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Primary Adaptive Emotion, Experiencing, and the Therapeutic Alliance: Predicting Outcome in Emotion-Focused Therapy for Trauma

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Primary Adaptive Emotion, Experiencing, and the Therapeutic Alliance:

Predicting Outcome in Emotion-Focused Therapy for Trauma

By

Shawn J. Harrington

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the Requirements for
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at the University of Windsor

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2016

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AUTHOR'S DECLARATION OF ORIGINALITY

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ABSTRACT

The purpose of this study was to determine if primary adaptive emotions added to the prediction of therapy outcome above and beyond client depth of experiencing. In an effort to provide an explanatory model, the effect of early-therapy alliance and experiencing on working phase primary adaptive emotions were examined. Individual differences in alliance formation, depth of experiencing, and time spent in primary adaptive emotions were also evaluated. An archival data set of $N = 42$ individuals who underwent emotion-focused therapy for trauma (EFTT) for childhood maltreatment was used to code time spent in primary adaptive emotions using the Classification of Affective Meaning States (CAMS). The study further made use of alliance and experiencing ratings. All ratings were completed during primary trauma re-experiencing. Participants' report of interpersonal distress was the index used for therapy outcome. Experiencing in the working phase of therapy, not time spent in primary adaptive emotions, was the best predictor of therapy outcome. Early phase experiencing best-predicted time spent in primary adaptive emotions in the working phase of therapy. From an individual differences standpoint, working phase alliance was the best predictor of therapy outcome for those who had difficulty forming an alliance early in therapy. Depth of experiencing in the working phase of therapy was the best predictor of therapy outcome for those who had difficulty engaging in deepened experiencing early in therapy. The findings of this study suggest that facilitating client experiencing in the working phase of EFTT is important in promoting a good therapy outcome. It further suggests that focusing on the process (i.e. alliance or experiencing) that clients have trouble engaging with early in therapy contributes to the best therapy outcome.

DEDICATION

For Marissa,

Thank-you for your love, support, encouragement, and patience.

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Chapter 1: Introduction

Overview of Current Study

The aim of the current study is to determine if the presence of primary adaptive emotions adds any predictive value to final therapy outcome in emotion-focused therapy for trauma (EFTT), above and beyond other process variables. It further examines key therapy processes (i.e., alliance, experiencing, and primary adaptive emotions) that contribute to therapy outcome at different phases (i.e., early and working) of therapy. The present study also takes individual differences into consideration when examining the process variables that best-predict therapy outcome. As such, it is an in-depth examination of clients' change processes during therapy.

This investigation of change processes builds upon the strong foundation of work by Pos, Greenberg, and Warwar (2009). In their study, the authors examined the therapeutic alliance and client experiencing as client change processes, over time, affecting therapy outcome in a combined sample of 74 individuals who underwent EFT for depression. Approximately two-thirds of the sample was female with an average age of 39. Through a path analysis, they demonstrated that the therapeutic alliance and client experiencing both improved during therapy; the alliance predicted engagement in deeper experiencing; and early experiencing was mediated by later depth of client experiencing in predicting outcome. The study at hand extends this work by examining the same processes (therapeutic alliance and experiencing) in the context of treatment for trauma, and also by adding specific emotions from sequential emotional processing (i.e., primary adaptive emotions), to the prediction. Pascual-Leone and Greenberg (2007) demonstrated that individuals who followed a specified sequence of emotional processing to completion fared better in therapy than those who only engaged with emotions at the beginning of the sequence. Similarly, a subsequent study (Pascual-Leone & Greenberg, 2009) found that

individuals with greater emotional range, within the sequential model, fared better than those with a more restricted emotional range.

Clinically, facilitating the expression of primary adaptive emotions is important because, if Pascual-Leone and Greenberg's research is generalizable, it maximizes the likelihood of a good therapy outcome. Take the example of clients who are able to establish strong relationships with their therapists and engage in deeper experiencing. These clients stand to benefit less from therapy should they only engage in emotions identified by Pascual-Leone and Greenberg (2007) as an early expression of distress, instead of a primary adaptive emotion.

As the example above demonstrates, there are a variety of client change processes (i.e., therapeutic alliance, depth, and primary adaptive emotions) involved in therapy, and clients enter therapy with differing capacities to successfully engage in these. Consequently, it is also important to study individual differences in these capacities throughout therapy in order to maximize treatment outcomes for individuals of all abilities. Pos, Greenberg, Goldman, and Korman (2003) demonstrated that experiencing skills improved over the course of emotion-focused therapy even for individuals who had an initial reduced capacity for experiencing. Without measuring some type of change, erroneous conclusions could have been drawn about the client on the basis of initial experiencing capacity (e.g., experiencing should not be a target of treatment in individuals with an initial decreased capacity for experiencing).

