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Running head: SCORS-G VALIDITY

Dimensional measure of self and interpersonal functioning: Comparisons with treatment alliance and readiness for inpatient psychotherapy

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Abstract

The Social Cognition and Object Relations Scale-Global Rating Method (SCORS-G; Westen, 1995; Stein, Hilsenroth, Slavin-Mulford, Pinsker, 2011) is a clinical rating system assessing eight domains of self and interpersonal functioning. It can be applied to score numerous forms of narrative data. In the current study, we investigate the SCORS-G relationship to measures of alliance and readiness for psychotherapy with an adolescent inpatient sample. Seventy-two psychiatrically hospitalized adolescents were consented and subsequently rated by their individual and group therapist using the SCORS-G. The unit psychiatrist also completed an assessment of patients' readiness for inpatient psychotherapy. The patients completed a self-report of their alliance with the inpatient treatment team as a whole. SCORS-G ratings were positively correlated with assessments of readiness for inpatient psychotherapy and patient-reported alliance. This study further demonstrates the clinical utility of the SCORS-G with adolescents.

Key Practitioner Messages:

- Assessing self and interpersonal functioning, using a measure like the SCORS-G, can help with treatment planning and to identify potentially difficult patients to engage in treatment.

- Clinicians can reliably assess patients' self and interpersonal functioning using the SCORS-G on an inpatient adolescent service.
- Self and interpersonal functioning is important to assess because it is linked with such things as patients' alliance with their treatment team and their readiness for psychotherapy.

Dimensional measure of self and interpersonal functioning: Comparisons with treatment alliance and readiness for inpatient psychotherapy

Adolescence has been described as a time of storm and stress (Hall, 1904). For a select few, the storm and stress is more extreme and impairing, affecting the manner in which adolescents see themselves and interact with others. Measuring self and interpersonal functioning during adolescence is important for at least three reasons. First, self and interpersonal functioning are key components of personality. The Personality and Personality Disorders Work Group of the DSM-5 (APA, 2013) has defined personality disorders (PD) as involving a "moderate or greater impairment in personality (self/interpersonal) functioning." Research links personality disorders with distorted thinking about self and impaired interactions with others (Skodol et al., 2011). Studies suggest that problematic patterns for representing the self and others can be useful for conceptualizing personality pathology (Bender et al., 2003; Blatt & Lerner, 1983; Donegan et al., 2003; Wagner & Linehan, 1999; Westen et al., 1990; Zeeck, Hartmann, & Orlinsky, 2006). Second, personality pathology develops throughout a person's early life. Therefore, studying personality pathology developmentally has the advantages of

helping to better identify high risk people earlier as well as identifying related clinical issues that may arise as a result (e.g., engagement in psychotherapy, treatment alliance). Third, adolescents' personality functioning may affect their functioning in other realms and their response to treatment.

Personality Pathology in Adolescents

While diagnosing personality disorders in adolescents remains controversial, the presence of maladaptive personality features in adolescents is less so. Adults diagnosed with personality pathology must show at least some maladaptive patterns when they are younger (American Psychological Association, 2013; Shiner & Allen, 2013). Thus, adolescents can exhibit maladaptive personality traits and characteristics, even if not qualifying for personality disorders. In fact, Shiner and Tacket (2014) suggest that the prevalence of such traits among adolescents is fairly high, sometimes higher than in adult samples.

Adolescent personality pathology does tend to be stable and contributes to impairment to a degree comparable to the stability and impairing nature of such traits in adults (Cohen, Crawford, Johnson, & Kasen, 2005; Shiner, 2009). Further, personality pathology in adolescence is strongly linked to concurrent difficulties and problematic behaviors (e.g., Bernstein, Cohen, Skodol, Bezirganian, & Brook, 1996; Bornovalova, Hicks, Iacono, & McGue, 2009; Caspi, Roberts, & Shiner, 2005; Cohen et al., 2005; Crawford & Cohen, 2008; de Clercq, van Leeuwen, van den Noortgate, de Bolle, & de Fruyt, 2009; Ferguson, 2010; Johnson et al., 1999; Shiner, 2009; Westen, Betan, & Defife, 2011). Regardless of the veracity of diagnosing PD during

adolescence, it's clear that problematic personality characteristics in adolescence negatively impacts the individual and may influence responses to treatment interventions.

Various theories, psychodynamic (Blatt, 2008; Kernberg, 1984, 2006) and cognitive (Beck, 1999; Bender & Skodol, 2007; Benjamin, 1996, 2003; Cloninger, 1998; Linehan, 1993; Livesley, Lang, & Vernon, 2003; Young, 1990), view personality disorders as conditions involving problematic representations of self and/or other which impair interpersonal functioning. Westen, Betan, and Defife (2011) have shown that such conceptualizations can be accurately applied to evaluate adolescent personality. In fact, examining adolescent personality through the lens of self and other representations has advantages. Self and other representations have been consistently linked to personality pathology in adults (Bender, Morey, & Skodol, 2011; Livesley, 2007; Morey et al., 2011; Skodol, 2012; Skodol et al., 2011; Tackett, Balsis, Otlmanns, & Kreuger, 2009). PD outcomes are predicted by self and interpersonal functioning in adolescents (Defife, Goldberg, & Westen, 2013) and adults (Hopwood et al., 2011). In addition to impacting functioning and risk for psychopathology, research with adults has found that a PD diagnosis and PD traits impact treatment outcomes, treatment process, risk for self-harm, and the quality of the therapeutic alliance (Hirshfeld et al., 1998; Johnson et al., 2000; McCranie & Kahan, 1986; Seiverwright et al, 1998; Skodol et al, 1999). More research is needed, however, to ascertain if these associations hold within adolescent populations.

