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SCHOOL-BASED DEPRESSION PREVENTION: EXAMINATION OF
TECHNIQUES UTILIZED IN GROUPS LED BY SCHOOL COUNSELORS

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ABSTRACT OF THE DISSERTATION

School-Based Depression Prevention: Examination of Techniques Utilized in Groups Led

by School Counselors

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As evidence-based programs (EBPs) are transported to more representative clinical settings from highly controlled efficacy trials, their advantage over usual care (UC) is largely diminished. However, it is difficult to explain this phenomenon without a better understanding of the status quo in mental health care. Knowledge of the nature of UC is limited and even less is known about the typical care provided in schools. As a preliminary step towards improving knowledge of school-based services, the current study examined group counseling (GC) sessions led by school counselors for adolescents with elevated depressive symptoms. Group counseling was conducted as part of the Depression Prevention Initiative (DPI), a randomized controlled trial of Interpersonal Psychotherapy – Adolescent Skills Training (IPT-AST), a preventive intervention for adolescent depression. Forty-seven GC sessions were randomly selected for coding using the Therapy Process Observational Coding System for Child Group Psychotherapy (TPOCS-G). Self-report data from the Therapy Procedures Checklist (TPC) was also utilized to describe the range of therapeutic techniques in GC. Additionally, the current study utilized 54 IPT-AST sessions from the DPI project that were coded by a different research group. Independent samples t-tests were used to compare GC and IPT-AST

conditions and linear regressions were used to examine whether therapeutic techniques utilized in GC predicted depression and functioning outcomes. School counselors were observed delivering eclectic therapeutic techniques from a variety of theoretical orientations. Shared non-specific factors (e.g., Warmth/Empathy/Validation) were used most frequently, followed by novel unsupported treatment strategies (e.g., Play/Art); evidence-based (EB) techniques were utilized least frequently. Moreover, EB strategies were implemented with low extensiveness, which is inconsistent with EB approaches. Compared to IPT-AST, EB strategies were utilized less frequently and extensively in GC. GC included significantly more non-specific and unsupported strategies than IPT-AST. Within GC, use and extensiveness of EB strategies predicted better depression and functioning outcomes and greater use of non-specific strategies predicted worse functioning outcomes. This work contributes to a growing body of research on UC and may help tailor future training and implementation efforts to meet the unique needs of the education sector.

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Introduction

There has been substantial research dedicated to the development of innovative evidence-based programs (EBPs) for youth, though few have been formally integrated into routine clinical care, representing a science-practice gap (Shafran et al., 2009). Accumulating evidence suggests that as EBPs are moved into representative clinical environments from highly controlled efficacy trials, the strength of their effects and their advantage over UC is largely or entirely diminished (Weisz, Jensen-Doss, & Hawley, 2006; Weisz, Kuppens, et al., 2013). The dwindling disparity between EBP and UC outcomes in the real world may be explained by a variety of factors, including the gradual infusion of evidence-based (EB) elements into UC, the need for EBPs to be modified to better fit within the youth mental health ecosystem, or the possibility that some forms of UC may be potent in their own right (Garland, Bickman, & Chorpita, 2010; Weisz, Ugueto, Cheron, & Herren, 2013). Yet it is virtually impossible to draw conclusions about the ways in which EB practices differ from and likely improve upon UC without greater knowledge of the status quo in youth mental health. Additionally, efforts to transport EBPs to the community are likely to be hampered without a better understanding of the inherent strengths, needs, and limitations of different service settings (Hoagwood & Kolko, 2009). Thus, research on UC is essential to help bridge the science-practice gap and enhance the quality of mental health services for youth.

Regrettably, knowledge of the nature of UC for children has been limited, in part because of the lack of an agreed upon unit of analysis by which to examine psychotherapy processes. Researchers have traditionally examined the effects of psychotherapies at the level of their theoretical orientation (e.g., cognitive-behavioral,

psychodynamic) or at the level of specific treatment manuals (e.g., Coping Cat, Interpersonal Psychotherapy for Adolescents) (Chorpita & Daleiden, 2009). This has provided little information about what actually occurs in UC, as community providers rarely use treatment manuals and often employ theoretically eclectic techniques. Additionally, it has made it difficult to draw conclusions about efficacious EB practices more generally because different protocols comprise diverse procedures, limiting the extent to which researchers could draw universal inferences. To address these limitations, researchers have begun to deconstruct psychotherapies into their essential ingredients, referred to as “clinical strategies” or “practice elements,” which can be examined alone or grouped into subscales representing different theoretical orientations (e.g., Cognitive, Behavioral, Psychodynamic) or other theoretical constructs (e.g., evidence-based strategies, common factors) (Bailin, Busa, & Bearman, November, 2013; Chorpita, Daleiden, & Weisz, 2005; McLeod, 2001; Weersing, Weisz, & Donenberg, 2002).

Two approaches have been developed to study psychotherapeutic processes, indirect (e.g., self-report, chart review) and direct (e.g., in vivo observation, videotape review) methods. While direct methods are inherently more objective and considered the “gold standard” for assessing psychotherapy processes, self-report measures have the advantage of being more practical and efficient. The extent to which these different methods reflect the same clinical behavior, however, has yet to be established. Several studies have found disagreement between clinician-reported and coder-observed ratings of clinical strategies, specifically that clinicians over report their use of strategies and the thoroughness with which they apply them (Borntrager, Chorpita, Orimoto, Love, & Mueller, 2015; Hurlburt, Garland, Nguyen, & Brookman-Frazee, 2010). Nonetheless, the

development of instruments capable of measuring clinical strategies has allowed for the assessment of a broader range of therapeutic techniques, a means of comparing UC and EB interventions more comprehensively, and a more nuanced glimpse into UC.

Most of the research on usual care, as detailed below, has occurred within the specialty mental health sector (i.e., outpatient mental health services). The available data suggest that clinical practices in UC are flexible and heterogeneous, diverging from the more prescriptive cognitive-behavioral (CB) techniques that comprise most EBPs. For instance, in two independent randomized controlled effectiveness trials of Primary and Secondary Control Enhancement Training and Coping Cat, EB treatments for youth depression and anxiety respectively, CB strategies were employed significantly more in the EB condition than in UC; UC involved significantly greater use of family and psychodynamic strategies (McLeod, Smith, Southam-Gerow, Weisz, & Kendall, 2015; Weisz et al., 2009). Likewise, another study by Southam-Gerow et al. (2010) found that while Coping Cat and UC conditions utilized comparable levels of generic-CB techniques, Coping Cat included significantly more manual specific-CB techniques and UC included significantly more psychodynamic, family, and client-centered strategies.

Many UC clinicians also self-identify as “eclectic” and report using an assortment of evidence-based, non-specific (e.g., validation), and unsupported (e.g., play) techniques (Borntreger, Chorpita, Higa-McMillan, Daleiden, & Starace, 2013; Garland, Bickman, et al., 2010; Orimoto, Higa-McMillan, Mueller, & Daleiden, 2012; Weersing et al., 2002). An examination of UC for youth with disruptive behavior problems (DBPs) revealed that providers utilized a variety of clinical strategies, some common to the evidence base for DBPs (e.g., use of positive reinforcement, problem solving skills, psychoeducation) as

well as other non-EB strategies (Garland, Brookman-Frazee, et al., 2010). Moreover, all clinical strategies were applied with low average extensiveness, inconsistent with EB approaches emphasizing the high intensity application of a limited set of techniques. Similar findings emerged from a study of UC for trauma-exposed youth (Borntreger et al., 2013). Therapists reported using two of the top three most frequently occurring practice elements in the evidence base for traumatic stress for the majority of their patients (i.e., Cognitive strategies and Psychoeducation), but reported using Exposure with less than a quarter of all patients. They also endorsed using a number of techniques not common to EB trauma protocols. This is consistent with another study in which 81% of community clinicians providing treatment for anxious youth reported “never” using Exposure and 76% reported “rarely or never” teaching Relaxation skills, even though both are primary components of most EBPs for childhood anxiety (Chorpita & Daleiden, 2009; Weersing et al., 2002).

The literature further suggests that UC providers may be inclined to use specific EB strategies more than others and to employ these strategies more readily with certain populations. For instance, in the abovementioned Garland et al. (2010) study, UC therapists utilized non-directive EB strategies, but often did not employ more directive techniques (e.g., assigning/reviewing homework, role play/behavioral rehearsal). Other studies have found that clinicians reported greater use of behavioral strategies when treating patients who were younger, those who were male, and those experiencing greater externalizing problems (Higa-McMillan, Nakamura, Morris, Jackson, & Slavin, 2015; Orimoto et al., 2012; Weersing et al., 2002). In contrast, other research suggests that

clinicians were more likely to utilize EB strategies with older youth and when providing in-home versus out-of-home services (Borntrager et al., 2013).

Cumulatively, this research suggests that clinical care in the real world differs considerably from faithful evidence-based practice. While some EB strategies have filtered into UC, others have been largely excluded from routine clinical care. Clinicians also appear to pick and choose when and with whom to use EB strategies without empirical grounding. Further, EB practices in UC have been diluted with the application of numerous non-cognitive-behavioral strategies and appear to be delivered with low average extensiveness, inconsistent with the standards for most EBPs.