An approach to studying individual differences that takes into account client capacity and potential is closely related to Stiles' (1988; 1996; 2009) concept of *responsiveness*, and represents another aim of this study. Stiles argues that therapists must pay close attention to those processes that a client already possesses versus those that might need more attention. He identifies *responsive* therapists as those who are able to attend to the client's process needs

overall but most importantly in the moment in therapy sessions. Evidently, it is important to focus on the client processes that are in short supply. Conversely, Stiles (1996) also asserts that it is important that a therapist not focus on a client process that is abundant because it precludes other processes that are in short supply, which might otherwise better contribute to therapy outcome. This idea is summarized by Stiles' phrase, "More of a good thing is better when one is not already getting enough" (Stiles, 1996, p. 915). Take as an example, a gregarious and trusting client who presents to treatment with panic attacks. She is likely able to quickly form a good therapeutic alliance with the therapist. Therefore, once a good relationship has already been well established, continuing to focus more on the relationship, at the expense of addressing the client's fear of emotions and their sequelae, would not be optimal use of time in therapy.

The main purpose of this study is to further explore the change processes that contribute to a successful therapeutic outcome. Furthermore, it seeks to identify individual differences in therapeutic change processes, through the lens of *responsiveness*. Elucidating these differences will provide clinicians with the necessary information to tailor treatment to the individual needs of clients in order to maximize the possibility of a good therapy outcome. Ideally, the results of the study would provide a heuristic for therapists to decide which change processes to highlight or focus on with their clients.

The study makes use of archival videotapes of therapy sessions (from Paivio et al., 2010) where participants are engaged in Emotion-Focused Therapy for Trauma (EFTT). Such a sample is useful for studying the therapeutic alliance, depth of experiencing, and primary adaptive emotions as all three of these processes are theorized to be hallmarks of EFTT (Paivio & Pascual-Leone, 2010) and the sequential model of emotional processing is consistent with its phases and can be used as a guide for working with clients. Although the sample consists of

individuals in EFTT, the results may also be applicable to a wide range of therapy orientations, such as Cognitive Behavioural Therapy (CBT) and psychodynamic therapies as the processes being examined (i.e., alliance, experiencing, primary adaptive emotions) are common and important factors underlying differing theoretical orientations. For example, Norcross and Wampold (2011), summarizing research on the therapeutic relationship, concluded that the therapeutic alliance significantly contributes to therapy outcome, regardless of theoretical orientation. Furthermore, Coombs, Coleman, and Jones (2002) have demonstrated the importance of emotional experiencing in CBT and Interpersonal Therapy (IPT) for depression. With respect to sequential emotional processing, studies (e.g., Kramer et al., in press; Kramer, Pascual-Leone, Despland, & de Roten, 2015) have shown that Pascual-Leone and Greenberg's (2007) sequence of emotional processing can be successfully applied to dynamic as well as behavioural therapies. Specifically, Kramer et al. (2015) found that individuals who had better outcomes in short-term dynamic therapy for adjustment disorder were more likely to adhere to the sequence of emotional processing than those with poorer outcomes.

Trauma

A significant proportion of individuals experience a traumatic event over the course of their lives. One estimate from a large-scale study approximates that 50-60% of individuals will experience a traumatic event in their lifetime (Kessler et al., 2005; Kessler et al., 1995). Events of this kind include, but are not limited to sexual assault, physical assault, combat, witnessing violence, motor vehicle collisions, and natural disasters. Of the 50-60% who experience a traumatic event, approximately 7-8% meet the clinical threshold for post-traumatic stress disorder (PTSD; Kessler et al., 1995; Kessler et al., 2005). For a diagnosis of PTSD to be given, the DSM-5 requires that a specific event, which causes or threatens bodily harm or injury to the

self or another, occur. However, a study conducted by Mol et al. (2005) found that individuals who experienced a distressing life event (e.g., sudden unemployment, divorce, relational problems, theft from the home, death of a loved one) experienced more PTSD symptomatology than individuals who had experienced a traumatic event as defined by the DSM-IV. Similarly, Shapiro and Maxfield (2002) distinguished between events defined as traumatic by DSM criteria, referred to as capital “T” trauma, and other traumatic events resulting from experiences of rejection, embarrassment, or attachment difficulties, referred to as small “t” trauma. In a sample of $N = 164$ female survivors of childhood maltreatment, Cloitre, Miranda, Stovall-McClough, and Han (2005) established that survivors of childhood trauma evidenced difficulties in emotion regulation and interpersonal functioning in addition to traditional PTSD symptoms. Such a distinction has led to evidence supporting a second classification of trauma survivors in addition to those with traditional PTSD, a classification referred to as: Complex Post-Traumatic Stress Disorder (CPTSD; Cloitre, Garvert, Brewin, Bryant, & Maerker, 2013).