Personality Pathology and Assessment

Researchers studying PD characteristics (e.g., Bornstein, 2011; Huprich, Bornstein, & Schmitt, 2011) have advocated against relying solely on self-report personality assessments. However, over 80% of published papers on PD in leading journals do rely on self-reports to validate PD symptoms (Bornstein, 2003). Self-report methods clearly have value, but they also face challenges. Adolescents with PD or PD traits may be unable or unwilling to accurately report on their personality (Ganellen, 2007; Huprich et al., 2011). In fact, personality pathology itself may contribute to difficulties in describing maladaptive patterns or traits (Ganelle, 2007; Shiner & Allen, 2013) relative to those without personality pathology (Klonsky, Oltmann, & Turkheimer, 2002). Affect regulation problems (Huprich et al., 2011) and implicit psychological processes (Kihlstrom & Klein, 1997; Kunda & Thagard, 1996; McNamara, 2005; Shevrin & Dickman, 1980; Westen & Gabbard, 2002) often involved in PD may bias responses. The latter of which has been demonstrated in priming research (Bargh, Bond, Lombardi, & Tota, 1986; DeMarree, Wheeler, & Petty, 2005; Hull, Slone, Meteyer, & Matthews, 2002; Markman & McMullen, 2003; Mussweiler, 2003; Wheeler, DeMarree, & Petty, 2005). In general, experts in personality assessment recommend multi-method approach for assessing PD traits and characteristics (Meyer et al., 2001). Multi-method assessments collect data with other assessment methods (e.g., performance-based tests, clinical rating scales, self-reports). Thus, ideally, research in adolescent personality pathology would incorporate self-report measures and performance-based measures (e.g., Rorschach, Thematic Apperception Test), as well as clinician-rated approaches (e.g., SCORS-G).

Researchers working with adolescents, however, may feel constrained as access to performance-based and clinician-rated methods for this population are limited. While many self-report personality inventories for adolescents exist, such as the Minnesota Multiphasic Personality Inventory-Adolescent Version (MMPI-A; Butcher, Williams, Graham, Archer, Tellegen, Ben-Porath, et al., 1992) and the Personality Assessment Inventory-Adolescent Version (Morey, 2007), there is a dearth of clinician-rated tools for assessing adolescent personality in clinical settings. As such, there is a need for researchers to identify tools that could fill this gap.

One potential option for assessing personality pathology among adolescents is the Social Cognition and Object Relations-Global Rating Method (SCORS-G; Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2011; Westen, 1995). The SCORS-G, is the latest version of the SCORS rating system. It is a collection of eight clinician-rated scales that assess the affective and cognitive components of a patient's object relations which underlie self- and relational-functioning. The SCORS-G has shown strong reliability across raters and various types of narrative data (Huprich & Greenberg, 2003). In adults, it has been able to discern patients with PDs from those without PDs, distinguish among different types of PDs, and differentiate the level of dysfunction (for review see Ackerman, Clemence, Weatherill, & Hilsenroth, 1999; Stein & Slavin-Mulford, in press).

Research examining the SCORS-G in adolescents, however, is currently limited. Two studies have examined the relationships between personality pathology and SCORS-G ratings

using adolescent samples. First, Defife, Goldberg, and Westen (2013) investigated the validity of the SCORS-G with clinicians treating adolescents. They recruited 294 psychologists and psychiatrists to complete the SCORS-G and several other measures regarding an outpatient adolescent patient they were treating that was experiencing significant personality pathology. Results showed that all eight SCORS-G dimensions as well as the composite SCORS-G ratings were able to differentiate those with PDs versus those without. Also, this study showed that SCORS-G scales were significantly positively related to composite ratings of adaptive functioning and school functioning, and negatively related to externalizing behavior, and prior psychiatric treatment. The SCORS-G also predicted variance in adaptive functioning beyond the DSM-IV personality disorder diagnosis.

Second, Haggerty et al. (2015) investigated the SCORS-G reliability and validity on adolescent inpatients. In this study, both the patient's individual and group therapist completed the SCORS-G scales blind to one another and all other study data. A SCORS-G composite score was formed by taking the mean of all the items scored by the individual and then the group therapist and averaging them together. The SCORS-G composite scores demonstrated good inter-rater reliability and validity when compared with ratings of engagement in psychotherapy and history of nonsuicidal self-injury. The results also showed that the SCORS-G composite score incrementally improved the prediction of therapy engagement and adaptive functioning beyond the DSM-IV GAF scores.

The Present Study

This study investigates the utility of the SCORS-G for predicting treatment-related variables in a sample of adolescent inpatients. The study specifically examines if the SCORS-G scales are related to psychiatrist-rated readiness for inpatient psychotherapy and patient-rated alliance. We selected treatment-related variables that are expected to be associated with self and relational personality functioning. Ogrodniczuk, Joyce, and Piper (2009) see readiness for therapy as associated with healthier object relationships and personality functioning. Readiness for therapy has been linked to the capacity to relate (Moras, 2002), recognition for need for help (Petry et al., 2000), psychological mindedness (McCallum & Piper, 1997), willingness to discuss personal matters (Krause, 1967), desire for change (Truant, 1999), and autonomy (Pelletier et al., 1997). Thus, we expected that the SCORS-G overall composite score to be associated with readiness. We also expected that the cognitive scales of the SCORS-G (i.e., complexity of representations scale (COM); understanding social causality (SC) would be linked to readiness as well. With regard to patient-rated alliance, consistent with the literature with adults (Honig, Farber, & Geller, 1997; Pinsker-Aspen, Stein, & Hilsenroth, 2007; Piper, Azim, Joyce, McCallum, Nixon, & Segal, 1991; Ryan & Cicchetti, 1985) we hypothesize that better alliance will be related to healthier object relations overall. In particular, we expected that the relational scales (i.e., emotional investments in relationships [EIR], affective quality of representations [AFF], and Emotional Investment in Moral Standards [EIM]) would be linked to stronger client-rated alliance. Further, we anticipated that the COM scale of the SCORS-G to be related to

stronger alliances given that Pinsker-Aspen et al. (2007) found that stronger alliance was related to greater complexity, differentiation and integration in patient representations of self and other.