This research is in its infancy and even less is known about the typical care provided to adolescents in schools, highlighting a gap in the UC literature. Schools are the leading provider of mental health services for youth and the most common entry point into the mental health system (Farmer, Burns, Phillips, Angold, & Costello, 2003). School-based care appears to be particularly important for minority youth at-risk for depression, who often go undetected and untreated in the community (Lyon, Ludwig, Vander Stoep, Gudmundsen, & McCauley, 2013). Given the spike in depressive symptoms and disorders in adolescence and the negative associated psychological and psychosocial outcomes, school-based prevention efforts have received increased attention (Allen, Chango, Szwedlo, & Schad, 2014; Fergusson, Boden, & Horwood, 2007; Hankin et al., 2015). Nonetheless, few school-based randomized controlled trials of evidence-based preventive interventions for depression have utilized control conditions representative of the typical school-based services a child would receive if they were recognized as experiencing mood problems (e.g., Challen, Machin, & Gillham, 2014;

Dobson, Hopkins, Fata, Scherrer, & Allan, 2010; Gillham et al., 2007; Rohde, Stice, Shaw, & Brière, 2014).

There are a few exceptions. Two school-based randomized controlled trials of Interpersonal Psychotherapy – Adolescent Skills Training (IPT-AST), an evidence-based interpersonally-oriented depression prevention group, utilized a school counseling control condition to approximate the regular services provided when adolescents were identified as having minor emotional difficulties (Young, Mufson, & Davies, 2006; Young, Mufson, & Gallop, 2010). However, neither study elaborated on the specific therapeutic strategies used by school-based providers, thus offering only a superficial description of these services.

The current study takes initial steps towards enhancing knowledge of school-based care. It uses therapist self-report and direct observation methods to describe the techniques utilized in school counselor-led group counseling (GC) sessions that were provided for adolescents with elevated depressive symptoms as part of the Depression Prevention Initiative (DPI), an NIMH-funded randomized controlled trial of IPT-AST (Young et al., 2015). The first aim of the study was to provide a description of the GC condition and examine the agreement between therapist-reported use of cognitive and behavioral techniques and use of EB strategies as rated by independent coders. Consistent with previous research, we hypothesized that GC would be characterized by eclectic therapeutic techniques and that self-report and observational coding measures would not be correlated. The second aim was to examine the extent to which GC and IPT-AST groups differed from one another. We hypothesized that GC would include more “other” (non-evidence-based) strategies than IPT-AST and fewer EB techniques. We also

hypothesized that EB techniques would be applied more extensively in IPT-AST compared to GC. The third aim was to examine whether variability in the therapeutic techniques used in GC predicted differential depression and functioning outcomes for adolescents. We hypothesized that the use of EB strategies in GC would be positively associated with depression and functioning outcomes at post-intervention.

Method

Participants

Adolescents. Adolescents (ages 12 to 17) with elevated depressive symptoms (i.e., at least two subthreshold or threshold symptoms of depression) were identified through a two-stage screening procedure. Eligible adolescents were then randomly assigned to IPT-AST ($n = 95$) or GC ($n = 91$). See Young and colleagues (2015) for a more detailed description of the study procedures.

School counselors. Eighteen school counselors participated in the DPI study. Counselors worked in public schools located in Central New Jersey. The majority of counselors were female (72%, $n = 13$) and held Master's degrees in education, counseling or a related field (55%, $n = 10$). Of the remaining counselors, one was a doctoral level psychologist, two held Educational Specialist degrees, and five were graduate students enrolled in clinical doctorate or master's level programs. Counseling experience ranged from 300 hours to 30 years ($M = 9.28$, $SD = 9.13$) among the providers. Race and ethnicity data for school counselors was not collected.

Measures

Therapy Process Observational Coding System for Child Group

Psychotherapy (TPOCS-G). The TPOCS-G (Bearman, Weisz, & McLeod, 2010)

assesses a wide range of clinical strategies used in group interventions. It was adapted from the TPOCS (McLeod, 2001), which has been used to describe child psychotherapy practices in UC and has demonstrated strong psychometric properties (e.g., Garland, Brookman-Frazee, et al., 2010; McLeod & Weisz, 2005, 2010). The TPOCS-G was developed in collaboration with school-based practitioners and through consultation with experts in child and adolescent psychology. It includes 33 clinical strategies common to group therapy that are divided into content and process codes. Content codes describe topics or issues addressed in the group (e.g., Behavioral Activation, Cognitive Restructuring) and process codes describe the group leader's active method to instruct, intervene, or relate to the group members (e.g., Homework, Psychoeducation). The clinical strategies that comprise the TPOCS-G have been further grouped into three theoretical subscales: EB strategies (i.e., practices common to cognitive-behavioral and interpersonal approaches), Common factors (i.e., processes that are related to the therapeutic relationship and shared across therapies), and Other strategies (i.e., unsupported, non-EB treatment practices). See Table 1 for a full list of clinical strategies grouped by subscale.

In addition to measuring the frequency with which each clinical strategy is delivered (i.e., the percentage of time the clinician uses each strategy in the session), the TPOCS-G also measures the extensiveness with which each strategy is applied. The extensiveness score reflects both the thoroughness (i.e., complexity, depth, and persistence) with which strategies are utilized and the amount of time spent delivering the strategy. Extensiveness is rated on a 7-point Likert scale where "1" indicates that a clinical strategy was never used and "7" represents thorough and sustained execution.

Therapy Procedures Checklist – Revised With Family Items (TPC-RF). The TPC (Weersing et al., 2002) is a 53-item therapist-report measure assessing clinician use of various child therapy techniques. The measure represents Psychodynamic strategies (20 items; e.g., trying to understand the effects of early life experiences), Cognitive strategies (13 items; e.g., giving direct instruction and information designed to change thoughts) and Behavioral strategies (17 items; e.g., identifying the antecedents and consequences of the child's behavior). An initial study found support for the measure's content validity and for its internal consistency and test-retest reliability in several samples of child therapists (Weersing et al., 2002). A revised version, the TPC-RF, used in the DPI study, includes 62-items comprising the three original theoretical orientations (Psychodynamic, Cognitive, and Behavioral) and an additional Family therapy orientation (see Appendix B). Given that caregivers were not involved in the GC groups, analyses for the current study excluded the Family therapy items. Clinicians rate their use of each clinical strategy on a Likert scale ranging from 1 (*rarely*) to 5 (*most of the time*). The TPC-RF has been used in other studies assessing usual practices in youth psychotherapy and has been shown to have good internal consistency on all four subscales (Baumann, Kolko, Collins, & Herschell, 2006; Kolko, Cohen, Mannarino, Baumann, & Knudsen, 2009). School counselors completed the TPC-RF at two time points, mid-intervention and post-intervention.

Center for Epidemiologic Studies-Depression Scale (CES-D). The CES-D is a 20-item measure assessing depressive symptoms over the past week. Adolescents rate various symptoms (e.g., I had trouble keeping my mind on what I was doing; I felt that everything I did was an effort; I felt depressed) on a 4-point Likert scale ranging from 0

(rarely or none of the time [less than one day]) to 3 (most or all of the time [5-7 days]).

The CES-D has been widely used in studies of adolescent depression and has strong psychometric properties (Roberts, Andrews, Lewinsohn, & Hops, 1990). It was one of two primary outcome measures in the DPI project and was completed by adolescents at screening, baseline, mid-intervention, post-intervention, and every 6-months for 24-months. The current study used CES-D data from baseline and post-intervention.

Children's Global Assessment Scale (CGAS). The CGAS is a clinician-rated measure of general functioning that produces a score ranging from 1 to 100 based on an adolescent's functioning at home, school, and with peers (Shaffer et al., 1983). Higher scores indicate better functioning with scores above 70 indicative of only minor impairment. The CGAS was the other primary outcome measure in the DPI project and was rated by a diagnostic evaluator naïve to intervention assignment at baseline, post-intervention, and follow-ups. The current study used CGAS data from baseline and post-intervention.

Intervention Conditions

GC. GC was intended to approximate the typical group services provided to adolescents in schools. School counselors were free to determine the content and techniques provided in the groups, but GC was enhanced to match IPT-AST in terms of frequency and duration. To parallel the IPT-AST groups, GC consisted of an individual pre-group session lasting 15 to 45 minutes, eight weekly group sessions lasting 45 to 90 minutes, and an individual mid-group session lasting 15 to 45 minutes. Thus, GC represented enriched school-based usual care, as schools with active group programs initiated prior to the DPI study held shorter and more infrequent group sessions. Because

the purpose of the current study was to better understand group services in schools, GC data from the individual pre-group and mid-group sessions were excluded. Of the 16 GC groups, 5 were co-led and 11 had one group leader. Two school counselors ran multiple groups with one leading four groups and the other two groups. While most groups had eight sessions, two had seven sessions and one had 11 sessions of shorter duration to fit within a single class period.

IPT-AST. IPT-AST sessions conducted as part of the DPI study were utilized for comparison with GC. IPT-AST is based on an interpersonal model of depression, positing that depressive symptoms occur in an interpersonal context, impacting relationships and in turn affecting mood (Young & Mufson, 2003). The IPT-AST prevention program teaches adolescents communication strategies and interpersonal problem-solving skills to improve their current relationships, reduce current depressive symptoms, and prevent against the development of future depressive episodes (Young, Mufson, & Schueler, 2016). IPT-AST consisted of two individual pre-group sessions lasting 30 to 50 minutes, eight group sessions lasting 45 to 90 minutes, and an individual mid-group session lasting 30 to 50 minutes that parents were invited to attend. The current study included IPT-AST data from the weekly group sessions as well as from the pre-group sessions, as the interpersonal inventory, a primary component of the intervention, was completed exclusively during the pre-group sessions. There were 18 IPT-AST groups in the DPI study, all of which were co-led. Of the 12 IPT-AST group leaders, eight ran multiple groups. All of the IPT-AST groups had eight sessions.

