersonal circle. In terms of father responses, subjects' most frequent responses fell within the detached-inhibited area (15.4%), although 12.4% imagined their fathers responding in a warm-friendly way. Of significant note, "can't imagine interacting in this way" accounted for 20.8 % of all responses for father. For friend at best, subjects predicted behavior along the high affiliation side of the circle: 24% of responses were sociable-exhibitionistic, 21.7% were warm-friendly, and 16.6% were deferent-trusting. Participants' expectations for friend at worst fell on the low affiliation side of the circle: 19.5% of responses were detached-inhibited, 16.6% were cold-hostile, 15.7% were competitive-mistrusting, and 14% were unassured-submissive.

When frequency of responses was examined separately for CA and RV groups, similar findings were observed. In the CA group, the majority of responses for interactions with mother fell in the detached-inhibited (14.7%) and competitive-mistrusting (15%) areas of the circle, with 13.8% of responses in the warm-friendly segment. Predictions of father in the CA group were similar to predictions of mother, with the most frequent responses of

detached-inhibited (15.3%) and 13.5% warm-friendly (22.5% of father responses were "can't imagine interacting in this way"). The CA group's most frequent responses for friend at best fell around the high affiliation segment of the circle: 21.8% warm-friendly and 18.5% sociable-exhibitionistic. For friend at worst, the CA group's responses mostly fell around the low affiliation side of the circle: 17.5% competitive-mistrusting, 17.5% cold-hostile, and 18.7% detached-inhibited. For the RV group, the most frequent response for mother was warm-friendly (15.3%), followed by competitive-mistrusting (13.9%) and detached-inhibited (13.5%). Frequent responses for father in the RV group were detached-inhibited (15.4%) and unassured-submissive (12.7%) (19.6% were "can't imagine interacting in this way"). Expectations for friend at best in the RV group again fell in the high affiliation range: 27.7% sociable-exhibitionistic, 21.6% warm-friendly, and 19.2% deferent-trusting. The RV group's predictions for friend at worst were spread along the low affiliation side of the circle: 16.3% unassured-submissive, 20.1% detached-inhibited, 15.9% cold-hostile, and 15% unassured-submissive.

Frequencies of responses by octant on the ISQ were translated into mean scores and the two groups were compared. There was a significant difference between groups on the competitive-mistrusting octant, with the CA group having a higher mean score on this dimension than the RV group, $t(56) = 2.378$, $p < .021$. There was a near significant difference between groups on the deferent-trusting octant, with the RV group having a higher average score on this octant, $t(56) = -1.851$, $p > .069$.

There were no significant differences between groups on average control or average affiliation scores on the ISQ averaged across all significant others (i.e., mother, father, and friend), $t(56) = .697$, $p > .489$ and $t(56) = -1.114$, $p > .270$, respectively. Mean affiliation and control scores for mother, father, friend at best, and friend at worst were obtained. A t-test for equality of means

demonstrated a significant difference between groups for the mean control score for friend at best, with the CA group having a significantly higher control mean than the RV group, $t(56) = .2093$, $p < .041$. There was a marginally significant difference between groups on the mean affiliation score for friend at best, with the CA group having a lower affiliation mean than the RV group, $t(56) = -1.855$, $p < .069$.

Mean desirability ratings for mother, father, friend at best, and friend at worst were examined and the desirability rating for friend at best was the highest for both the CA and RV group, $F(1, 54) = 6.660$, $p < .013$. A significant difference was found between groups on the mean desirability rating for friend at best, with the RV group having a higher rating than the CA group, $t(30.909) = -2.333$, $p < .026$ (equal variances not assumed).

The CA and RV groups were compared in terms of response complementarity. When control and affiliation scores were collapsed across all significant others and analyzed in relationship to complementary situations (i.e., affiliation scores in friendly vs. hostile situations and control scores in dominant vs. submissive situations), there were no significant differences between groups. However, when control and affiliation scores were examined separately for mother, father, and significant other, the CA group had a significantly lower control mean for father in submissive situations than did the RV group, $t(55.804) = -2.140$, $p < .037$ (equal variances not assumed). The RV group also had a higher affiliation mean for friend at best in dominant situations, $t(56) = -2.292$, $p < .026$.

Frequency of abuse, rape, and assault was calculated for all participants. A negative correlation was found between chronicity of abuse, rape, and assault and IIP total score, Pearson $r = -.269$, $p < .037$. There was no significant correlation found between severity of abuse and IIP total score, $p > .438$. Multiple regres-

sion analysis of severity of abuse and chronicity of abuse on IIP total score found that adding chronicity of abuse to the model was significant, $F(2, 57) = 3.271$, $p < .05$.