Methods

Procedure

Parents and legal guardians were approached regarding participation in this study by a research team member. Those who provided informed consent were entered into the study. All patients, whether they were enrolled in this study or not, received individual psychotherapy and group therapy as part of their treatment on the unit. Patients were assigned to a therapist on the first business day after admission in an ecologically valid manner based on clinician availability and caseload. The unit psychiatrist completed the Readiness for Inpatient Psychotherapy Scale ratings after an hour long initial psychiatric interview. The patients' individual and group therapists completed clinical SCORS-G ratings at discharge blind to all other study data including each other's ratings. Consented patients completed the Inpatient Treatment Alliance Scale at discharge along with other study measures. A description of the study setting, clinical raters and their reliability training can be found in Haggerty et al. (2015) as this study uses the same dataset.

Participants

The sample consisted of 72 patients (45% of the total patients admitted to the unit), 52.8% male, consecutively admitted to the adolescent psychiatric inpatient unit of a large northeastern hospital. Although 72 patients consented some patient did not complete all the study

measures used in this study. This study was approved by the hospital's IRB of record. Patients were between the ages of 13 – 17 with a mean age of 15.7 (SD = 1.18). Ethnic makeup of the sample was as follows: 40.8% Caucasian, 25.4% African American, 25.4% Latino/Hispanic/Spanish, 5.6% Other and 2.8% Asian. The primary diagnoses for these 72 patients were as follows: 64% Mood Disorders, 30% Conduct Disorder/Oppositional Defiant Disorder, 2% Impulse Control Disorder, 3% Psychosis, 1% Post Traumatic Stress Disorder. We found no significant differences in age, gender, or diagnosis between those who consented to the study versus those who did not consent. Patients who showed cognitive impairment or those with an IQ below 70 were excluded from this study (4 patients). Twenty-three percent of the sample reported a history of non-suicidal self-injury and 4% had a history of eating disordered behavior. The setting, description of clinical raters and rating procedures have been described previously (Haggerty, Blanchard, Baity, Defife, Stein, Siefert, Sinclair, & Zodan, 2015)

Measures

Social Cognition and Object Relations Scale – Global Ratings (SCORS-G; Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2011). The SCORS-G is a clinician-rated measure of a patient's representations of self and significant others. The scale consists of eight theoretically constructed variables that are scored on a 7-point Likert-type scale, where a lower score indicates more pathological responses and a higher score suggests healthy functioning. The eight variables are as follows: 1) Complexity of Representation (COM) reflects the richness of one's representations of self and others, one's ability to recognize internal states in self and others, and

one's ability to integrate both positive and negative aspects of self and others; 2) Affective Quality of Representations (AFF) assesses one's expectations of others (positive or negative) and one's evaluation of past relationships; 3) Emotional Investment in Relationships (EIR) relates to one's capacity for intimacy and emotional sharing; 4) Emotional Investment in Moral Standards (EIM) broadly reflects one's ability to think about moral questions and show genuine compassion towards others; 5) Understanding of Social Causality (SC) assesses the extent to which one understands human behavior, or why people act the way they do in various situations; 6) Experience and Management of Aggressive Impulses (AGG) reflect one's ability to tolerate and appropriately express anger; 7) Self-Esteem (SE) assesses one's self esteem; and 8) Identity and Coherence of Self (ICS) assesses one's level of integration versus fragmentation (refer to Stein et al., 2011 for details regarding history of the SCORS rating system). The SCORS has shown good to excellent reliability when used to rate semi-structured interview data, TAT narratives, early memories narratives, dream narratives, and other clinical data such as psychotherapy session material (cf. Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2011). For this study we averaged all 8 items of the SCORS-G. Past research (Defife et al., 2013) has shown the average SCORS-G to be significantly related to clinician-ratings of adolescent patients. The advantages to using an average score is that instead of having one item for each subscale there are eight items that can be used to measure the construct, object relations. We then calculated a *SCORS-G composite score* by averaging the individual and group therapist's mean SCORS-G rating. The SCORS-G ratings were based on the clinician's interactions with the patient both in

therapy and on the unit. All available information including background information and behavioral observations of the patient made by the staff were used in the clinicians' SCORS-G ratings. Haggerty et al (2015) showed, using the same sample, that the inter-rater reliabilities of the variables and composite score were found to be in the good range (Shrout & Fleiss, 1979).

Readiness for Inpatient Psychotherapy (RIPS; Blais et al., 1999). The RIPS is an 8-item scale rated by a clinician who has interviewed the patient but who is not the patient's therapist. The clinician who completed the RIPS ratings was a board certified child and adolescent psychiatrist with 25 years of experience. Past research (Haggerty et al., 2014), using the same sample, showed that RIPS ratings were related to scores of engagement in individual psychotherapy. The items are scored using a 6-point Likert style scale from 0 ("not at all") to 5 ("totally"). The items assess constructs similar to those assessed in the Readiness for Psychotherapy Index (level of distress, desire for change, willingness to work in therapy, recognition of problems as psychological, willingness to discuss personal matters, willingness to endure discomfort in therapy and responsibility for change) but were adjusted for the inpatient setting. This rating was taken from the consented patients' medical record as it was completed as part of the unit's clinical assessment protocol. The RIPS showed good psychometrics, construct validity, and inter-rater reliability in use with adolescent inpatients (Haggerty et al., 2014). Cronbach alpha was .94 for this sample.

Inpatient-Treatment Alliance Scale (I-TAS; Blais, 2004) is a 10-item Likert-style self-report measure designed to assess the patient's composite treatment alliance and engagement as

it developed across the entire inpatient treatment experience. I-TAS items were selected through a guided review of the factor analysis by Hatcher and Barends (1996) of three widely used alliances measures developed for outpatient individual treatment. In developing the I-TAS, 10 items were selected which cover the alliance factors of bond (items 4, 6, and 8), goals (items 2, 5, 7, and 9) and collaboration (items 1, 3, and 10). The items were worded to better match the inpatient treatment experience. The scale was limited to 10 items to reduce patient burden. Blais (2004) found the mean score was 45.5(SD=13.5) with adult inpatients. Haggerty et al. (2014) showed that the I-TAS is a reliable and valid measure of alliance of adolescent inpatients and their treatment team.

