# The REARING Coding System (RCS): Development of a competence coding system for the Group Attachment Based Intervention (GABI©)

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**Abstract**

The current study aimed to develop a competency-based coding system for clinicians disseminating the Group Attachment Based Intervention (GABI). GABI is an intervention aimed at improving the parent-child relationship in vulnerable, high-risk families, and utilizes the REARING model of therapeutic action (Reflective Functioning, Emotional Attunement, Affect Regulation, Reticence, Intergenerational Transmission of Attachment Patterns, Nurturance, and Group context). The study team observed over 100 hours of GABI clinical video in order to develop a competency coding system to measure clinician efficacy, titled the REARING Coding System (RCS). This study was conducted in two phases: 1) 15-minute videos were coded across 5-minute segments (N=42), and 2) 10-minute videos were coded in 1-minute segments (N=21). This evolution was based on feedback from clinician's utilizing RCS for supervision purposes. RCS exhibited robust inter-rater reliability, construct validity, and internal consistency in both studies. Additionally, in the second study, analyses were run in order to understand how competency in the GABI intervention as measured by RCS was affected by specific clinician characteristics, including degree level, experience in the intervention, and the effects of RCS supervision on the development of competency over time. It was shown that there were no significant differences in performance dependent on degree level, and that GABI experts performed significantly better in Reflective Functioning, Reticence, and Nurturance, than GABI novices. This study provides evidence for the validity of the Rearing Coding System (RCS) to assess clinician competency in the GABI intervention and the utility of this measure as a tool for training and supervision.

*Keywords*: Clinician competency, Attachment Interventions, Dissemination

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# Chapter 1: Literature Review

## Introduction

The development of quality measures for psychotherapy practice is a high priority for children's mental health, and is often neglected in the dissemination of evidence-based practices (Baker, 2001). A sobering finding emerged in the 1990's indicating that, despite service initiatives in children's mental health, there remained a lack of evidence that these initiatives actually impacted child outcomes (Bickman, 1996; Bickman, Summerfelt, Firth, & Douglas, 1997). This dissemination gap, i.e., the documented differences in the effects of treatment in research settings versus in community-based settings, is likely due to difficulties in the training and the monitoring of fidelity (Schoenwald, Henggeler, Brondino, & Rowland, 2000; Weisz, Donenberg, Han, & Kauneckis, 1995; Weisz, Donenberg, Han, & Weiss, 1995). Clinical quality-benching tools and fidelity monitoring are essential for establishing efficacious mental health services (Bruns et al., 2004; Garland, Bickman, & Chorpita, 2010; Schoenwald, Henggeler, Brondino, & Rowland, 2000). The rapid dissemination of evidence-based practices has focused special attention on monitoring implementation quality (Fixsen, Naoom, Blase, & Friedman, 2005). However, only a small number of quality or competence measures have been developed thus far for services that specifically target children, adolescents, and their families (Olin et al., 2014).

While the American Psychological Association (APA) does not list specific competencies for working with children, the American Board of Psychiatry and Neurology (ABPN) created the Child and Adolescent Core Competencies for proper patient care (Scheiber, & Kramer, 2008). These include involving the children's families, working with difficult family dynamics which affect compliance, educating patients and families, communicating effectively, fostering a therapeutic alliance, and developing partnerships through treatment decisions (Scheiber, &

Kramer, 2008). There has certainly been a push for these types of benchmarks within psychiatry and primary care, but unfortunately only a small number of quality or competence measures have been integrated within psychotherapy treatment models.

Thus far, the APA has only provided a small framework for conceptualizing global competencies for clinicians working with children, described as a work in progress, titled "Competencies for Psychology Practice in Primary Care" (Inter-organizational Work Group on Competencies for Primary Care Psychology, 2015). They identify six broad competency areas, including science (utilizing a biopsychosocial approach and engaging in research/evaluation), systems (clinician's leadership and ability to work with administrations), professionalism (professional values and attitudes, awareness of cultural diversity, adherence to ethics, and self-care), relationships (maintaining inter-professionalism and building relationships in primary care), application (practice management, assessment, and intervention), and education (teaching and supervision). It is evident that most of these competencies address an individual's performance on an institutional or occupational level. The only area that addresses competencies in psychotherapy and patient care is intervention competency, which requires that the clinician focus their interventions on goal directed outcomes and symptom reduction, and effectively use evidence-based interventions appropriate for pediatric care. However, these competencies do not give guidelines or benchmarks for what it looks like for a clinician to be competent in the treatment of children, nor does it provide a framework to assess or increase competence in practice if need be. As such, while there is a clear movement in the field to establish efficacious care, it is evident that more quality indicators are needed in order to deliver successful treatments to children and their families.

This lack of standards or guidelines for assessing therapist's effectiveness and competence has resulted in what Waltz, Addis, Koerner, & Jacobson (1993) characterize as,

"many reinventions of the wheel, with little consistency across studies." Because there is no larger framework for how psychotherapists are to competently disseminate interventions with children and families, or how the psychological field should assess the effectiveness of clinicians in these modalities, individual treatments are left to determine their own standards of care. However, many treatments do not establish proper markers of competence within their model. Without tests or checks of therapist proficiency, we cannot attribute what aspects of a patient's outcome are due to therapist intervention. By identifying these factors of therapeutic action, clinics, treatment centers, and private practice providers can then target training more effectively. This is especially important due to the notion that therapist experience is not correlated with treatment outcomes (Berman & Norton, 1985; Durlak, 1979; Hattie, Sharpley, & Rogers, 1984; Waltz, Addis, Korener, & Jacobson, 1993). Therefore, competence seems to be a distinct construct separate from years of clinical experience and worthy of our attention as clinicians and researchers.

## Part 1: The History and Importance of Competency Measures

### Why Develop Efficacy and Competency Measures?

Most studies use three common assessment methods to determine treatment efficacy: 1) subjective assessments by supervising clinicians, 2) examinations given to clinicians to evaluate factual knowledge of the intervention and abstract problem solving, and 3) standardized patient assessments (i.e., did the patient improve as a result of therapy) (Barrows, 1993; Colliver, & Swartz,1997; Kassebaum, & Eaglen, 1999; Newble, Dawson, & Dauphinee, 1994). However, it is clear that all of these methods fall short. Subjective ratings or feedback given by supervising clinicians are just that, subjective. They are amenable to bias and influence. Additionally, a clinician's performance on an examination does not mimic the potential anxiety and immediacy of treating a patient within a psychotherapy session. Standardized patient assessments also

address the issue of competency perhaps too late, after the clinician has disseminated the treatment and the patient has benefited (or not) from the therapy. Using patient outcomes also does not provide information about what intervention or aspect of therapeutic action was most effective in helping the client, and negates the opportunity to understand the intervention more fully in order to inform training and supervision.

In order to develop more effective competency measures, it is important to consider the reasons for doing so and how this impacts patient outcomes. The psychotherapy process literature is perhaps the most relevant arena to explore this issue. The literature advocates that interventions must first be evaluated and established as an effective evidence-based practice. It is important to note that in the literature there is a distinction between the between evidence of efficacy and effectiveness (Hoagwood, Hibbs, Brent, & Jensen, 1995). In the past, psychotherapy researchers have almost exclusively focused on efficacy research (i.e., establishing an evidence base in randomized controlled trails). Only recently has effectiveness research come into the forefront examining the external validity of interventions. In other words, examining if specific interventions, once given to other clinicians, agencies, and clinics, remain efficacious when disseminated by these different providers and in these treatment settings (Chambless & Ollendick, 2001).

Beginning in the mid 1980's, treatment manuals became a popular way to facilitate training and foster competence in therapists (Luborsky & DeRubeis, 1984; Strupp, Butler, & Rosser, 1988). Manuals serve as an effective way of stating treatment principles and interventions in order to establish external validity. They can provide both guidelines and flexibility within the treatment framework, but the most effective manuals include examples of successful treatment application, as well as protocols and procedures for when problems arise in treatment (Kendall, Chu, Gifford, Hayes, & Nauta, 1999). Manuals are necessary to provide an

operational definition of the intervention, and without it clinicians are often unable to replicate the evidence-based treatment (Chambless, & Ollendick, 2001). However, while manuals are needed to establish a basis for specific psychotherapies, critics posit that therapists rigidly trained in evidence-based treatments could show difficulties in deviating or showing flexibility in the model when necessary. It is also argued that a standardized approach to treatment could be less beneficial than tailoring interventions for specific cases (Chambless & Ollendick, 2001; Garfield, 1996; Henry, 1998). Additionally, the findings on the adherence and the efficacy of manual based treatments are inconsistent, with some studies finding that greater adherence is actually related to poorer outcomes (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Moncher & Prinz, 1991).

Hans Stripp and his colleagues conducted work in the early 1990's pointing to this discrepancy between training in treatment manuals and actual competency in clinical work. In one study, these researchers gave experienced therapists a full year of training in a manualized psychodynamic therapy focusing on the management of maladaptive interpersonal patterns and enactments in the therapy session. They looked at differences in process and outcome in the manual-trained clinicians versus clinicians not trained with the manual. It was found that the therapists were, in fact, adhering to the treatment goals and intervention as defined by the treatment manual. However, it was also found that this adherence to the manual did not lead to more *competent* therapy. These manual-trained therapists were found to have more negative process with their patients. Additionally, manual-trained therapists who exhibited more controlling behaviors were more likely to adhere to the treatment manual than others and display more negative process, therefore resulting in poorer outcomes for patients. These therapists also tended to deliver the manualized treatment in a mechanical fashion and never exhibited comfort

or ease with the therapy (Henry, Schacht, Strupp, Butler, & Binder, 1993; Henry, Strupp, Butler, Schacht, & Binder, 1993; Strupp, 1993).

Given these findings, it stands to reason that a competent therapist may deviate from strict adherence to the manual in service of the patient, especially when considering issues around safety and trauma. While a treatment such as Cognitive Behavioral Therapy (CBT) has a list of protocols to which a clinician should adhere (i.e., setting the agenda, assigning homework, etc.), clinicians often have to deviate from this protocol in order to address larger safety issues, such as domestic violence or suicidal ideation (Addis, Wade, & Hatgis, 1999). It is evident that competence in clinical practice is not only the adherence of treatment modalities, but also an adaptability and flexibility in situations that warrant a deviation from the protocol (Palinkas, Schoenwald, Hoagwood, Landsverk, Chorpita, & Weisz, 2008).

As such, adherence appears to be the quantitative aspect of treatment delivery (i.e., did the clinician perform the intervention), while competency is the qualitative measure of treatment dissemination (i.e., how well the intervention was delivered) (Perepletchikova, & Kazdin, 2005). Adherence can also be conceptualized as the degree to which a treatment is delivered (Barber, Liese, & Abrams, 2003). Adherence is considered the prerequisite for competence, but competence determines something more, i.e., the efficacy of treatment (Perepletchikova & Kazdin, 2005). Adherence demonstrates that the clinician knows how to apply the treatment, while competence requires the knowledge of when and when not to apply specific interventions (Barber, Sharpless, Klostermann, & McCarthy, 2007).

Other studies have indicated that moderate levels of adherence lead to the greatest patient improvements. This mid-range model posits that low adherence indicates that the core components of the intervention are not executed, while high adherence may indicate that the clinician was not flexible enough to tailor the therapy to the patient's needs (Barber et al., 2006;

Hogue, Henderson, Dauber, Barajas, Fried, & Liddle, 2008). Competence can be conceptualized as this mid-range model: The ability to adhere to treatment guidelines when appropriate for the clinical context, all while maintaining flexibility.

Perhaps most importantly, competence predicts better outcomes for patients than adherence alone (Barber, Crits-Christoph, & Luborsky, 1996). If competence is not measured, it becomes increasingly difficult to determine which factors of the therapy resulted in the desired treatment effect or lack of effect, as well as locate the source of therapeutic action (Perepletchikova, & Kazdin, 2005).

**What is Competence?**

The American Psychological Association's Policy Statement on Evidence-Based Practice in Psychology, identifies the following steps in the development of clinical competence: 1) Psychologists should only provide treatments within their areas of competence; 2) Psychologists should take the necessary steps to ensure the competence of their work in areas where they are not experts; 3) Psychologists should make an effort to continually increase their competence via trainings, and 4) Psychologists should base their work on proven scientific and professional knowledge (American Psychological Association, 2005). Additionally, Barber, Sharpless, Klostermann, and McCarthy (2007) note that there are steps a clinician must take in order to exhibit competence in any evidence-based practice, including establishing a knowledge base in the treatment, developing the actual tools for delivering the treatment, exhibiting a willingness to deliver the treatment with fidelity, and exhibiting an ability to implement the treatment with unique patient populations. However, these guidelines still beg the question of what exactly is competence and what does it look like when a clinician is competent in a specific treatment modality. The guidelines here simply lay the groundwork for education and ethical

considerations when choosing a treatment modality, but are not descriptive enough to translate into the therapy room.

Given this, how do we determine clinician competence above and beyond existing adherence measures? The definition of competence is rarely operationalized and definitions are not always readily available in the literature. However, Epstein and Hundert (2002) provide a definition of overall clinical competence as the thoughtful application of communication, knowledge, technical skills, emotions, clinical reasoning, values, and circumstantial understanding, all in service to benefit the client or patient. Competence taps into the sense of appropriateness in treatment including good clinical judgment, responsiveness to the patient, and clinical perspicuity, all existing in an ever-changing diverse client population (Barber, Sharpless, Klostermann, & McCarthy, 2007).

**Global vs. Limited Domain Competency**

There are two main types of competency defined in the literature: global competency and limited-domain competency. Global competency taps into the clinician's clinical judgment and wisdom, as well as the knowledge of the patient's unique demographics and how this impacts their psychopathology. On the other hand, limited-domain competence is a subset of competency that is based on aptitude in a specific treatment or intervention, e.g. Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, and so on. Both domains are positively correlated with better outcomes for patients (Barber, Sharpless, Klostermann, & McCarthy, 2007). While these do not always overlap, an appropriate method of measuring competency would address both features of global and limited-domain competence. Competence should be conceptualized as the level of skill in delivering the intervention, while taking into consideration factors such as client's degree of psychological impairment and symptomology, contextual and environmental

factors, as well as the stage of therapy and sensitivity of timing of interventions within the therapy session (Waltz, Addis, Koerner, & Jacobson, 1993).

One global way of measuring competency is exemplified in Rodolfa et al.'s (2005) cube model of therapist competencies in psychology. This "Competency Cube" includes foundational competency domains, such as the clinician's own reflective practice and self-assessment, scientific knowledge and methods, and ethical standards. The model also includes functional competency domains, such as assessment and diagnosis, intervention, consultation, research, and supervision. Rodolfa has embedded these within stages of professional development as well (i.e., doctoral education, internship, fellowship, and continuing competency), noting that comptencies evolve overtime.

However, most competency measures fall within the realm of limited domain competency and are focused on specific interventions, such as Cognitive Behavioral Therapy (CBT) or Interpersonal Psychotherapy (IPT). The development of these limited-domain competency measures are more detailed and targeted than global domain competency measures. There are many initiatives underway in limited-domain competencies to develop quality measures for effective treatment. For example, a workgroup commissioned by the Improving Access to Psychological Therapies program identified the competencies needed to implement CBT in anxious and depressive patients. The model considered a spectrum of competencies that included both low and high levels of competence, as well as described the skills needed in such detail that this model could also be used as a training tool for new clinicians (Roth & Pilling, 2007). These types of detailed measures may be the key in determining flexible adherence in treatment dissemination (McHugh, Murray, & Barlow, 2009).

**Development of Competency Measures**

Waltz et al. (1993) suggest that competency-based measures should be derived directly from the treatment manual and the theory of change specified in the manual. As such, they do not operate under the assumption that there are universal notions of competence across modalities. The development of competency scales typically consists of teams trained in the therapy, who determine and decide on a number of scales that define optimal, suboptimal, and harmful or ineffective treatment. Ratings are generally assigned based on Likert scales ranging from harmful/ineffective to optimal delivery. These measures often assess the technical quality of the interventions, also known as skillfulness, as well as the timing and appropriateness of the intervention, and the clinician's responsiveness to patient's needs (Diamond & Diamond, 2002; Falloon, Economou, Palli, Malm, Mizuno, & Murakami, 2005; Henggeler & Borduin, 1992).

Following this line of reasoning, researchers and clinicians have now begun to develop specific competencies tied to the intervention in question. Most studies glean their list of competencies from intervention treatment manuals. Sburlati, Lyneham, Mufson, and Schniering (2012), developed a competency measure based on a review of the manual for Interpersonal Psychotherapy for Depressed Adolescents (IPT-A), with attention to necessary interventions in implementing this treatment approach. The study team then consulted with the original author of the manual in order to add, delete, or edit any of the competencies that the study team identified. The team utilized an approach that consulted with the creator of this therapy in order to ensure that the competencies they developed were consistent and concordant to the treatment approach, as defined by its originators.

Despite the best of intentions, often times these competency scales mirror adherence measures, utilizing a "yes or no" checklist or frequency ratings (Luborsky, Woody, McLellan, O'Brien, & Rosenzweig, 1982). Some of these measures even seek to identify clinical missteps.

One such measure is The Vanderbilt Negative Indicators Scale (Suh, O'Malley, & Strupp, 1986); a 42-item measure rating the frequency of negative interventions or failure to use interventions. While this can be useful to allow clinicians to self-correct over time, it can also be punitive and focus too heavily on maladaptive strategies without providing alternative interventions.

One measure that attempts to integrate both adherence and competence is the Therapist Behavior Rating Scale – Competence (TBRS-C; Hogue, Henderson, Dauber, Barajas, Fried, & Liddle 2008). This is an observational measure of competence for individual CBT and Multidimensional Family Therapy (MDFT), specifically developed for an intervention targeting adolescent substance abuse. The scale represents the treatment modules across several sessions (Diamond & Diamond, 2002). Items are scored on a 7-point Likert scale, from 1 being "not at all," 3 "somewhat," 5 "considerably," and 7 "highly." Each item received a score for adherence and competence. Adherence ratings are concerned with the frequency with which interventions are used and competence ratings estimate the quality or skillfulness of the intervention delivered. For the CBT intervention, items ranged from "establishing a working relationship" to "increasing prosocial behavior." For the MDFT intervention, items were concerned with the target of psychotherapy, including "adolescent interventions" and "family interaction interventions." This provides a framework for both measuring the frequency and competency of the intervention. Additionally, their use of a Likert scale in determining clinical competency allows the rater to determine the extent to which an intervention was implemented effectively in treatment.

Similarly, Luborsky, Woody, McLellan, O'Brien, and Rosenzweig (1982) measured competence to three manualized treatments, including Cognitive Behavioral Therapy, Supportive Expressive Therapy, and drug counseling with a Likert scale. They sampled 15-minute videos from each of these sessions and used a 5-point scale ranging from 1) none to 5) very much. Raters assessed the therapy videos on the extent to which interventions from the manual were

utilized effectively. In this study they used what they called “expert raters,” or individuals with a myriad of knowledge in all modalities.

Another well-established method of identifying consensus for modes of therapeutic action is the Delphi technique that brings together both empirical evidence and an iterative expert review to achieve consensus regarding professional competencies (Morrison & Barratt, 2010). This often includes extensive review of the treatment manuals and the extraction of therapist interventions according to the manual (Sburlati, Lyneham, Mufson, & Schniering, 2012). A study by Olin et al. (2014) utilized this method in order to develop what they termed, “Quality Indicators,” for a family support worker providing emotional and instrumental support to parents with children in mental health treatment. The researchers used the Delphi method in order to develop both program level (i.e., organizational competencies for the role of a family support worker) and individual level (i.e., for the family support worker in the implementation of support services). Each of these quality indicators or competencies was rated on a scale of 1 to 3, where 1) indicated that the family support worker was rated as below expectations, 2) family support worker met expectations, and 3) family support worker exceeds expectations. This study provides a useful metric in establishing appropriate anchors for quality or competency measures by conceptualizing specific interventions as below, meeting, or exceeding the expectation for the interventions established in the manual.

All of these initial ways of rating competency can provide a framework for other therapies to determine measures to assess efficacy. There is a clear need for competency measures to be specific enough to exemplify the intervention, but should also be flexible enough to hold nuance in the clinician’s ability to address specific client characteristics. Additionally, pertinent to the current study, while very few competency measures have been developed in for

adult psychotherapy, even fewer have been established for dyadic, family, or parent-child psychotherapy.

**Current Competence Measures in Dyadic Therapy**

Of interest to the current study is the utilization of competence measures in the dissemination of dyadic therapies, i.e., therapies with caregivers and their children. One such intervention is Parent-Child Interaction Therapy or PCIT (Eyber & Matarazzo, 1980; Hembree-Kigin &McNeil, 1995). PCIT was developed to treat children with conduct problems and their families, with both child-directed and parent-directed interactions to increase reflective listening, praise, and physical proximity. In order to ensure treatment fidelity, a checklist was created for each session based on the treatment manual (Eyberg & Durning, 1994). The checklist was based on if the intervention was delivered or not, based on videotaped footage. Therefore, it is evident that this fidelity measure tapped into adherence more than the competence with which the clinician disseminated the intervention. While this is an important step in establishing that the dyadic intervention is following some of the PCIT framework, it is not sufficient enough to assess how well or appropriately the clinician intervened with the dyad.

Additionally, the Oregon Model of Parent Management Training (PMTO; Forgatch, Bullock, & Patterson, 2004), developed a fidelity measure to incorporate both adherence to the components of the intervention, as well as the competent execution of these techniques. PMTO emphasizes five core parenting practices, including discipline, skill encouragement, monitoring, problem solving, and positive involvement, and is based on social interaction learning (SIL). SIL is a developmental model that posits that family structural changes and parental maladjustment have indirect effects on outcome, due to coercive and ineffective parenting techniques that arise during these stressful times (Forgatch, Patterson, & DeGarmo, 2005). The research team developed a fidelity measured titled the Fidelity of the Implementation Rating System (FIMP),

an observational measure that assesses “competent adherence” to PMTO. The fidelity measure has five core dimensions including, knowledge of PMTO, structure (following an agenda, responsiveness to family issues, and maintaining an orderly flow), teaching (psychoeducation and role plays), clinical process (provision of support to create safety and openness), and overall quality. The measure requires the rater to draw on information from the entire session and determine the likelihood of the family continuing this intervention based on the clinician’s performance. The fidelity scale is coded by trained coders who attend approximately 40 hours of training, including the memorization of the coding manual, practice coding, and discussion of discrepancies. Reliability was determined by an intra-class correlation (ICC) of at least 70% or above on 10-minute videos from three separate families selected specifically for training (Forgatch, Patterson, & DeGarmo, 2005). This scale provides an interesting way of determining competence and an added evaluation of the family’s likelihood to continue treatment with the clinician. However, this largely remains subjective. Overall, the structure of the competency measure provides a framework that includes the clinician’s knowledge of the specific therapy model, as well as the quality of interventions offered in the session.