Severity and chronicity of abuse were then correlated with scores on each of the eight octants on the IIP. There was a negative correlation found between chronicity of abuse and the overly submissive octant of the IIP, Pearson $r = -.320$, $p < .013$. Chronicity of abuse and the overly exploitable octant were also negatively correlated, Pearson $r = -.288$, $p < .026$. There were no significant correlations found between severity of abuse and any of the IIP octants.

There were no significant correlations or regression analyses found between control and affiliation scores on the ISQ and severity or chronicity of abuse. Chronicity and severity of abuse were then correlated with each of the ISQ octants (these analyses were done once including mean octant scores for mother, father and friend at best and then again for mother, father, friend at best and friend at worst). Not including friend at worst, there was a negative correlation found between frequency of abuse and scores on the competitive-mistrusting octant, Pearson $r = -.321$, $p < .015$. A near-significant correlation between severity of abuse and the unassured-submissive octant was also found, Pearson $r = .250$, $p > .063$. When including scores for friend at worst, the correlation between severity of abuse and the unassured-submissive reached significance, Pearson $r = .272$, $p < .042$.

IIP and ISQ octants were then compared across all participants (see Table 3). The cold-hostile octants on both the IIP and ISQ were significantly correlated, Pearson $r = .292$, $p < .026$. There was a negative correlation found between the deferent-trusting octants of the IIP and ISQ, Pearson $r = -.300$, $p < .022$. No other significant correlations were found among the remaining octants of the IIP and ISQ.

Table 3: Pearson Correlation Coefficients Between the IIP and ISQ Scales

		IIP							
		Autocratic (PA)	Competitive (BC)	Cold (DE)	Introverted (FG)	Subassertive (HI)	Exploitable (JK)	Nurturant (LM)	Expressive (NO)
ISQ	Assured-Dominant	.02							
	Competitive-Mistrusting		.09						
	Cold-Hostile (DA)			.29*					
	Detached-Inhibited (FG)				.22				
	Unassured-Submissive (HI)					-.05			
	Deferent-Trusting (JK)						-.30		
	Warm-Friendly (LM)							-.13	
	Sociable-Exhibitionistic (NO)								-.04

Note: * indicates significant difference between groups, $p < .0222$

Discussion

This study investigated the relationship between interpersonal schemas and self-reported interpersonal problems in a sample of women abused in childhood. Previous research indicates that childhood abuse, as well as violence in adulthood, have profound effects on both predictions and actual experiences of interpersonal relationships. However, no study to date has simultaneously explored the constructs of interpersonal schemas and real world problems to elucidate the parallels between the two. Studying interpersonal schemas and behavior in an abused population has particular advantages as well, given the quality of early attachments with trusted caregivers and its ramifications for future relationships.

The sample involved in this study consisted of women who were physically and/or sexually abused in childhood by a trusted caregiver only (CA group) and those who were abused in childhood and sexually or physically revictimized in adulthood (RV group). We first hypothesized that women who reported a greater number of interpersonal problems (on the IIP) would have more negatively-valenced interpersonal schemas (on the ISQ). Consistent with our prediction, it was found that, across all subjects, the higher the control score on the ISQ, the more interpersonal problems the individual reported on the IIP. In addition, lower affiliation scores on the ISQ were associated with more interpersonal problems on the IIP. This combination of expectations of high control and low affiliation on the part of significant others is consistent with our conceptualization of the interpersonal schemas of abused women.

Our next hypothesis was that the RV group would report a higher number of interpersonal problems than the CA group, given their experiences of more repeated and protracted traumas and the implications of those experiences for interpersonal function-

ing. Instead, we found that the CA group reported more interpersonal problems on average than the RV group on each of the eight octants, with half of those differences meeting statistical significance. The CA group reported significantly more difficulties than the RV group on the overly competitive, overly subassertive, overly exploitable, and overly nurturant octants. In order to explain these findings, we propose that the RV group had either become desensitized to their interpersonal difficulties and so minimized them in their report or were in denial of such problems. Within such a model, it may be theorized that women who suffer repeated abuse in childhood and adulthood compensate by downplaying interpersonal problems in an effort to maintain a fragile connection with others.