Results

Table 1 contains the means and standard deviations of all the study measures. The Pearson product moment correlations between the SCORS-G scales and composite score and the criterion variables are presented in Table 2. We also included in Table 2 the inter-rater reliabilities of the SCORS-G scales and composite which were previously reported in Haggerty et al. (2015) using the same patient sample for reference. The SCORS-G scales assessing Affective Quality of Representations, Self-Esteem, and Identity and Coherence of Self showed poor interrater reliability and were removed from our discussion of the results. Our analysis also showed that the I-TAS and RIPS assess a somewhat similar constructs, but they proved to be only modestly correlated (r .25, *ns*).

As shown in Table 2, overall, adolescents who were rated as having more adaptive object relations (SCORS-G composite score) were more likely to be rated as having greater readiness for inpatient psychotherapy and were more likely to rate themselves as having a more positive alliance with their inpatient therapist. As expected, readiness was associated with the SCORS-G cognitive scales (COM [$r = .42$, $p < .01$] and SC [$r = .39$, $p < .01$]). However, several relational scales were also linked to readiness, including AFF ($r = .34$, $p < .01$), EIR ($r = .39$, $p < .01$), EIM ($r = .42$, $p < .01$), and AGG ($r = .38$, $p < .01$). In short, adolescents rated by their clinicians as having better capacity for complex thought and reflection and better relational functioning, were rated by an independent rater as ready for inpatient psychotherapy. Patient-rated alliance was, as expected, linked to ratings for the SCORS-G relational scales; AFF ($r = .37$, $p < .01$), EIR ($r = .43$, $p < .01$), and EIM ($r = .35$, $p < .01$). To a slightly lesser degree, patient-rated alliance was also associated with COM ($r = .31$, $p < .05$) and SC ($r = .27$, $p < .05$). Thus, adolescents rated by clinicians as having better relational functioning and better capacity for reflection and thinking complexly were also likely to rate their relationship with the inpatient therapists more positively. The self-scales of the SCORS-G (ICS; SE) were not related to the RIPS or I-TAS, and these scales showed very limited inter-rater reliability.

Discussion

While there is debate concerning diagnosing adolescents with personality disorders, there is wide agreement that adolescents may experience personality pathology. Currently, the research in this area has relied heavily on the use of self-report inventories tapping personality

symptoms or problematic characteristics. While such research has clear value, the field would benefit from access to alternative methods for assessing adolescent personality. In fact, experts in the area of personality assessment strongly advocate for a multi-methods approach that simultaneously employs self-report instruments, performance-based measures, and clinician-rated methods. The aim of the present study was to examine the utility of the SCORS-G for predicting clinically-relevant variables among adolescents on an inpatient unit. Our findings suggest that the SCORS-G has potential and assesses important areas of adolescent personality functioning. The study also highlights some challenges that it would be important for future researchers to continue to address. We discuss the implications of our findings below.

The current findings support and expand past research (Defife et al., 2013: Haggerty et al., 2014) on assessing adolescent personality with the SCORS-G. For a personality measure to have utility, it needs to provide data that is clinically meaningful. We found that lower levels of overall functioning were associated with less readiness for psychotherapy and lower alliances with inpatient providers. While modern conceptualizations of personality functioning emphasize self and relational functioning, our findings indicated that deficits in relational functioning and the capacity for cognitive complexity, reflection, and social causality, to be most linked to challenges. As predicted, there was evidence that relational functioning was consistently associated with alliance quality, whereas cognitive variables had a mixed pattern of association with the alliance. Similarly, relational functioning appeared to be roughly as important to predicting readiness for inpatient psychotherapy as were cognitive variables.

The present results suggest a pattern of associations among adolescents that is similar to the findings obtained with adults. Disruptions in relational functioning have been linked to problems establishing alliance in adults seeking psychotherapy (Ackerman, Hilsenroth, Clemence, Weatherill, & Fowler, 2000; Errazuriz, Constantino, & Calvo, 2014; Pinsker-Aspen, Stein, & Hilsenroth, 2007). In other words, adults who were more differentiated, logical in thought process, more capable of understanding others, invested in relationships, and better able to manage aggression effectively, have been found to form stronger alliances. We observed a very similar pattern of findings for adolescents. Research with adults also suggests that relational functioning is linked to readiness to engage in psychotherapy (Carufel & Piper, 1988; Hoglend, 1993; Luborsky et al., 1988; Piper et al., 1991, 2004; Valbak, 2004). Again, we found a similar pattern of findings, with some of our data indicating that cognitive variables (e.g., capacity to think complexly about others) may also play a role. When considered in light of prior finings, present results suggest that problematic personality traits are associated with treatment challenges across age ranges.

Most of the SCORS-G research, with adults and adolescents, has made use of narrative data collected from a single source or method (e.g., TAT; early memory narratives, video recorded psychotherapy sessions). In the current study, the SCORS-G was rated by clinicians using different data sources (i.e., their unique experience with the patient in different contexts), based on clinicians clinical duties. Thus, the study employed a method that is likely to be ecologically similar to how the SCORS-G might be used in an actual treatment setting.