In Child Parent Psychotherapy (CPP; Lieberman, 2004) the focus of the intervention is the mother-child relationship in traumatized families, and utilizes this relationship to improve the attachment system. Interventions in this model are guided by the interaction and free-play with toys chosen to elicit trauma play. Clinicians seek to target maladaptive behaviors, support the parent-child interaction, and guide the dyad in creating a narrative of traumatic events with a goal towards resolution (Lieberman, Van Horn, & Ippen, 2005). In this model, fidelity is only monitored through intensive weekly case conferences with a CPP expert including review of narrative process notes, but not video (Lieberman, Ippen, & Van Horn, 2006). This allows for bias in the CPP therapist’s remembering of the sessions. While process notes are quite detailed

and often written immediately after the session, they are still amenable to lapses in memory and perhaps unconscious omissions due to poor performance. Without video or audio transcripts of the session, it is difficult to provide targeted feedback. This model appears to be a supervision with CPP principles in mind, but not quite a check on adherence or competence to the model.

In Multisystemic Therapy (MST; Henggeler & Schoenwald, 1998), a community, family-based treatment for children originally developed to treat juvenile offenders, a 26-item MST Adherence Scale (Henggeler & Bourdin, 1992) was used to determine clinician effectiveness in the model. This measure uses a 5-point Likert scale to assess therapist's adherence to key principles identified in the MST model. These include some basic tenants of all competent psychotherapy (for example, "The session was lively and energetic"), as well as interventions unique to MST (for example, "The therapist's recommendations require family members to work on our problems almost every day"). What is unique about this scale, however, is the respondent. Therapists were rated by the patients (the caregiver and child) and themselves (Schoenwald, Henggeler, Rondino, & Rowland, 2000). In other words, instead of an expert rater, these therapists rated their own competence, as did their patients: the families receiving the MST treatment. While this can be a useful way of understanding the effects of clinical interventions on patients based on their own self-report, it does not necessarily mean that the therapist is wholly competent in the intervention in question. Many other factors can come into play when a patient is rating their therapist, including their own projections or personality characteristics. This may be, however, a useful way in assessing alliance to the therapist and may indicate that the patient is more likely to return to therapy if they rate their therapist highly.

Perhaps the most notable intervention in child-family psychotherapy using a fidelity measure is Attachment and Biobehavioral Catch-up (ABC; Dozier, Bernard, & Roben, 2017). ABC is designed to help children develop affect regulation through work with their caregivers.

In this model, caregivers learn to reinterpret their children's alienating behaviors and help caregivers cope with the problems that may result in difficulties within the parent-child relationship. In this model, treatment fidelity is conceptualized as both the frequency and quality of clinician's feedback to parents in session (Caron, Weston-Lee, Haggerty, & Dozier, 2016). Clinicians are evaluated on if their comments are on target (i.e., relevant) in response to parent's behavior. Clinicians are also evaluated on if their comments were successful in providing either, 1) a description of parent's behavior, 2) an intervention that targets the behavior, or 3) if the clinician links a behavior to a child outcome. The parent behaviors relevant to the interventions are first coded and then the clinician's responses to these behaviors are coded as well. Each time a relevant parent behavior is detected, the fidelity coding system is used to determine if the clinician is on or off target. Additionally, the frequency of coaching or information conveyed to the parent is quantified. The frequency of on-target comments is the primary marker of fidelity.

In ABC, all sessions are videotaped so that experts in the intervention can supervise new clinicians and so that fidelity can be assessed. Group supervisions were offered in a video-conference format led by a PhD supervisor and undergraduate students who were expert coders in the fidelity coding system. In these "fidelity focused" supervisions (Caron, Weston-Lee, Haggerty, & Dozier, 2016) the clinicians, or as ABC terms them, "parent-coaches," and supervisors reviewed the fidelity coding together. The coding system focuses on the moment to moment commenting from the parent-coach's recent ABC sessions. During these supervisions, parent-coaches receive feedback on their own coding accuracy as well as their performance in the sessions. The goals of this process are to help parent coaches improve their fidelity to the model, by both refining their understanding of ABC interventions, while also evaluating their performance in sessions. This method of assessing competency is ideal for a number of reasons, including the use of video footage, the way in which competency is evaluated, and the process of

assessing and coding for competency. The process of coding and supervision is perhaps the most interesting in that it enlists clinicians to watch videos of themselves and code for competency behaviors. This allows for clinicians to evaluate themselves in a real therapy setting, while also beginning to internalize the principles of the intervention via the process of coding themselves.

**Use of Video in Psychotherapy to Assess Competence and Provide Supervision**

As utilized in ABC (Dozier, Bernard, & Roben, 2017), one of the most useful ways to assess competence is through the use of psychotherapy video in the supervision. Video provides a unique experience in which the supervisor and/or clinician can gain access to both the verbal and non-verbal aspects of the therapy session. The use of video in supervision is a concept that has gleaned support since the 1980's. Caligor, Bromberg, and Meltzer (1984) initially asserted that, "In supervision, the student must be able to scrutinize what he already does. He must have the opportunity to hear his sessions, to hear himself with his patient, in a way that goes beyond what he heard during the sessions as they were in progress" (p.35). The use of video in supervision allows both the therapist and their supervisor to re-evaluate interventions and techniques that may have been missed in the recollection of a therapy session.

With the advent of video, key moments can be slowed down and re-watched to determine what was said, how it was said, and how the patient reacted (Aveline, 1992). Additionally, video can assist in boosting competence above and beyond just adherence to an intervention. While, treatment manuals can lead novice therapists to apply interventions in a "cookbook" fashion, more experienced clinicians can engage in "reflection-in-action" (Schon, 2017). This allows the therapist to construct new theories and techniques based on the patient and moment-to-moment interaction. Experienced clinicians are able to do this when they are in an ongoing "conversation" with themselves in the moment and aware of why and how interventions should be disseminated (Safran & Muran, 2003). Video allows the clinicians to engage with themselves,

their patients, and the material of the session in a way that facilitates a more nuanced understanding of their own skillfulness and efficacy in moments, allowing for "reflection-in-action."

## Part II: Developing a Competency Rating System for the Group Attachment Based Intervention (GABI)

### The Group Attachment Based Intervention (GABI)

With all of this data in mind, it is crucial that new evidenced-based practices in children's mental health establish quality, adherence, and efficacy measures. For that purpose, the Group Attachment Based Intervention (GABI), recently established as an evidence-based treatment in a randomized controlled trial (Steele, Murphy, Bonuck, Meissner, & Steele, 2019), has set out to create quality measures in order to determine efficacy in treatment and success in dissemination and implementation of the intervention. Findings suggest that GABI is most successful in fostering a positive change in the parent-child attachment relationship (Steele, Murphy, Bonuck, Meissner, & Steele, 2019; Steele, Murphy, & Steele, 2010). The aim of the current study is to develop a competency-based coding system in order to establish best practices for therapeutic action under the GABI model of treatment.

The Group Attachment Based Intervention (GABI) was developed by Dr. Anne Murphy at the Children's Evaluation and Rehabilitation Center (CERC), located at the Albert Einstein College of Medicine, Montefiore Medical Center, in the Bronx, New York, in conjunction with Drs. Howard and Miriam Steele at the Center for Attachment Research, located at the New School for Social Research, in New York City. GABI is an intervention for vulnerable, isolated parent-child dyads living in poverty with ongoing exposure to domestic and neighborhood violence (Steele, Murphy, Bonuck, Meissner, & Steele, 2019; Steele, Murphy, & Steele, 2010). The children enrolled in the intervention are aged 0-3. Their parents, often referred by the

Administration for Children's Services (ACS), have experienced multiple Adverse Childhood Experiences (ACEs), and bring complex internal working models to bear in their current relationships with their children. Many parents enrolled in the intervention experienced childhoods characterized by abuse and neglect due to the complex historical context of the 1980's in the Bronx, New York, during which substance use increased dramatically.

The intervention utilizes a group format, which helps to combat the social isolation these families experience. The intervention consists of a parent-child group, a separation, a parent-only group, and a child-only group. Clinicians during the parent-child group facilitate interactions between the parent and child in order to fortify the attachment relationship. After the parent-child session, there is a separation which mimics that of Mary Ainsworth's Strange Situation Paradigm (Ainsworth, Blehar, Waters, & Wall, 1978). During the separation clinicians support the parent and child in coping and managing this often difficult transition. During the parent-only group, a lead clinician facilitates conversations amongst parents enrolled in the intervention to combat stress and increase social understanding, while allowing participants to reflect on their own storied past and how this may affect their current relationship with their child. Offered concurrently, the child-only group not only allows children to interact with peers, but also to be in the presence of a responsive and nurturing adult, i.e., the clinician.

**GABI Model of Therapeutic Action**

Most notably for the current study, GABI includes video filming for both the purpose of supervision, but also to assess treatment fidelity. After watching over 100 hours of clinical video, the team of Dr. Anne Murphy and Drs. Howard and Miriam Steele, in conjunction with graduate students at the Center for Attachment Research, developed the conceptual framework for GABI known as REARING (Murphy, Steele, & Steele, 2013). REARING refers to the key components of GABI that facilitate therapeutic action including Reflective Functioning, Emotional

Attunement, Affect Regulation, Reticence, Nurturance, and Group Context. All of these components can be seen as techniques clinicians use in order to foster change within the parent-child dyad, but it is also vital for parents and children to begin to exhibit these psychological skills themselves. It is this model of therapeutic action that the current study will base its competency measure. The REARING concepts are detailed in full below.

**Reflective functioning.** Reflective functioning is an essential capacity of healthy psychological functioning that impacts parent-child relationships and is derived from the construct of mentalization (Fonagy, Steele, Moran, Steele, & Higgit 1991). It is the ability to understand another's behavior, as well as one's own, within the context of internal mental states and intentions. It is the hallmark of social relationships and is the precursor to affect regulation (Slade, 2005). In order to develop healthy social relationships and a coherent sense of cause and effect, individuals try and make understanding of other's thoughts, wishes, and beliefs in order to contextualize the origins of another's behavior, as well as anticipate future actions (Fonagy & Target, 1998). The ability to reflect on mental states also allows individuals to make sense of their own subjective experience.

The concept of Reflective Functioning was first operationalized as part of the London Parent-Child study, beginning in the 1980s with an examination of parental Adult Attachment Interviews (AAIs - George, Kaplan, & Main, 1996). Fonagy, Steele, & Steele (1991) analyzed these AAIs in an effort to understand the intergeneration transmission of attachment. This then led to the development of a measure of Reflective Functioning on the AAI. Reflective Functioning was coded when respondents reflected upon the mental states and intentions of their own parents. In their initial research on this scale, they found considerable variation in the respondents' reflective capacities. Perhaps most notable, the researchers were also able to link these reflective capacities, or lack thereof, to the attachment classification on the AAI and their

own child's attachment classification, as measured by the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978). For example, those who were rated as secure on the AAI, exhibited higher Reflective Functioning throughout the interview, and were more likely to have children who were securely attached. On the other hand, those who exhibited low Reflective Functioning were likely to have an insecure attachment classification, and their children were also more likely to be insecure at one year. This points to the importance and significance of this construct for parental and infant mental health.

The seed of mentalization and Reflective Functioning is planted in the child's earliest relationships, most notably through the infant's relationship with her parents (Fonagy & Target, 2002). The parent must first exhibit the capacity to hold in mind thoughts and representations about her child and understand that the child has his or her own thoughts and desires, distinct from her own. The parent must be able to observe the child's changes in psychological state and provide an external representation of these through words and play (often through Winnicott's concept of a "transitional play-space" between reality and play; 1965), thus providing the child with mentalizing abilities (Slade, 2005). The parent in this "transitional play-space" provides a symbolization of the child's mental state in a manner in which the child can engage. It is deeply important for the child's future relationships that the parent aids the child in developing this reflective capacity. Fonagy et al. (1991) state that the development of the reflective self is tied to the development of social relationships across all domains of life and is influenced primarily by our caregivers. It is pivotal that a child comes to acquire a representation of their behaviors as they are connected to distinct mental and emotional states.

The inability to do so is often associated with serious psychological disorders. Parents who are either non-reflective, or dysregulated themselves, are unable to mirror the child's emotions effectively, therefore inhibiting the child's ability to develop this capacity. Particularly,

when a child is exposed to misattuned caregiving, they are unable to construct a coherent sense of themselves within the social world (Fonagy et al., 2002). Even worse, when parents are abusive, their children have little to no opportunity to understand themselves or others in the face of the parent's malevolence and projections. Thus, these children often integrate their parent's aggression into their own psyche, via an identification with the aggressor (Fraiberg, Adelson, & Shapiro, 1975) or, in cases of severe abuse, the mind of the other can be too terrifying to consider. This often then leads to a protective disinterest in the mental states of oneself and others in order to defend against understanding an abusive mind (Slade, 2005).

**Emotional attunement.** Emotional Attunement is a critical aspect of the predictability of caregiving and is a crucial feature of infant development (Bowlby, 1969). Beginning as early as 1953, Mahler (Mahler & Elkisch, 1953) and Sullivan (Sullivan, 1953) spoke to the profound influence of maternal affect on the child's sense of self, citing the potential negative effects of the mother's anxiety on her developing infant. Mary Ainsworth and her colleagues emphasized the importance of maternal sensitivity in the child's development of both a subjective sense of self, but also in the development of a healthy dependency on their caregiver to meet their needs (Ainsworth, Blehar, Waters, & Wall, 1978). Winnicott also noted the importance of maternal attunement in infant development (Winnicott, 1974), and Siegel notes that this is the essence of a healthy, secure attachment (Siegel, 1999). It is evident that the failure to develop this capacity, or the inability to provide an accurate interpretation of the infant's non-verbal cues, can be detrimental for future psychosocial development (Stern, 1971; Tronick, Als, and Brazelton, 1977; Tronick, Als, and Adamson, 1979).

Beebe and Sloate (1982) note that, "the provision of an appropriate amount and quality of stimulation, and the maternal capacity to modulate the intensity of stimulation within a comfortable range, is an important aspect of successful 'attunement'" (p. 602). Attunement is the

ability to mirror the child's emotional state in a way that does not overstimulate them or provide an inaccurate external representation of their internal experience. Often times this includes, "mutual gaze" and "cueing" (Robson, 1967; Stern, 1971). Cueing refers to an acknowledgement of the child as an external entity sharing in an emotional experience with the mother, while mutual gaze is most commonly shown in both play and feeding (Beebe & Sloate, 1982). Emotional Attunement can often times be comprised of the matching of facial expressions. Infants show a variety of subtle yet expressive faces especially when conveying positive affect (Beebe, 1982). The ability of the caregiver to match these expressions is important in the child's development of her emotional world. Often times this attunement can be inhibited by the mother's own psychopathology, leading the mother to be unable to match the infant's rate of information processing or rhythm (Tronick, Als, & Adamson, 1979).

Daniel Stern notes that appropriate emotional attunement plays a central role in the learning of emotions in later life. It affords the child with a repertoire of emotional experience, as well as ways to articulate their emotions (Stern, 1985). However, both well-adjusted and maladaptive parent-infant dyads experience periods of emotional misattunement (Tronick, 1989). In healthy dyads, these moments of misattunement are often followed by a repair. This allows the child to internalize a positive internal working model of relationships later in life. In contrast, in dysfunctional dyads, the caregiver not only fails to attune to the initial emotion, but is also often unable to facilitate a repair, leading to further misattunement and rupture without repair (Tronck, 1989).

Ruth Feldman (2007) also discusses the concept of synchrony, which includes the ability to attune to another's emotional state. Synchrony is the "intricate dance" that occurs in interactions between parent-child dyads and builds upon the familiarity established with each partner's behaviors and rhythms of interaction (Beebe, 1982; Feldman, 2007; Fogel, 1993; Stern,

1977; Tronick, 1989; Trevarthen, 1979). Feldman (2007) further describes this as rooted in time in the caregiver's responsiveness and interactive flow. She also notes the importance of the caregiver's ability to match affective states and mirror the infant's communicative cues.

**Affect regulation.** Fonagy and Target (2002) note that the goal of child development is the enhancement of self-regulation. Parents who are able to develop an understanding of the emotional depth of themselves and their children, and who are able to turn volatile expressions into emotional states that can be more easily understood, promote attachment security (Bowlby, 1988). Affect regulation is especially important considering Winnicott's notion of a "good-enough mother:" a mother who can attend to her child's needs but inevitably misinterprets or impinges on the child at some point in time (Winnicott, 1965). These moments of rupture, allow the infant and mother to create moments of repair. It is in this moment of misattunement and collaborative repair where the parent can foster affect regulation by accurately attuning in a timely manner. Through this sequence of attunement, misattunement, and repair, the child learns the skills to regulate their own affective states (Schore & Schore, 2008). This provides the foundation for resilience in the face of stress. As such, the caregiver's provision of attunement and regulation is vital to psychosocial development (Mahler et al., 1975).

As mentioned above, synchrony (Feldman, 2007) is a major component of co-regulation in parent-child dyads. Synchrony facilitates self-regulation via the co-regulation established with the caregiver (Feldman, 2003; Feldman, 2007; Pickens, Field, Nawrocki, Martinez, Soutullo, & Gonzalez, 1994; Fogel, 1993; Tronick, 1989). At the time of birth, infants depend on caregivers to provide anchors to regulate their biological systems (McKenna & Mosko, 1994). The mother's provision of proximity and interaction allow the child to learn to cope with difficult emotions and sensations. Without the scaffolding of this regulatory capacity, infants can develop into socially isolated adults and experience social disengagement in later life (Harlow, 1958; Spitz,

1946). Parents can provide affect regulation early in life through touch, physical contact, the provision of a holding environment, vocalizations, facial expressions, and body tone (Feldman, 2007; Gottlieb, 1976; Levine, 2002; Richter, 1995; Sanders, Bor, & Dadds, 1984). This dyadic reciprocity between the infant and caregiver serves as a regulator of the child's internal homeostasis (Schore, 2001). These contingent parent responses to a child's negative affect promote the development of affect regulation. When infants are approximately 3 months old, reflecting back their own emotions and behaviors at synchronized pace and level of activity is perhaps the most effective way to provide regulation for a developing child (Nichols, Gergely, & Fonagy, 2001).

However, the parent's capacity to provide this vital skill can be compromised by their own psychopathology. Often times, a caregiver's inability to soothe her child can be influenced by the attribution of negative intentionality (Beebe & Sloate, 1982), leading the caregiver to a failure in reflective functioning and an experience of helplessness in calming her child down. Inability to regulate the infant's emotions can lead to a myriad of physiological reactions with adverse outcomes, including increased heart rate (Sroufe & Waters, 1977) and increased cortisol production (Spangler & Grossman, 1993). Additionally, insecurely attached children overall experience higher levels of physiological arousal and increased cortisol levels (Nicols, Gergely, & Fonagy, 2001). Establishing the mother as a secure base for which the child can turn when she is upset, can lessen these physiological reactions and their long-term consequences.

**Reticence.** Colwyn Trevarthen believed that, "Good parenting is defined by reticence on the part of the parent" (Trevarthen 1979, p. 343). A good-enough parent is one who is able to reserve one's own emotions and motivations in the service of the child. While reticence can be conceptualized negatively, as wariness or caution, here it is celebrated as a way for the parent to hold back in important moments in order to allow the child to grow, problem solve, and become

efficacious on their own. It is also the ability to put aside one's anxiety and judgment in the service of the child.

This concept, as we have defined it, is informed by the practice of psychoanalytic infant observation, beginning at the Tavistock Clinic in London. The observation of the infant is the observation of the earliest formation of the psyche (Bick, 1964). Esther Bick writes in regards to her time at the Tavistock clinic, that the importance of observation lies within its ability to facilitate an understanding of the child's non-verbal behavior and compare these observations when necessary. The observer is fortunate enough to witness the creation of the psyche through the infant's relationship with her caregiver (1964). Additionally, infant observation, on both part of the clinician and the parent, can enhance reflective capacities (Tanner, 1999), allowing the other party to quietly watch the ways in which the infant's potential intentions effect their actions.

Traditional psychoanalytic infant observation has since grown to include the notion of *therapeutic* infant observation, first posited by Didier Houzel (1999). Houzel and colleagues integrated interventions within the typical model of infant observation to include those situations in which the child may be at risk. His methods begin with what he terms, "therapeutic observation," i.e., observation with the lens of developing goals and strategies for psychological interventions, and later incorporating these interventions in individual psychotherapy with the child (Houzel, 1999). While the integration of therapy does not occur in this model until later, it points to the importance and necessity in observing the relationship and context before intervening.

Taking a moment to inhabit an observational, rather than intervening, stance allows the observer to not be influenced immediately by their own biases on what is right and wrong, or over-identify with the baby or parent (Rustin, 2006). Hollis (1964) noted that the clinician must

first open her eyes to see, but then close her eyes to think. This moment of stillness, in which the clinician takes a moment to ponder the situation, allows the clinician to meaningfully respond. This is the essence of Reticence.

Britton describes how meaning making can occur within something he terms as the "triangular space" (1998). He notes that a *third position,* from which object relationships can be observed, allows us to be in interaction with the dyad while also maintaining our own vantage point. This harken backs Freud's notion of evenly hovering attention and Reik's notion of the third ear. Freud first commented on this idea in 1912, stating that the clinician should not fix her attention to anything in particular, but rather maintain, "evenly-suspended attention (p. 111)." Reik's (1983) third ear is a concept that refers to listening to multiple layers of meaning at once and is a profoundly present way of being reticent. It is important for therapists to pause in order to turn their attention inward and not become too attached to any aspect of the interaction or observation and to suspend judgments. By using the "third ear," therapists are able to further understand the nuances of their patients (Safran & Muran, 2003).

Wilfred Bion also contributes to this idea of Reticence in his notion that the therapist should approach each session, "without memory or desire" (1967). He highlights the therapist's observational stance as one that allows each session to not be clouded by previous sessions or theories about the patient. Rather, this stance allows the therapist to be fully present in the moment and to be open to new possibilities or formulations as they emerge. Additionally, Thomas Ogden explains the notion of the "analytic third" (1994). The analytic third is the third subject in the room that is co-created by the patient and the therapist and exists in the interpersonal field between the two. This third space can inform the nature of the relationship and elucidate the difficulties at hand.

In addition, being reticent allows the clinician to "meet the family where they are at." This can be particularly important in cases of cultural or identity difference. A moment of empathic observation can be used to further understand specific parenting practices or cultural expectations, forestalling immediate judgment or the need for change. There has been a number of infant observation studies conducted in different communities that take this stance and describe the utility of restraint and curiosity when engaging with communities that are perhaps different from the clinician's (Ellis, 1997; Grier, 2002; Lin, 1997; Maiello, 2000). Some researchers in the social work field also argue that cross-cultural observations can have an impact on anti-discriminatory practice (Briggs, 1999; Tanner, 1999)

**Intergenerational Transmission of Attachment Patterns.** The "ghosts" of previous generations often repeat the past in the present (Fraiberg, Adelson, & Shapiro, 1975). It is evident that a parent's own attachment history greatly affects all of their relationships thereafter, and especially their relationship with their children. Bowlby originally posited that attachment is transmitted between parents and children through "Internal working models," which influence the ways in which these parents internalize and therefore apply their own representations of their first relationship with their caregivers to those that occur thereafter (Bowlby, 1969). It is theorized that the parent's state of mind with respect to their attachment is transmitted to the child via the provision, or lack thereof, of sensitivity and responsiveness in caregiving practices, therefore influencing the child's attachment patterns (van IJzendoorn, 1995). In Main, Kaplan, & Cassidy's (1985) hallmark study, it was found that mother's Adult Attachment Interview classifications (AAI; George, Kaplan, & Main, 1985) and infant's Strange Situation (SSP; Ainsworth, Blehar, Waters, & Wall, 1978) classification were correlated. This pointed to the move to the "level of representation" in attachment theory that involves the reconstruction of the early caregiving experiences into the level of mental representation that parents bring to bear in

their relationships with their children. This concept also highlights the ability of individuals to disrupt negative attachment patterns, if provided with a positive attachment experiences via another relationship in their lives or in the therapeutic relationship (Main et al., 1985; van IJzendoorn, 1995).

