

Summary

The Psychometric Properties of the Turkish Form of the Therapeutic Alliance Observational Coding System (TPOCS-A)

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Therapeutic Alliance (TA) is an umbrella term referring to a number of interpersonal processes that take place in psychotherapy. Presently, most definitions of TA in youth psychotherapy focus on the affective and collaborative aspects of the patient–therapist relationship outlined by Bordin (Elvins & Green, 2008). Bordin (1979) identified three dimensions of TA, which are bond, referring to the affective aspects of the patient–therapist relationship, task constituting agreement and participation in the activities of therapy and finally mutual consensus on goals in treatment.

Even though the alliance–outcome association has been well established in adult psychotherapy with over 200 studies (Flückiger, Del Re, Wampold, & Horvath, 2018), when it comes to the field of child psychotherapy, the most recent meta-analysis by Karver, Nadai, Monahan and Shirk (2018) found only 28 studies that used an explicit measure of TA, which revealed a small to medium effect consistent with the adult TA literature and with prior youth meta-analyses (McLeod, 2011; Shirk & Karver, 2003). The number of studies is limited because research on youth alliance–outcome associations is relatively new compared to adult psychotherapy and there are few empirically validated measures.

There is no gold standard for therapeutic alliance measurement in youth psychotherapy. Observer-rated methods are considered to be a more reliable method for assessing therapeutic alliance since they are not subject to youth’s varying ability to self-report on the relationship (Shirk & Karver, 2003). The Therapy Process Observational Coding System for Child Psychotherapy – Alliance Scale (TPOCS-A; McLeod & Weisz, 2005) is based on independent evaluators’ ratings of actual therapy sessions and has been found to have good psychometric properties in past studies (McLeod & Weisz, 2005). To the author’s knowledge, there is no empirically validated measure of therapeutic alliance for child psychotherapy that has been adapted to Turkey. The aim of this

study was to investigate the psychometric properties of the Turkish form of TPOCS-A with a group of children in psychodynamic play therapy.

Methods

Participants

The source of data used for this study comes from Istanbul Bilgi University Psychotherapy Research Laboratory, which provides low-cost outpatient psychodynamic psychotherapy. The sample included 117 children. All the children were born in Turkey and came from relatively homogeneous urban neighborhoods and belonged to low to middle socioeconomic status (SES). 24% of the children were 4-5 years old, 30% were 6-7 years old, and 46% were 8-10 years old. 44% of the children were girls. They were referred most frequently due to behavioral problems such as rule-breaking and aggressive acts (42%), followed by anxiety and depressive complaints (20%), school problems such as learning difficulties (19%), and finally social problems (19%). The therapists were 38 clinical psychology master’s level students, who were all female, with ages ranging from 23 to 35 years. The standard treatment applied at Istanbul Bilgi University Psychological Counseling Center is psychodynamic play therapy.

Measures

The following scales were used in this study apart from TPOCSA-TR. The Child Behavior Checklist (CBCL; Achenbach, 1991; Erol ve Şimşek, 2010) is a widely used method of identifying problematic behaviors in children with two separate versions for ages 1.5-5 and 6-18. The scale has good reliability and validity. Teacher Rating Form (TRF; Achenbach, 1991; Erol ve Şimşel, 2010) includes 118 items, 93 of which have counterparts on the CBCL. The scale has good reliability and validity. The Children’s Global Assessment Scale

(CGAS; Shaffer et al., 1983) is a numeric rating scale (from 1 to 100) used by mental health clinicians to rate the general functioning of children under the age of 18. It has shown moderate to excellent inter-rater reliability. Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1995; Batum & Yağmurlu, 2007) comprises 24 items describing emotion regulation and dysregulation behaviors. The scale has good reliability and validity.

Procedures

The parents, teacher and therapists filled out the outcome scales at the beginning and end of therapy. Demographic information was collected before treatment. Reliable and trained raters rated the sessions using TPOCSA-TR. 65% of the sessions were double coded and their averages were taken. The rest of the sessions were coded by one rater.

Data Analytic Strategy

The factor structure of the scale will be investigated using Exploratory and Confirmatory Factor Analysis. For reliability analyses, internal consistency of the factors, inter-rater and test-retest reliabilities will be calculated. In order to investigate the scale's validity, divergent validity will be investigated according to children's ages, sex and diagnoses. Convergent validity will be investigated with other alliance scales and outcome measures. The change in therapeutic alliance over the course of treatment will be investigated using Hierarchical Linear Modeling. SPSS, AMOS and HLM 7.00 programs will be used in the analyses.