Similar to our expectations of IIP responses, we hypothesized that the RV group would also have more negative interpersonal schemas than the CA group. Analysis of responses on the ISQ demonstrated that the CA group was more likely to advocate the competitive-mistrusting response than the RV group. There was a trend toward significance with the RV group being more likely to choose the deferent-trusting response. While the two groups did not differ in their averaged control and affiliation scores (across all significant others), the CA group was more likely to expect controlling responses from friend at best than the RV group. There was also a trend toward significance with the RV group having a higher affiliation mean with friend at best than the CA group. The RV group also had a higher average desirability rating for responses for friend at best than the CA group. This higher average desirability rating on the part of the RV group may be an artifact of them predicting more affiliative responses from friend. When imagining interacting with father in submissive situations on the ISQ, the CA group expected less controlling responses from father than the RV group. The RV group expected more affiliative responses from friend at best in dominant situations than the CA group.

IIP and ISQ scores were then examined relative to chronicity and severity of abuse experienced. Higher chronicity (i.e., frequency of abuse, rape and assault) was associated with fewer interpersonal problems as well as lower scores on the overly subassertive and overly exploitable octants of the IIP. Severity of abuse did not correlate with total score or scores on any of the octants of the IIP. Chronicity and severity of abuse were not related to ISQ control or affiliation scores. A significant relationship was found between chronicity of abuse and the competitive-mistrusting octant of the ISQ such that the more frequently the individual experienced abuse, rape or assault, the less the competitive-mistrusting response was advocated. The more severe the abuse history, the more likely the subject was to advocate the unassured-submissive response.

The result that higher frequency of abuse, rape and assault was correlated with fewer interpersonal problems appears to be an artifact of the RV group having lower scores on the IIP. Again, this surprising result may be explained by a defense process in which individuals experiencing repeated trauma minimize their reporting of interpersonal difficulties. The finding that participants with more chronic abuse histories tended to report fewer problems in being subassertive or exploitable is also compatible with this explanation. It may be these individuals have become so accustomed to victimization that they do not view themselves as exploited or lacking in assertiveness - their reality simply is.

Based on Cloitre et al.'s (2002) findings, we had predicted that the RV group would be more likely to generalize negative interpersonal schemas to current relationships, which we did not find. Cloitre et al.'s (2002) sample consisted of women who were sexually abused in childhood and some of whom were sexually revictimized in adulthood. Given that the participants in the current study consisted of women who experienced sexual and/or

physical abuse in childhood as well as physical or sexual assault in adulthood, we may argue that the present sample is quite different from Cloitre et al.'s group.

The major emphasis of this study was to compare the IIP and ISQ in terms of circumplex dimensions. Each of the eight octants on the IIP was correlated with the corresponding octant on the ISQ. The cold-hostile dimension of the IIP was positively correlated with the cold-hostile octant of the ISQ, suggesting that either both measure a similar construct or that responses on one measure in some way predict responses on the other. The deferent-trusting octant of the IIP was negatively correlated with the deferent-trusting dimension of the ISQ. This inverse relationship is sensible for an abused population, particularly in combination with the positive correlation on the cold-hostile octants. Predictions of hostility from others coupled by the conflicting emotions of wanting to trust others and deep-rooted mistrust are common within this population.

The finding that only one octant on the IIP (cold-hostile) positively correlated with its corresponding octant on the ISQ suggests that within this clinical sample, the two questionnaires measure rather different things. It may be that we should not take the theoretical leap in connecting anticipated responses of significant others to self-reported interpersonal problems. Many of these women may have worked very hard to not engage in the same types of interpersonal behaviors that they observed in their parents and other significant figures. Future research is needed to compare the IIP and ISQ in a normative sample to uncover if the findings of this study are limited only to this particular clinical population. It seems likely that childhood abuse victims process and predict relational experiences very differently from individuals without trauma histories.

The fact that many of our predictions were not supported sug-

gests that trauma and revictimization have much more complex effects on interpersonal behaviors than we initially anticipated. It may be that repeatedly abused women are protecting a fragile sense of interpersonal relating from complete deterioration if they were to acknowledge the extent of their difficulties with others. If we argue that people are social beings who need to connect with others, we can begin to imagine what happens when some of our most important relationships (with parent, close relative, trusted friend, etc.) are abusive or exploitive. It seems that the relationship between expectations of how others will behave and one's own behavior may be moderated by the fact that abuse often happens no matter what the victim does. As a result, the victim learns over time that negative responses from others will occur regardless of her own behavior.

The findings of this study may be useful in the development of treatment methods for trauma victims. Exploration of interpersonal schemas may be a useful technique in working with such a population, both in terms of providing such individuals with a better understanding of the way in which experiences are processed and internalized and in order to separate these experiences from one's own interactions in current situations. In this study, the IIP was administered and analyzed at pre-treatment only. For future studies, it may be useful to examine IIP scores over the course of treatment as well as at post-treatment. In this way, the IIP could be used as a measure of psychotherapy efficacy for trauma survivors.

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