A study conducted by Steele, Steele, & Fonagy (1996) examined both mother's and father's attachment classification as measured by the AAI and infant's attachment classification measured by the SSP. It was found that both mothers and fathers with dismissing pattern of attachment were more likely to have children who exhibited an insecure-avoidant attachment pattern. Additionally, parents with an autonomous secure pattern were more likely to have children who were also secure. Parents who were classified as preoccupied were more likely to have infants classified as insecure-resistant, and mothers who exhibited unresolved loss or trauma in their interview were more likely to have children who exhibited disorganized attachment. Parents with maladaptive working models of attachment are more likely to misunderstand relational signals from the infant, and therefore provide inconsistent or misleading feedback to the child, which activates an unhealthy cycle of interaction. This then leads the dyad to experience difficulties in communication. Through this the child does not develop a healthy coping capacity. Conversely, secure patterns are likely to give the infant helpful feedback about parent-child relationships and support the child in developing other relationships (Bretherton, 1990).

**Nurturance.** Nurturance in primarily informed by Bowlby's notion of the parent as a, "haven of safety," or a secure base which the child can turn in moments of distress (Bowlby, 1969). It is also influenced by the notion of a "holding environment" (Winnicott, 1974) or "containment," (Bion, 1962), in which the parent provides a space where she can be present with the child and responsive to the child's needs. The concept of Nurturance is derived here from the

overarching notion of maternal sensitivity, defined originally by Ainsworth as the mother's ability to understand and react appropriately to her child's signals and communications (Ainsworth et al., 1978). Additionally, this construct includes the parent's provision of empathy, flexibility, and a willingness to share experiences with the child.

Nurturance is something a good therapist or clinician provides to all of their patients. Through this basic provision of empathy, the patient can experience a "corrective emotional experience" (Alexander, 1948). Franz Alexander describes that when a patient is given a different experience from that of their parents, healing can occur. The therapist provides the patient with an alternative emotional and relational experience. While this concept has been heavily critiqued within the psychoanalytic community (Safran & Muran, 2003), it can be a useful way to conceptualize how nurturance and basic empathy, while perhaps not enough of an intervention alone, can build a foundation upon which deeper work can be done. Nurturance is not only an intervention specifically geared to GABI, but is also proposed as a general factor of competent therapy in any modality. Waltz et al. (1993) suggest that warmth and nurturance should be viewed as a therapeutic universal and a competent therapist should possess these qualities.

Nurturance is often related to the concepts of emotional attunement and affect regulation both discussed earlier. When the child is under duress, the parent first has to recognize this and attune to their emotions in order to assist the child in regulating these negative emotions. Many parents with difficult and storied attachment histories of their own, are unable, or perhaps defended against, interpreting their children's emotional state (Bernard, Meade, & Dozier, 2013). This dismissive state of mind, may lead the parent to not nurture the child in moments when the child needs this the most. It can also lead them to avoid addressing any negative behaviors their children may exhibit (Stovall-McClough & Dozier, 2004). Given this, it is no wonder that some

studies have found that caregiver nurturance in infancy and early childhood is related to less attachment avoidance in teenage years and beyond (Chopik, Moors, & Edelstein, 2014). It is thusly imperative that parents provide nurturance to children even when they do not explicit prompt this reaction in their parents and caregivers.

**Group Context.** Group Context refers to the important sources of social support and the facilitation of peer relationships amongst the children and parents alike, combating the inherent social isolation faced by the participants (Murphy, Steele, & Steele, 2013). It is evident that in group psychotherapy, the group itself can serve as its own secure base from which the patient can explore new modes of being and new internal working models (Tasca, 2014). The emotional bond held by an individual for the entire group is considered group therapy alliance (Gaston & Marmar, 1993). Group therapy alliance also strengthens when there are shared goals and tasks of the treatment. According to the goals of GABI, all parents share a common goal: To improve their relationship with their children.

Just as the nurturing relationship with the therapist can provide a corrective emotional experience (Alexander, 1948), the members of the group can also provide empathy and shared experience. Further, within the realm of attachment theory, these experiences can be integrated into an individual's internal working model (Bowlby, 1988) and promote positive relationships elsewhere in the patient's life. It has also been found that individual's attachment styles can become more salient and clearer when engaged in a group therapy format. Tasca, Balfour, Ritchie, and Bissada (2007), noted that individuals with anxious or avoidant strategies employ these when faced with affect exploration in groups and when focusing on the here-and-now in interpersonal relationships. Thus, the group provides a way in which these difficult attachment relationships are illuminated and worked through with members of the group. This is especially important given that, while anxious or avoidant strategies are often consistent throughout the

individual's life (Thompson, 2000), these strategies are not always employed in all situations. These attachment strategies are most likely to be activated in interpersonally and emotionally challenging situations, such as the group therapy context (Mikulincer & Florian, 1998; Tasca, Balfour, Ritchie, and Bissada, 2007).

Furthermore, Smith et al. (1999) explored the notion of group attachment and found that, in regards to groups, individuals can experience unique attachment anxiety and avoidance. Those patients who exhibit greater group attachment avoidance tend to miss sessions more regularly, leave the group during the session, and engage with the group less. Additionally, those with group attachment anxiety are often preoccupied by being accepted or rejected by the group and often present as overly sensitive in their reactions to group (Rom & Mikulincer, 2003; Smith et al., 1999). These reactions and interpersonal dynamics are often unique to group therapy and are not elucidated in individual therapy alone.

Yalom conceptualized the group as a social microcosm and noted that patients change and heal through interpersonal learning and feedback (Yalom, 1995). In his writings, he noted eleven curative factors of the group therapy experience, including self-understanding, interpersonal learning, universality, instillation of hope, altruism, recapitulation of the family group, catharsis, cohesiveness, identification, guidance, and what he termed the "existential" factor, or the inevitable discussion of loss, death, and the passage of time (Yalom 1985, 1995). Perhaps most relevant to the GABI model, the corrective recapitulation of the primary family group refers to the conscious and unconscious association between the members of the group and one's family of origin. While this is a projection, these associations can be interpreted in order to provide new ways of relating to others. In line with this reasoning, it has also been posited that individuals experience the group itself and its members as a transference object (Mallinckrodt & Chen, 2004; Markin & Kivlighan, 2008; Markin & Marmarosh, 2010).

**REARING Coding System (RCS)**

The REARING Coding System (RCS) was developed by graduate students at the Center for Attachment Research, at the New School for Social Research, to integrate these factors of therapeutic action into a competency-based measure for monitoring clinician effectiveness. The team began with creating a coding system for parent-child dyadic sessions based on the REARING concepts with the parent-child relationship as the target of the clinician's interventions. While all aspects of GABI foster attachment security, it is within the parent-child group where parents can learn to interact, understand, and ultimately bond with their children. Therefore, it was imperative that this aspect of the GABI intervention was monitored for efficacy in treatment delivery.

Additionally, RCS was developed to address gaps in other competency measures, including the lack of specificity of Likert scale items, by providing concrete anchors and examples of each rating for clarity and to ensure inter-rater reliability. The team identified anchors and examples of different levels of quality for each core feature of REARING within the parent-child session, identifying how the clinician should utilize these skills with dyads. Anchors centered around if the clinician was below expectations, meeting expectations, or exceeding expectations for clinical competence. As such, the scores were rated on a scale from 1 to 5, where higher scores indicated greater competence. Generally, scores were given based on the following metric:

1 = Clinician missed an opportunity for intervention

2 = Clinician's intervention was executed poorly, insensitively, or was intrusive

3 = Clinician recognized an opportunity and performed a basic intervention

4 = Clinician seized an opportunity for intervention with clear therapeutic intent and intervention was meaningful

5 = Clinician created an opportunity for intervention and/or included the parent enacting the concept with the child

Examples were identified to characterize what each score would look like within the intervention context and were gleaned from actual GABI sessions. Additionally, there are certain therapeutic moments within the parent-child sessions in which a concept may not be relevant for dyad or situation. As such, scores of N/A can also be given as to not penalize the clinician delivering GABI. These scores are to be given sparingly.

In RCS, Reflective Functioning is conceptualized as the ability to think about the thoughts, feelings, and intentions of another person (Fonagy, Steele, Steele, Moran, & Higgitt, 1991). It is the hallmark objective of GABI, to which all of the clinical goals are linked (Murphy, Steele, & Steele, 2013). In the RCS coding system, Reflective Functioning is coded when the therapist explores why a person behaved the way they did, and comments on the parent's or child's feeling states. The concept is coded when the therapist explores the reasons (i.e., thoughts, feelings, and intentions) that underlie behavior for one or both members of the dyad. This often involves labeling emotions that are not yet articulated or expressed. A score of 1 is given when there is a missed opportunity for an intervention; a score of 2 is given when the clinician mentions a mental state but it has an unclear clinical focus; a score of 3 is given when the clinician recognizes that there is a basic opportunity and addresses the parent-child interaction in a way that promotes Reflective Functioning; a score of 4 is given when the clinician *seizes* the opportunity for promoting Reflective Functioning with clear therapeutic intent or performs a meaningful intervention commenting on mental states; and finally a score of

5 is given when the clinician *creates* an opportunity and broadens exploration and awareness of mental states, often including the clinician's initiation of play as a way to foster understanding of mental states.

In RCS, Emotional Attunement is conceptualized as the therapist's ability to engage the dyad in a way that conveys an understanding of their emotional states, allowing the dyad to feel seen and understood. In GABI, Emotional Attunement is a critical skill through which therapists try to engage parents in a way that facilitates a recognition and understanding of their children's emotional states, conveying to the child a sense of being understood. Additionally, therapists also support the parents' understanding of their child's emotions, scaffolding their own ability to attune to their children, therefore bolstering the attachment relationship (Murphy, Steele, & Steele, 2013). Emotional Attunement in RCS is conceptualized as the therapist's attempts at "taking the temperature of the room." It involves empathizing with, and reflecting back, an expressed feeling. It often involves reflecting the emotion in a modulated or modified form, which can also have a regulating effect. A score of 1 is given when a clinician misses an opportunity to attune, usually by ignoring hostile or negative feeling states in moments where the clinician is anxious; a score of 2 is given when the clinician recognizes the emotional context but does not address the more complex feelings that may underlie the parent's or child's expression of affect; a score of 3 is given when the clinician's affect is appropriately matched to the parent and child, but is not elaborating or intended to intervene; a score of 4 is given when the clinician *facilitates* the awareness of emotional experience, often by matching the expression of affect; and finally a score of 5 is given when the clinician *elaborates* on the emotional experience in a way that allows participants to think more deeply about their emotional experience and usually entails attuning to multiple participants or mirroring emotions through symbolic play.

Affect regulation is coded, not only in instances of negative affect, but also reflects the clinician's ability to up-regulate flat affect. Affect Regulation is coded with higher scores at times when the parent-child dyad is visibly distressed and the interventions are intended to reduce this distress. Affect Regulation is achieved by therapists who are sensitive to the expression of volatile feeling states. This often involves slowing down, encouraging the parent to listen to the child, and engaging the dyad in calming activities, such as singing, squeezing Play-Doh, or other developmentally appropriate calming activity. A score of 1 is given when there is a missed opportunity in which Affect Regulation is needed but the clinician does not provide a strategy for the dyad; a score of 2 is given when the clinician recognizes the opportunity but the intervention is vague or interferes with the exploration of affective states; a score of 3 is given when the clinician delivers a basic intervention intended to calm or upregulate; a score of 4 is given when the clinician *seizes* the opportunity to regulate affect with clear therapeutic intent, often by facilitating the awareness of affective states and modeling; and finally a score of 5 is given when the clinician *creates* an opportunity to regulate, often by introducing a new activity to up-regulate or down-regulate.

Reticence is coded when the clinician seizes the opportunity to not interrupt the interaction, while tolerating discomfort and maintaining a strong supportive presence. This often includes facilitating the play and interaction between the dyad, while exhibiting flexibility to move in and out of reticence as needed. The tolerance of discomfort is especially important as it is related to Ernst Schactel's (1959) notion of allocentricity, or the clinician's openness to ambiguity and uncertainty. Reticence involves waiting to intervene, giving parents and children the space to discover their own feeling states and enhance self-efficacy. Both therapists and parents practice reticence in order to have access to important information that would otherwise be lost. A score of 1 is given when the clinician misses an opportunity to be reticent, i.e., the

clinician is too quick to respond; a score of 2 is given when the clinician is not reticent enough (i.e., needs to allow more space for the dyad to interact without intervention) or is too reticent (i.e., holds back and appears to not know what to do next); a score of 3 is given when the clinician recognizes a moment for Reticence and appears to be present and attentive; a score of 4 is given when the clinician provides space for a moment to happen with therapeutic intent, while also demonstrating the ability to tolerate discomfort and uncertainty; and finally a score of 5 is given when the clinician *seizes* the opportunity to not interrupt the interaction, while also maintaining a strong supportive presence, facilitating play and interaction, while exhibiting flexibility (i.e., is able to move in and out of a reticent stance as needed).

Intergenerational Context is coded when the primary purpose of the clinician's intervention is to acknowledge the parent's past experiences and how their experience of being parented affects them in their relationship with their child. This is coded when the clinician helps the parent make connections between their past experiences as a child, their current psychological state, and their reactions to their children. This acknowledges the parent's past experiences and how their experience of being parented affects the way in which they parent, as well as refers to the intergenerational transmission of attachment patterns from one generation to the next. A score of 1 is given when there is a missed opportunity for intervention, in which the parent refers to their experience as a child in connection to their own child's experience and the clinician does not intervene to explore the Intergenerational Context; a score of 2 is given when the clinician addresses the Intergenerational Context, but does so in a vague manner lacking therapeutic intent; a score of 3 is given when the clinician recognizes and comments on memories of the parent's own childhood in a way that shows curiosity and interest to the parent's experience; a score of 4 is given when the clinician addresses the memories of the parent's childhood and helps them to reflect on why their parents or other caregivers in their lives may

have behaved the way they did; and finally, a score of 5 is given when the clinician helps the parent make connections between their past experiences as a child, their present experience of parenting a child, and how this affects their relationship with their child.

Nurturance involves providing both instrumental care (i.e., offering food or drink), as well as providing warmth and empathy with a nonjudgmental stance. It involves nurturing both the parents (as motherhood generates a strong wish for the mother to be cared for; Bowlby, 1988) and children, and promotes the nurturance of the children by their parents. While nearly every intervention can be seen as nurturing in some way, this is coded highly in instances when the primary purpose of the intervention is aimed at making the parent and/or child feel comfortable and taken care of. Nurturance is also coded highly in instances where the clinician maintains a warmth towards the parent and child throughout the coded segment. A score of 1 is given when the clinician misses an opportunity to nurture the parent and/or child, perhaps by being dismissive or ignoring a parent's comment; a score of 2 is given when the clinician uses a technique that nurtures in a way that does not have a clear clinical focus (e.g., saying, "It will be okay," to a clearly distressed parent or child, rather than validating their emotions or comforting them in an appropriate manner); a score of 3 is given when the clinician offers instrumental support (i.e., food or drink when a parent needs a moment to proverbially "refuel") or a holding environment; a score of 4 is given when the clinician is empathic and warm, allowing the participants to feel supported by the clinical context; and finally, a score of 5 is given when the clinician is nurturing to the parent or child, but also promotes the nurturing of the child by their parent or children nurturing each other or parents nurturing each other.

Group Context is coded when the intervention provides a source of social support or facilitates further understanding of emotional states through the use of connections and interactions within the group. It is coded when the group is the primary vehicle of the therapeutic

intervention and the clinician makes efforts to engage the multiple group members in a way that fosters other therapeutic aims, such as Reflective Functioning or Emotional Attunement. This code does not include the dyad as the group, but rather focuses on the discrete families involved in a GABI session and the clinician's bids to connect group members. A score of 1 is given when the clinician misses an opportunity to make links or connections between members of the group; a score of 2 is given when the clinician recognizes the opportunity but uses a technique that forecloses further use of the group as the vehicle for intervention; a score of 3 is given when the clinician captures the opportunity to engage the dyad with the group in a way that allows for further exploration of mental and/or emotional states; a score of 4 is given when the clinician *facilitates* the intervention utilizing the group by drawing in another dyad to make meaningful connections between experiences; and finally, a score of 5 is given when the group is used as the primary vehicle of the therapeutic intervention in which the clinician engages the multiple group members in a way that fosters other therapeutic aims. The RCS scale is also included in the appendix for review.

## Chapter II: Empirical Article

### The Current Study: RCS Development, An Iterative Process

Because the REARING coding system was primarily created in order to provide both clinicians with guidelines for competent care within the GABI model, and also to allow for monitoring treatment fidelity during the dissemination process, the research team sought to develop, test, and receive clinician feedback in order to create a measure that is helpful not only for the researchers, but also for clinician's learning to perform GABI for the first time. It was the hope that the scale, with its anchors and unique examples gleaned from actual GABI sessions, would provide useful benchmarks while also remaining flexible enough to hold ambiguity in regards to patient difficulty and the patient's needs present on any given day. This flexibility was

pivotal in order to establish RCS as more useful, and perhaps more accurate way, of assessing clinician competence above and beyond adherence measures.

The researchers, in following previous studies in psychotherapy research, decided to extract 15-minute clips from an hour parent-child GABI session and code this for competence in the REARING model. The 15-minute clips were further distilled into 5-minute chunks to aid in the ease of remembering interventions in smaller, discrete timepoints. This RCS 15-minute scale was used to establish inter-rater reliability, construct validity, and an overall procedure for coding the videos.

Once this was completed and analyses were ran to establish these standards, feedback was elicited from clinicians currently implementing the GABI intervention. Two lead clinicians were given 15-minute clips of themselves in a GABI session and were then asked to code using the RCS 15-minute scale. This was done with the assumption that eventually RCS would be given to GABI clinicians in order to rate themselves to increase their knowledge of competency in the GABI model. It is important to the GABI model to keep a close relationship between the researchers and clinicians actually performing the intervention. It is a cornerstone of this treatment that the research is constantly translated into practice and vice versa.

Based on the clinician's feedback, the scale was further redefined to include 10-minute clips. 10-minute clips were chosen in order to aid in the efficiency of coding amongst a clinician's busy schedule. Additionally, clinicians noted that more discrete timepoints would be useful in determining what the dyad did or did not do in order to elicit an intervention from the clinician. As such, it was decided that the videos would be chunked into 1-minute timepoints and codes would be assigned to minute intervals over the 10-minute period.

Below details this iterative process and the 2 studies performed in order to establish RCS as a valid and reliable measure. First, Study 1 will be detailed. Study 1 includes the original iteration of RCS with 15-minute clips and provides data for this study. Second, Study 2 will be described. Study 2 includes the move to the 10-minute RCS scale in order to integrate the valuable feedback from clinicians.

## Study 1

## Methods

### Measures

**Development of the RCS 15-minute scale.** The first iteration of the Rearing Coding System (RCS) was comprised of 15-minute videos (Armusewicz, unpublished Master's thesis). 15-minute clips were selected from the middle of the session of the parent-child group based on studies in psychotherapy process research (Henry, Strupp, Butler, Schacht, & Binder, 1993; Patton, Kivlighan, & Multon, 1997). Many studies have decided to rate this section of therapy to both reduce research costs, and also on the basis of previous analyses which determined there are no significant differences between the ratings of the middle 15 minutes and the entire session (Henry, Strupp, Butler, Schacht, & Binder, 1993; Multon, Kivlighan, & Gold, 1996; Patton, Kivlighan, & Multon, 1997).

These 15-minute clips were broken up into 5-minute segments. Coders watched each 5-minute segment and independently coded for REARING concepts. Process codes were assigned for each 5 minutes (0-5 minutes, 5-10 minutes, 10-15 minutes), and coders assigned an overall score for each REARING concept based on the codes for all 5-minute segments. The overall score for each REARING concept was used for analysis as the separate codes for the three 5-minute sections of clinical video were used simply as a proxy to determine overall scores.

**Population and video selection**. Videos were randomly selected based on available footage of hour-long sessions from the GABI intervention disseminated at CERC at the Albert Einstein College of Medicine at Montefiore Medical Center in the Bronx, New York. The videos were then cut down to the 15-minute segments. This random selection of videos attempted to capture both a range of clinical experience, in both lead clinicians and psychology trainees (i.e., psychology externs from clinical PhD, school psychology PhD, and PsyD programs), a variety of ethnic backgrounds, and a range in age, where possible.

**Coding procedure.** A coding group consisting of Drs. Howard and Miriam Steele and Dr. Anne Murphy, as well as master's level and PhD graduate students, met weekly in order to refine the coding system. The group then met to code videotaped sessions for clinician's quality on each REARING feature of treatment delivery implemented at the Children's Evaluation and Rehabilitation Center (CERC). Scores were reached based on group consensus and any coding discrepancies were discussed until a consensus was reached.

From this group of students, three were identified who exhibited adequate inter-rater reliability in the group coding meetings. Waltz et al. (1993) recommends that raters are experienced in the intervention in order to understand the use of therapeutic action, as well as understand the contextual factors that may influence the ratings of competency. As such, during coding meetings Drs. Miriam Steele, Howard Steele, and Anne Murphy were present. These three raters learned the coding procedure from the GABI intervention "experts" and also attended a one-day training offered to the clinicians disseminating GABI.

Waltz et al. (1993) also notes a potential for bias regarding the researchers own investment in the intervention. They state that often times the researchers are wholly invested in the therapist's competence within a specific modality. However, given that that RCS has been developed and intended to highlight areas in need of improvement and to provide supervision,

this critique is not applicable to the current study. Raters did not have a stake in providing higher scores as GABI was not being compared to another treatment modality in regards to level of clinician competence.

**Adherence coding.** Based on previous studies' indication that adherence is the prerequisite for competence, (Perepletchikova & Kazdin, 2005) the current study will attempt to validate the usefulness of the REARING Coding System (RCS) with an already existing measure of GABI adherence. Adherence coding was developed by Dr. Anne Murphy and Drs. Howard and Miriam Steele, in order to establish a checklist of 48 items that exemplify an ideal GABI session. The Adherence measure includes a list of interventions for the parent-child group, parent-only group, and child-only group respectively. For our purposes, we will focus only on the parent-child group section of the Adherence measure.