Results

Factorial Structure and Reliability

Principal component analysis using a direct oblimin rotation revealed a 2-factor structure. The two factor structure explained 56% of the total variance and represented the positive alliance and negative alliance factors (please see Table 1). Next, a confirmatory factor analysis was conducted. The two factor model was tested to analyze how well it fits to the data. Modification indices suggested to correlate the error terms between items 2, 5 and 9. The model was revised accordingly and the final model had a good fit to the data (please see Table 2). This two factor model was also compared with the one factor model and was found to have superior fit to the data. The factors and item loadings are presented in Table 1. The internal consistencies of the factors was tested by Cronbach Alpha and was found to be adequate for total alliance and negative alliance (0.71 and 0.81; respectively) but was low for positive alliance (0.64).

Convergent Validity

TPOCSA-TR total score showed significant associations with most outcome scales, the positive alliance factor showed significant associations with the CBCL externalizing and total scores and ERC emotion regulation subscale, and the negative alliance score showed significant associations with TASC therapist alliance, CGAS global functioning, CBCL and TRF externalizing scores (please see Table 3).

Divergent Validity

Multivariate Analysis of Variance (MANOVA) was conducted in order to evaluate whether TPOCSA-TR total score and factors differentiated children's ages, sex and diagnoses. Age significantly differentiated negative alliance ($F(7,115) = 3.22, p < 0.01, \eta^2 = 0.18$), such that three year-old children ($M = 7.67, SD = 7.67$) compared to other age groups formed a more negative alliance. Age also significantly differentiated total alliance ($F(7,115) = 2.43, p < 0.05, \eta^2 = 0.15$), such that children who were age three ($M = 23.33, SD = 8.19$) formed the most negative alliance. CBCL externalizing problems were associated with negative alliance at trend level of significance ($F(2,115) = 2.84, p = 0.06, \eta^2 = 0.05$). Children with clinical level problems ($M = 4.08, SD = 3.89$), compared to children in the non-clinical range ($M = 2.49, SD = 2.65$) formed a more negative alliance. Finally, positive alliance score marginally differentiated CBCL total problems ($F(2,115) = 2.83, p = 0.06, \eta^2 = 0.05$), such that children who had borderline level problems ($M = 9.37, SD = 3.04$) formed the highest positive alliance.

Inter-rater Reliability

Cronbach alpha coefficients between two raters was calculated to be on average 0.90 (min = 0.73; max = 1.00).

Test-retest Reliability

In order to assess test-retest reliability of TPOCSA-TR's factors and total score, Pearson correlations were calculated between alliance ratings at the beginning and end of treatment. Total alliance ($r = 0.35, p < 0.01$), positive alliance ($r = 0.28, p < 0.01$), and negative alliance ($r = 0.41, p < 0.01$) showed statistically significant test-retest reliability.

Sensitivity to Change

In our data, sessions were nested within children who were nested within therapists, therefore we used Hierarchical Linear Modeling (HLM). 453 sessions from different phases of treatment were included in the analyses. The results indicated a quadratic change in therapeutic alliance such that total therapeutic alliance increased

over the course of treatment, and showed a decrease towards the end of treatment, whereas negative alliance showed an opposite pattern (please see Table 4).

Discussion

The findings indicate that TPOCSA-TR showed a different factor structure than the original, however our findings are consistent with the ensuing studies that found a similar factor structure as ours (see Fjermestad et al., 2012) being the positive and negative alliance factors. Modification indices suggested that item 2, 5 and 9 was correlated, which could suggest a hidden latent factor that could not be elucidated within the current factor structure. However, the model fit indices were good and superior to the one factor model, therefore this factor solution was retained. The internal consistencies of the negative alliance and total alliance subscales was acceptable; however, the positive alliance scale's internal consistency was low. The inter-rater reliabilities were excellent. The relatively low, albeit significant, test-retest reliability findings may be due to the long-term nature of the therapies. In terms of validity, the scale showed meaningful relations with some of the outcome scales such as the externalizing and total problem dimensions of CBCL and TRF and emotion regulation scores on ERC. We did not find significant associations with CBCL/TRF internalizing problems, which may be due to these children's stronger ability to form relationships and thus the therapeutic alliance may be less essential for their therapeutic progress. The lower therapeutic alliance scores of children with externalizing and total problems point to the importance of keeping the relationship strong with these children. Younger children formed a poorer alliance possibly because of their difficulty in understanding and complying with the therapeutic tasks. TPOCSA-TR total score was sensitive to change and showed a quadratic trajectory over the course of treatment. The children's negative reactions to separation may explain the decrease in therapeutic alliance towards the end of treatment.

These findings show that TPOCSA-TR has acceptable reliability and validity, however the internal consistency of the factors needs to be improved. Moreover, the divergent validity needs to be tested with other scales and diagnostic groups. Our findings show that TPOCSA-TR shows promise to be used in future research, however our findings need to be replicated with a larger sample, different populations and psychotherapy orientations.