Coding Procedures

GC and IPT-AST sessions were video or audio recorded. Within GC, a random sample of three sessions per group were selected for coding, corresponding to early, middle, and late stages of the intervention (i.e., one tape was selected from sessions one to three, one from sessions four to six, and one from sessions seven and eight). One GC group had recordings for sessions four through seven only, so no early session was coded for this group. In the GC group with 11 sessions, one tape was selected from sessions one through four, one from sessions five through eight, and one from sessions nine through 11. This resulted in a total of 47 GC sessions for coding. The sampling procedure resembled those used in previous studies (Garland, Bickman, et al., 2010; Southam-Gerow et al., 2010; Weisz et al., 2009).

Additionally, 54 randomly selected IPT-AST sessions were coded by an independent group of graduate students who were trained and supervised on the TPOCS-G by Dr. Sarah Kate Bearman, co-author of the coding manual. Fourteen IPT-AST pre-group sessions and 40 IPT-AST group sessions were coded.

Group sessions were coded in five-minute intervals. Coders used the microanalytic coding sheet (see Appendix A) to mark all intervention codes that occurred in each five-minute segment. Once coding was completed, coders assigned an extensiveness value to each clinical strategy. Frequency was calculated for each clinical strategy by multiplying the total number of times each strategy was observed in the session by five and then dividing by the total session time (in minutes).

GC sessions were coded by the author and another doctoral student in clinical psychology; IPT-AST sessions were coded by an independent research group supervised by Dr. Bearman. Coder training involved three phases. First, coders received didactic

instruction on the TPOCS-G provided by Dr. Bearman. Next, coders engaged in brief exercises designed to enhance understanding of the coding procedures. Finally, coders practiced coding sessions together and then independently and results were discussed in weekly meetings. Coders were approved for coding after their ratings achieved an acceptable average inter-rater reliability across all TPOCS-G items.

Out of 47 GC sessions, 13 were randomly selected for double-coding (28%) to test inter-rater reliability. The ICC assessing reliability on frequency and extensiveness across all codes was 0.91 and 0.87 respectively, representing excellent reliability. ICC's were also calculated at the individual code level and ranged from .70 to 1 on frequency and from .50 to 1 on extensiveness. Three clinical strategies had ICC's below .70 (i.e., Encourages Cohesiveness extensiveness, Explores Universality extensiveness, and Warmth/Empathy/Validation extensiveness) so results for these strategies should be interpreted cautiously. Because the IPT-AST sessions were coded by an independent research group, inter-rater reliability for the IPT-AST data is unknown.

Data Analytic Strategy

Data from each group session was averaged across each group, producing a total of 16 average frequency and extensiveness scores for each clinical strategy on the TPOCS-G. The same technique was used to produce an average score for each item on the TPC-RF. Composite scores for the TPOCS-G subscales (EB strategies, Common factors, and Other strategies) and the TPC-RF subscales (Cognitive, Behavioral, and Psychodynamic) were created by averaging the items on each subscale. The data were then screened for outliers, skewness, and normality. To assist in the determination of normality, Shapiro and Wilk (1965) provide a test statistic that has been demonstrated to

yield greater power than other tests of normality. The test statistic ranges from 0 to 1 with larger values indicating a near normal measure. For smaller sample sizes ($25 \leq n \leq 50$), values exceeding 0.85 indicate near normality (Razali & Wah, 2011). Given the sample size in the current study, scales that had a Shapiro-Wilk statistic exceeding 0.85 were considered approximately normal. When deviations in normality were observed, box-cox transformations were applied to achieve approximate normality. For scales with severe departures in normality that could not be corrected with box-cox transformations, nonparametric methods, which are less powerful than their parametric counterparts, were employed.

As a first step, descriptive data for the TPOCS-G and TPC-RF were explored. Second, comparisons between GC and IPT-AST groups were examined. Independent samples t-tests were used to compare GC and IPT-AST conditions on the frequency and extensiveness with which EB strategies, Common factors, and Other strategies were used. Effect sizes for the independent samples t-test (Hedges' g) were derived using the formula specified by Hedges (1981). For Hedges' g , thresholds of 0.20, 0.50, and 0.80 correspond to small, medium, and large effect sizes respectively, which are consistent with Cohen's d effect size estimates (Cohen, 1992). For cases in which either or both groups had a departure from normality on the variable of interest, as assessed through the Shapiro-Wilk test of normality, a Mann-Whitney test was used. For the Mann-Whitney test, effect sizes (r) were derived using the formula specified by Pallant (2007) and Field (2013) and have thresholds of 0.10, 0.30, and 0.50 corresponding to small, medium and large effect sizes respectively. Third, linear regressions were used to predict post-intervention depression and functioning outcomes from the TPOCS-G subscales,

controlling for pre-intervention depression and functioning scores on the CES-D and CGAS respectively. The effect size generated from the regression model, a partial eta-squared, has established thresholds of 0.02, 0.13, and 0.26 for small, medium, and large effect sizes respectively (Grissom & Kim, 2012; Pierce, Block, & Aguinis, 2004).

Results

Primary Analyses

Description of GC. Averaging across groups on the TPC-RF, school counselors reported using Cognitive techniques most frequently ($M = 2.82$, $SD = 0.67$), followed by Psychodynamic ($M = 2.18$, $SD = 0.65$) and Behavioral ($M = 1.59$, $SD = 0.28$) techniques. In 12 groups, Cognitive techniques were endorsed most frequently, followed by Psychodynamic techniques (in eight groups) or Behavioral techniques (in four groups). In four groups, Psychodynamic strategies were endorsed most frequently, followed by Cognitive techniques.

Averaging across groups on the TPOCS-G, Common factors were observed most frequently ($M = 29.01$, $SD = 5.74$) and extensively ($M = 2.81$, $SD = 0.26$), followed by Other strategies (frequency: $M = 10.42$, $SD = 4.75$; extensiveness: $M = 1.65$, $SD = 0.25$) and EB Strategies (frequency: $M = 6.44$, $SD = 4.07$; extensiveness: $M = 1.46$, $SD = 0.34$). In all 16 GC groups, Common factors were employed most frequently followed by Other strategies (in 13 groups) and EB strategies (in 3 groups). Table 2 displays means and standard deviations for the TPC-RF subscales, the TPOCS-G subscales, and the clinical strategies on the TPOCS-G.

Bivariate correlations were used to examine the relationship between the EB strategies subscale of the TPOCS-G and the Cognitive and Behavioral subscales of the TPC-RF. A composite CB score was also created by averaging mean scores on the two

TPC-RF subscales. Deviations in normality were observed for EB Strategies on frequency and extensiveness and were addressed by using natural log transformations. The transformed variables are used in all subsequent analyses unless otherwise indicated. EB Strategies were not significantly correlated with Cognitive ($r = 0.15, p = 0.58$) or Behavioral ($r = -0.16, p = 0.57$) techniques or the CB composite ($r = 0.06, p = 0.82$).

Differences between GC and IPT-AST. GC and IPT-AST groups were compared with regard to the frequency and extensiveness with which EB strategies, Common factors, and Other strategies were employed. The results are displayed in Table 3. EB strategies were used significantly more frequently in IPT-AST ($M = 2.41, SD = 0.18$) than in GC ($M = 1.87, SD = .53; t(18.12) = 3.85, p = .001, g = 1.39$) and applied more extensively in IPT-AST ($M = 1.12, SD = 0.07$) than in GC ($M = 0.89, SD = 0.13; t(21.84) = 6.26, p < .001, g = 2.23$), with large effect sizes. In contrast, Common factors were used significantly more frequently in GC ($M = 29.01, SD = 5.74$) than in IPT-AST ($M = 20.07, SD = 4.80; t(32) = 4.95, p < .001, g = 1.70$), though there were no significant differences between conditions on Common factors extensiveness (IPT-AST: $M = 2.75, SD = .37$; GC: $M = 2.81, SD = .26; t(32) = .58, p = .57, g = .20$). Within IPT-AST, Other strategies were used infrequently if at all. Therefore, deviations in normality persisted on the Other strategies subscale despite attempts to normalize these data with box-cox transformations. Non-parametric tests were used to compare the conditions and indicated that Other strategies were used significantly more frequently in GC ($Mdn = 10.93, range = 15.17$) than in IPT-AST ($Mdn = 0.00, range = 8; U = 9.00, p < .001, r = .81$) and were applied more extensively in GC ($Mdn = 1.63, range = .83$) than in IPT-AST ($Mdn = 1.00, range = .75; U = 15.00, p < .001, r = .77$).