To be adherent to the parent-child group, there are a number of subscales the clinician must consider, including Structure of the Group (e.g., sits on the floor and/or encourages other clinicians and parents to be at eye level with the child; sings welcome song), Facilitating Interpersonal Support (e.g., attempts to draw in group members who are not participating; opens up comments and questions directed at leader), Taking a Therapeutic Stance (e.g., validates and accepts parent experiences or efforts with a non-judgmental tone; demonstrates faith in members' ability to change and grow), Enhancing Reflective Functioning (e.g., encourages parents and children to wonder or imagine what others might be thinking/feeling and/or why they may act as they did; encourages parents to watch, wait, and wonder), Promoting the Parent-Child Relationship (e.g., redirects children to their parents; brings parents and children closer together in joint activities), Demonstrating Emotional Attunement (e.g., shows strong attempt to notice and understand parents' and children's thoughts and feelings; puts words to non-verbalized expressions of emotions), Helping to Regulate Affect (e.g., engages parents and children in

specific activities to regulate affect, demonstrates tolerance of negative affect, alongside attempts to transform affect through reflection), and Highlighting Intergenerational Patterns (e.g., asks parents about memories of their own childhoods; helps parents to reflect on why their parents might have behaved as they did). The GABI Adherence measure is included in the appendix of this paper for review.

Adherence was scored based on a videotape of the entire parent-child session (i.e., the full hour). Items were scored based on the presence or absence of the intervention within the session. In other words, items were scored 0 or 1 based on if the clinician administered the intervention. Scores were summed to create an overall adherence score with higher scores indicating greater adherence to the GABI intervention, as well as subscale scores across different aspects of treatment delivery. An independent rater coded the adherence for these sessions, separate from the RCS coding group.

**Study 1: Hypotheses**

It is hypothesized that the measure will establish robust inter-rater reliability. It is also hypothesized that the relevant subscales of the RCS and GABI adherence measure will also be related, therefore establishing construct validity, specifically:

1. The RCS subscale of Reflective Functioning will be significantly positively correlated with the Adherence subscale of Reflective Functioning.
2. The RCS subscale of Emotional Attunement will be significantly positively correlated with the Adherence subscale of Emotional Attunement.
3. The RCS subscale of Affect Regulation will be significantly positively correlated with the Adherence subscale of Regulation of Affect.

4. The RCS subscale of Reticence will be significantly positively correlated with the Adherence subscale of Takes Therapeutic Stance.
5. The RCS subscale of Intergenerational Context will be significantly positively correlated with the Adherence subscale of Intergenerational Patterns.
6. The RCS subscale of Group Context will be significantly positively correlated with the Adherence subscale of Structure of Group and/or Interpersonal Support.

Additionally, it is hypothesized that the RCS 15-minute scale will exhibit robust internal consistency, as measured by Cronbach's alpha, across the 5-minute timepoints for all REARING concepts and within each distinct concept subscale over the 15-minute span. Additionally, it is hypothesized that competence in GABI as measured by the RCS 15-minute scale will be positively correlated with distinct clinician characteristics, including years of experience in general psychotherapy and years of experience in GABI specifically.

## Study 1: Results

The results from Study 1 are organized into three sections. The first provides a demographic profile of the participants. The second concerns establishing consensus and reliability among the trained independent raters. The third section reports on the construct validity of the 15-minute RCS scale as per its relation to the existing GABI adherence measure. The fourth section focuses on the structure of the REARING 15-minute coding scale. The fifth section details a number of item level and overall analyses of the scale. The sixth section reports performance on RCS based on unique clinician characteristics.

### Participants

**Training in the intervention.** All participants in this study were trainees (i.e., students, psychology externs, etc.) or employed at CERC at the Albert Einstein College of Medicine,

Montefiore Medical Center. The trainees were trained in the GABI model via a one-day workshop with Drs. Miriam Steele, Howard Steele, and Anne Murphy, and worked under an apprenticeship model with Dr. Anne Murphy, the lead clinician at the time of the first study.

**Demographics.** A total of 42 separate GABI sessions were analyzed in the initial study, all disseminating GABI at CERC at the Albert Einstein College of Medicine at Montefiore Medical Center. The demographics of the sample are listed below.

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Insert Table 1 About Here

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Of the 42 videos coded, the clinicians videotaped were overwhelmingly female (95.2%), Caucasian (88.1%), and non-Hispanic (97.6%). The clinician's ages ranged from 25-58 ($M$=30.69, $SD$=8.15). Majority of the videos included clinicians who completed a MA degree (45.2%).

**Establishing Consensus and Inter-Rater Reliability**

In order to facilitate inter-rater reliability, coders were trained and required to attend group meetings where clinicians were coded with the 15-minute RCS coding system. In those meetings consensus is reached based on group discussion. After this training, outside of the group, three coders continued to code videos independently to establish inter-rater reliability. The independent coders coded a total of 14 of the 42 videos (33%). Amongst these coders, all three were MA candidates in clinical psychology at the New School for Social Research at that time. The three coders provided to be highly reliable ($\alpha$=.82).

**Establishing Construct Validity**

In order to establish construct validity, the RCS scale was correlated with the existing adherence measure. As noted above the adherence measure was created by the developers of the

intervention in order to capture the essence of a true GABI session and serves as the most relevant way of measuring construct validity. Additionally, adherence is noted as a prerequisite for competence and the two measures were correlated in order to determine the relationship and validate the RCS as a measure competence in specifically GABI.

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Insert Table 2 About Here

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Table 2 exemplifies the strong correlations between Reflective Functioning, Emotional Attunement, Reticence, Nurturance, and Group Context with relevant GABI Adherence Scales. Intergenerational Transmission of Attachment Patterns did not prove to be significant with any of the GABI Adherence subscales. Specifically, the following hypotheses were proven correct: The RCS subscale of Reflective Functioning was positively correlated with the Adherence subscale of Reflective Functioning ($r(41)=.77$, $p<.01$), the RCS subscale of Emotional Attunement was positively correlated with the Adherence subscale of Emotional Attunement ($r(41)=.83$, $p<.01$), the RCS subscale of Affect Regulation was positively correlated with the Adherence subscale of Regulation of Affect ($r(41)=.76$, $p<.01$), the RCS subscale of Reticence was positively correlated with the Adherence subscale of Takes Therapeutic Stance ($r(41)=.70$, $p<.01$), and the RCS subscale of Group Context was positively correlated with the Adherence subscale of Structure of Group ($r(41)=.65$, $p<.01$) and Interpersonal Support ($r(41)=.71$, $p<.01$). However, the RCS subscale of Intergenerational Context was not significantly correlated with the Adherence subscale of Intergenerational Patterns ($r(41)=.28$, $p=.07$).

**Structure of the Scale**

To establish internal consistency of the 15-minute RCS scale, Cronbach's alpha was measured across the 5-minute timepoints. For this analysis, Intergenerational Transmission of

Attachment Patterns and Group Context was extracted because of the abundance of N/A codes for these interventions. These two REARING concepts were not coded often during the parent-child dyadic session as these tend to be interventions utilized within the parent-only group of GABI. As such, each REARN (REARING minus Intergenerational Transmission of Attachment Patterns and Group Context) score was analyzed using Cronbach's alpha. This was done to establish that the subscales were consistent over time and all measuring the same construct.

While we do expect that the clinician may perform worse or better on the scale over time, and depending on the moment to moment dyadic interaction, we do expect that the clinicians who are overall capable of achieving higher scores will tend to achieve higher scores within a similar range across the 3 discrete timepoints. All scales proved to be internally consistent over the 15-minute span with all REARING concepts achieving alphas of .8 and above. Scores were also internally consistent in each 5-minute interval. Tables 3a and 3b below detail the results of these analyses.

Insert Table 3a About Here

Table 3a highlights that alphas ranged from .92 to .98, with the lowest being in Nurturance and the highest in Reticence.

Insert Table 3b About Here

Table 3b highlights that alphas from across the 5-minute spans range from .92 to .94, with the highest being in the last 10 minutes of the video clip.

**Analysis of Codes at the Individual Item Level**

Of the 42 videos coded, RCS demonstrated a wide range of scores, exemplifying full use of the 5-point scale. Intergenerational Transmission of Attachment Patterns and Group Context were left out of these analyses and those to follow due to the infrequency of this being coded in the parent-child sessions.

The overall score for all codes ranged from 1-5, except for Nurturance, which ranged from 1-4. A 5 in Nurturance includes the therapist or clinician promoting the parent to nurture the child and unfortunately was not seen in any of the 42 videos coded. The means for all overall REARN scores were between a 2.86 (Affect Regulation) and a 3.22 (Nurturance), which suggests that overall therapists were meeting expectations in implementing the REARN concepts during therapy sessions. See below for Table 4 that details these results.

Insert Table 4 About Here

**Analysis of RCS 15-minute Scale**

As noted above, overall scores were given to each minute in order to distill the REARN concepts to 1 score per 15-minute video and aid in data analyses. Correlations between these REARN overall scores were run in order to determine the relationship amongst these key features of therapeutic action. All of the REARN scores are highly correlated and detailed in the Table 5.

Insert Table 5 About Here

**Analysis of Codes Dependent on Clinician Characteristics**

Analyses were run in order to determine how specific clinician attributes affected the RCS codes within the 15-minute video clip. Participants were separated into two groups, general psychotherapy novices (*N*=20; less than 5 years of experience in psychotherapy) and general psychotherapy experts (*N*=22; greater than 5 years of experience in psychotherapy). This refers to overall psychotherapy experience in any modality or treatment model. T-tests were run in order to determine any difference between these groups in regards to their competence in REARN scores.

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Insert Table 6 About Here

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It was shown that psychotherapy experts perform better in all REARN concepts than psychotherapy novices. Specifically, psychotherapy experts (*M*= 3.64, *SD*=.72) perform significantly better in Reflective Functioning, *t*(40)=6.02, p<.001, than psychotherapy novices (*M*=2.30, *SD*=.72). Psychotherapy experts (*M*=3.97, *SD*=*.73)* perform significantly better in Emotional Attunement, t(40)=8.09, p<.001, than psychotherapy novices (*M*=2.15, *SD*=.72). Psychotherapy experts (*M*=3.64, *SD*=.88) perform significantly better in Affect Regulation, *t*(40)=6.85, p<.001, than psychotherapy novices (*M*=1.98, *SD*=.67). Psychotherapy experts *(M*=3.80, *SD*=.95) perform better in Reticence, *t*(40)=6.77, p<.001, than psychotherapy novices (*M*=2.12, *SD*=.65). Finally, psychotherapy experts (*M*=3.91, *SD*=.78) perform significantly better in Nurturance, *t*(40)=5.88, p<.001, than psychotherapy novices (*M*= 2.47, *SD*=.80).

Additionally, participants were separated into two more groups: GABI novices (*N*=23; less than 3 years of experience in GABI specifically) and GABI experts (*N*=19; greater than 3 years of experience in GABI specifically. T-tests were performed again to determine differences between these groups and their competence in REARN scores.

Insert Table 7 About Here

Table 7 exemplifies that GABI experts perform better in all REARN concepts than GABI novices. Specifically, GABI experts ($M$=3.67, $SD$=.73) perform better in Reflective Functioning, $t(40)=5.08$, p<.001, than GABI novices ($M$=2.45, $SD$=.81). GABI experts (M=3.98, SD=.69) perform better in Emotional Attunement, $t(40)=6.08$, p<.001, than GABI novices ($M$=2.38, $SD$= .97). GABI experts ($M$= 3.60, $SD$ =.88) performed better in Affect Regulation, $t(40)=4.65$, p<.001, than GABI novices ($M$= 2.25, $SD$ =.98). GABI experts ($M$=3.91, $SD$ = .94) performed significantly better in Reticence, $t(40)=6.45$, p<.001, than GABI novices ($M$=2.25, $SD$=.94). Finally, GABI experts ($M$=3.95, $SD$=.74) performed significantly better in Nurturance, $t(40)=5.03$, p<.001, than GABI novices ($M$=2.62, $SD$=.93).

To distill this further, correlations were run in regards to clinician's years at GABI and the REARN overall scores. It was found that there was a significant positive correlation between years at GABI (i.e., more experience) and Reflective Functioning overall scores ($r(42)=.63$, p<.001), Emotional Attunement ($r(42)=.65$, p<.001), Affect Regulation ($r(42)=.59$, p<.001), Reticence ($r(42)=.70$, p<.001), and Nurturance ($r(42)=.57$, p<.001).

## Study 2

## Methods

### Procedure

**Development of RCS 10-minute scale.** As noted above, the first iteration of the RCS scale for 15-minute videos was initially piloted in order to establish construct validity and inter-rater reliability. The 15-minute scale was further tested for its clinical utility with GABI clinicians. Two clinicians used the scale to code a video of themselves disseminating GABI. The

clinicians then met with Drs. Howard and Miriam Steele and the research team in order to provide feedback on their experience of coding themselves. The clinicians determined that it would be most useful to them if the scale and coding procedure was broken down further into 1-minute segments as opposed to 5-minute segments. It was determined that doing so would allow both clinicians, supervisors, and raters to better assess interventions within the temporal landscape of the dyad. Additionally, a discussion around the usefulness of these smaller, discrete moments within parent-infant dyads ensued, considering especially Dr. Beatrice Beebe's work on microanalysis (Beebe, 2006; Beebe et al., 2010; Beebe et al., 2012; Beebe & Steele, 2013). While one-minute segments are certainly not as fine-grained as Beebe's microanalysis, employing a more detailed approach could allow for more observational power in determining moments of maternal and therapist sensitivity and contingency, which are the building blocks of secure attachment (Beebe & Steele, 2013).

The impetus for enlisting GABI clinician feedback on the RCS measure was due to the dissemination of GABI to multiple sites within the New York City area via a grant from the Administration for Children Services (ACS). As such, many more clinicians would be implementing the intervention for the very first time. RCS would be used to code these new clinicians for their competence in the REARING model of therapeutic action within GABI. The current study focuses on clinicians only located within CERC at the Albert Einstein School of Medicine within the Montefiore Medical System in the Bronx, NY, as Institutional Review Board (IRB) approval only covered this site at this time. Further studies will be completed with this GABI dissemination data.

Thusly, based on this feedback the RCS scale was edited and developed to assess 1-minute segments across a 10-minute video collected from the middle of a GABI dyadic session. Because these are smaller sections of the video, a code of Not Applicable was employed for

moments when the clinician was perhaps choosing one intervention over another. This code was used as to not penalize clinicians for appropriate clinical judgments. However, it was determined that these codes are to be used sparingly, as even in 1-minute segments the clinician can be doing a number of subtle interventions within the REARING model.

**Coding procedure.** Similar to the first study, a coding group consisting of Drs. Howard and Miriam Steele and Dr. Anne Murphy, as well as master's level and PhD graduate students, met weekly to code videotaped sessions for clinician's quality on each REARING feature of treatment delivery in GABI implemented CERC using the RCS 10-minute scale. In order to establish inter-rater reliability and aid in the efficiency of coding outside of the weekly meetings, another three students were identified who exhibited adequate inter-rater reliability in the group coding meetings. These three raters learned the coding procedure from the GABI intervention "experts" and also attended a one-day training offered to the clinicians disseminating GABI. Additionally, unique to Study 2, raters were given an online training platform created for GABI clinicians that included theoretical background of the intervention and videos of actual clinical work with expert clinician commentary.

Also unique to the second study, GABI was being disseminated into a number of sites in the New York City area. As part of the dissemination procedure, clinicians were asked to submit RCS videos (i.e., 10-minute videos of a GABI parent-child session) to the research team for competency coding. New clinicians were also hired in the original site of GABI at the Albert Einstein School of Medicine at Montefiore Medical Center. For the purposes of this study, and due to current limitations in the Institutional Review Board (IRB) approval, only clinicians disseminating GABI at this location will be evaluated. However, this provided a new subset of data that could help determine a learning effect on competence, i.e., the experiential and didactic

learning that occurs when the clinicians code themselves and subsequently receive supervision in the RCS model with Dr. Miriam Steele.

**Study 2: Hypotheses**

It is hypothesized that the measure will retain the robust inter-rater reliability and internal consistency originally established with the RCS 15-minute scale. Internal consistency, as measured by Cronbach's alpha, will be established across the 1-minute timepoints for all REARN concepts and within each distinct concept subscale over the 10-minute span. It is hypothesized that competence in GABI as measured by the RCS 10-minute scale will be positively correlated with distinct clinician characteristics, including years of experience in general psychotherapy and years of experience in GABI specifically. Unique to the second study, a GABI learning effect will be examined based on clinician's submission of videos across different times in their training in the GABI model. It is hypothesized that clinicians will exhibit an increase in competency over time based on not only their increased exposure to GABI sessions, but also based on supervisions they received on RCS videos with Dr. Miriam Steele. Additionally, an exploratory factor analysis will be run in order to determine factorability of the five REARN concepts and will elucidate any additional factors missed within our conceptualization of the model.

## Study 2: Results

Similar to the first study, the results are organized into five sections. The first provides a demographic profile of the participants. The second concerns establishing consensus and reliability among the trained independent raters. The third section focuses on the structure of the REARING Coding Scale (RCS) operationalized as REARN (Reflective Functioning, Emotional Attunement, Affect Regulation, Reticence, and Nurturance). The fourth section reports on validity of the REARN scale as possibly indicative of clinical experience generally, and GABI-

experience specifically. The fifth section describes analyses run to determine evidence of a GABI learning effect in RCS codes over time as a function of supervision sessions. Finally, the sixth section reports a factor analysis determining the factorability of the five REARN concepts.

## Participants

**Participants training in the intervention.** All participants in this study were employed at the Children's Evaluation and Rehabilitation Center (CERC) at the Albert Einstein College of Medicine, Montefiore Medical Center. One of clinicians was an original creator of the GABI intervention and another was trained in an apprenticeship model with this lead clinician. The remaining clinicians were trained in the GABI model via a one-day workshop with Drs. Miriam Steele, Howard Steele, and Anne Murphy. Additionally, they were provided with an online training platform that included supplementary lectures on attachment, specifics on the implementation of GABI, and clinical videos. The web-training also included an introduction to RCS and example videos. Upon completion of this training, clinicians disseminated the GABI intervention at CERC and were videotaped at 3-month intervals to assess competence in the intervention. Dr. Miriam Steele, who played a key role developing the intervention (Steele, Murphy & Steele, 2010), provided targeted supervision using the RCS coding system and 10-minute videos provided by clinicians of the parent-child portion of GABI. Clinicians were also trained to rate themselves in order to develop a nuanced understanding of the goals of the intervention. Their self-codes will not be evaluated in the current study as data collection has just begun and the current study only has access to data from CERC at the Albert Einstein College of Medicine at Montefiore Medical Center in the Bronx, New York.

**Demographics.** Of the 21 videos coded, the clinicians videotaped were all Caucasian, female, and non-Hispanic. The clinician's ages ranged from 29-58 ($M$ =35.38, $SD$ =7.53). Majority of the videos coded included a LCSW level clinician (52%) and most clinicians were

not currently trainees (i.e., not studying a degree; 91%). The clinician's ranged from 3-25 years of experience in psychotherapy (*M* =6.77, SD =5.34) and ranged from 1-15 years of experience in GABI specifically (*M* =3.46, *SD* =3.09).

Insert Table 8 About Here

**Establishing Consensus and Inter-Rater Reliability**

In order to facilitate inter-rater reliability, coders were trained and required to attend weekly group meetings where videos of clinicians were coded with RCS. In those meetings, consensus was reached based on group discussion. Three coders were chosen from the group based on their perceived competence in the coding system and given a reliability set of five videos to code independently to establish inter-rater reliability. Amongst the three coders one was a PhD candidate and the others were MA candidates in clinical psychology at the New School for Social Research. The three raters established robust inter-rater reliability ($\alpha = .83$).

**Structure of Scale**

Scores of N/A (not applicable) were given for concepts that were not present in the videos and deemed not clinically relevant for the dyad and situation. These scores were given rarely and only to the REARING concepts of Intergenerational Transmission of Attachment Patterns and Group Context. These codes are more reflective of therapeutic action that occurs in the parent group portion of GABI, where parents discuss their childhood and attachment history while the clinicians use the group as the primary facilitator of therapeutic action. As such, these were excluded from the analyses for parent-child groups and only the following were analyzed: Reflective Functioning, Emotional Attunement, Affect Regulation, Reticence, and Nurturance (REARN).

Additionally, twenty-six of one thousand values (3%) of REARN episodes over ten minutes from twenty-one videos) were missing from the dataset due to audio difficulties and shortened videos due to technical difficulties. Therefore, mean substitution (Kang, 2013) was relied on to estimate the missing values. A rating of 3 was inserted for all but one of the twenty-six substitutions where a 2 was assigned.

To establish the structure of the scale and the internal consistency, Cronbach's alpha was established for the REARN scores across the one-minute intervals. This was done to ensure that these subscales as applied to the discrete timepoints were measuring the same construct. While we expected that clinician's ability to perform these interventions would not always be consistent throughout the ten minutes, we do, however, expect that the clinicians who are capable of higher scores tend to achieve higher scores within a one- or two-point range across the ten minutes. It would be unusual for a clinician who is capable of a score of five to then receive a score of one within the same ten-minute span. As such, we predicted that the Cronbach's alpha across the ten minutes would be high. All scales proved to be internally consistent over the 10 minutes with alphas all over .9, while the REARN scores were also internally consistent in each minute interval. The results of which are detailed in Table 9a and 9b below.

Insert Table 9a About Here

Table 9a shows that the alphas ranged from .92 to .96, with the highest alpha for emotional attunement.

Insert Table 9b About Here

Table 9b reveals that the alphas ranged within each minute interval from .91-.98.

**Analysis of RCS Codes at the Individual Item Level**

Of the 21 videos coded, the overall REARN scores demonstrated a wide range of scores, exhibiting full use of the 5-point scale. Overall Reflective Functioning scores ranged from 1.50 to 4.90, overall Emotional Attunement scores ranged from 1.70-5.00, overall Affect Regulation scores ranged from 2.20-4.80, overall Reticence scores ranged from 1.90 to 4.80, and overall nurturance scores ranged from 1.80 to 4.80. The means for all REARN scores were between 2.93 and 3.26, suggesting that overall clinicians were meeting expectations in disseminating the intervention. See below for Table 10 detailing these results.

Insert Table 10 About Here.

**Analysis of RCS 10-minute Scale**

Average scores were created in order to distill the REARN concepts to one score for each video and to aid in the coherence of data analyses. Of the 21 videos coded, the mean Reflective Functioning scores were 2.93 (*SD* = .76), the mean Emotional Attunement scores were 3.11 (*SD* = .92), the mean of Affect Regulation scores were 3.10 (*SD* = .76), the mean of Reticence scores was 2.96 (*SD* = .71), and the mean of Nurturance scores was 3.26 (*SD* = .84).

Correlations between these REARN scores were also analyzed in order to understand the relationship among these possibly distinct features of therapeutic action. All of these scores were highly correlated and detailed in the table below.

Insert Table 11 About Here

Table 11 shows that all REARN sum scores were highly correlated with each other, with correlation coefficients ranging from .91 to .95, indicating a large effect size. Correlation coefficients were determined based on Cohen's (1988) guidelines for effect sizes that state correlations of .10 are small, .30 are medium or moderate, and .50 are large.