As a result, reliability training had to be shortened and less structured to meet real world demands of the trainees. This highlights a challenge for sophisticated rating scales, such as the SCORS-G. While their complexity and sophistication allows for a nuanced assessment of important clinical constructs, it also requires a fairly high degree of training. In the present study, three scales proved to have poor reliability. In fact, it is possible that some of the effects observed in this study were attenuated due to limited reliability (e.g., correlations for AFF scale). Additionally, some null findings (e.g., lack of associations between SE, ICS, and criterion variables) may also be due to limited reliability for the self-functioning scales. Alternatively, it's possible that the manner in which ratings were conducted rendered assessing the self-functioning scales of the SCORS-G more difficult. While relational functioning can be more easily observed in how patients interact with providers and other patients, assessing the self-functioning scales may require access to deeper levels of the patient's experience that are less readily observable during patients brief time in an inpatient unit. On the other hand, with only limited training clinicians were able to provide reliable ratings for most SCORS-G scales. It is possible that future resources that provide examples and more detailed instructions for coding the SCORS-G could reduce training burden on real-world clinicians (Stein & Slavin-Mulford, in press).

Study limitations include a fairly small sample size, but consistent with many studies using an adolescent inpatient setting. Additionally, findings for inpatient adolescents may not generalize to adolescents in other settings. Many adolescents seen in inpatient services are not presenting to treatment on their own free will but are often brought in by others. There is a need

to examine clinician-rated methods for assessing personality, such as the SCORS-G, with healthy adolescents and with adolescent outpatients. Another limitation was that the clinical assessors were clinicians on the unit. Although they were blind to each other's' ratings they sat in the same team meetings and this may incidentally bias their responses about the patient's functioning in a similar direction. Future research should have raters who are not part of the clinical team seeing the patients and who are blind not only to the other staff's ratings but blind to the clinical staff's presentations of the patients. Though our study was limited, it also had some strengths. We examined the utility of the SCORS-G for predicting independent clinician-ratings for readiness. Correlations between ratings completed by different individuals with their own unique viewpoint are often smaller than those between ratings completed by the same person as is done in many validity studies. We also showed associations between the SCORS-G and a a patient-rated measure. Thus, clinicians' ratings were predicting variance in patient's experience of inpatient psychotherapy relationships.

Conclusion

Ideally, clinicians and researchers would have access to multiple types of methods for assessing personality functioning in adolescents. These methods should be capable of providing an index of problematic characteristics, symptoms associated with personality pathology, and an assessment of self and interpersonal functioning. The present study indicates that the SCORS-G has promise as a clinician-rated method for assessing adolescents. The findings in this study generally suggest that the SCORS-G provides information that can be used to guide treatment

(e.g., identify adolescents most likely to benefit from psychotherapy). Inpatient care is expensive, quick reliable assessments that can be used to improve alliance are likely to promote better patient outcomes. Going forward, it is also important for future researchers to continue to examine the utility of the SCORS-G with adolescents being seen in other settings (e.g., outpatient). There is also a need to continue developing low-burden training programs to ensure that staff using the SCORS-G can score it reliably. While further research continues to be needed, present results are encouraging and suggest the SCORS-G has considerable promise as a useful assessment tool to employ in multi-method assessment of adolescent personality.

References

Ackerman, S.J., Clemence, A.J., Weatherill, R., & Hilsenroth, M.J. (1999). Use of the TAT in assessment of DSM-IV cluster B personality disorders. *Journal of Personality Assessment, 73(3),* 422-448.

American Psychiatric Association (2013). *DSM 5.* American Psychiatric Association.

Bargh, J.A., Bond, R.N., Lombardi, W.J., & Tota, M.E. (1986). The additive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology, 50,* 869-878.

Beck, A. (1999). Cognitive aspects of personality disorders and their relation to syndromal disorders: A psychoevolutionary approach. In C.R. Cloninger (Ed.), *Personality and psychopathology* (pp.411-429). Washington, DC: American Psychiatric Association.

Bender, D.S., Farber, B.A., Sanislow, C.A., Dyck, I.R., Geller, J.D., & Skodol, A.E. (2003). Representations of therapists by patients with personality disorders. *American Journal of Psychotherapy, 57,* 219-236.

Bender, D.S., Morey, L.C., & Skodol, A.E. (2011). Toward a model for assessing level of personality functioning in DSM-5, Part I: A review of theory and methods. *Journal of Personality Assessment, 93,* 332-346.

Bender, D.S., & Skodol, A.E. (2007). Borderline personality as a self-other representational disturbance. *Journal of Personality Disorders, 21,* 500-517.

Benjamin, L.S. (1996). *Interpersonal diagnosis and treatment of personality disorders.*

New York: Guilford Press.

Benjamin, J.S. (2003). *Interpersonal reconstructive therapy: Promoting change in nonresponders.* New York: Guilford Press.

Bernstein, D. P., Cohen, P., Skodol, A., Bezirganian, S., & Brook, J. S. (1996). Childhood antecedents of adolescent personality disorders. *American Journal of Psychiatry, 153*, 907–913.

Blais, M.A. (2004). Development of an inpatient treatment alliance scale. *Journal of Nervous and Mental Disease, 192(7),* 487-493.

Blais, M.A., Lenderking, W.R., Baer, L., deLorell, A., Peets, K., Leahy, L., Burns, C. (1999). Development and initial validation of a brief mental health outcome measure. *Journal of Personality Assessment, 73(3),* 359-373.

Blatt, S.J. (2008). *Polarities of experience: Relatedness and self-definition in personality development, psychopathology, and the therapeutic process.* American Psychological Association.

Blatt, S.J., & Lerner, H. (1983). the psychological assessment of abject representation. *Journal of Personality Assessment, 47,* 7-28.

Bornovalova, M. A., Hicks, B. M., Iacono, W. G., & McGue, M. (2009). Stability, change, and heritability of borderline personality disorder traits from adolescence to adult- hood: A longitudinal twin study. *Development and Psychopathology, 21(Special Issue 4),* 1335–1353. doi: 10.1017/ S0954579409990186

Bornstein, R.F. (2003). Behaviorally referenced experimentation and symptom validation: A paradigm for 21st century personality disorder research. *Journal of Personality Disorders, 17,* 1-18.

Bornstein, R.F. (2011). From symptom to process: How the *PDM* alters goals and strategies in Psychological Assessment. *Journal of Personality Assessment, 93(2),* 142-150.