Prediction of Depression and Functioning Outcomes in GC. EB strategies, Common factors, and Other strategies were used to predict post-intervention depression outcomes on the CES-D in the GC condition, controlling for pre-intervention scores. The results of these analyses are displayed in Table 4. Greater frequency of EB strategies predicted better depression outcomes (i.e., lower CES-D post-intervention score), controlling for pre-intervention scores ($F(2,87) = 22.59, p < .001, \text{Partial } \eta^2 = .34$), accounting for 34.2% of the variance in outcome. The unique contribution made by the frequency with which EB strategies were used was significant ($\beta = -.25, t(89) = 2.80, p = .006, \text{Partial } \eta^2 = .083$). Likewise, more extensive application of EB strategies predicted better depression outcomes, controlling for pre-intervention scores ($F(2,87) = 23.24, p < .001, \text{Partial } \eta^2 = .35$), accounting for 34.8% of the variance in outcome. The unique contribution made by EB extensiveness was also significant ($\beta = -.26, t(89) = 2.97, p = .004, \text{Partial } \eta^2 = .092$). Neither the frequency ($\beta = .18, t(89) = 1.94, p = .06, \text{Partial } \eta^2 = .04$) nor extensiveness ($\beta = -.02, t(89) = .20, p = .84, \text{Partial } \eta^2 = 0.00$) with which Common factors were used predicted depression outcomes. Similarly, neither the frequency ($\beta = .07, t(89) = .78, p = .44, \text{Partial } \eta^2 = .01$), nor extensiveness ($\beta = -.04, t(89) = .42, p = .67, \text{Partial } \eta^2 = .002$) with which Other strategies were used significantly predicted depression outcomes.

EB strategies, Common factors, and Other strategies were also used to predict post-intervention functioning on the CGAS in the GC condition, controlling for pre-intervention scores. Again, greater frequency of EB strategies predicted better functioning outcomes (i.e., higher CGAS post-intervention score), controlling for pre-intervention scores ($F(2,87) = 22.40, p < .001, \text{Partial } \eta^2 = 0.34$), accounting for 34% of

the variance in outcome. The unique contribution made by the frequency with which EB strategies were used was significant ($\beta = .25$, $t(89) = 2.80$, $p = .006$, Partial $\eta^2 = .083$). Likewise, more extensive application of EB strategies predicted better functioning outcomes, controlling for pre-intervention scores ($F(2,87) = 22.15$, $p < .001$, Partial $\eta^2 = 0.34$), accounting for 33.7% of the variance in outcome. The unique contribution made by EB extensiveness was also significant ($\beta = .24$, $t(89) = 2.74$, $p = .008$, Partial $\eta^2 = .08$). In addition, greater frequency of Common factors predicted worse functioning outcomes (i.e., lower CGAS score) at post-intervention ($F(2,87) = 21.35$, $p < .001$, Partial $\eta^2 = .33$), accounting for 32.9% of the variance in outcome. The unique contribution made by the frequency with which Common factors were used was significant ($\beta = -.22$, $t(89) = 2.52$, $p = .014$, Partial $\eta^2 = .07$). However, Common factors extensiveness was not predictive of functioning outcomes ($\beta = -.13$, $t(89) = -1.45$, $p = .15$, Partial $\eta^2 = .02$). Additionally, neither the frequency ($\beta = -.13$, $t(89) = 1.38$, $p = .17$, Partial $\eta^2 = .02$) nor extensiveness ($\beta = -.04$, $t(89) = -.42$, $p = .68$, Partial $\eta^2 = .002$) with which Other Strategies were used predicted post-intervention functioning.

Post-hoc Analyses

Given that GC showed much variability across the sample, we conducted post-hoc analyses at the clinical strategies level to further unpack the findings from our preliminary analyses. The clinical strategies data were screened for outliers, skewness, and normality. The following variables were approximately normal in the GC and IPT-AST data and did not require transformation: Agenda/Goal Setting frequency and extensiveness; Explores Universality frequency and extensiveness; Information Gathering frequency and extensiveness; Psychoeducation frequency and extensiveness;

Seeks Client Perspective frequency and extensiveness; and Previous Themes frequency. For all other variables, deviations in normality were observed within the GC data, the IPT-AST data or both. Box-cox transformations were applied to achieve approximate normality. Unless otherwise indicated, the following transformed variables were used in all subsequent analyses: the square root of Between Session Assignment frequency, the square root of Modeling frequency, the square root of Uses Collaboration frequency, the natural log of Modeling extensiveness, the natural log of Uses Collaboration extensiveness, and the natural log of Previous Themes extensiveness. Deviations in normality persisted for a number of variables that were observed infrequently. To address this, nonparametric methods were employed in analyses involving these variables.

Item Level Associations Between the TPC-RF and the TPOCS-G. We examined associations between specific items on the TPC-RF and particular clinical strategies on the TPOCS-G to explore if associations between the measures were masked by examining correlations at the subscale level. Cognitive Restructuring on the TPOCS-G was found to be significantly correlated with “training child to recognize maladaptive thoughts” (item 21; $r_s = .58, p = .02$) and correlated at a trend level with “giving direct instruction and information designed to change thoughts” (item 6; $r_s = .49, p = .06$). Additionally, Relaxation on the TPOCS-G was correlated with “teaching the child relaxation as a coping method” at a trend level (item 3; $r_s = .47, p = .07$). No other trend level or significant correlations between measures emerged at the item level.

Differences between GC and IPT-AST at the Clinical Strategies Level. We compared GC and IPT-AST conditions at the clinical strategies level to further explore differences between the groups. As seen in Table 5, IPT-AST involved significantly more

frequent and extensive use of the following interpersonally-oriented techniques compared to GC: Interpersonal Inventory, Communication Analysis, Principles of the Interpersonal Model, and Social Skills Training. Moreover, IPT-AST involved significantly more frequent and extensive use of several general EB techniques compared to GC: Role Play, Monitoring, and Agenda/Goal Setting. Additionally, the following techniques were applied significantly more extensively in IPT-AST compared to GC, although not more frequently: Homework, Seeks Client's Perspective, Uses Collaboration, and Previous Themes.

In contrast, GC used Cognitive Restructuring and Relaxation techniques at significantly greater frequency and extensiveness than IPT-AST. Psychoeducation was also used significantly more frequently in GC, although not more extensively. GC involved significantly more frequent and extensive use of the following Common factors and Other strategies compared to IPT-AST: Information Gathering, Play/Art, Self-Disclosure, and Affective Content. Additionally, the following techniques were provided more frequently, although not more extensively, in GC compared to IPT-AST: Explores Universality, Resistance, and Advising.

Within GC there was much variability and it was observed that five groups utilized a considerable number of EB strategies, drawing heavily from existing EB materials and manuals. We sought to learn: (1) how these five groups compared to the other 11 GC groups, and (2) how this subset of groups compared to IPT-AST. Within GC, EB strategies were employed significantly more frequently in the five identified groups ($M = 2.48$, $SD = .28$) compared to the remaining 11 groups ($M = 1.60$, $SD = .34$; $t(14) = 5.02$, $p < .001$, $g = 2.72$) and more extensively in this subset of groups ($M = 1.06$,

$SD = .07$) compared to the rest of the GC groups ($M = .81, SD = .05; t(14) = 8.06, p < .001, g = 4.43$). Additionally, frequency of EB strategies in the five identified GC groups ($M = 2.48, SD = .28$) did not differ significantly from IPT-AST ($M = 2.41, SD = .18; t(21) = .72, p = .48, g = .33$) and extensiveness of EB strategies in the five GC groups ($M = 1.06, SD = .07$) did not differ significantly from IPT-AST ($M = 1.12, SD = .07; t(21) = 1.66, p = .11, g = .86$), suggesting that comparable levels of EB strategies were delivered with comparable extensiveness. Notably, at the clinical strategies level, IPT-AST involved more frequent and extensive use of IPT-AST-specific techniques (i.e., Interpersonal Inventory, Communication Analysis, and Principles of the Interpersonal Model) with less frequent and extensive use of CB strategies, whereas the five GC groups used CB strategies (i.e., Relaxation and Cognitive Restructuring) more frequently and extensively than IPT-AST.

Clinical Strategies Related to Depression and Functioning Outcomes in GC.

To explore whether discrete clinical strategies within the EB strategies and Common factors subscales were associated with depression and functioning outcomes at post-intervention, partial correlations were used to control for baseline CES-D and CGAS scores respectively. The results are displayed in Tables 6 and 7.

Two EB strategies were associated with improved outcomes on both depression and functioning at post-intervention: Psychoeducation frequency and extensiveness were associated with better functioning (frequency: $r = .22, p = .035$; extensiveness: $r = .27, p = .01$) and lower depression scores (frequency: $r = -.21, p = .047$; extensiveness: $r = -.029, p = .006$) and Relaxation frequency and extensiveness were associated with better functioning (frequency: $r = .23, p = .034$; extensiveness: $r = .25, p = .018$) and lower

depression scores (frequency: $r = -.24, p = .024$; extensiveness: $r = -0.26, p = .013$). Problem Solving frequency and extensiveness (frequency: $r = -.23, p = .028$; extensiveness: $r = -.23, p = .032$) and Social Skills Training frequency and extensiveness (frequency: $r = -.23, p = .031$; extensiveness: $r = -.25, p = .018$) were associated with better depression outcomes at post-intervention. Social Skills Training extensiveness was also associated with better functioning ($r = .23, p = .031$) at post-intervention. Finally, assigning Homework frequency and extensiveness were associated with better functioning at post-intervention (frequency: $r = .25, p = .019$; extensiveness: $r = .26, p = .015$), but were not significantly associated with post-intervention depression scores.