**Analysis of RCS Codes Dependent on Clinician Characteristics**

Analyses were run in order to understand how unique clinician characteristics affect competence in the REARN concepts. Participants were separated into two groups, psychotherapy novice's (*N*=10; less than 5 years' experience in psychotherapy) and psychotherapy experts (*N*=11; greater than 5 years' experience in psychotherapy). This was general psychotherapy experience and not GABI experience. T-tests were performed to analyze differences between these groups in regards to overall competency in REARN concepts.

Insert Table 12 About Here

Table 12 exemplifies that those clinicians who were more experienced in general psychotherapy did not differ in their competence in REARN as compared to less experienced clinicians.

Additionally, participants were separated into two groups based specifically on experience in the GABI model, GABI novices (*N* =18; less than 3 years of experience in GABI) and GABI experts (*N* =3; more than 3 years of experience in GABI). T-tests were performed to analyze differences between these groups and competence in REARN.

Insert Table 13 About Here

It was shown that GABI experts (*M* =3.87, *SD* =1.23) perform significantly better in Reflective Functioning, *t*(19)=2.63, p<.05, than GABI novices (*M* =2.77, *SD* =1.23). GABI experts (*M* = 3.7, *SD* = 2.83) also perform significantly better than GABI novices (*M* =2.83, *SD* =.61) in Reticence, *t*(19)=2.12, p<.05. GABI experts (*M* =4.13, *SD* = .06) also perform better than GABI novices (*M* =3.11, *SD* =.73) in Nurturance, *t*(19)=2.11, p<.05. However, there were no significant differences in Emotional Attunement, *t*(19)=1.8, p=.42, or Affect Regulation, *t*(18)=2.18, p=.37.

Finally, clinicians were separated into two different groups dependent on their degree: PhD (*N*=5) and Social Work degree (*N*=16).

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Insert Table 14 About Here

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It was shown that there was no significant differences in REARN performance dependent on degree level (RF: *t*(19)=1.35, p=.19; EA: *t*(19)=1.55, p=.13; AR: *t*(18)=.61, p=.55; R: *t*(19)=.72, p=.55; N: *t*(18)=.53, p=.59).

**Evidence of a GABI Learning Effect: Analysis of RCS Codes Over Time**

As noted above, independent of the current study, participants also submitted videos to be coded as part of a larger supervision with one of the interventions creators, Dr. Miriam Steele. These videos were coded with RCS and feedback was given based on their scores. Participants also coded themselves in order to establish a nuanced understanding of the coding system and the REARING concepts that are at the heart of therapeutic action in GABI. Feedback was given approximately every three months. Based on the clinician's start date and availability, the number of supervisions varied across participants. Across the 21 videos coded in the second phase of RCS, 6 videos were of trainees evaluated at time 1 (within 3 months after training;

27%), 3 videos evaluated at time 2 (within 6 months after training; 13%), 3 videos evaluated at time 3 (within 9 months after training; 13%), 3 videos evaluated at time 4 (within 1 year of training), and 2 videos evaluated at time 5 (within 1 year, 3 months of training). The remaining four videos were of an experienced GABI clinician and therefore excluded from this analysis.

The overall REARN scores created did not show a significant difference with time points but was trending to significance for Reflective Functioning, Affect Regulation, and Nurturance. The trends are exemplified in the figures below.

Insert Figure 1 About Here

Figure 1 demonstrations that Reflective Functioning score was trending to significance on a positive upward slope, $r(22)=.39$, $p=.07$.

Insert Figure 2 About Here

Figure 2 demonstrates that Emotional Attunement increased slightly over time, but was not significant, $r(22)=.33$, $p=.14$.

Insert Figure 3 About Here

Figure 2 demonstrates that Affect Regulation was trending to significance on a positive upward slope, $r(22)=.38$, $p=.09$.

Insert Figure 4 About Here

Figure 4 demonstrates that Reticence, decreased slightly during time 2 and time 3, and slightly increased over time 4 and 5, but was not significant, $r(22)=.32$, $p=.16$.

Insert Figure 5 About Here

Figure 5 demonstrates that Nurturance was trending towards significance on a positive upward slope, $r(22)=.38$, $p=.08$.

Insert Figure 6 About Here

Figure 6 demonstrates that the REARN sum score was not significantly correlated with time points, $r(22)=.32$, $p=.16$.

For the minute by minute analysis, there was a significant large correlation between time points (i.e., more supervision) and Reflective Functioning in the second minute ($r(22)=.57$, $p<.01$). For Emotional Attunement there was a significant correlation effect with time points within the first minute ($r(22)=.44$, $p<.05$). There was a large significant correlation between time points and Affect Regulation in the ninth ($r(22)=.43$, $p=.05$) and tenth minute ($r(22)=.59$, $p<.01$). Supervision did not affect Reticence over the ten minutes. There were significant correlations between time points and Nurturance in the fourth minute ($r(22)=.50$, $p<.05$).

**Factor Analysis**

The factorability of the five REARN items were examined and the Scree Plot suggested a three-factor solution. In order to inspect the likely 3-factor solution, the Varimax Method of rotation was applied. This is an orthogonal rotation method that minimizes the number of

variables that have high loadings on each factor, making visible the three factors. Initial eigen values for each of the three factors were 14.2, 13.4 and 10.6 respectively, corresponding to variance explained: Factor 1: 28%, Factor 2: 27%, and Factor 3: 21%. This three-factor solution explained 76% of the variance in the 50-item set of REARN scales. The Varimax Rotation appears to have assigned items according to whether they applied to the first few, middle, or last few minutes of the sampled behavior.

Insert Figure 7 About Here

Figure 7 exemplifies this 3-factor solution. The first factor comprised of 20 items, 18 (90%) of which were in the 7th to 10th minute. The second factor comprised 19 items and 100% of these were in the 3rd to 6th minute. The third factor comprised 11 items and 8 (73%) were in the 1st or 2nd minute. Internal consistency of each factor was examined using Cronbach's alpha. All alphas were high: REARN codes from 1-2 minutes ($\alpha$=.94), REARN codes from 3-6 minutes ($\alpha$=.98), and REARN codes from 7-10 minutes ($\alpha$=.98).

These new factors were then used to examine differences in clinician characteristics, particularly if there was a difference between GABI experts versus GABI novices across the 3 factors. Table 15 details these analyses below.

Insert Table 15 About Here

Table 15 shows that GABI experts ($N$=9; $M$=.66, $SD$=.42) perform significantly better on REARN than GABI novices ($N$=11; $M$=-.53, $SD$=1.02) in the last 7-10 minutes, $t(13.88)=3.54$, $p<.01$.

## Discussion

The results of this study provide support for the usefulness and application of the REARING Coding System (RCS) in determining GABI clinician competency, above and beyond adherence measures. This study is an important contribution to the ever-growing and intensely needed field of efficacy measures. Additionally, it is one of a limited number of existing competency measures in children's mental health, and furthermore, one of a very few competency measures developed specifically for dyadic psychotherapy with parents and their infants and toddlers.

The iterative process in which RCS was developed is perhaps one of its greatest strengths. Too often researchers do not collaborate directly or refer to the needs of clinicians "on the ground." It is imperative that researchers find ways in which to collaborate with those implementing evidence-based interventions in order to increase fidelity, competence, and subsequently improve patient outcomes.

The team originally began the development of RCS by referring to the literature and consulting directly with the developers of the intervention, Drs. Howard and Miriam Steele and Dr. Anne Murphy. This collaboration allowed for an accurate depiction of the core features of therapeutic action and provided the REARING (Reflective Functioning, Emotional Attunement, Affect Regulation, Reticence, Intergenerational Transmission of Attachment Patterns, Nurturance, and Group Context) model of therapeutic action. These concepts, rooted in attachment research, psychoanalytic theory, and infant development, provided a useful framework from which clinicians could situate their interventions.

Clinicians beginning in the GABI intervention are not only trained in this framework via in-person trainings given by Drs. Howard and Miriam Steele with Dr. Anne Murphy, but also receive an online training platform with theoretical lectures and clinical videos. While these

types of training are vital and situate an intervention within a particular set of theories and values, they often lack the experiential component of disseminating the intervention in real time with real patients exhibiting a wide range of psychopathology. RCS adds to this existing training structure by allowing clinicians to practice coding videos of lead clinicians on these concepts, in order to hone their attention to these discrete features of therapeutic action unique to the GABI model. Furthermore, by allowing clinicians to code themselves using this coding system, clinicians can evaluate the competency of their therapeutic interventions through this particular lens, ensuring treatment fidelity and an adherence to the specific principles of GABI, while fostering clinical skill and acumen.

In order to establish such a measure, this study sought to create, validate, pilot, restructure, and re-create a competency measure for GABI that would appropriately address these goals. Initially, the RCS 15-minute scale provided a preliminary structure to measure competency, establish inter-rater reliability, establish construct validity, evaluate the structure of the scale, and examine how the scale is affected by unique clinician characteristics. The results from this first study indicated that inter-rater reliability was established with three independent raters across a third of all videos coded. It is not surprising that these raters were able to code reliably as they were extensively trained via in-person trainings with the intervention's creators and attended RCS coding meetings for a minimum of 6 months before being selected to code on their own. Additionally, the coding systems specificity and examples gleaned from actual GABI sessions aided in their decisions to assign certain ratings and allowed them to do so reliably across videos.

Establishing construct validity is an important step in the development of any measure or questionnaire, and based on previous research suggesting that adherence is a prerequisite for competence, the current study sought to validate RCS with an existing adherence measure. The

GABI Adherence measure was developed originally by Dr. Anne Murphy and created well before the development of RCS. The adherence measure was coded independently from the RCS group by a coder assigned to assess hour long videos for treatment adherence. These two measures were correlated in order to establish construct validity, or the notion that the RCS measure is actually measuring the concept or theory it is intended to measure. The hypothesis that RCS and the GABI Adherence Measure would be highly correlated was upheld and the specific subscales that measured similar concepts were also highly correlated. However, there was one exception: Intergenerational Transmission of Attachment Patterns. The raters often gave this code a score of Not Applicable (N/A) due to the nature of the parent-child sessions. During these sessions the clinician is required to focus on the relationship between the parent and child as the main target of the intervention. By addressing Intergenerational Transmission of Attachment Patterns within the dyadic session, the clinician would therefore be focusing their interventions more on the parent and would perhaps lose the focus on the parent-child relationship. While there are certainly moments in which addressing the parent's childhood is important in the context of their relationship with their child, usually these moments are precipitated by the parent offering an insight into their own history. In the videos examined for this study, this happened sparingly. This is likely an intervention used heavily in the parent-group session of GABI. The parent-group serves as a space for parents and caregivers to process their experiences as a parent in relation to their attachment relationships and histories.

The code of Group Context also functions similarly in that, because the target of the intervention is the parent-child relationship, bringing in other members of the group outside the dyad does not happen often. The clinician typically carves out a space within a crowded group format for meaningful connection between parent and child. The group serves as a way to provide a cost-effective intervention and also foster these social connections as they arise.

Addressing the Group Context is another intervention likely to arise in the parent-group session of GABI. During the parent-group the clinician seeks to combat the social isolation often felt with this unique patient population, and that can also be inherent in the experience of being a new caregiver, by facilitating connections between members of the group within their shared identities as parents.

These codes were therefore left out of the further analyses. However, it remains in the RCS coding manual in order for clinicians to be mindful of the times where these types of interventions come up naturally during a group. For example, when parents sit closely to each other during the dyadic session and share in a discussion of their children's behaviors (Group Context), or for example in a situation in which the parent brings up their own attachment history by saying, "My mother never played with me like this" (Intergenerational Transmission of Attachment Patterns). In these moments the clinician should address these interventions and are given credit if they do so, or given a score of 1 for a missed opportunity if they do not address these clear opportunities.

Once construct validity was established, the structure of the RCS 15-minute scale was examined. Cronbach's alpha was examined across the three 5-minute timepoints to establish that the REARN subscales were consistent overtime and all measuring the same construct. As noted, all scales proved to be highly internally consistent over time. While it could certainly be argued that these high alphas indicate that there is no reason to chunk the 15-minute video into 5-minute timepoints, we believe that the smaller timepoints aided in identifying discrete interventions performed by the clinician. Additionally, while the same clinician can exhibit a range in clinical effectiveness on any given day, and within any 15-minute period depending on the patient difficulty, stage of treatment, or a myriad of therapist factors, we do expect that clinicians who are capable of achieving higher scores tend to do so consistently within a 2-point range. It would

be highly unusual to have a clinician perform Reflective Functioning, for example, at a 5 within the first 5 minutes and then score a 2 within the last 5 minutes.

Additionally, Cronbach's alphas were performed for all REARN concepts within each 5-minute timepoint. It was found that alphas were all very high with scores within the 15-minute video. Similarly, it could also be argued here that the REARN concepts seem to be highly similar. The argument to keep these as distinct factors is because it is important for the clinicians, supervisors, and raters to be identifying clear interventions that warrant each score within the RCS scale. It is imperative that clinicians have all REARING concepts in mind while evaluating their performance and therefore when disseminating the intervention in the future. Additionally, clinicians who are capable of achieving the highest scores on the scale will likely not receive the lowest scores on the scale in different interventions within the same 5-minute span.

When analyzing the RCS codes at the individual item level, the scale proved useful in that raters used the entirety of the 5-point scale when coding clinician competence. However, there was one code in this first study that ranged only from 1-4: Nurturance. A score of a 5 on Nurturance indicates that the clinician promotes the parent to nurture the child, enacting the intervention typically executed by the clinician themselves as the parent or caregiver. This was not seen in any of the 42 videos coded for the first study. It is hard to predict why that might be, but one potential explanation is that this is an intervention that may emerge in the dyad's latter stage of treatment, when they themselves have integrated some of the GABI model. Unfortunately, at this time there was no data on the family in each of the videos coded in regards to their stage of treatment, the specific diagnoses of the dyad other than parent-child relationship problem, and exact age of child and/or parent. However, a seasoned clinician should be able to exhibit the confidence needed to assist the parent in nurturing their child, even within the first stage of treatment.

Clinician's coded on the RCS 15-minute scale obtained mean scores within the range of 2.86 in Affect Regulation and 3.22 in Nurturance. Overall, this suggests that clinicians were meeting expectations in implementing all REARN concepts. It is interesting to note that the lowest of these mean scores were in Affect Regulation, perhaps one of the more advanced skills a clinician could have. Infants and toddlers are prone to negative affective states, especially when they have an unfortunate history of violence and abuse. Infants and toddlers need significant assistance in tolerating their negative emotions, and it is often difficult for newer clinicians to provide this while enlisting the parent within the problem-solving process. It is therefore not surprising that the mean for Affect Regulation proved to be the lowest in the scale. Nurturance, on the other hand, is the building block for most therapeutic interventions as it entails the provision of empathy and warmth. If nothing else, a clinician can provide this in moments of uncertainty with where to intervene next.

Without a current way in which to measure predictive validity (the ability of the competency system to predict patient outcomes; i.e., the higher the clinical competence, the better the patient outcome), it was important to establish some benchmarks between unique clinician characteristics and the RCS 15-minute scale. In order to do so, clinicians were separated into a number of groups, including general psychotherapy novices and experts, and GABI novices and experts. It was shown that psychotherapy and GABI experts perform better in all REARN concepts than psychotherapy and GABI novices, indicating that competency is also a function of experience, both within psychotherapy and in the GABI model specifically.

The data gleaned from the first study using the RCS 15-minute scale was a valuable way to establish that the researchers were following the correct path in assessing competency in GABI. Providing lead clinicians with a space to provide feedback on RCS was vital in not only establishing a new, more efficient, and fine-grained approach to assessing competence, but also

to continue an important partnership between research and clinical practice. The movement to reconceptualize and restructure RCS to a 10-minute scale was helpful to both clinicians and raters in that it provided smaller, discrete timepoints in which RCS coders could focus more on the synchronicity of the clinician's interventions based on the temporal landscape of the dyad and what is clinically appropriate in those moments. The basic anchors and examples remained in the coding manual. However, the process of coding anecdotally changed in that it was easier to define exact moments, no matter how small, of intervention and therefore code more efficiently and perhaps even more effectively.

Similarly to the first study, the RCS 10-minute scale established robust internal consistency as per Cronbach's alpha. All subscales were highly internally consistent across the 10 minutes and for all REARN scores within each minute interval. The highest alpha for the REARN subscales was Emotional Attunement and the lowest for Reflective Functioning. While these are both very high (suggesting that perhaps it might not be useful to measure these concepts within these discrete timeframes) it is interesting to consider that clinicians are able to consistently provide, or not provide, interventions in a similar fashion throughout the 10-minute span. It stands to reason as well that Reflective Functioning would have lowest internal consistency of the REARN subscales in that there are likely moments where commenting directly on emotional and mental states is perhaps more relevant than others where the clinician may hold back, be reticent, or provide a different intervention. Often times an overprovision of Reflective Functioning can be intrusive when the clinician is hyper-mentalizing and providing an anxious account of potential mental states. Therefore, it stands to reason that scores in Reflective Function would be less consistent over the 10-minutes. However, as also stated before, the REARN scales are so highly internally consistently because clinicians who are likely to achieve very high scores are not likely to achieve the lowest scores within the same therapy session. This

also applies to clinicians who achieve scores on the lower part of the scale, in that they are unlikely to receive a 1 for Reflective Functioning, for example, only to then receive a 5 in a later minute within the 10-minute clip. Additionally, the minute by minute timepoints serve as a practical way for clinicians and researchers alike to identify smaller discrete moments of therapeutic action and aid in the coherence of coding.

As mentioned, alphas were also all very high amongst the REARN scores in each 1-minute time point within the 10-minutes. Similarly, it could also be argued here that the REARN concepts seem to be highly similar, and one once again might wonder what the utility is in examining these as distinct concepts. The same argument above remains, in that raters need to be able to identify REARN as discrete interventions in order to fully understand the model of therapeutic action within GABI. Again, clinicians who are capable of achieving the highest scores on the scale, will likely not receive the lowest scores on the scale in another REARN concept within the 1-minute interval. For example, if a clinician received a score of a 5 on Reflective Functioning, indicating that they had created a unique opportunity for the dyad to think deeply about their emotional and mental states, it is highly unlikely that this same clinician would receive anything lower than a 3 on Emotional Attunement. Reflective Functioning often involves first attending and then attuning to the emotional temperature of the dyad. There are times, however, in which a clinician's primary intervention is Emotional Attunement without the provision of Reflective Functioning. One such moment is when the dyad is connecting on their own, without the need for intervention. The clinician here could remain present in attuning to the dyads emotional states and heightening this awareness through their own attunement, without providing a reflective comment or mentalizing for the dyad. Moments such as these provide useful examples for coding the distinct REARN features, despite the fact that they are often interrelated.

Again, analyses performed at the individual level for the RCS 10-minute scale demonstrated a wide-range of scores exhibiting full use of the 5-point scale; this time with all REARN concepts. The mean scores also ranged from 2.93 (Reflective Functioning) to 3.26 (Nurturance). This is similar to the finding from the study evaluating the 15-minute scale in that Reflective Functioning seems to be the more difficult intervention to execute, while Nurturance tends to acquire a higher mean score due to the ease in which a clinician can provide an empathic stance and a holding environment. It is also positive to note here that overall these newer clinicians disseminating GABI at CERC were meeting expectations for all REARN concepts, as the mean scores hovered around a score of 3 on the RCS scale.

Clinician characteristics were also examined in the second study using the RCS 10-minute scale, including their status as a psychotherapy novice (less than 5 years' experience in general psychotherapy) or psychotherapy expert (greater than 5 years' experience in general psychotherapy) and their status as a GABI novice (less than 3 years' experience in GABI) or GABI expert (greater than 3 years' experience in GABI). According to our analyses, clinicians who had 5 or more years of experience did not differ in their competence in RCS as compared to less experienced clinicians. While this is not what we originally expected to find, it does point to a perhaps positive implication. This suggests that general psychotherapy experience does not influence the competence of clinicians disseminating GABI specifically. This indicates that GABI, when the clinician is trained properly, is an intervention that can be done by beginner clinicians. This finding is not consistent with the original iteration of the RCS 15-minute scale. In that study it was found that general psychotherapy experience led to greater competence in GABI. There are a number of explanations for this. One of which is the fact that in the second study a more fine-grained analysis, i.e., minute intervals, was employed and therefore may have captured more nuances in coding. There may have been moments in which an experienced

clinician performed an ineffective intervention that was perhaps missed by the raters using the 5-minute intervals, in that the same experienced clinician may have overall had a more confident stance, influencing the raters. The same goes for inexperienced clinicians in that they may have also performed effective interventions that were perhaps missed within the larger milieu of the 5-minute interval, where they could have exhibited less confidence and competence, also influencing the raters overall score given to the 5 minutes. With the smaller minute by minute intervals, it is possible that these minor moments were noted and not clouded by the general aura of the 5-minute video segment.

Another, perhaps more interesting, explanation for the absence of any differences between competence scores between general psychotherapy experts and novices, as measured by RCS 10-minute, is due to the adequate training and the additional learning experience of coding oneself as a clinician with RCS. This population is distinctly different from the population in the first study, as clinicians in the second study received a different level of training, i.e., both the online GABI training and the supervision from Dr. Miriam Steele using RCS as an anchor for supervision. The clinicians here then knew the "answers to the test," in that they knew what they would be evaluated on, studied the RCS manual, and framed their interventions within this specific framework. This is the exact intention of self-coding, as it allows for clinicians to becoming increasingly familiar with the model and with the competent delivery of interventions within the specific modality. Perhaps this experience allowed even inexperienced or less experienced clinicians to develop an understanding of the therapy without having years of additional psychotherapy experience. This allows for more flexibility in the hiring process of clinicians in that adequate training and supervision with RCS could be enough even for clinicians early in their careers. This perhaps also mirrors the finding that there were no significant differences in PhD clinicians versus those clinicians holding a Social Work degree. This was an

encouraging result as GABI seeks to employ a multi-disciplinary team who can all implement the intervention with efficacy.

It was also found in the second study that GABI experts, however, did perform significantly better in Reflective Functioning, Reticence, and Nurturance than GABI novices. There were no differences in Emotional Attunement or Affect Regulation amongst these two groups. It appears that those with greater than 3 years' experience in the GABI model are more able to perform effective Reflective Functioning interventions that allow for the exploration of affective states. Additionally, it is interesting to consider that GABI experts perform better in Reticence as well. Reticence is the thoughtful and intentional decision to hold back and allow a moment of discomfort to ensue in order to create psychological growth in the parent, child, or dyad. Clinicians with more experience, perhaps feel more confident in these moments, having the goals of the therapeutic context in mind. An experienced GABI clinician is one that can be comfortable with silence in a way in which many new clinicians are not. GABI experts also performed better on Nurturance, perhaps because they then had the confidence to enlist the parent in nurturing their own child. In the first study using the RCS 15-minute scale, Nurturance was only coded on a scale of 1-4 and did not utilize the whole scale. In this study, the full 5-point scale was used, indicating that this may actual be the case, as a score of 5 indicates that the clinician scaffolded and supported the parent in nurturing their own child.