Treatment of Trauma

Exposure therapy. There is a long list of empirically-validated treatments for trauma, most of which were established on clients who met diagnostic criteria for PTSD (e.g., Beck & Clark; Foa & Kozak, 1996). One of the earliest validated treatments for PTSD was exposure therapy (Keane, Fairbank, Caddell, & Zimering, 1989), consisting of repeatedly exposing individuals to thoughts, images, and other feared sequelae of trauma. The treatment consists of encouraging individuals to process the emotional content of the trauma, resulting in a decrease in distress (Foa & Kozak, 1986). In exposure therapy, emotional processing consists of the presentation of feared stimuli, which typically results in high physiological arousal. Upon subsequent presentations of the feared stimuli, individuals begin to attenuate to the physiological

arousal. The process of reduced physiological arousal and reduction in fear and distress over repeated exposures to feared stimuli is termed habituation, which is believed to be the mechanism of change. Habituation has been shown to be significantly positively related to therapy outcome among clients who underwent therapy for PTSD (Jaycox, Foa, & Morral, 1998). Subsequent research has confirmed the effectiveness of exposure therapy in the successful treatment of individuals presenting with PTSD as a result of varying traumatic events.

A study by Resick and colleagues (2002) examined the efficacy of exposure therapy and cognitive processing therapy (CPT) in treating $N = 171$ female survivors of sexual assault who suffered from chronic PTSD. Compared to the minimal attention treatment control group, both CPT and exposure therapy were efficacious in treating the women with chronic PTSD. A total of 53% (33/62) of individuals in the CPT group and 53% (33/62) of individuals in the exposure therapy group no longer met the criteria for PTSD at the end of treatment, in comparison to 2.2% (1/45) of individuals in the minimal attention control group. Another study by Foa et al. (2005) examined the efficacy of exposure therapy with and without cognitive restructuring in treating female survivors of nonsexual assault, sexual assault, or childhood sexual abuse. The women were randomly assigned to a wait-list control group or one of two active treatment groups: (a) exposure therapy; or (b) exposure therapy with the addition of cognitive restructuring. Depending on treatment response, women in the active treatment groups were offered 9 to 12 sessions of psychotherapy. Results indicated that both active treatment groups were successful in reducing PTSD and depressive symptoms in comparison to the wait-list control group. However, cognitive restructuring did not seem to confer any additional benefit over exposure therapy alone. Those in the active treatment groups also maintained their gains in depression and trauma symptomology and work and social functioning following treatment.

Specific to CPTSD, Cloitre et al. (2010), demonstrated the superiority of exposure therapy with the addition of a skills-based pre-cursor phase to exposure therapy or the skills-based component alone among a sample of $N = 104$ female survivors of childhood abuse. The skills based component lasted eight sessions and was modeled after the findings (Cloitre et al., 2005) that individuals with CPTSD experience difficulties with emotion regulation and interpersonal functioning. Thus, the first sessions were dialectical-behaviour therapy (DBT)-based and provided psychoeducation on emotional regulation, identifying emotions, and acceptance. The remaining four sessions were devoted to resolving interpersonal problems and faulty schemas, assertiveness, and social context awareness. Following the skills-based component, individuals then underwent a second set of eight sessions in exposure-based therapy. It seems that beginning the treatment with a skills-based component conferred additional benefit to participants in the form of better efficacy and fewer adverse events than the comparison groups.

Cognitive behavior therapy. Although it retains some of the behavioural principles used in exposure therapy for PTSD, cognitive-behavioural therapy (CBT) offers a differing treatment approach to treating individuals with trauma. The additional cognitive interventions stem from findings that suggest individuals with PTSD experience excessive negative appraisals of their trauma and similar stimuli, and have difficulty integrating the trauma into their autobiographical memories (Ehlers & Clark, 2000). Clark and Beck (2010) explain the many components of CBT for trauma. First, individuals are educated about the effects of trauma on functioning and any misunderstandings that one might have about symptoms are addressed. Next, negative beliefs and appraisals about the idiosyncratic meaning of the individual's trauma are targeted and modified. Clients are then encouraged to elaborate on their trauma and repeated imaginal

exposure is facilitated. Other components of treatment include addressing cognitive distortions related to symptoms such as nightmares, in vivo exposure to trauma cues, the modification of cognitive avoidance and control strategies and emotion regulation techniques.