Within the Common factors subscale, Information Gathering frequency ($r = -0.31, p = .004$) and Seeks Client's Perspective frequency ($r = -.29, p = .006$) were associated with worse functioning at post-intervention.

Discussion

Schools are the single largest provider of mental health services for youth (Farmer et al., 2003) and school-based care is particularly critical for youth with internalizing symptoms, especially those from minority backgrounds, who often go untreated in the community (Lyon et al., 2013). While evidence-based interventions offer promise for improving the quality of psychological care in schools, they are not routinely provided. Schools present distinctive challenges for implementation, including organizational and staff resistance and budgetary constraints (Schaeffer et al., 2005). Thus, researchers must gain a better understanding of the typical services provided in schools to lay the groundwork for more tailored and sustainable implementation efforts.

As a preliminary step towards improving knowledge of school-based services, the current study offers a thorough examination of school counselor-led groups provided for adolescents with elevated depressive symptoms as part of the Depression Prevention Initiative, a school-based randomized controlled trial of IPT-AST. The first aim of the study was to provide a description of the therapeutic techniques utilized in GC and to examine the agreement between therapist-reported use of cognitive and behavioral techniques on the TPC-RF and coder-rated use of EB strategies on the TPOCS-G. Both measures captured the heterogeneous techniques utilized in GC. However, there was no correspondence between measures at the subscale level and minimal correspondence at the individual item level. Low agreement between therapist and coder ratings of therapeutic processes has been documented previously, indicating that clinicians often over report their use of techniques, especially cognitive and behavioral ones, compared to ratings from independent coders (Borntrager et al., 2015; Hurlburt et al., 2010).

There are several possible hypotheses to explain the lack of agreement between the TPC-RF and the TPOCS-G. First, both measures characterize clinical strategies in different ways. On the TPC-RF, there are multiple items representing cognitive restructuring processes (e.g., “training to recognize maladaptive thoughts,” “instruction to modify maladaptive cognitions,” “generating alternative interpretations of events”) whereas these are represented as a single practice element on the TPOCS-G. Notably, the two items that were correlated significantly (“training child to recognize maladaptive thoughts”) and at a trend level (“giving direct instruction and information designed to change thoughts”) with Cognitive Restructuring on the TPOCS-G had the highest mean scores among multiple TPC-RF items representing cognitive restructuring processes,

suggesting that these may have been the dominant techniques that clinicians used within the broader construct. Second, the TPC-RF has not been validated in relation to observed clinical behavior, so it is possible that it is not reliable with existing observational methods. Third, providers may feel compelled to inflate their use of certain clinical strategies that they believe researchers want to see (i.e., those from the evidence-base). Another possibility is that therapists' perceptions may not correspond with those of researchers. Providers may intend to deliver certain strategies and thus endorse their use; however if these strategies are poorly executed, coders will fail to register these behaviors in the way they were intended.

Overall, the results suggest that self-reported clinical strategies may not accurately represent the in-session behavior of school counselors in our study, echoing previous findings. Encouragingly, there are some ongoing efforts to validate self-report tools using observational methods, which may help to advance their utility (Borntrager et al., 2015). Observational coding methods are still considered the "gold standard" for assessing psychotherapy practices and thus the results discussed hereinafter focus on data from the TPOCS-G.

The larger literature on UC practices in child psychotherapy indicates that UC clinicians utilize diverse therapeutic techniques from multiple theoretical orientations (e.g., Borntrager et al., 2013; Garland, Brookman-Frazee, et al., 2010; Weisz et al., 2009). Consistent with this literature, school counselors were found to use a variety of clinical strategies spanning the theoretical spectrum. On average, independent coders observed school counselors employing Common factors most frequently and extensively, followed by Other strategies, and lastly EB strategies. In three groups, Common factors

were used most frequently followed by EB strategies. In 13 groups, Common factors were used most frequently followed by Other strategies.

The existing literature on psychotherapy processes further suggests that UC clinicians largely rely on client-centered approaches (McLeod et al., 2015; Smith et al., 2016; Southam-Gerow et al., 2010; Weisz et al., 2009). Consistent with these findings, two of the top three most frequently occurring clinical strategies in the current study were client-centered techniques, Warmth/Empathy/Validation (used 64.55% of the time on average) and Seeking the Client's Perspective (used 42.44% of the time on average). School counselors also used a number of unsupported treatment strategies in GC, most regularly Self-Disclosure (used 31.10% of the time on average), Discussing Affective Content (used 26.90% of the time on average), and Play/Art (used 13.73% of the time on average).

There was much variability with regard to the use of specific EB strategies within GC. The most frequently utilized EB techniques were Psychoeducation (used 38.85% of the time on average), Cognitive Restructuring (used 14.81% of the time on average), and Agenda/Goal Setting (used 11.03% of the time on average). However, other techniques common to the evidence-base for child and adolescent depression, such as Social Skills Training, Relaxation, and Behavioral Activation (Chorpita et al., 2005), were observed relatively infrequently (less than 10% of the time on average). Overall, our results are similar to previously documented findings suggesting that utilization of EB practices in UC is inconsistent; some EB strategies are used frequently and others are employed rarely if at all (Borntrager et al., 2013; Garland, Brookman-Frazee, et al., 2010).

Evidence-based practice also emphasizes the thorough execution of a limited set of clinical strategies. Nearly all-clinical strategies were employed with low average extensiveness in GC, indicating that counselors utilized techniques for only a brief time, such as with a fleeting comment, or with inadequate elaboration. Similarly, research on UC practices in general outpatient and school-based mental health clinics has found that UC clinicians tend to apply EB techniques superficially without the depth necessary to meet the fidelity standards for most EBPs (Borntrager et al., 2015; Garland, Brookman-Frazer, et al., 2010; Hurlburt et al., 2010).

The second aim was to examine comparisons between GC and IPT-AST to provide a benchmark against which to understand GC. Most randomized controlled trials of EBPs have found that UC clinicians utilize fewer EB strategies than EBP-trained providers (McLeod et al., 2015; Smith et al., 2016; Weisz et al., 2009). However, at least one study found that comparable levels of EB techniques were utilized in EBP and UC conditions (Southam-Gerow et al., 2010). In the current study, EB strategies were employed more frequently and extensively in IPT-AST than in GC. Other strategies and Common factors were used more frequently in GC and Other strategies were also used more extensively in GC. Though IPT-AST was more evidence-based overall, Cognitive Restructuring and Relaxation techniques were used more frequently and extensively in GC. This is in line with the fact that IPT-AST is based on an interpersonal model of depression and does not address cognitive vulnerabilities for depression.

Further, there was considerable variability in the use of EB strategies among the GC groups. Specifically, there was a subset of five groups that utilized a greater number of EB techniques. One counselor, who led four of these groups, employed an adapted

version of Coping with Stress, a cognitive behavioral prevention program for depression (Clarke et al., 1995). Another counselor, who ran the fifth group, employed a variety of general EB and CB-specific techniques (e.g., Monitoring, Psychoeducation, Relaxation) as well as Social Skills Training strategies. Of note, in follow-up analyses, these five GC groups did not significantly differ from IPT-AST in terms of the frequency and extensiveness with which EB strategies were employed, suggesting that comparable levels of EB techniques were used in this subset of GC groups. These results suggest that the use of EB practices in UC differs meaningfully across different variants of UC, with some variants delivering potent doses of EB strategies and others utilizing higher doses of common factors or unsupported strategies. Indeed, utilization of EB techniques has been shown to vary greatly in community settings and depend on a variety of individual and organizational factors, including the provider's experience and training, their attitude towards EBPs, and budgeting limits (Borntrager, Chorpita, Higa-McMillan, & Weisz, 2009; Kratochwill, 2007; Schaeffer et al., 2005). The finding that one counselor implemented an evidence-based cognitive-behavioral prevention program on her own and that another used a variety of EB strategies, suggests that with appropriate training and direction, other school counselors may follow suit.

The third aim was to examine whether therapeutic techniques utilized in GC predicted adolescent depression and functioning outcomes at post-intervention to add to the nascent literature linking therapeutic processes and outcomes (Weersing, Rozenman, & Gonzalez, 2009). Past research has demonstrated a link between adherence to EB practices and improved clinical outcomes for youth with externalizing problems (Hogue et al., 2008). Garland and colleagues (2014) also found that more extensive delivery of

benchmark elements for the treatment of DBPs in youth predicted greater reduction in parental inconsistent discipline and that extensive use of “other” (i.e., non-manualized) strategies predicted smaller improvements in family functioning. Research linking therapeutic processes and outcome for internalizing problems in youth is more inconsistent. Weisz and colleagues (2009) found that use of CB strategies in UC did not significantly predict youth or parent-reported depression scores at the end of treatment; rather, psychodynamic strategies predicted parent-reported improvement of child depressive symptoms.