However, GABI experts did not perform significantly better in Emotional Attunement or Affect Regulation. Emotional Attunement is the clinician's ability to take the emotional "temperature" of the room and often times this includes mirroring the emotion back to the dyad. It is possible that this is a somewhat basic intervention that is easily grasped and understood by GABI novices and experts alike. Affect Regulation, on the other hand, is a more confusing finding. It would be expected that GABI experts would perform significantly better on Affect

Regulation, especially considering that this deals with the modulating of negative affective states in both the parent and child, and appears to be a more advanced clinical skill. However, again this may be due to a number of factors, including the video selection which may not have included enough clinical opportunities for the up or down-regulating of affect. Rather GABI experts and novices may have been able to regulate affect using less advanced clinical techniques, such as simply attuning and keeping maintaining a holding environment. Another potential explanation, similar to the one noted above, is that the supervisions with Dr. Miriam Steele allowed for a more nuanced understanding of these interventions earlier on in their experience in GABI leading to increased competence at an earlier stage than previously possible.

Unique to the second study, analyses were performed to determine a GABI learning effect. These clinicians submitted 10-minute videos of themselves to be coded in a supervision with one of the interventions developers. Before receiving feedback from Dr. Miriam Steele, clinicians were required to code themselves. However, due to lack of data, self-codes were not compared in this study and will be reported in a future study. Although, it may not be entirely relevant to do so. The self-codes serve as a process, more than an outcome measure, that facilitates new clinicians' understanding of the REARING concepts that are the hallmark of GABI. These supervisions were given every 3 months and as such clinicians submitted videos for these discrete time points during their training from time 1 (within 3 months of beginning GABI) to time 5 (within 15 months of training). Unfortunately, change over time was not found to be significant for all REARN concepts. This could have been due to the small number of participants in each group. However, Reflective Functioning, Affect Regulation, and Nurturance were all trending towards significance. Additionally, one look at the figures provided with these results indicate that these are moving in the intended direction.

While these results are not statistically significant, it can be interesting to examine these anecdotally. According to Figure 1, it appears that Reflective Functioning is at its lowest at time 1, increases to nearly meeting expectation at time 2, decreases yet again at time 3, and continues on an upward slop to time 5, surpassing a score of 3. This indicates that time 5 clinicians are exhibiting competence, as a score of 3 suggests that they are meeting expectation for that REARING concept. The decrease in time 3 is interesting, albeit not statistically significant, to consider. It appears as if clinicians take in the most after the first RCS supervision session and perhaps shows a minor decrease in time 3 as clinicians are perhaps trying new interventions, but missing the mark (i.e., a score of 2). It is, however, optimistic to see an increasing positive slope at time 4 and time 5 suggesting that if the sample was bigger, and if more timepoints were measured, perhaps there would be a significant positive trend of increased competence in RF with additional RCS supervision.

Figure 2 outlines an overall positive increase in Emotional Attunement overtime. Clinicians appear to start at around a 2 or 3, meaning that they are attempting to attune but may not be aware of the more complex emotional states associated with emotion or affect. Overall attunement increases to a 3 to 4, suggesting that clinicians are grasping the more nuanced emotions of the parent-child dyads and are overall meeting expectation after receiving RCS supervision.

Affect Regulation has a more interesting trajectory. Figure 3 outlines that Affect Regulation hovers around a 2 to 3 for the first 4 time points. Clinicians may be attempting to address negative or flat affects, sometimes succeeding in a basic intervention and other times employing vague interventions. There is, however, a sharp increase from time 4 to time 5 where clinicians pass the meeting expectation mark and move even towards a score of 4, suggesting that Affect Regulation is a skill that is honed and refined most over time. Perhaps this

intervention, because it deals with uncomfortable and anxiety provoking emotional states, such as flat affect in depression and increased emotional lability in a traumatized toddler, is something that needs more experience and targeted supervision in order to accomplish.

Reticence, or the ability to refrain from intervening in moments where the clinician can instead scaffold the dyad's self-efficacy, has another interesting trajectory. It appears that Reticence begins higher, but remains within the 2 to 3 range, suggesting that at time 1 clinicians are not being reticent enough and are anxiously attending to the dyad in a way that is not therapeutic. Reticence drops at time 2 to time 4 and then increases to the range of a 3 to 4 at time 5. This perhaps suggests that clinicians, while learning more about the GABI model and learning interventions from the RCS supervisions, actually become more active during the next few sessions. It appears as if they are trying on a number of interventions in order to gain a grasp of the model at the expense of Reticence. More experienced clinicians may feel less pressure to "do something" during the session, while a newer clinician may not be comfortable in a more reserved role. However, from time 4 to time 5 clinicians greatly increase in their competence in Reticence, suggesting that, like Affect Regulation, this may be a more nuanced clinical skill requiring more experience, supervision, and confidence in one's clinical ability.

Nurturance also has a positive slope as per Figure 5. Clinicians at time 1 are already meeting expectation on this skill at a score of 3 and increase to reach about a score of 3 to 4 at time 5. Nurturance is comprised of the basic provision of empathy and warm. It stands to reason that a good majority of social workers and psychologists would have this skill. Again, there is the most growth between time 4 and 5. This suggests that although the clinicians possessed the ability to employ this intervention very early on in their time in GABI, they perhaps learned specific ways to be nurturing to the parent-child relationship aligned with the GABI intervention.

The REARN mean score hovers around a 3 and slightly below for the first 4 time points and again increases between time 4 and 5. This consistent observation that there is perhaps more growth between time 4 and time 5, suggests that clinicians need approximately 4 RCS supervisions coupled with about a year of clinical experience in which to employ the skills and practice these within the GABI model, in order to improve. Again, this is a tentative finding and will need to be further supported by future research. Although these findings were not statistically significant, it is interesting to ponder these trends for hope that they can be replicated in the future with a larger sample and provide more information about how to target training and supervision.

In the second study examining the RCS 10-minute scale, a minute interval analysis was also completed in order to understand how more supervision affected interventions within discrete minutes within the 10-minute video clips. In other words, the researchers sought to determine if there were any unique minute intervals (for example, minute 1-2 or 5-6) that differed between clinicians receiving more supervision (i.e., time 4 or 5) verses clinicians at the beginning of their training experience (i.e., time 1 and time 2). There was a significant positive correlation between time points (i.e., more supervision and experience) and the following: Reflective Functioning within the second minute, Emotional Attunement within the first minute, Affect Regulation in the ninth and tenth minute, and Nurturance in the fourth minute. This suggests that clinicians with more experience and training are able to attune quicker to the dyad, within the first minute, and potentially use this attunement to then effectively mentalize or provide Reflective Functioning within the second minute. Nurturance seems to be at its peak within the middle of the session, perhaps when the clinician is becoming more comfortable with the clinical context (or the experience of being video recorded). Affect Regulation may be significant in the last minutes of the session because over time the child can become more

dysregulated as a function of the interaction with mother. More time may mean more opportunities for rupture. More experienced clinicians, as defined by these discrete timepoints, may be able to foster moments of affect regulation and potentially scaffold a moment of repair.

The factor analysis ran with the RCS 10-minute scale provided a 3-factor solution: the first factor consisting of all REARN scores within the seventh to tenth minute, the second factor comprised of all REARN codes within the third to sixth minute, and the third factor comprised of all REARIN scores within the first and second minute. This indicates that clinicians seem to perform similarly, but somewhat distinctively, over the 10-minute video. Also, this may reflect something about how coders go about the task of assigning REARN codes, perhaps performing distinctly within 2-3-minute segments. This may suggest that while the RCS raters use minute by minute analyses in order to capture smaller interventions and determine more accurately the antecedents and consequences of interventions, overall clinicians perform similarly within 2-3-minute intervals. One might suggest that it would therefore make sense to chunk the video into 2-3-minute segments and code as such. However, the research team maintains that the minute by minute approach has been practically useful for clinicians and raters alike in order to retain their memory and identify discrete moments of intervention within a smaller timeframe.

These factors corresponding with the first, middle, and last third of the 10-minute video were then used to examine differences in distinct clinician characteristics, notably if there was a difference between how GABI experts (more than 3 years' experience in GABI) perform within these segments versus GABI novices (less than 3 years' experience in GABI). It was shown that GABI experts performed significantly better on REARN than GABI novices in the last third of the session (minutes 7 to 10). Again, this could suggest that there is something unique about these last few minutes in which the clinician perhaps overrides any anxiety around being filmed, or uses these last few minutes after observing and finding synchrony with the dyad to

disseminate their intervention. This could also be due to something unique about how coders go about coding 10-minute videos. Perhaps the coders use the context and assess the clinical environment of the first few minutes of session and then determine the competency of the interventions in the last few minutes within this milieu.

## Limitations

While the researchers attempted to control all extraneous or impeding factors, due to the real-world application of RCS within a clinic and not in a controlled research setting, there are a number of limitations in the current study. One of the major limitations of the study is the lack of diversity in regards to the clinician population. In both studies, the clinicians were overwhelming female, white, and non-Hispanic. Ideally, the study would encompass a more diverse clinical population. Unfortunately, however, this is reflective of the general demographics of psychologists (APA, 2015) and social workers (Salsberg, Quigley, Mehfoud, Acquaviva, Wyche, & Silwa, 2017) alike.

The smaller number of participants included in the study, particularly Study 2, is a major limitation. While many of the findings proved significant for even this small group, it would be important to see which of these findings would remain or if other findings would emerge with a large pool of participants. Another limitation concerns where the participants disseminated the intervention. Because of limitations in IRB approval, the researchers were only permitted to use the data from the CERC location at Albert Einstein College of Medicine in the Bronx, NY. The intervention, however, is currently being disseminated at a number of sites across New York City. It would be important in the future to access this data in order to create a larger picture, as well as dispel the myth that any findings could be due to a unique effect of CERC location. Additionally, in the future multiple sites would allow for RCS to establish predictive validity which we were unable to do in this study. In other words, with other sites we could establish if

clinician competency as measured by RCS predicts better patient outcomes. Because this is a group intervention, with multiple clinicians implementing GABI within one site, we were unable to do this with just the CERC Bronx site. However, with other clinics implementing the intervention across the five boroughs of New York, we could link RCS competency and patient outcomes to determine if the measure retains predictive validity.

The researchers also sought to determine that the distinct time points were reflective of a learning or supervision effect. However, these results could be due to supervision, but also may be influenced by a confluence of factors, including experience in the intervention, time, and other sources of peer or "in-house" supervision not provided by Dr. Miriam Steele. Because the study was conducted while clinicians were engaging in real-world clinical practice, it may be impossible to parse out these extraneous factors.

Additionally, as mentioned in the discussion, a potential limitation of the results is that ultimately ratings on RCS were subjected to human error on part of the coders. The results of the study could be both due to the clinician's performance and competence in the intervention, but may also be reflective of something about how coders go about the task of assigning the REARING codes. It would be near impossible to parse this out, and is a common limitation to conducting psychological research that requires self-report or clinical judgment. It is an ambiguity to which the field has to contend with often.

## Future Directions

The current study outlines the groundwork of reliability and content validity in order to initially validate the REARING Coding System (RCS). Future work will focus on validating the RCS system further by establishing predictive validity via the procedure noted above, i.e., gaining Institutional Review Board (IRB) approval to conduct the RCS study in the dissemination sites across the five New York City boroughs, in order to establish that increased

competency as measured by RCS predicts better patient outcomes. RCS is currently being used in the dissemination sites for supervision purposes as noted above, but is not yet permitted to be used for research purposes. The research team is confident that they will be able to establish approval for future research at these sites and therefore conduct this vital research aiding in validating RCS further. Establishing predictive validity is perhaps the most important way to demonstrate this measure's importance and legitimacy.

As previously mentioned, as a function of the supervision, clinicians also coded themselves on RCS before meeting with Dr. Miriam Steele to review their video recordings. Future studies could examine the relationship between the clinician codes and supervisor codes, paying special attention to discrepancies and if those discrepancies lessen over time as a function of the supervision sessions. While we consider coding RCS to be an important process in itself, coupled with the experience of watching oneself deliver therapy, it is worth examining if clinician's reliability increases over time and if that increased reliability in RCS leads to higher competence in the GABI model.

Additionally, since the inception of the current study, the coding system has added a number of body codes. Because dyadic therapy includes a unique bodily component that traditional therapy does not, it was determined that clinicians should be trained and therefore mindful of their body interactions in the session with the dyad. The experienced clinician in working with the infant, child, and by extension the parent-child relationship, uses interventions embedded in therapeutic play and movement. Clinicians often use their body to help facilitate the interaction, especially while in a triad. Some of the body codes added include supportive positioning, or the extent to which the therapist positions themselves in the therapy room in relation to the dyad; clarity of signaling, or the synchrony of the body with verbal interventions; contingency of response, or the extent to which the therapist is in synchrony with the dyad; and

finally, interaction scaffolding, which consists of the degree to which the clinician uses their body to facilitate the interaction between the parent and child. This coding system will also need to be validated and examined in the same context as the original RCS measure, employing the iterative process as needed to modify these in a way that is helpful for GABI clinicians currently disseminating the intervention.

Lastly, the GABI intervention is unique in its provision of distinct but interconnected services: a parent-child dyadic session, a parent psychotherapy group, and a child play therapy group. The current study created a competency measure for the parent-child session of the GABI intervention, but it will be vital in the future to create a competency measure for both the parent-only and child-only session of GABI. As noted earlier, the codes of Intergenerational Transmission of Attachment Patterns and Group Context were not coded often with in the dyadic session. However, we believe that these are codes that would be distinctive to the parent session. Parents often use the GABI parent-group psychotherapy to discuss their own attachment history and the effect it has on their current functioning and on their role as a parent. This discussion occurs within a group context in which the clinician elicits other group members for feedback and support. Additionally, in the GABI child-only group, while Intergenerational Transmission will likely not be coded at all, Group Context may become increasingly relevant due to the importance of facilitating peer relationships within this time. Affect Regulation and the other REARING concepts are also critical within the child session. It will be important to reconceptualize the anchors for the REARING concepts based on how these distinct features of therapeutic action emerge in these unique therapy contexts. The researchers will need to employ a similar process in which they glean anchors and examples from videos of actual clinical sessions. This will then provide a way to assess for fidelity and competence in these other vital features of the GABI model.

## Conclusions

The current study overall provides support for the REARING Coding System (RCS) as a valid and reliable measure of competency within the GABI model. RCS was a collaborative measure developed with both researchers and clinicians in mind, and strives to be useful for both purposes. The iterative process in which the measure was developed is one of the major strengths of RCS. RCS represents a true attempt to integrate research into clinical practice for an important attachment-based intervention seeking to improve the relationship between caregivers and their children.

It is one of the first clinician competency ratings of its kind, especially developed for dyadic attachment-informed psychotherapy for a largely traumatized population of families at risk of losing custody of their children due to Administration for Children Services (ACS) involvement. RCS employs unique anchors and provides examples from actual clinical video, allowing it to be easily understood and coded even by inexperienced clinicians and research assistants. It provides a way to conceptualize clinician effectiveness above and beyond simple adherence measures. Where adherence measures focus on the quantitative aspects of the intervention, i.e., whether the clinician employed the intervention or not, competence measures such as these, allow for observes to evaluate if the intervention was effective within the treatment model.

It is pivotal for all evidence-based treatments to measure competency in order to ensure that the intervention is disseminated in a way that is both adherent to the manual, but also indicative of advanced clinical skill and an ability to flexibly employ interventions to meet the patient where they are in regards to demographics, psychopathology, and stage of therapy. It is our hope that the REARING Coding System (RCS) provides one such way of measuring these nuanced clinical skills within the Group Attachment Based Intervention (GABI).

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## Tables and Figures

*Table 1: Study 1 Clinician Demographics by Video*

| Demographics | N | Percent | M | SD | R |
|---|---|---|---|---|---|
| Gender | | | | | |
| Female | 40 | 95.2% | | | |
| Race | | | | | |
| Caucasian | 37 | 88.1% | | | |
| Other | 1 | 2.4% | | | |
| Unreported | 2 | 4.8% | | | |
| Ethnicity | | | | | |
| Hispanic | 1 | 2.4% | | | |
| Non-Hispanic | 41 | 97.6% | | | |
| Age | | | 30.69 | 8.15 | 25-58 |
| Degree Completed | | | | | |
| BA | 2 | 4.8% | | | |
| MA | 19 | 45.2% | | | |
| LMSW | 5 | 11.9% | | | |
| PhD Clinical | 1 | 2.4% | | | |
| PhD School Psy | 15 | 35.7% | | | |

*Table 2: Study 1 Construct Validity*

| Adherence Scale | R | E | A | R | I | N | G |
|---|---|---|---|---|---|---|---|
| Total Score | .84** | .90** | .91** | .80** | .21 | .85** | .75** |
| Structure of Group | .77** | .75** | .78** | .68** | .19 | .72** | .65** |
| Interpersonal Support | .71** | .79** | .82** | .65** | .15 | .72** | .71** |
| Therapeutic Stance | .73** | .81** | .82** | .70** | .07 | .81** | .66** |
| Reflective Functioning | .77** | .79** | .85** | .61** | .12 | .74* | .62** |
| PC Relationship | .60** | .58** | .65** | .40** | .04 | .51** | .46** |
| Emotional Attunement | .77** | .83** | .85** | .64** | .09 | .78** | .69** |
| Affect Regulation | .64** | .74** | .76** | .68** | -.28 | .70** | .59** |
| Intergenerational patterns | .35* | .44** | .50** | .17 | .28 | .34* | .22 |

* p<.05. **p<.01. ***p<.001

*Table 3a: Study 1 Internal Consistency of REARING Concepts Across 15 Minutes*

| REARING Concept | Cronbach's Alpha |
|---|---|
| Reflective Functioning | .94 |
| Emotional Attunement | .97 |
| Affect Regulation | .95 |
| Reticence | .98 |
| Nurturance | .92 |
| REARN Overall Scores | .96 |

*Table 3b: Study 1 Internal consistency of REARN concepts for each 5-minute segment*

| REARING Concept | Cronbach's Alpha |
|---|---|
| Minutes 0-5 | .92 |
| Minutes 6-10 | .94 |
| Minutes 11-15 | .94 |

*Table 4: Study 1 Descriptives of Overall REARN Scores*

| | M | SD | Range |
|---|---|---|---|
| Reflective Functioning | 3.00 | 0.98 | 1-5 |
| Emotional Attunement . | 3.10 | 1.68 | 1-5 |
| Affect Regulation | 2.86 | 1.15 | 1-5 |
| Reticence | 3.00 | 1.78 | 1-5 |
| Nurturance | 3.22 | 1.07 | 1-4 |

*Table 5: Study 1 Correlations of REARN Overall Scores*

| | RF | EA | AR | R |
|---|---|---|---|---|
| Emotional Attunement | .78*** | | | |
| Affect Regulation | .81*** | .87*** | | |
| Reticence | .73*** | .83*** | .77*** | |
| Nurturance | .82*** | .88*** | .86*** | .78*** |

* p<.05. **p<.01. ***p<.001

*Table 6: Study 1 Comparing Psychotherapy Novices versus Psychotherapy Experts*

| | Novices (*N* =20) | | Experts (*N* =22) | | |
|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *T* value |
| Reflective Functioning | 2.30 | .72 | 3.64 | .72 | 6.02*** |
| Emotional Attunement | 2.15 | .72 | 3.97 | .73 | 8.09*** |
| Affect Regulation | 1.98 | .67 | 3.65 | .88 | 6.85*** |
| Reticence | 2.12 | .65 | 3.80 | .95 | 6.77*** |
| Nurturance | 2.47 | .80 | 3.91 | .78 | 5.88*** |

* p<.05. **p<.01. ***p<.001

*Table 7: Study 1 Comparing GABI Novices versus GABI Experts*

| | Novices (*N* =23) | | Experts (*N* =19) | | |
|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *T* value |
| Reflective Functioning | 2.45 | .81 | 3.67 | .73 | 5.08*** |
| Emotional Attunement | 2.38 | .97 | 3.98 | .69 | 6.08*** |
| Affect Regulation | 2.25 | .98 | 3.60 | .88 | 4.65*** |
| Reticence | 2.25 | .74 | 3.91 | .94 | 6.45*** |
| Nurturance | 2.62 | .93 | 3.95 | .74 | 5.03*** |

* p<.05. **p<.01. ***p<.001

*Table 8: Study 2 Clinician Demographics by Video*

| Demographics | N | Percent | M | SD | R |
|---|---|---|---|---|---|
| Gender | | | | | |
| Female | 21 | 100% | | | |
| Race | | | | | |
| Caucasian | 21 | 100% | | | |
| Ethnicity | | | | | |
| Non-Hispanic | 21 | 100% | | | |
| Age | | | 35.38 | 7.53 | 29-58 |
| Degree Completed | | | | | |
| MA | 2 | 9.5% | | | |
| MSW | 5 | 23.8% | | | |
| LCSW | 11 | 52.4% | | | |
| PhD Clinical Psy | 2 | 9.5% | | | |
| PhD School Psy | 1 | 4.8% | | | |
| Degree in Progress | | | | | |
| PsyD | 1 | 4.8% | | | |
| PhD School Psy | 1 | 4.8% | | | |
| None | 19 | 90.5% | | | |
| Years' Experience in Psychotherapy | | | 6.77 | 5.34 | 3-25 |
| Years' Experience in GABI | | | 3.46 | 3.09 | 1-15 |

*Table 9a: Study 2 Internal Consistency of REARN Concepts Across 10 Minutes*

| REARN Concept | Cronbach's Alpha |
|---|---|
| Reflective Functioning | .92 |
| Emotional Attunement | .96 |
| Affect Regulation | .93 |
| Reticence | .95 |
| Nurturance | .95 |

*Table 9b: Study 2 Internal Consistency of REARN Minute by Minute*

| Minute | Cronbach's Alpha for REARN |
|---|---|
| Minute 1 | .98 |
| Minute 2 | .93 |
| Minute 3 | .94 |
| Minute 4 | .97 |
| Minute 5 | .93 |
| Minute 6 | .95 |
| Minute 7 | .95 |
| Minute 8 | .96 |
| Minute 9 | .91 |
| Minute 10 | .95 |

*Table 10: Study 2 Descriptives of Overall REARN Scores*

| | M | SD | Range |
|---|---|---|---|
| Reflective Functioning | 2.93 | .76 | 1.50 - 4.90 |
| Emotional Attunement . | 3.11 | .92 | 1.70 – 5.00 |
| Affect Regulation | 3.06 | .76 | 2.20 –4.80 |
| Reticence | 2.96 | .71 | 1.90 – 4.80 |
| Nurturance | 3.26 | .84 | 1.80 - 4.80 |

*Table 11: Study 2 Correlations of REARN Average Overall Scores*

| | RF | EA | AR | R |
|---|---|---|---|---|
| Emotional Attunement | .92** | | | |
| Affect Regulation | .92** | .95** | | |
| Reticence | .89** | .92** | .91** | |
| Nurturance | .91** | .94** | .95** | .94** |

* p<.05. **p<.01. ***p<.001

*Table 12: Study 2 Comparing Psychotherapy Novices and Experts in REARN Competence*

| | Novices (*N* =10) | | Experts (*N* =11) | | |
|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *T* value |
| Reflective Functioning | 2.77 | .63 | 3.08 | .86 | .93 |
| Emotional Attunement | 3.00 | .78 | 3.23 | 1.05 | .56 |
| Affect Regulation | 2.92 | .61 | 3.17 | .88 | .73 |
| Reticence | 2.76 | .51 | 3.15 | .83 | 1.27 |
| Nurturance | 3.09 | .55 | 3.41 | .89 | .90 |
| REARN Average | 3.01 | .55 | 3.21 | .88 | .56 |