Butcher, J.N., Williams, C.L., Graham, J.R., Archer, R.P., Tellegen, A., Ben-Porath, Y.S., et al. (1992). *MMPI-A: Manual for administration, scoring and interpretation.* Minneapolis: University of Minnesota Press.

Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology, 56,* 453–484.

Cloninger, C.R. (1998). The genetics and psychobiology of the seven-factor model of personality. In K.R. Silk (Ed.), *Biology of personality disorders.* Washington, DC: American Psychiatric Press.

Cohen, P., Crawford, T., Johnson, J., & Kasen, S. (2005). The children in the community study of developmental course of personality disorder. *Journal of Personality Disorders: Special Issue on Longitudinal Studies, 19(5),* 466–486.

Crawford, T., & Cohen, P. (2008). Comorbid Axis I and Axis II disorders in early adolescence: Outcomes 20 years later. *Archives of General Psychiatry, 65(6),* 641.

de Carufel, F.L., & Piper, W.E. (1988). Group psychotherapy or individual psychotherapy:

Patient characteristics as predictive factors. *International Journal of Group Therapy, 38(2),* 169-188.

de Clercq, B., van Leeuwen, K., van den Noortgate, W., de Bolle, M., & de Fruyt, F. (2009). Childhood personality pathology: Dimensional stability and change. *Development and Psychopathology, 21(Special Issue 3),* 853–869. doi: 10.1017/ S0954579409000467

DeFife, J.A., Goldberg, M., & Westen, D. (in press) Dimensional assessment of self- and interpersonal functioning in adolescents: implications for DSM-5's general definition of personality disorder. *Journal of Personality Disorders.*

DeMarree, K.G., Wheeler, S.C., & Petty, R.E. (2005). Priming a new identity: Self-monitoring moderates the effects of nonself primes on self-judgments and behavior. *Journal of Personality and Social Psychology, 89,* 657-671.

Donegan, N.H., Sanislow, C.A., Blumberg, H.P., Fulbright, R.K., Lacadie, C., Skudlarski, P.,…Wexler, B.E. (2003). Amygdala hyperactivity in borderline personality disorder: Implications for emotional dysregulation. *Biological Psychiatry, 54,* 1284-1293.

Errazuriz, P., Constantino, M.J., Calvo, E. (2015). The relationship between patient object relations and the therapeutic alliance in a naturalistic psychotherapy sample. *Psychology and Psychotherapy, 88(3),* 254-269.

Ferguson, C. J. (2010). A meta-analysis of normal and disordered personality across the life span. Journal of Personality and Social Psychology, 98(4), 659–667.

Ganellen, R.J. (2007). Assessing normal and abnormal personality functioning: Strengths

and weaknesses of self-report, observer, and performance-based methods. *Journal of Personality Assessment, 89,* 30-40.

Haggerty, G., Blanchard, M., Baity, M.R., Defife, J.A., Stein, M.B., Siefert, C.J., Sinclair, S.J., Zodan, J. (2015). Clinical validity of a dimensional assessment of self- and interpersonal functioning in adolescent inpatients. *Journal of Personality Assessment, 97(1),* 3-12.

Haggerty, G., Siefert, C.J., Stoycheva, V., Sinclair, S.J., Baity, M.R., Zodan, J., Mehra, A., Chand, V., & Blais, M.A. (2014). Determining adolescents' suitability for inpatient psychotherapy: Utility of the clinician-rated Readiness for Inpatient Psychotherapy Scale with an adolescent inpatient sample. *Bulletin of the Menninger Clinic, 78(4),* 349-372.

Hall, G.S. (1904). *Adolescences: Its psychology and its relation to physiology, anthropology, sociology, sex, crime, religion, and education* (Vols. I & II). Englewood Cliffs, NJ: Prentice-Hall.

Hatcher, R.L., & Barends, A.W. (1996) Patients' view of the alliance in psychotherapy: Exploratory factor analysis of three alliance measures. *Journal of Consulting and Clinical Psychology, 64,* 1326–1336.

Hirshfeld, R.M., Russell, J.M., Delgado, P.L., Fawcett, J., Friedman, R.A., Harrison, W.M., Koran, L.M., Miller, I.W., Thase, M.E., Howland, R.H., Connolly, M.A., & Miceli, R.J. (1998). Predictors of response to acute treatment of chronic and double depression with sertraline or imipramine. *Journal of Clinical Psychiatry, 59,* 69-675.

Hoglend, P. (1993). Transference interpretations and long-term change after dynamic

psychotherapy of brief to moderate length. *American Journal of Psychotherapy, 47(4),* 494-507.

Honig MS, Farber BA, Geller JD. The relationship of patients' pretreatment representations of mother to early treatment representations of their therapist. *The Journal of the American Academy of Psychoanalysis*. 25: 357-72.

Hopwood, C.J., Malone, J.C., Ansell, E.B., Sanislow, C.A., Grilo, C.M., McGlashan, T.H., …Morey, L.C. (2011). Personality assessment in the DSM-5: Empirical support for the rating severity, style, and traits. *Journal of Personality Disorders, 25,* 305-320.

Hull, J.G., Slone, L.B., Meteyer, K.B., & Matthews, A.R. (2002). The nonconsciousness of self-consciousness. *Journal of Personality and Social Psychology, 83,* 406-424.

Huprich, S.K., Bornstein, R.F., & Schmitt, T.A. (2011). Self-report methodology is insufficient for improving the assessment and classification of Axis II personality disorders. *Journal of Personality Disorders, 25(5),* 557-570.

Huprich, S. K., & Greenberg, R. P. (2003). Advances in the assessment of object relations in the 1990s. *Clinical Psychology Review, 23,* 665–698.

Johnson, J. G., Cohen, P., Skodol, A. E., Oldham, J. M., Kasen, S., & Brook, J. S. (1999). Personality disorders in adolescence and risk of major mental disorders and suicidality during adulthood. *Archives of General Psychiatry, 56(9),* 805–811.