Contrary to Weisz et al. (2009), we found that both frequent and extensive use of EB strategies predicted better depression and functioning outcomes at post-intervention. Unexpectedly, we also found that greater use of Common factors predicted worse functioning at post-intervention. These findings help to shed light on a longstanding dispute about whether clinical improvement from psychotherapy is due to specific treatment strategies or to common factors shared across therapies (Messer & Wampold, 2002). Given the observed positive relationship between EB strategies and clinical outcomes in GC, the current findings lend support for the former view. However, continued study is warranted considering existing empirical evidence for the common factors perspective (Laska, Gurman, & Wampold, 2014). Importantly, these findings point to the utility of training school counselors in evidence-based practices to enhance the quality of school-based care. The techniques that school-based providers use most readily, namely common factors and unsupported strategies, appear less relevant for clinical outcomes and may actually be detrimental to psychosocial progress. Thus, these

findings suggest that transporting EB interventions to schools and training school counselors in EB practices continue to be valuable and important endeavors.

We also explored whether discrete clinical strategies within the EB subscale predicted better clinical outcomes. Frequent and extensive use of Social Skills Training and Problem Solving predicted better depression scores at post-intervention. These are two core clinical strategies to IPT-AST, which has been shown as an intervention to lead to reductions in depressive symptoms and diagnoses in adolescents (Young et al., 2015; Young et al., 2006; Young et al., 2010). Given that social, interpersonal, and family problems are the most frequently occurring psychosocial issue in schools (Foster et al., 2005) and given that depressive symptoms are highly prevalent among adolescents (Hankin et al., 2015), these techniques may be particularly relevant for school-based providers. It is also notable that frequent and extensive use of Psychoeducation, Relaxation, and Homework predicted better functioning at post-intervention. These are general EB strategies that may be easily adapted to address a variety of presenting problems (e.g., depression, anxiety, mood dysregulation). Given that CGAS score is based in part on an adolescent's functioning at school and with peers, these results provide preliminary evidence that these strategies impact outcomes relevant for the education sector.

While Psychoeducation was used frequently in GC, employed nearly 39% of the time on average, Relaxation, Social Skills Training, Problem Solving, and Homework were utilized more infrequently, around 5% of the time or less on average. As suggested by Garland and colleagues (2010), future training and implementation efforts may harness clinical strategies that are being regularly provided by school counselors (e.g.,

Psychoeducation) as a foundation of mutual understanding and build in more targeted instruction on techniques that are largely lacking from usual care (e.g., interpersonally-oriented strategies).

The finding that EB strategies and extensiveness predicted better depression and functioning outcomes for youth provides support for continued research on the implementation of EBPs in schools. However, traditional EB interventions in the form of structured manualized protocols may not fit well in educational settings. School-based services may need to have more flexibility in order to address diverse contextual and population needs (Elkins, McHugh, Santucci, & Barlow, 2011). Modular treatments enhance flexibility compared to more structured manualized interventions by providing therapists with a selection of therapeutic modules (e.g., relaxation, modifying negative cognitions) and flow charts to guide decision-making. Several studies have provided initial support for the feasibility and effectiveness of implementing modular approaches in school settings for youth with internalizing problems (Becker, Becker, & Ginsburg, 2012; Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011; Weisz et al., 2012). However, these services were intended for treatment not prevention and have been delivered in individual rather than group formats. To our knowledge modular approaches have not yet been tested in a prevention or group context.

Additionally, transdiagnostic interventions offer promise for addressing broad ranging symptoms with a single protocol, enhancing the reach and generalizability to more youth, which is attractive for educators and reduces the burden on school-based providers to learn multiple protocols. IPT-AST has shown initial efficacy as a transdiagnostic preventive intervention in schools (Benas et al., 2016). However, most of

the other existing research on transdiagnostic interventions has focused on treatment rather than prevention. The assessment of modular and transdiagnostic approaches for depression prevention in school-based groups would be an interesting and important future application.

Another way to improve the use of EB practices in schools may be to provide school counselors with pragmatic empirical evidence. Many providers have been critical of treatment research because it does not feel applicable to typical clinical practice (Nelson, Steele, & Mize, 2006). Providing school counselors with applied research that they can easily incorporate into their daily routine, such as the findings from the current study, may contribute to increased attempts to utilize EB techniques. Indeed, the literature suggests that positive provider attitudes towards research predicts greater self-reported use of EB practices (Aarons, 2004; Nelson & Steele, 2007).

Institutional culture may also influence utilization of EB practices. Research indicates that when providers perceive greater openness to and encouragement of evidence based practices within their organization, they are more likely to utilize these techniques (Nelson & Steele, 2007). Mental health programs are often regarded as peripheral to the central mission of schools (Paternite & Johnston, 2005) and are relatedly underfunded, understaffed, and under-resourced (Elkins et al., 2011). Thus a challenge for researchers is to demonstrate the positive effects of EB interventions on outcomes relevant to educators to garner greater organizational support for training and implementation. The current study indicates that greater use and extensiveness of EB practices within GC led to improvement in adolescent functioning and depressive symptoms, outcomes broadly applicable to schools. Future research should continue to

explore outcomes more centrally relevant to schools, such as the impact of EB practices on attendance, engagement, academic performance, and behavioral problems.

Limitations of this study should be noted. First, school counselor behavior may have been influenced by virtue of participating in a research study and the knowledge that their group sessions were being recorded and observed. It is possible that typical practices, when not subjected to scrutiny, may differ from those observed in the current study. Second, IPT-AST and GC were coded by different groups of graduate students. Though both groups were trained by Dr. Bearman, co-author of the TPOCS-G manual, it is unknown whether the groups were reliable with one another and thus IPT-AST and GC comparisons should be interpreted with caution. A third issue is that GC coders were not blind to condition so individual biases may have influenced coding. Though future research could be strengthened by keeping coders naïve to study condition, a number of other studies have also utilized non-blinded coders (e.g., Southam-Gerow et al., 2010; Weisz et al., 2009). Fourth, considering the large number of tests conducted on clinical strategies and the number of clinical strategies that were not normally distributed, requiring the use of nonparametric statistical methods, findings at the clinical strategy level should be interpreted cautiously. Finally, we did not take into account nesting in groups or schools given the small sample size of the current study.

This study has several important strengths. First, it adds to the nascent literature on usual care, as one of only a handful of studies to examine UC for internalizing problems in youth and to our knowledge the only study thus far to provide a thorough description of the typical group services provided to adolescents in schools. To our

knowledge this is also the first study to explore associations between processes utilized in typical school-based groups and depression and functioning outcomes.

In conclusion, schools are an important and key avenue for the delivery of youth mental health services and provide a powerful target for improving access to quality mental health care. The current study suggests that school-based care is eclectic in nature, with infrequent and cursory use of EB strategies, except in a small subset of groups that drew heavily from existing EB protocols and materials. Future research should continue to investigate usual care practices in schools to further delineate the types of techniques used, how they differ from traditional EB practice, and how they relate to clinical outcomes. Enhanced knowledge of school-based care will help researchers personalize future training and implementation efforts to address the specific needs and challenges of this service context.

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Table 1. TPOCS-G Subscales, Items, and Descriptions

Subscale/Item	Description
<i>Evidence-Based Strategies</i>	
Homework	Assigns and/or reviews between session tasks
Interpersonal Inventory	Reviews significant current and/or past relationships(s)
Communication Analysis	Conducts in-depth breakdown of an interpersonal interaction
Modeling	Teaches skills using observational learning
Monitoring	Elicits standardized measurement of mood, functioning, or experiences; encourages group members to monitor mood states
Psychoeducation	Teaches about psychological principles, treatment issues, or other related content
Role Play	Encourages group members to participate in hypothetical enactments
Interpersonal Model Principles	Teaches about or emphasizes how emotional/behavioral problems may be caused or maintained by the interpersonal context
Positive Reinforcement	Establishes reward system or employs reinforcement to shape behavior
Relapse Prevention	Anticipating future difficulties; establishing plan for how setbacks will be managed or resolved
Behavioral Activation	Teaches positive relationship between pleasant activities and mood; employs pleasant experiences in session to demonstrate impact on mood; assigns pleasant activities with the express purpose of improving mood
Cognitive Restructuring	Teaches about the relationship between thoughts, behaviors, and emotions; identifies dysfunctional thought patterns or distortions
Problem Solving	Teaches sequential problem solving; encourages use of these skills; applies skills
Relaxation	Teaches, processes, and/or encourages use of relaxation, mindfulness, meditation, or pleasant mental imagery
Social Skills Training	Teaches and/or encourages group members to use observable pro-social behaviors
Agenda/Goal Setting	Establishes and/or reviews session/treatment goals
Exposure	Develops an exposure hierarchy; employs mastery ratings; and/or performs an exposure
Uses Consequences	Establishes or employs rules and implements or threatens consequences for rule-breaking or negative behavior

Common Factors

Encourages Cohesiveness	Encourages group identity or sense of unity, employs activities designed to build group cohesion; comments on instances of group cohesiveness
Explores Universality	Recognizes shared experiences and feelings among group members
Warmth/Empathy/Validation	Leader responds to group members in a warm, empathetic, validating manner
Information Gathering	Inquires about factual information; employs activities to elicit factual information
Seeks Client Perspective	Attempts to understand group member(s)' unique point of view
Uses Collaboration	Works together with group members; encourages group members to collaborate with one another towards making a decision, providing advice or reaching a consensus
Previous Themes	Comments upon themes from previous sessions or builds on past successes in group
<i>Other Strategies</i>	
Transference	Discusses group member's interaction with the group as it relates to the group member's life or past experiences
Resistance	Identifies and discusses group members resistance to treatment
Advising	Leader provides advice about how a group member should behave in or respond to a situation
Interpretation	Comments on the meaning of group member(s)' behavior; relates behavior to an aspect of group member(s)' functioning and/or past experiences to foster insight
Play/Art	Utilizes play, art or other creative expression
Uses Self-Disclosure	Leader shares information about his or her personal life, feelings, or experiences
Affective Content	Examines different emotional experiences, identifies verbal labels, physical or environmental cues, or encourages expression of emotions
Explores Past	Discusses past experiences