* p<.05. **p<.01. ***p<.001

*Table 13: Study 2 Comparing GABI Novices and Experts in REARN Competence*

| | Novices (*N* =12) | | Experts (*N* =9) | | |
|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *T* value |
| Reflective Functioning | 2.61 | .52 | 3.36 | .84 | 2.50* |
| Emotional Attunement | 2.81 | .69 | 3.53 | 1.07 | 1.90 |
| Affect Regulation | 2.79 | .43 | 3.39 | .96 | 1.74 |
| Reticence | 2.67 | .53 | 3.36 | .74 | 2.48* |
| Nurturance | 2.90 | .58 | 3.73 | .92 | 2.37* |
| REARN Average | 2.83 | .45 | 3.47 | .88 | 1.99 |

* p<.05. **p<.01. ***p<.001

*Table 14: Study 2 Comparing Clinicians with SW Degrees and Clinicians with PhD/PsyD and REARN Competence*

| | SW (*N* =16) | | PhD/PsyD (*N* =5) | | |
|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *T* value |
| Reflective Functioning | 3.05 | .72 | 2.54 | .81 | 1.35 |
| Emotional Attunement | 3.28 | .84 | 2.58 | 1.04 | 1.55 |
| Affect Regulation | 3.11 | .78 | 2.85 | .73 | .61 |
| Reticence | 3.03 | .65 | 2.76 | .93 | .72 |
| Nurturance | 3.35 | .77 | 2.98 | 1.05 | .86 |
| REARN Average | 3.16 | .73 | 2.94 | .83 | .54 |

* p<.05. **p<.01. ***p<.001

*Figure 1: Study 2 Reflective Functioning Overall Score for Training Clinicians over Time*

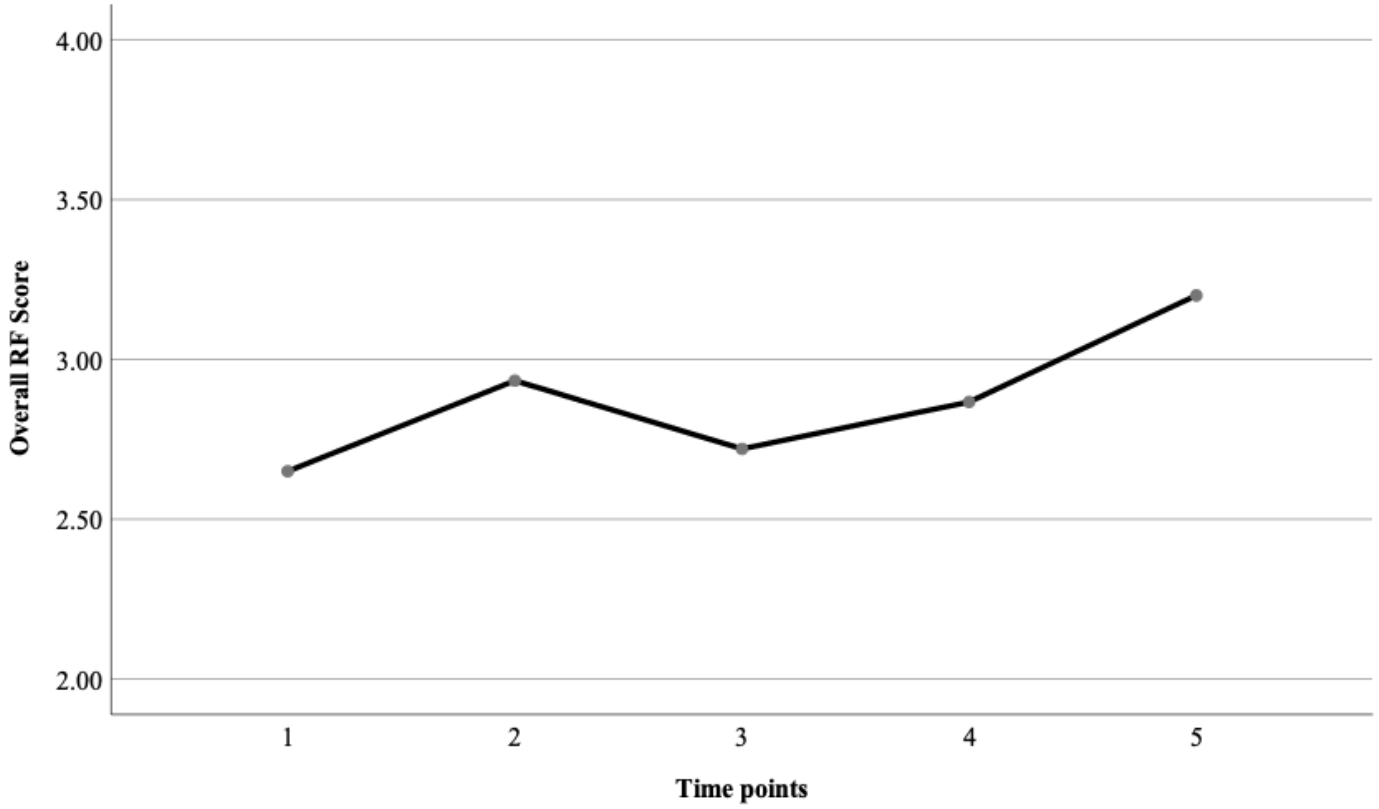

*Figure 2: Study 2 Emotional Attunement Overall Score for Training Clinicians over Time*

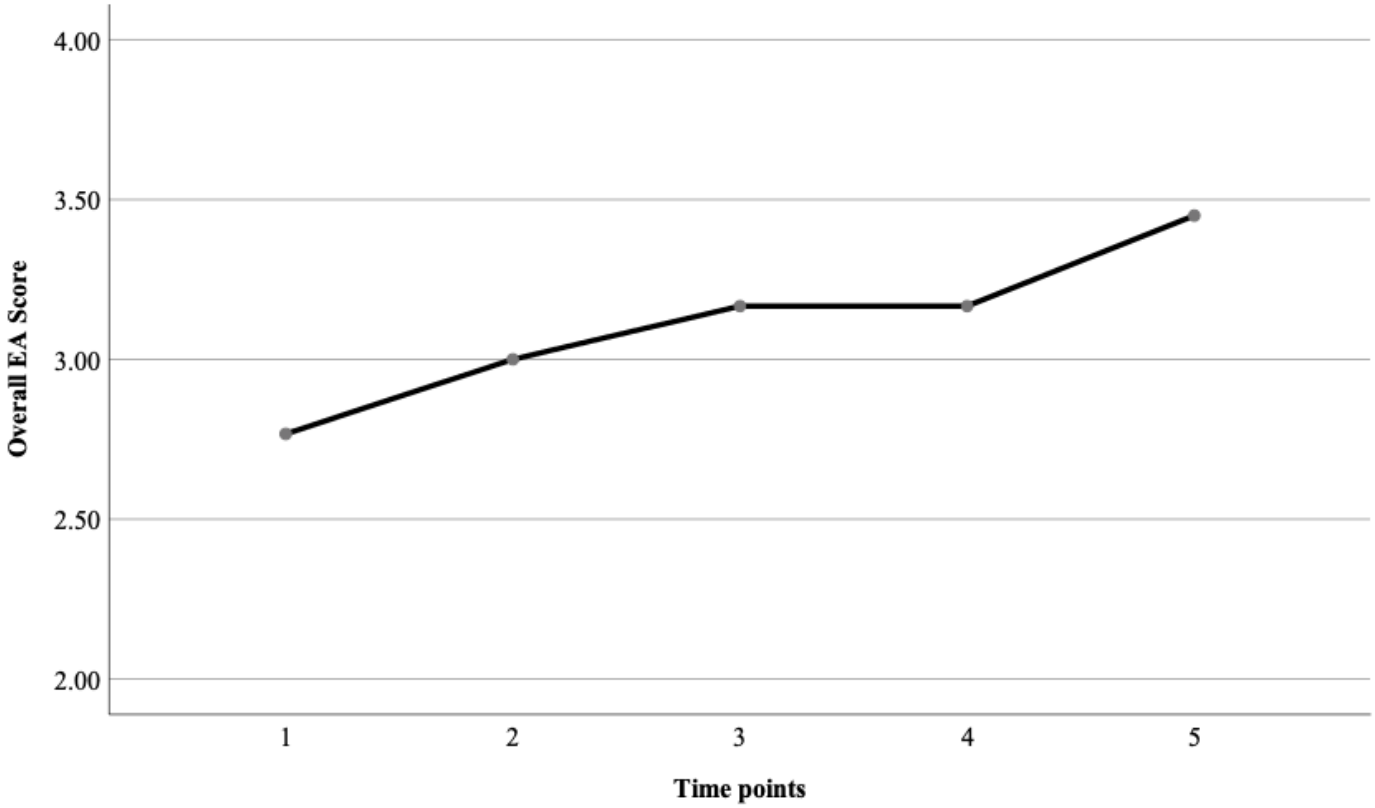

*Figure 3: Study 2 Affect Regulation Overall Score for Training Clinicians over Time*