Johnson, J.G., Cohen, P., Smailes, S., Oldham, J.M., Skodol, A.E., & Brook, J.S. (2000). Adolescent personality disorders associared with violence and criminal behavior

during adolescence and early adulthood. *American Journal of Psychiatry, 157(9),* 1406-1412.

Kernberg, O. (1984). *Severe Personality Disorders: Psychotherapeutic Strategies.* New Haven/London: Yale Univ. Press.

Kernberg O (2006). Identity: Recent findings and clinical implications. *Psychoanalytic Quarterly, 75* 969–1004.

Kihlstrom, J.F., & Klein, S.B. (1997). Self-knowledge and self-awareness. In J.G. Snodgrass & R.L. Thompson (Eds.), *The self across psychology: Self-recognition, self-awareness, and the self concept* (pp. 5-17). New York: New York Academy of Science.

Klonsky, E.D., Oltmanns, T.F., & Turkheimer, E. (2002). Informant reports of personality disorder: Relation to self-reports, and future research directions. *Clinical Psychology: Science and Practice, 9,* 300-311.

Krause MS (1967) Behavioral indexes of motivation for treatment. *Journal of Counseling Psychology, 14,* 426-435.

Kunda, Z., & Thagard, P. (1996). Forming impression from stereotypes, traits, and behaviors: A parallel-constraint-satisfaction theory. *Psychological Review, 103,* 284-308.

Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford.

Livesley, W.J. (2007). A framework for integrating dimensional and categorical classifications of PD. *Journal of Personality Disorders, 21,* 199-224.

Livesley, W.J., Jang, K., Vernon, P. (2003). Genetic basis of personality structure. In T. Millon & M. Lerner (Eds.), *Handbook of psychology: Personality and social psychology,* Vol 5. (pp. 59-83). New York: John Wiley & Sons, Inc.

Luborsky, L., Crits-Christoph, P. (1988). Measures of psychoanalytic concepts—the last decade of research from 'the Penn studies'. *International Journal of Psychoanalysis, 69(1),* 75-86.

Markman, K.D., & McMullen, M.N. (2003). A reflection and evaluation model of comparative thinking. *Personality and Social Psychology Review, 7,* 244-267.

McCallum M, Piper WE (1997) *Psychological Mindedness: A Contemporary Understanding.* Mahwah (NJ): Lawrence Erlbaum.

Meyer, G.J., Finn, S.E., Eyde, L., Kay, G.G., Moreland, K.L., Dies, R.R., Eisman, E.J., Kubiszyn, T.W., & Reed, G.M. (2001). Psychological testing and psychological assessment: A review of evidence and issues. *American Psychologist, 56,* 128-165.

Moras K (2002) Might relationship 'techniques' extend the reach, efficacy and efficiency of the psychotherapies? The challenge of treatment-resistant outpatients. *Journal of Comtempory Psychotherapy. 32*, 41-50.

Morey, L.C. (2007). *Personality Assessment Inventory-Adolescent: Professional manual.* Odessa, FL: Psychological Assessment Resources.

Morey, L.C., Berghuis, H., Bender, D.S., Verheul, R., Krueger, R.F., & Skodol, A.E. (2011). Toward a model for assessming level of personality functioning in DSM-%, Part II:

Empirical articulation of a core dimension of personality pathology. *Journal of Personality Assessment, 93,* 347-353.

Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review, 110,* 472-489.

Ogrodniczuk, J. S., Joyce, A. S., & Piper, W. E. (2009). Development of the readiness for psychotherapy index. *The Journal of nervous and mental disease, 197*(6), 427-433.

Pelletier LG, Tuson KM, Hadda NK (1997) Client motivation for therapy scale: A measure of intrinsic motivation, extrinsic motivation and amotivation for therapy. *Journal of Personality Assessment, 68,* 414-435.

Petry NM, Tennen H, Affleck G (2000) Stalking the elusive client variable in psychotherapy research. In CR Snyder, RE Ingram (Eds), *Handbook of Psychological Change: Processes and Practices for the 21st Century* (pp 88-108). New York (NY): Wiley.

Pinsker-Aspen, J.H., Stein, M.B., & Hilsenroth, M.J. (2007). Clinical utility of early memories as a predictor of early therapeutic alliance. *Psychotherapy: Theory, Research, Practice, Training, 44(1),* 96-109.

Piper, W.E., Azim, H.F., Joyce, A.S., McCallum, M., Nixon, G.W., & Segal, P.S. (1991). Quality of object relations versus interpersonal functioning as predictors of therapeutic alliance and psychotherapy outcome. *Journal of Nervous and Mental Disease, 179(7),* 432-438.

Ryan, E.R., Cicchetti, D.V. (1985). Predicting quality of alliance in the initial psychotherapy

interview. *Journal of Nervous and Mental Disease, 173(12),* 717-725.

Seiverwright, H., Tyrer, P., & Johnson, T. (1998). Predictors of outcome in neurotic disorder: A 5-year prospective study. *Psychological Medicine, 28,* 1149-1157.

Shevrin, H., & Dickman, S. (1980). The psychological unconscious: A necessary assumption for all psychological theory *American Psychologist, 35,* 421-434.

Shiner, R. L. (2009). The development of personality disorders: Perspectives from normal personality development in childhood and adolescence. *Development and Psychopathology, 21(Special Issue 3),* 715–734. doi: 10.1017/S0954579409000406

Shiner, R.L., & Allen, T.A. (2013). Assessing personality disorders in adolescents: Seven guiding principles. *Clinical Psychology: Science and Practice, 20,* 361-377.

Shiner, R.L., & Tackett, J.L. (in press). PDs in children and adolescents. In E.J. Mash & R.A. Barkley (Eds.), *Child Psychopathology* (3rd ed.). New York, NY Guilford Press.

Shrout, P.E., & Fleiss, J.L. (1979). Interclass correlations: Uses in assessing rater reliability. *Psychological Bulletin, 86(2),* 420-428.