Table 2. Description of GC Condition

	Mean (SD) / <i>n</i> (%)	
Session Characteristics		
Number of Sessions	8.06 (0.85)	
Session Length (min)	54.83 (15.32)	
One group leader	11 (68.75%)	
Co-led groups, <i>n</i> (%)	5 (31.25%)	
TPC-RF		
Cognitive Techniques	2.82 (0.67)	
Behavioral Techniques	1.59 (0.28)	
Psychodynamic Techniques	2.18 (0.65)	
Family Techniques	1.17 (0.17)	
TPOCS-G		
	Frequency	Extensiveness
<i>Evidence-Based Strategies</i>	6.44 (4.07)	1.46 (0.34)
Homework	4.42 (5.63)	1.43 (0.54)
Interpersonal Inventory	2.71 (3.67)	1.22 (0.30)
Communication Analysis	0.63 (1.48)	1.07 (0.16)
Modeling	9.94 (10.24)	1.77 (0.72)
Monitoring	9.54 (16.11)	1.67 (1.08)
Psychoeducation	38.85 (25.09)	3.32 (1.74)
Role Play	3.43 (7.59)	1.29 (0.60)
Interpersonal Model Principles	1.17 (1.94)	1.10 (0.16)
Positive Reinforcement	0.30 (0.83)	1.04 (0.11)
Relapse Prevention	4.09 (7.28)	1.31 (0.58)
Behavioral Activation	0.64 (1.47)	1.06 (0.13)
Cognitive Restructuring	14.81 (18.99)	1.98 (1.23)
Problem Solving	3.77 (5.66)	1.33 (0.46)
Relaxation	5.20 (8.60)	1.50 (0.74)
Social Skills Training	5.22 (13.38)	1.31 (0.67)
Agenda/Goal Setting	11.03 (9.21)	1.81 (0.60)
Exposure	0.00 (0.00)	1.00 (0.00)
Uses Consequences	0.15 (0.61)	1.02 (0.08)
<i>Common Factors</i>	29.01 (5.74)	2.81 (0.26)
Encourages Cohesiveness	12.36 (15.39)	1.85 (0.87)
Explores Universality	11.44 (11.23)	1.57 (0.49)
Information Gathering	48.32 (22.23)	3.70 (1.25)
Seeks Client Perspective	42.44 (23.45)	3.65 (1.21)
Uses Collaboration	9.14 (9.49)	1.70 (0.77)
Previous Themes	14.83 (11.99)	2.08 (1.06)
Warmth/Empathy/Validation	64.55 (15.72)	5.15 (1.33)
<i>Other Strategies</i>	10.42 (4.75)	1.65 (0.25)
Transference	0.15 (0.61)	1.02 (0.08)
Resistance	5.12 (7.63)	1.31 (0.41)
Advising	4.74 (10.94)	1.23 (0.34)

Interpretation	0.49 (1.07)	1.06 (0.13)
Play/Art	13.73 (11.42)	1.92 (0.86)
Uses Self-Disclosure	31.10 (20.70)	2.81 (1.08)
Affective Content	26.90 (22.84)	2.72 (1.15)
Explores Past	1.12 (2.52)	1.13 (0.30)

Note. TPC-RF: possible range is 1 (*uses technique rarely*) to 5 (*uses technique most of the time*). TPOCS-G: possible range is 0% to 100% for frequency and 1 (*technique not used at all*) to 7 (*technique used thoroughly and for an extended time*) for extensiveness.

Table 3. Differences between GC and IPT-AST on TPOCS-G Subscales

TPOCS-G Subscale	GC	IPT-AST	<i>t</i> / <i>U</i>	<i>df</i>	<i>g</i>/<i>r</i>
Frequency					
Evidence-Based Strategies ^a	1.87 (.53)	2.41 (.18)	3.85***	18.12	1.39
Common Factors	29.01 (5.74)	20.07 (4.80)	4.95***	32	1.70
Other Strategies ^b	10.93 (15.17)	0.00 (8)	9.00***		0.81
Extensiveness					
Evidence-Based Strategies ^a	.89 (.13)	1.12 (.07)	6.26***	21.84	2.23
Common Factors	2.81 (.26)	2.75 (.37)	0.58	32	0.20
Other Strategies ^b	1.63 (.83)	1.00 (.75)	15.00***		0.77

Note. * $p < .05$, ** $p < .01$, *** $p \leq .001$. Standard deviations appear in parentheses next to means.

^a Natural log transformed.

^b Mann-Whitney test; median (range) are reported instead of mean (SD); for effect size, r is reported instead of g .

Table 4. Regression of CGAS and CES-D scores on TPOCS-G subscales

Variable	CGAS Post-Intervention				CES-D Post-Intervention			
	<i>B</i>	<i>SE B</i>	β	Partial η^2	<i>B</i>	<i>SE B</i>	β	Partial η^2
Frequency								
Evidence-Based Strategies ^a	3.33	1.19	.25**	.083	-4.63	1.65	-.25**	.083
Common Factors	-.27	.11	-.22*	.068	.30	.15	.18	.042
Other Strategies	-.18	.13	-.13	.022	.15	.19	.07	.007
Extensiveness								
Evidence-Based Strategies ^a	12.68	4.64	.24**	.079	-19.16	6.46	-.26**	.092
Common Factors	-3.33	2.30	-.13	.024	-.64	3.25	-.02	.000
Other Strategies	-1.06	2.54	-.04	.002	-1.44	3.41	-.04	.002

Note. * $p < .05$, ** $p < .01$. Baseline CGAS and CES-D score were entered prior to TPOCS-G subscale to control for baseline scores.

^a Natural Log transformed.

Table 5. Differences Between GC and IPT-AST on TPOCS-G Clinical Strategies

	Frequency				Extensiveness			
	GC	IPT-AST	<i>t</i> / <i>U</i>	<i>g</i> / <i>r</i>	GC	IPT-AST	<i>t</i> / <i>U</i>	<i>g</i> / <i>r</i>
<i>Evidence-Based Strategies</i>								
Homework ^{b,c}	1.56 (1.45)	2.24 (1.56)	1.31		1.33 (1.67)	2.13 (5.50)	71.50*	0.43
Interpersonal Inventory ^{c,c}	0.00 (10.39)	29.70 (44.64)	46.50***	0.59	1.00 (1.00)	3.00 (4.00)	42.50***	0.62
Communication Analysis ^{c,c}	0.00 (5.24)	31.21 (53.42)	0.00***	0.88	1.00 (0.50)	3.42 (5.00)	0.00***	0.88
Modeling ^{b,a}	2.71 (1.67)	2.12 (1.35)	1.13		0.99 (0.24)	1.00 (0.20)	0.08	
Monitoring ^{c,c}	4.06 (61.92)	15.53 (29.29)	65.00**	0.47	1.33 (4.00)	3.00 (3.33)	34.50***	0.65
Psychoeducation	38.85 (25.09)	19.87 (16.53)	2.57*	0.90	3.32 (1.74)	2.81 (1.16)	1.03	
Role Play ^{c,c}	.00 (28.01)	14.64 (24.81)	31.00***	0.68	1.00 (2.00)	2.73 (2.67)	17.50***	0.77
Interpersonal Model Principles ^{c,c}	.00 (6.04)	13.35 (30.23)	15.50***	0.78	1.00 (0.33)	2.29 (4.00)	10.50***	0.81
Positive Reinforcement ^{c,c}	0.00 (2.54)	0.00 (7.46)	137.00		1.00 (0.33)	1.00 (0.75)	135.00	
Relapse Prevention ^{c,c}	0.00 (23.49)	4.92 (30.12)	110.00		1.00 (1.67)	1.67 (2.50)	105.00	
Behavioral Activation ^{c,c}	0.00 (4.90)	0.00 (3.42)	125.50		1.00 (0.33)	1.00 (1.00)	126.50	
Cognitive Restructuring ^{c,c}	6.63 (55.91)	0.00 (2.19)	66.50**	0.57	1.50 (4.00)	1.00 (0.33)	67.00**	0.57
Problem Solving ^{c,c}	0.00 (20.26)	0.00 (5.46)	102.00		1.00 (1.33)	1.00 (0.67)	104.00	
Relaxation ^{c,c}	1.04 (32.37)	0.00 (0.00)	72.00*	0.57	1.17 (2.33)	1.00 (0.00)	72.00*	0.57
Social Skills Training ^{c,c}	0.00 (52.02)	22.25 (44.82)	41.00***	0.62	1.00 (2.67)	3.00 (4.50)	48.00***	0.59
Set Goals/Agenda	11.03 (9.21)	18.65 (6.88)	2.75**	0.94	1.81 (0.60)	3.65 (0.84)	7.26***	2.49
Exposure	0.00 (0.00)	0.00 (0.00)	--		1.00 (0.00)	1.00 (0.00)	--	
Uses Consequences ^{c,c}	0.00 (2.43)	0.00 (2.82)	127.50		1.00 (0.33)	1.00 (0.50)	136.50	
<i>Common Factors</i>								
Encourages Cohesiveness ^{c,c}	7.87 (53.00)	0.00 (14.71)	88.00		1.67 (2.67)	1.00 (2.33)	95.00	
Explores Universality	11.44 (11.23)	4.82 (4.60)	2.20*	0.79	1.57 (0.49)	1.80 (0.74)	1.05	
Information Gathering	48.32 (22.23)	8.98 (9.67)	6.55***	2.35	3.70 (1.25)	1.65 (0.58)	6.03***	2.15
Seeks Client Perspective	42.44 (23.45)	51.52 (16.02)	1.33		3.65 (1.21)	4.83 (1.25)	2.79**	0.96
Uses Collaboration ^{b,a}	2.52 (1.73)	3.44 (1.53)	1.65		0.96 (0.26)	1.23 (0.29)	2.84**	0.97
Previous Themes ^{x,a}	14.83 (11.99)	21.51 (13.52)	1.52		1.08 (0.31)	1.38 (0.29)	2.88**	0.99