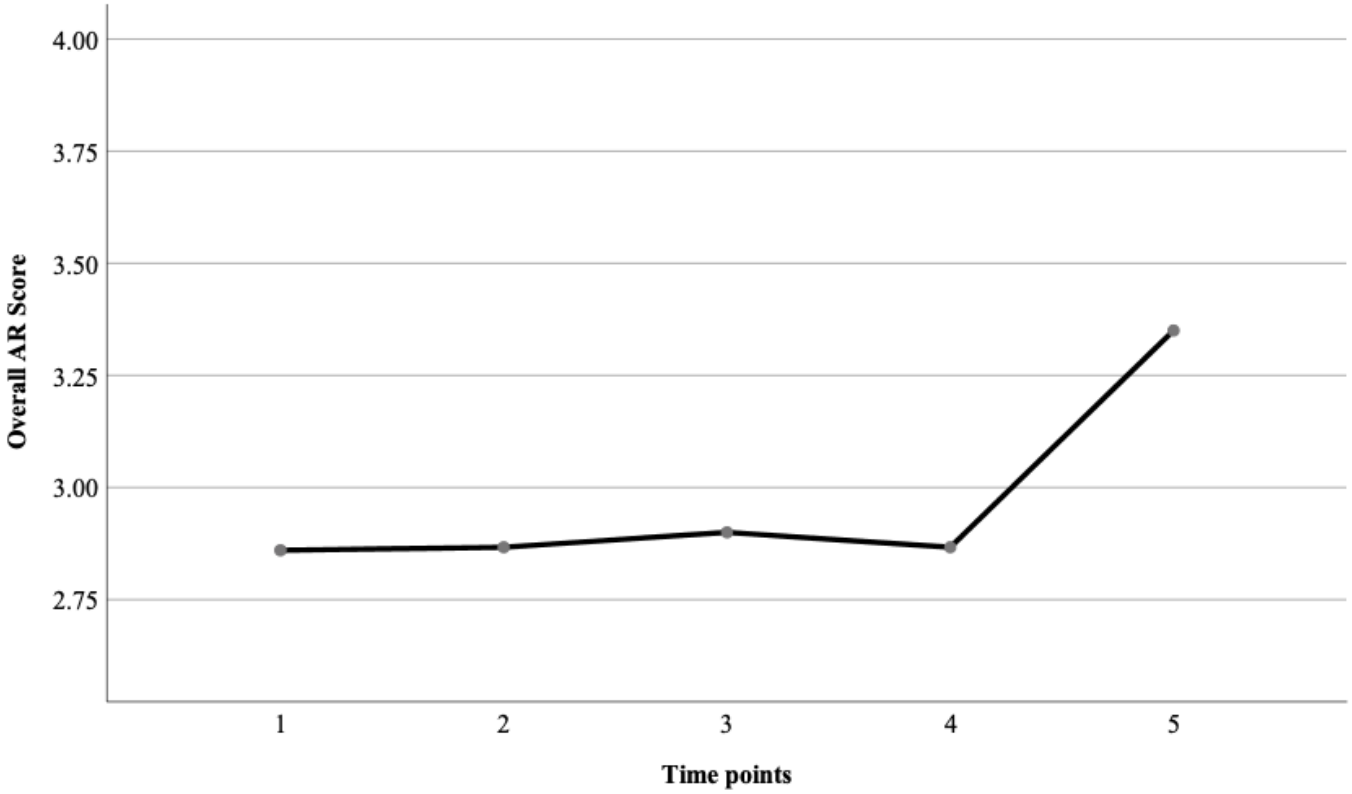

*Figure 4: Study 2 Reticence Overall Score for Training Clinicians over Time*

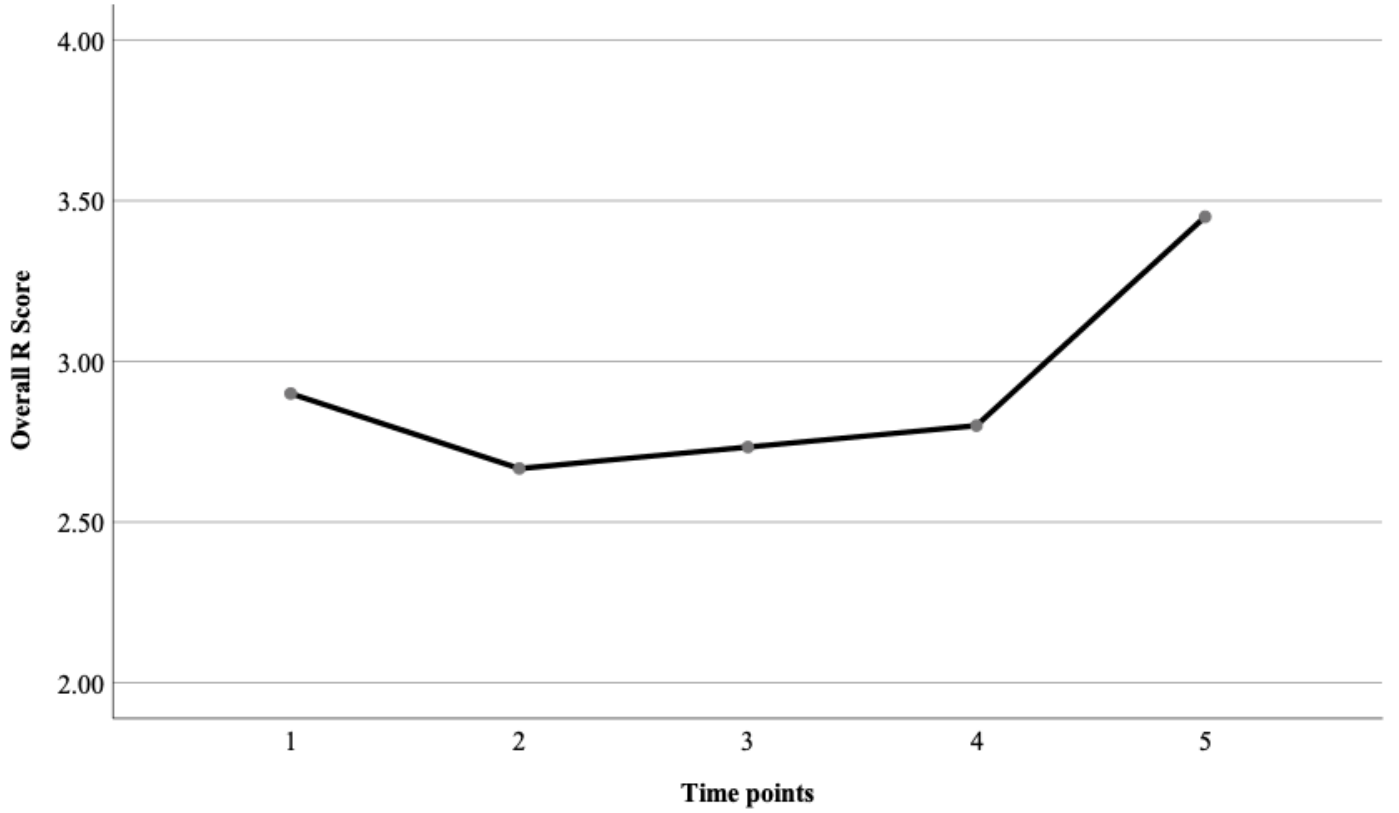

*Figure 5: Study 2 Nurturance Overall Score for Training Clinicians over Time*

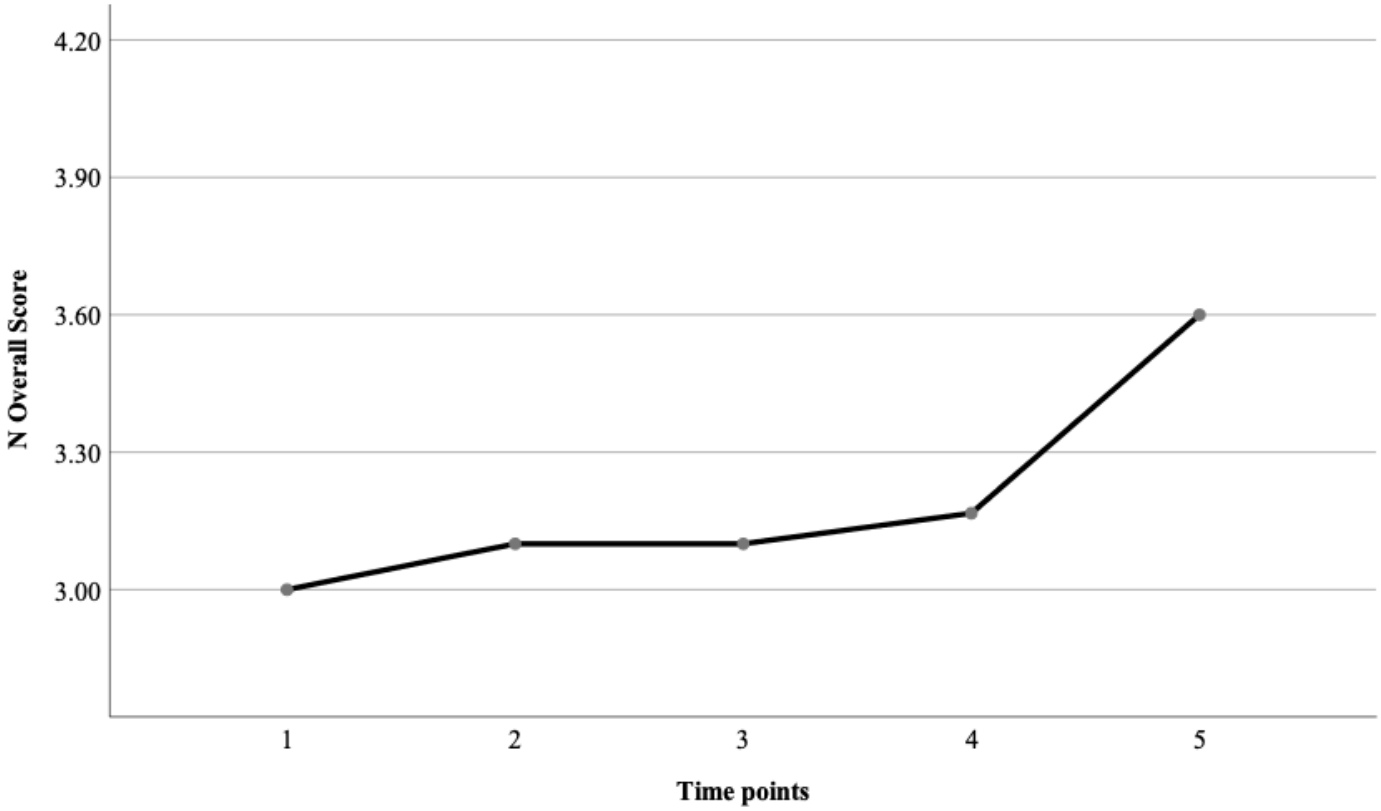

*Figure 6: Study 2 REARN Mean Score for Training Clinicians over Time*

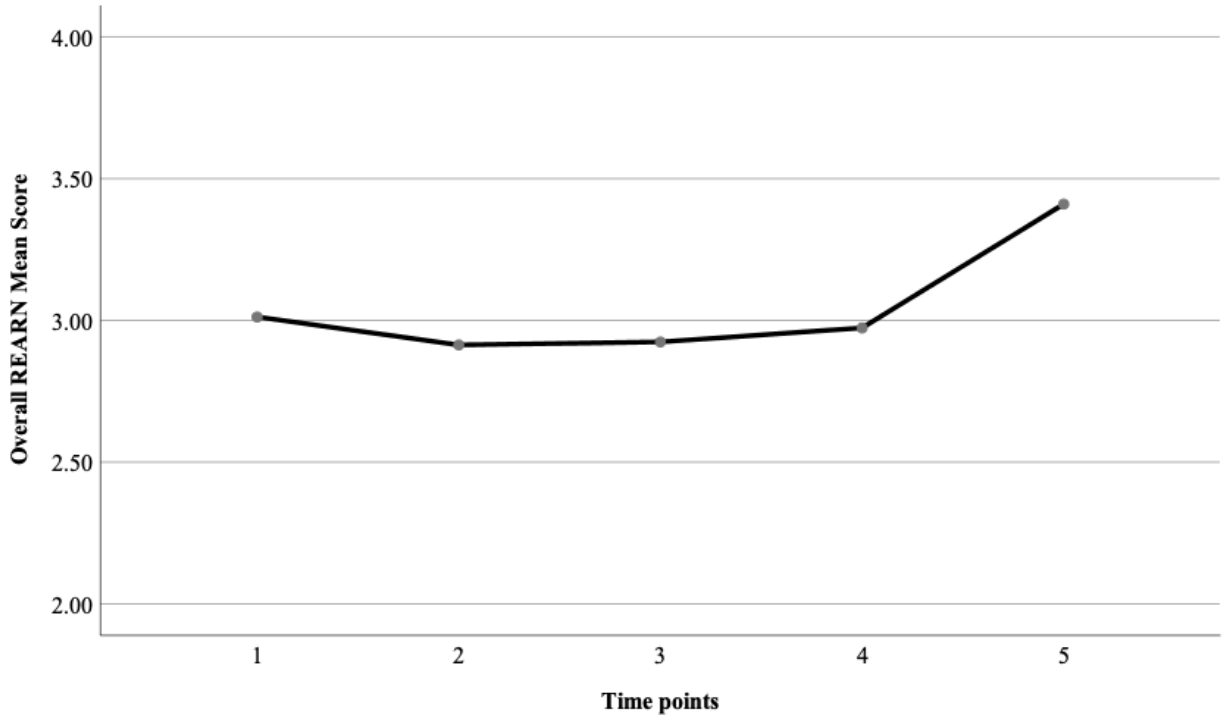

*Figure 7: Study 2 Scree Plot from Exploratory Factor Analysis*

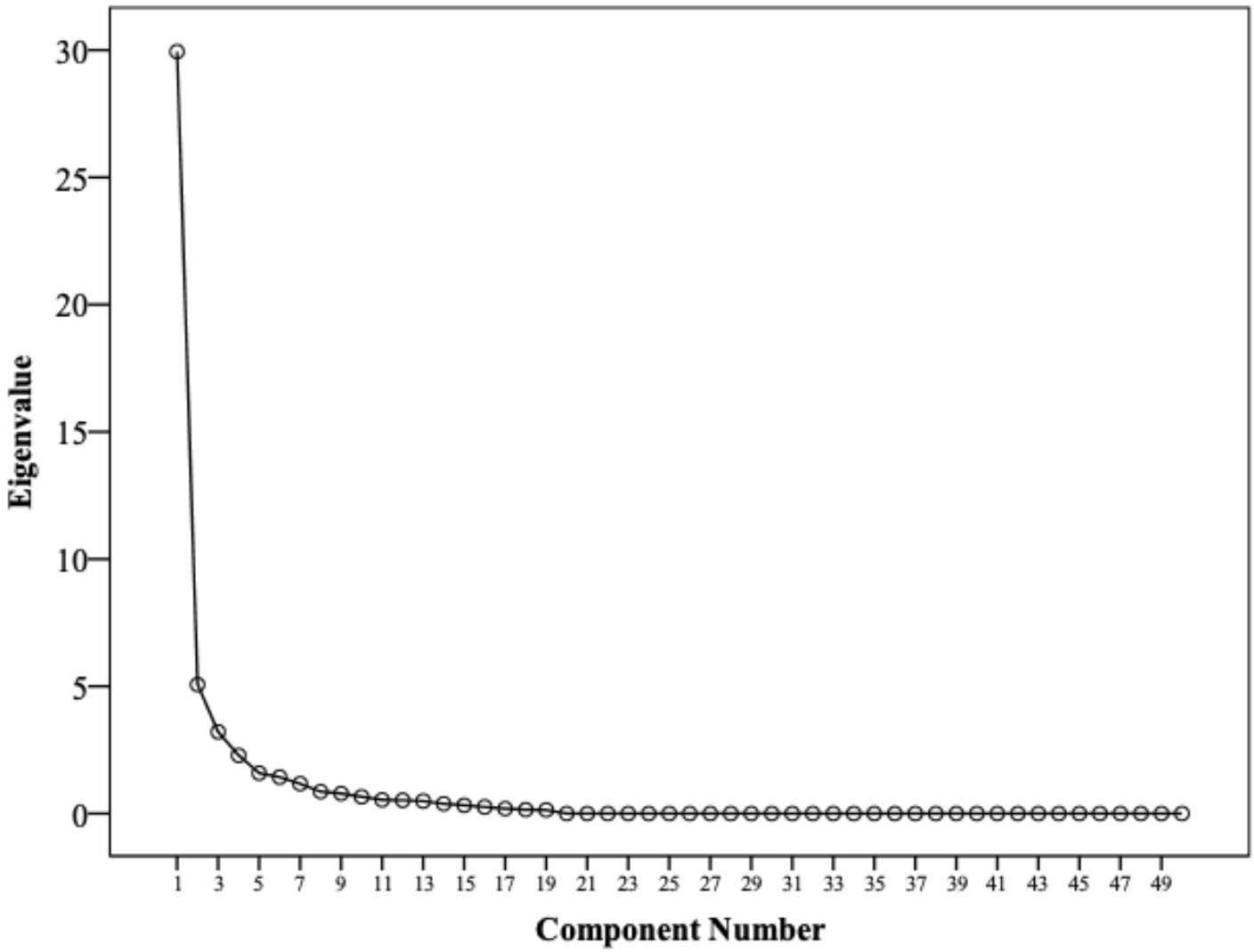

*Table 15: Study 2 Comparing GABI novices and experts in competence as defined by 3 Factor Solution*

| | Novices (*N* =12) | | Experts (*N* =9) | | |
|---|---|---|---|---|---|
| *Factor Score* | *M* | *SD* | *M* | *SD* | *T* value |
| 1-2 minutes | 0.18 | 0.97 | 0.22 | 1.05 | 0.88 |
| 3-6 minutes | 0.05 | 0.63 | 0.06 | 1.37 | 0.20 |
| 7-10 minutes | 0.54 | 1.02 | 0.66 | 0.42 | 3.52** |

* p<.05. **p<.01. ***p<.001

# The REARING Coding System (RCS) Manual

**Reflective functioning**

Reflective Functioning (RF) is the ability to think about the thoughts, feelings, and intentions of another person. It is the hallmark objective of GABI, to which all of the clinical goals and tools are linked. Reflective Functioning is coded when the therapist explores why a person behaved the way that they did and comments on feeling states. This concept is coded when the therapist explores the reasons (thoughts, feelings, and intentions) that underlie behavior. Often this involves labeling emotions that are not yet being articulated or expressed.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity or intrusive. | Clinician mentions a mental state or intention but this has an unclear clinical focus.<br>Or the intervention seems either vague or intrusive. | Clinician recognizes that there is an opportunity for RF and addresses the interaction in a way that promotes RF. | Clinician seizes the opportunity for promoting RF with clear therapeutic intent or performs a meaningful intervention commenting on mental states. | Clinician creates an opportunity and opens up a new aspect of the parent/child's experience that influences behavior and broadens exploration and awareness of mental states. This often includes initiating aspects of play in order to facilitate the understanding of mental states. |
| Ex: A clinician is sitting with a mother and child dyad. The child is playing with dolls and expresses that the baby doll is scared. Parent does not react and clinician does not draw attention to this moment to ask the mother why the child may have said this.<br><br>Ex: A child is playing with a baby doll and she says, "the baby is crying," and the mother says, "why is the baby crying," and the clinician says, "don't cry baby." | Ex. A clinician is sitting with a mother who is visibly anxious and in distress. They are watching the mother's child play, and the clinician asks repeated questions of the mother about what she imagines the child is thinking and feeling, ignoring mom's anxiety. | Ex. A child is yelling and being disruptive during the hello song, and the clinician says, "You don't like that song. You want to start drawing." | Ex. A mother tells the clinician that her daughter bit another child. The clinician asks the daughter, "Why did you bite her?" and when the daughter does not respond the clinician notes, "you must have been really mad." And the mother expands on this statement by saying, "I think she gets frustrated, she doesn't like to share." | Ex. A child in the group refuses to share the toys he is playing with. His mother and the other parents are trying to encourage him to share. The clinician gets down on the ground next to him and thinks out loud about reasons it might be hard to share and the child's mother joins in explaining that the family was recently moved to a shelter where they don't have much space and the child had to leave behind toys. She also recently had a second child and she thought it could be harder for her older son to have to share her. The clinician supported this reflective functioning and said, "sounds like you really can't share right now" To the child. |

**Emotional Attunement**

Emotional Attunement is a critical skill through which therapists try to engage parents in a way that facilitates recognition and understanding of their children's emotional states, conveying to the child a sense of being understood.

Emotional Attunement involves empathizing with and reflecting back an expressed feeling. Often it involves reflecting the emotion in a modulated or modified form, which can have an Affect Regulating effect. However, the intervention itself in this case would be Emotional Attunement. Higher scores in emotional attunement are scored based on the frequency and appropriateness of attunement throughout the coded segment.

"Taking the temperature of the room"

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity. | Clinician recognizes the emotional context but does not address the more complex emotions or feelings that may underlie the parent/child's expression. | Affect was appropriately matched to parent/child, but was not elaborating or intended to intervene. | Clinician facilitates the awareness of the emotional experience, often by matching the expression of affect. | Clinician elaborates on the emotional experience in a way that allows participants to think more deeply about their emotional experience.<br><br>This often includes attending to multiple participants or mirroring emotions through symbolic play. |
| Ex. Parent is angry about something that happened between him/her and his/her partner and is recounting the story. The clinician avoids addressing the angry and somewhat hostile feelings by trying to engage them in the welcome song. | Ex. A parent is talking with a clinician, and telling a story about something bad that happened but she is laughing about it and smiling even though it is a sad story. The clinician matches her smile and laughter, rather than attuning to the sadness of the story that it is masking.<br><br>Ex. Mom/child is telling a sad story and is visibly upset. The clinician matches the sad expression and affect, but does not help mom/child transition and perpetuates the depressed mood. | Ex: Two children are playing with the dollhouse. One child wants the doll that the other is playing with the doll, so the child hits the other child. Clinician remarks, "You are really mad." | Ex. A child is yelling and refusing to share the scissors she is playing with. The clinician mirrors her emotion with her facial expression and by stating, "You are really mad, you don't want to share those scissors." | Ex. A child is having a tantrum because he wants to play with a truck and the parent is trying to calm the child down by distracting the child with other toys. The clinician turns to parent and says, "It looks as if he is really mad. I wonder if he is telling you something about how he feels and wants you to acknowledge it." Clinician helps parent label the emotion and express the emotion back to him in a way that facilitates understanding. |

**Affect regulation**

Affect Regulation is achieved by therapists who are sensitive to the expression of volatile feeling states. Parents are able to develop an understanding of themselves and their children, turning volatile expression into emotional states that can be more easily understood. This is not only coded in instances of negative affect, but also reflects clinician's ability to up-regulate flat affect. Affect Regulation is coded with higher scores especially at times when the parent/child is visibly distressed or over excited and the interventions are intended to lessen/reduce the distress. These may involve slowing down, encouraging the parent to listen to others, and/or engaging parent/child in calming activities.

"Adjusting the temperature in the room"

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity. | Clinician recognizes the opportunity but intervention is vague or interferes with the exploration of affective states. | Clinician delivers a basic intervention intended to calm or upregulate. | Clinician seizes the opportunity to regulate affect with clear therapeutic intent, often by facilitating the awareness of affective states and modeling. | The clinician creates an opportunity to regulate, often by introducing a new activity to up-regulate or down-regulate. |
| Ex. A child is having a tantrum, the clinician looks on almost as if they are waiting for the moment to pass. | Ex. Parent/child is being very loud and upset about transitions between groups, the clinician softly "shushes" the parent/child. | Ex. A child is yelling and being disruptive, the clinician gets down on the ground, and speaks to him slowly and in a whisper.<br><br>Ex: Child is playing with toys happily. Clinician follows the child's lead and affect and does not interfere with the happy moment. | Ex: A child is running to the door and the clinician stops the child from going outside. The child becomes angry and spits at the clinician. The clinician states that she does not like when he does that and asks him if he can calm his body down. Clinician models a relaxed state and uses soothing touch to show child how to down-regulate.<br><br>Ex: Child is emotionally flat and is playing with bubbles with mom. Clinician notices a lack of enthusiasm, the clinician has an animated smile and claps with the child in order to "up-regulate" and share enjoyment with mom and child. | Ex. A child is very excited and running around the room, frequently crashing into others and tripping. The clinician gets on the ground and gently takes the child in her arms over to the Play-Doh. She hands the child a ball of Play-Doh encouraging her in whisper to slowly press it between her palms, and asking her if she can feel it squishing and rolling. |

**Reticence**

Reticence involves waiting to intervene, gives parents and children the space to discover their own feeling states, and enhances self-efficacy. Therapists practice reticence in order to have access to important information that would otherwise be lost. Reticence is coded in moments when the "watching and waiting" is meaningful.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity. Clinician is quick to respond. | Clinician is not reticent enough or the clinician is too reticent. | Clinician recognizes a moment for reticence. Clinician appears to be "present" and attentive. | The clinician provides space for a moment to happen with therapeutic intent, while also demonstrating the ability to tolerate discomfort and uncertainty. | Clinician seizes the opportunity to not interrupt the interaction, while also maintaining a strong supportive presence, facilitating play and interaction, while exhibiting flexibility, i.e., is able to move in and out of reticence as needed. |
| Ex. A mother and child are sitting together as group starts and the child is looking around the room beginning to warm up, and the clinician intervenes, talking to the mother about something unrelated, interrupting the parent-child moment. | Ex. A clinician sits with a mother and child who are attempting to play with each other, and while the interaction is not negative, they have not yet found a connection. The clinician does not intervene, and it appears that the clinician's inaction is not deliberate, but rather the result of uncertainty about what to do or say. | Ex. A mother and child are working on a puzzle together, and a clinician sits at the table with them, observing with a pleasant expression and serving as witness to this nice moment. | Ex. During the child-only group, a clinician is sitting alongside two children who have a conflict. One child stands on a dollhouse and the other child tries to push her off. The children engage for a moment in swatting the air, almost hitting each other, while the clinician watches with her hand on the back of the child who is standing on the dollhouse, keeping her safe and making sure no one gets hurt. Eventually, the children both turn to the clinician, looking for her to intervene, and she says, "hmm," in a wondering tone, allowing the children space to work the conflict out themselves. | Ex. A mother and child who were struggling to connect during play settled in to playing with Play-Doh. The clinician sat across from them, with her arms stretched out, circling around them as if creating space for them separate from the rest of the group and watching intently. When the mother began looking around, the clinician asked what she needed and offered to get it, highlighting the importance of staying within that moment. The clinician met the mother's needs and helped maintain the play by subtly passing the mother things that she needed to play with the child, while staying outside of the child's view. |

**Intergenerational Context**

Intergenerational Context is coded when the primary purpose of the interaction is to acknowledge the parent's past experiences and how their experience of being parented affects the way in which they parent their child.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity. | Clinician address the intergenerational context but does so in a vague or unfit manner. | Clinician comments on memories of the parent's childhood in a way that shows curiosity and interest in the parent's experience. | Clinician comments on memories of the parent's childhood and furthers the interaction by helping them reflect on why their parents may have behaved the way they did. | Clinician helps the parent make connections between their past experiences as a child, their present experience of parenting a child and how this affects who they are and their relationship with their child. |
| Ex: A parent is struggling with her child and doesn't' understand why he is upset. The parent states, "I don't know why he is throwing this tantrum. He has it so much better than I did as a child." The clinician does not further probe into the intergenerational context or question why the parent says this. | Ex: In an effort to relate to the parent, the clinician engages the parent in talk about the types of toys the child is playing with and says, "We didn't have toys like this when we were little." The parent looks frustrated and then remarks that, "Well I didn't have much of any toys when I was little." Clinician addresses the fact that the child has more opportunities but doesn't connect with the parent's intergenerational struggle. | Ex: The parent is sitting with the child playing with a colored puzzle. The parent expresses that they enjoy asking the child what colors he likes and that he is trying to teach him colors and says, "No one ever asked me what my favorite color was when I was a kid." The clinician then acknowledges this and asks what the parent's favorite color is and points to the fact that the parent is clearly trying to do things differently with their child. | Ex: Child and parent are playing when the child begins to have a temper tantrum. The parent mentions to the clinician that in this situation in their childhood they would have gotten beaten. The clinician takes this moment to acknowledge the frustration the parent feels with the child's action and relates this to the parent's frustration they may have felt with them. The clinician also importantly points out the significant different in the way in which this parent is handling the problem and how they are doing better by their child. | Ex: Clinician and parent are discussing the parent's childhood experiences. The parent expresses that they have a fear of abandonment, especially because their father left them at an early age. They also express that their son reminds them so much of their father. The clinician guides the parent through these linkages and notes that this might be the reason that the parent is having such a difficult time separating from his/her child, because of their past experiences as a child. The clinician reassures the parent that they are unlike their parent in the way that they wish to be present with their child. |

**Nurturance**

Nurturance involves providing both instrumental care (i.e. offering parents/children food or drink) as well as providing warmth and empathy with a nonjudgmental stance.

This intervention includes the nurturing of both the parents and children, and promotes the nurturance of the children by their parents. While nearly every intervention can be seen as nurturing in some way, Nurturance is coded when the primary purpose of the intervention is aimed at making the parent/child feel comfortable and taken care of. Nurturance should be coded highly in instances where the clinician maintains a warmth towards parent and child throughout the coded segment.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed opportunity. | Clinician uses a technique that nurtures in a way that does not have a clear clinical focus. | Clinician offers instrumental support or a "holding environment." | Clinician is empathic and warm allowing the participants to feel supported by the clinical context. | Clinician is nurturing to parent or child, but also promotes the nurturing of the child by their parent or children nurturing each other or parents nurturing each other |
| Ex. Parent comes into group complaining about a dispute with his/her partner and seems exhausted, and clinician says, "I'm sorry" and moves on. Does not offer a safe space for parent to express feelings and be comfortable in the group. | Ex. Child is upset because they fell down and hurt their knee. The injury is not particularly bad or visible but clinician says, "it will be okay," and misses the opportunity to comfort the child and perhaps physically soothe the child.<br><br>Ex. Clinician cuddles with child, plays with child's hair, or does another inappropriate physical action that is more suitable to babysitting than therapy. | Ex: A mother comes into group and is very overwhelmed. The clinician spends some time talking with her about what has happened recently. They reflect how difficult this time is and ask her what she needs from the group today. When she says that she would like to just sit and watch her child play, the clinician says "all right, so we're just going to sit back and let you guys have space to just be together." | Ex: Mom and child are both are visibly upset. Clinician comes over and acknowledges both's feelings and finds out that both missed breakfast in their shelter. Clinician offers to get mom coffee and a snack, and provides child with snack as well, all while ensuring the parent and child are comfortable and taken care of. | Ex. Parent and child are playing by the windowsill. The child climbs onto the heater to look out the window. The clinician comes over and places a hand on the back of the child to ensure safety, while asking the parent, who looks visibly distressed, if having the child on the heater is too stressful. Clinician holds both in mind while allowing the child to explore safety and allowing the mother to feel in control.<br><br>Ex. Child is excited and wants to play with another child who is not ready and is bundled up in winter clothes. Clinician engages the child in helping the other child get ready to play by helping him remove his coat and winter boots. Interaction is warm and playful. |

**Group**

Group Context provides important sources of social support to the parents and facilitates peer relationships amongst the children, combating the inherent social isolation faced by the participants. Group Context is coded when the intervention involves multiple parents and/or multiple children, in a way that are all benefited in some way.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Missed obvious opportunity. Parent, child, or dyad exhibits an interest in another parent, child, or dyad and clinician misses the opportunity to make links between members of the group. | Clinician recognizes the opportunity, but intervention is unsuccessful, i.e. clinician uses a technique that forecloses further use of the group as the vehicle for intervention. | Clinician captures the opportunity to engage the dyad with the group in a way that allows for further exploration of mental states and emotional/affective states. | Clinician facilitates the intervention utilizing the group by drawing in another parent/child or dyad and makes meaningful connections between experiences. Clinician is aware of everyone's presence in the group and seamlessly attends to dyads where appropriate. | The group is the primary vehicle of the therapeutic intervention. The clinician engages the multiple group members in a way that fosters other therapeutic aims, like reflective functioning, emotional attunement, etc. |
| Ex. A mother is discussing the death of her mother in the parent group. Another parent speaks up to note that they have had a similar experience. The clinician ignores the other parent's statement and allows the mother to continue discussing the death without allowing for group involvement. | Ex. Two children are fighting over a doll. The clinician distracts one child and gets the child to play elsewhere with other children, rather than using this moment to teach the children how to work out problems with peers with the support from their parents.<br><br>Ex. Children are playing a board game and trying to decide who goes first. Clinician does "eeny, meeny, miney, mo." | Ex. A parent is discussing difficulties in his romantic relationship, and the clinician elicits the support of other group members to offer empathy and help him develop possible solutions.<br><br>Ex. Children are playing with each other happily when one child decides that she does not want to share her toy with another child. The clinician engages both children and their mothers in discussing what it is that they want and what possible solutions there might be. | Ex. One parent is discussing recent difficulties with their child. Another parent chimes in and offers advice that conflicts with the first parent's perspective. Clinician fosters discussion while also allowing the parents to see each other's views in a safe way.<br><br>Ex. One parent is discussing her experience, and it is very similar to one that another parent had. The clinician brings in the second parent is newer to the group, asking if this has resonated with her. | Ex. A mother who recently went through an abortion is discussing the painful emotions she is experiencing. Another mother says that she knows the feeling, and the clinician engages her in order to foster a connection between both women so that they can process and work through these painful feelings together and benefit from having a shared experience. |

**Birth to Three Adherence Measure**
**(GABI)**

**PARENT-CHILD GROUP**

**Structure of the group:**

___Sits on the floor and/or encourages other clinicians/trainees and parents to be at eye level with the children
___Sets warm, comfortable, welcoming tone
___Sings welcome song
___Appropriately focuses conversations around parent-child relationships and other relevant topics
___Follows parents and children's leads in choosing activities and topics of discussion
___Organizes parents and children around separations
___Addresses parents' and children's feelings around separations and reunions
___Sings goodbye song
___Provides support and helps with transition to leave group, reminding parents and children when the next group will be

**Facilitates Interpersonal Support**

___Opens up comments and questions directed at leader
___Group members talk to each other directly, when appropriate
___Attempts to draw-in group members who are not participating
___Supports children's peer play
__Utilizes conflicts as opportunities to problem solve, rather than smothering those conflicts
___Identifies common themes and links in members' comments

**Takes Therapeutic Stance**

___Presents self as leader, not expert
___Demonstrates faith in members' ability to change and grow
___Validating and accepting of parent experiences or efforts with a non-judgmental tone
___Nonverbal body language conveys sense of being allied with parent
___Maintains an active observing stance and shows conscious deliberation when choosing to speak
___In presence of parent, refrains from taking role of ideal parent or playmate
___Is playful, has a relaxed attitude and sense of humor
___Psychoeducation

**Enhances Reflective Functioning**

___When parents use generalities (i.e. "my child always…") prompts them to be more specific
___Encourages parents and children to wonder or imagine what others might be thinking/feeling and/or why they may act as they did
___Prompts children to try to understand each other's emotions (i.e. "Hmm, look at his face, how do you think he feels?" or "I wonder what he wants, what do you think he wants?")
___Comments when someone has an idea, and encourages parents or other children present to let child explore that idea
___Encourages parents to watch, wait and wonder (i.e. "let's just see what happens")
___Uses phrases that indicate tentativeness, such as "I wonder…," "I'm thinking maybe," "I am imagining."

**Promotes the Parent-Child Relationship**
___Redirects children to their parents
___Brings parents and children closer together in joint activities
___Suggests parents face their children, or that older children sit near their parents for group activities
___Reminds children who are upset by separation that the mommies and daddies are talking and they will come back

**Demonstrates Emotional Attunement**
___Shows strong attempt to notice and understand parents' and children's thoughts and feelings
___Demonstrates understanding of parents' and children's feelings by reflecting back or commenting on observation
___Puts words to non-verbalized expressions of emotion
___Responds to parents' and children's needs
___Meets the child or parent where they are, and not limiting negative affect
___Moves flexibly between actively engaging children and parents and allowing children and parents to explore
___Shows sensitivity and understanding of parents' stresses that may impede ability to play

**Helps to Regulate Affect**
___Engages parents and children in specific activities to regulate affect (i.e. rice box, squeezing play-doh)
___Transforms affect when reflecting back heightened affect
___Lowers voice, speaking quietly and or more slowly when affects are heightening
___Demonstrates tolerance of negative affect, alongside attempts to transform affect through reflection

**Highlights Intergenerational Patterns**
___Asks parents about memories of their own childhoods
___Helps parents to reflect on why their parents might have behaved as they did
___Highlights the difference between being the "child of your parents" and "being the parent of your child"
___Helps parents make links between their past, their present and their future – what they have experienced and how it affects who they are, their reactions, and their relationships with their child, members of the family and society.