Skodol, A.E. (2012). PDs in *DSM-5*. *Annual Review of Clinical Psychology, 8,* 317-334.

Skodol, A.E., Stout, R.L., McGlashan, T.H., Grilo, C.M., Gunderson, J.G., Shea, M.T., Morey, L.C., Zanarini, M.C., Dyck, I.R., & Oldham, J.M. (1999). Co-occurrence of mood and personality disorders: A report from the Collaborative Longitudinal Personality Disorder Study (CLPS). *Depression and Anxiety, 10(4),* 175-182.

Skodol, A.E., Clark, L.A., Bender, D.S., Krueger, R.F., Morey, L.C., Verheul, R., et al.

(2011). *Personality Disorders; Theory, Research, and Treatment, 2(1),* 4-22.

Stein, M.B., & Slavin-Mulford, J. (in press). The Social Cognition and Object Relations Scale-Global Rating Method (SCORS-G): A comprehensive guide for clinicians and researchers. New York, NY: Routledge.

Stein, M. B., Hilsenroth, M., Slavin-Mulford, J., & Pinsker, J. (2011). *Social Cognition and Object Relations Scale: Global RatingMethod (SCORS–G; 4th ed.)*. Unpublished manuscript, Massachusetts General Hospital and Harvard Medical School, Boston, MA.

Tackett, J.L., Balsis, S., Oltmanns, T.F., & Krueger, R.F. (2009). A unified perspective on personality pathology across the life span: Developmental considerations for the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders*. *Development and Psychopathology, 21,* 687-713.

Truant GS (1999) Assessment of suitability for psychotherapy. II. Assessment based on basic process goals. *American Journal of Psychotherapy, 53*, 17-34.

Valbak, K. (2004). Suitability of psychoanalytic psychotherapy: A review. *Acta Psychiatria Scandinavica, 109(3),* 164-178.

Wagner, A.W., & Linehan, M.M. (1999). Facial expression recognition ability among women with borderline personality disorder: Implications for emotion regulation? *Journal of Personality Disorders, 13,* 329-344.

Westen, D. (1995). *Social Cognition and Object Relations Scale: Q-sort for projective stories (SCORS–Q)*. Unpublished manuscript, Department of Psychiatry, The Cambridge Hospital and Harvard Medical School, Cambridge,MA.

Westen, D., Betan, E., & DeFife, J. A. (2011). Identity disturbance in adolescence: Associations with borderline personality disorder. *Development and Psychopathology, 23*, 305–313.

Westen, D., & Gabbard, G.O. (2002). Developments in cognitive neuroscience: I. Conflict, compromise, and connectionism. *Journal of the American Psychoanalytic Association, 50,* 53-98.

Westen, D., Lohr, N., Silk, K., Gold, L., & Kerber, K. (1990). Object relations and social cognition in borderlines, major depressives, and normals: A TAT analysis. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2,* 355-364.

Wheeler, S.C., DeMarree, K.G., & Petty, R.E. (2005). The roles of the self in priming-to-behavior effects. In A. Tesser, J.V. Wood, & D.A. Stapel (Eds.), *On building, defending and regulating the self: A psychological perspective* (pp. 245-271). New York: Psychology Press.

Young. J. (1990). *Cognitive therapy for personality disorders: A schema-focused approach*. Sarasota, Fl: Professional Resources Exchange.

Zeeck, A., Hartmann, A., & Orlinsky, D.E. (2006). Internalization of the therapeutic process: Differences between borderline and neurotic patients. *Journal of Personality Disorders, 20,* 22-41.

Table 1. *Means and standard deviations for study measures*

	Mean	SD	Range
SCORS-G Dimensions			
COM	3.39	.87	1.5-5.5
AFF	3.36	.87	1.5-5.5
EIR	3.34	.90	1.5-6
EIM	3.29	.91	1.5-6.5
SC	3.28	.95	1.5-6
AGG	2.74	.87	1-5
SE	3.13	.61	2-5
ICS	3.71	.60	2.5-5
Composite *	3.28	.59	2.14-5.07

RIPS	20.75	8.61	2-36
I-TAS	46.71	11.63	13-60

Note: N = 66; SCORS-G = Social Cognition and Object Relations Scale- Global Rating Method; COM = Complexity of Representations of People; AFF = Affective Quality of Representations; EIR = Emotional Investments in Relationships; EIM = Emotional Investment in Values and Moral Standards; SC = Understanding Social Causality; AGG = Experience and Management of Aggressive Impulses; SE = Self-Esteem; ICS = Identity and Coherence of Self; Composite (Total) = mean rating of eight dimensions; RIPS = Readiness for Inpatient Psychotherapy; I-TAS = Inpatient Treatment Alliance Scale.

* was calculated averaging together the individual and group therapist ratings.

Table 2. Correlational Matrix between SCORS-G dimensions and Study Variables

SCORS-G Items	ICC[1]	RIPS	I-TAS
COM	.65	.42**	.31*
AFF	.38	.34**	.37**
EIR	.56	.36**	.43**
EIM	.65	.42**	.35**
CS	.63	.39**	.27*
AGG	.66	.38**	.20
SE	.17	.14	.09
ICS	.35	.12	.14
Composite	.64	.45**	.36**

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

Note: N=66; [1] = ICC ($_{1,2}$); COM = Complexity of Representations of People; AFF = Affective Quality of Representations; EIR = Emotional Investments in Relationships; EIM = Emotional Investment in Values and Moral Standards; SC = Understanding of Social Causality; AGG =

Experience and Management of Aggressive Impulses; SE = Self-Esteem; ICS = Identity and Coherence of Self; Composite= mean ratings for eight SCORS-G dimensions; RIPS=Readiness for Inpatient Psychotherapy Scale; I-TAS=Inpatient Treatment Alliance Scale; inter-rater reliabilities were initially reported in Haggerty et al., (2015) but are presented here for clarity.