<i>Other Strategies</i>								
Transference ^{c,c}	0.00 (2.43)	0.00 (2.49)	143.50		1.00 (0.33)	1.00 (0.67)	143.50	
Resistance ^{c,c}	1.26 (23.46)	0.00 (16.31)	82.00*	0.47	1.00 (1.00)	1.00 (2.00)	92.50	
Advising ^{c,c}	0.00 (44.32)	0.00 (2.98)	86.50*	0.46	1.00 (1.00)	1.00 (0.33)	96.00	
Interpretation ^{c,c}	0.00 (3.03)	0.00 (28.05)	118.00		1.00 (0.33)	1.00 (2.33)	118.50	
Play/Art ^{c,c}	14.73 (31.59)	0.00 (31.25)	49.00***	0.64	1.67 (2.67)	1.00 (1.33)	44.00***	0.68
Self-Disclosure ^{c,c}	26.74 (71.04)	0.00 (20.83)	8.00***	0.82	2.67 (3.67)	1.00 (0.67)	7.00***	0.83
Affective Content ^{c,c}	17.34 (84.38)	0.00 (6.49)	17.00***	0.77	2.67 (3.67)	1.00 (1.00)	31.00***	0.69
Explores Past ^{c,c}	0.00 (7.92)	0.00 (0.00)	117.00		1.00 (1.00)	1.00 (0.00)	117.00	

Note. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. Standard deviations appear in parentheses next to means. Effect sizes are displayed for significant findings only.

X,X First superscript signifies transformation/nonparametric test utilized for frequency and second superscript signifies transformation/nonparametric test utilized for extensiveness. An x as the first superscript signifies that there is no transformation/nonparametric test on that variable for frequency.

^a Natural Log transformed.

^b Square Root Transformed.

^c Mann-Whitney test; median (range) are reported instead of mean (SD); for effect size, r is reported instead of g .

Table 6. Correlations for TPOCS-G Clinical Strategies and Post-intervention CGAS Score

	1	2	3	4	5	6	7	8	9	10
1. CGAS Post-Intervention	-									
2. Psychoeducation Frequency	.22*	-								
3. Psychoeducation Extensiveness	.27**	.88***	-							
4. Homework Frequency ^b	.25*	.43***	.46***	-						
5. Homework Extensiveness ^c	.26*	.53***	.51***	.95***	-					
6. Relaxation Frequency ^c	.23*	.59***	.74***	.54***	.51***	-				
7. Relaxation Extensiveness ^c	.25*	.62***	.79***	.52***	.52***	.98***	-			
8. Social Skills Extensiveness ^c	.23*	.36***	.56***	.14	.15	.78***	.82***	-		
9. Info. Gathering Frequency	-.31**	-.50***	-.71***	-.28**	-.33**	-.73***	-.79***	-.72***	-	
10. Seeks Client Perspective Frequency	-.29**	-.06	-.40***	-.35***	-.29**	-.36***	-.44***	-.42***	.60***	-

Note. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. Partial correlations were used to control for pre-intervention CGAS score. Only clinical strategies that were significantly correlated with CGAS post-intervention score are displayed.

^b Square Root Transformed.

^c Non-parametric partial correlation approach (Spearman Rank-order Coefficient).

Table 7. Correlations for TPOCS-G Clinical Strategies and Post-intervention CES-D Score

	1	2	3	4	5	6	7	8	9
1. CES-D Post-Intervention	-								
2. Psychoeducation Frequency	-.21*	-							
3. Psychoeducation Extensiveness	-.29**	.88***	-						
4. Problem Solving Frequency ^c	-.23*	.68***	.80***	-					
5. Problem Solving Extensiveness ^c	-.23*	.68***	.82***	.98***	-				
6. Relaxation Frequency ^c	-.24*	.60***	.74***	.65***	.58***	-			
7. Relaxation Extensiveness ^c	-.26*	.63***	.80***	.70***	.64***	.98***	-		
8. Social Skills Frequency ^c	-.23*	.35***	.53***	.49***	.47***	.77***	.80***	-	
9. Social Skills Extensiveness ^c	-.25*	.38***	.58***	.52***	.50***	.79***	.83***	.99***	-

Note. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. Partial correlations were used to control for pre-intervention CGAS score. Only clinical strategies that were significantly correlated with CES-D post-intervention score are displayed.

^c Non-parametric partial correlation approach (Spearman Rank-order Coefficient).

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Appendix B. TPC-RF Items and Scales

Behavioral Technique Scale

1. Using a point or token system to reward the child for good behavior.
3. Teaching the child relaxation as a coping method.
7. Making up a contract for the child's behavior.
8. Identifying problem situations and role-playing alternate coping strategies.
10. Helping the child learn assertive communication skills to replace aggressive or passive behavior.
19. Developing secondary reinforcers to facilitate stimulus generalization.
24. Using systematic desensitization, with imagined or real exposure to feared objects or situations.
30. Encouraging self-administration of rewards.
31. Using time-out from reinforcement.
37. Identifying the antecedents and consequences of the child's behavior.
40. Fading therapist rewards and prompts to facilitate generalization and maintenance.
45. Charting behavioral gains and making the chart available.
48. Trying to extinguish undesirable behavior by discontinuing rewards for that behavior.
49. Shaping by teaching the desired behavior in a series of steps.
56. Directing adults to ignore the child's inappropriate behavior and/or doing so in session.
57. Parent training in child management techniques.
59. Administering rewards to increase positive behavior.
61. Arranging modeling opportunities to foster observational learning.

Cognitive Technique Scale

6. Giving direct instruction and information designed to change thoughts.
13. Teaching problem-solving and decision-making strategies.
14. Encouraging self-evaluation of performance.
16. Training the child to stop and think before responding to events.
21. Training the child to recognize maladaptive thoughts.
27. Setting up hypotheses to be tested to obtain confirming or disconfirming evidence regarding beliefs.
33. Encouraging the use of appropriate self-talk to guide thoughts and behavior.
35. Identifying and challenging irrational beliefs, attributions, or schemas.
38. Instructing the child how to modify his or her maladaptive cognitions.
41. Helping the child to correct misappraisals of perceived threat.
43. Teaching the child that cognitions affect mood and can cause emotional problems.
47. Teaching the child to monitor self-talk.
53. Teaching the child that cognitions affect behavior and can cause behavior problems.
55. Helping the child generate alternative interpretations of events.
62. Guiding the child to monitor his/her own behavior.

Psychodynamic Technique Scale

2. Interpreting the child's behavior in the session, including the relationship with the therapist.
4. Trying to understand the child's unconscious drives, feelings, or conflicts.
9. Assisting the child in navigating developmental transitions (e.g., adolescent issues of individuation).
11. Encouraging the child's recall of early memories.
12. Translating into words understandable by the child and/or parent the needs, thoughts, or feelings expressed in the child's play, art, or behavior.
15. Trying to understand the effects of early life experiences.
17. Using the therapeutic relationship to correct for early deprivation or dysfunctional relationships.
18. Trying to help the child gain insight into personal feelings, motives, or conflicts.
22. Analyzing the child's dreams, fantasies, or other products (e.g., art).
25. Using the experience of the therapeutic relationship to understand interpersonal styles.
29. Interpreting the underlying meaning of the child's words or actions.
39. Using techniques such as play to encourage symbolic expression of feelings or conflicts.
42. Trying to understand the original circumstances that led to the current problems.
46. Altering the child's use of defense mechanisms.
52. Helping the child to develop more effective ego functioning.

Family Therapy Technique Scale

5. Highlighting, for family members, developmental changes that require new family patterns.
20. Shifting the focus of treatment from the individual child to the family system.
23. Inviting extended family members and other people who are important to the family to participate in the therapy.
26. Encouraging the expression of the family's version of their strengths and problems.
28. Working with family members to change family interaction patterns.
32. Exploring and reducing conflict among family members.
34. Strengthening the executive subsystem [the caretaker(s)] of the family.
36. Coaching family members to redefine the child's symptoms as interactional or systemic.
44. Defining appropriate family roles within the context of a firm family hierarchy.
50. Working with multiple family members to improve communication patterns.
51. Mapping the family structure with the input of family members.
54. Developing appropriate generational boundaries between individual family members and between family subsystems.
58. Using observations of family interactions in session to highlight typical family patterns.
60. Joining with the family (e.g., by using the family's language).