A number of studies provide evidence for the efficacy of CBT for the treatment of PTSD due to varying precipitating events (Harvey, Bryant, & Tarrier, 2003). Additionally, in their review of the enduring effects of CBT for depression and anxiety, Hollon, Stewart, and Strunk (2006), concluded that the effects of CBT for PTSD are enduring. A further study by Cottraux and colleagues (2008) examined the long-term effectiveness of CBT for chronic PTSD in comparison to Rogerian therapy. The researchers were able to follow-up with 42 participants two years after receiving 16 weekly sessions of therapy. They concluded that the CBT treatment group retained more participants than the Rogerian therapy group; however, treatment outcomes were similar for both treatment groups at the two-year follow-up. When an intent-to-treat analysis was used to extrapolate data from participants who missed the last follow-up assessment, though, CBT seemed to provide a better outcome than Rogerian therapy.

With respect to childhood maltreatment, a specific, manualized CBT intervention for PTSD, cognitive processing therapy (CPT), was evaluated for use among individuals with complex trauma (Chard, 2005). In this study, $N = 71$ female survivors of childhood sexual abuse were randomly assigned to 17 weeks of CPT or a waitlist control group. Compared to the waitlist control group, those who participated in CPT experienced significant reductions in symptoms of PTSD, depression, and dissociation. Furthermore, these gains were maintained at a one-year follow-up. Therefore, CPT was shown to be a viable treatment for individuals who experienced complex trauma stemming from childhood maltreatment.

Emotion-focused therapy for trauma. Growing out of the humanistic tradition with an emphasis on experiential techniques is emotion-focused therapy for trauma (EFTT). The treatment approach is based on the general model of emotion-focused therapy (Greenberg & Paivio, 1997) with specific adaptations for a trauma population (for a complete overview, see Paivio & Pascual-Leone, 2010). Unlike other treatments, EFTT recognizes that not everyone who has suffered a trauma presents with PTSD symptoms as defined by the DSM-5 (Paivio & Pascual-Leone, 2010). The authors maintain that significant trauma can result from childhood maltreatment and impair psychological functioning without an individual meeting the diagnostic criteria for PTSD. According to Paivio and Pascual-Leone (2010), the primary change processes in EFTT are the therapeutic relationship and the emotional processing of traumatic memories, which occurs through deeper experiencing and meaning construction. The authors further state that these change processes are accomplished through different intervention phases in therapy. They include cultivating an alliance, reducing fear and shame, resolving trauma and attachment injuries, and termination. Specific mechanisms by which these phases are accomplished are empathic responding, experiencing, promotion of primary adaptive emotions, and imaginal confrontation of attachment figures (Paivio, 2013).

A number of studies have confirmed EFTT as an efficacious treatment for trauma. In fact, it is the only evidenced-based treatment for both women and men who have suffered various forms of childhood maltreatment (Paivio, Jarry, Chagigiorgis, Hall, and Ralston, 2010). Early support for EFTT came from a study by Paivio and Nieuwenhuis (2001) that examined the ability of EFTT to treat 32 survivors of childhood abuse. Participants, who were predominately Caucasian females in their mid-thirties with an average of 1 year of post-secondary education, were divided into two groups: an active treatment group and a delayed treatment group. Those in

the active treatment group received 20 weeks of EFTT and showed substantial improvement over the delayed treatment group in multiple domains. Moreover, these improvements were maintained at a 9-month follow-up. Since then, other studies (e.g., Paivio & Patterson, 1999; Paivio, Hall, Holowaty, Jellis, & Tran, 2001) have demonstrated the effectiveness of EFTT's mechanisms of change, such as the therapeutic relationship, and experiencing.

Change Processes

A number of empirically validated approaches to treating trauma and PTSD exist. Three of the previously discussed approaches, exposure therapy, CBT, and EFTT, have varying conceptualizations of psychological dysfunction and proposed mechanisms of treatment and client change. However, although not evident at first glance, these approaches to trauma treatment, among others, likely share common change processes. A change process is a mechanism in therapy by which change occurs (Kazdin, 2009) and includes processes such as the therapeutic alliance and emotional processing.

As Pachankis and Goldfried (2007) point out, studying these mechanisms of change is important for several reasons. First, it provides a link between specific components of therapy and their contribution to a successful outcome. This information provides insight into why a treatment is successful, thereby lending it credibility. Second, it provides the clinician with guidance as to important areas of focus during treatment. Some process research even provides clinicians with therapeutic markers to attend to in order to gauge progress and facilitate client change. Such an approach to therapy is consistent with Stiles' (1988) idea of responsiveness. According to Stiles, responsiveness in therapy occurs when therapists adjust their interventions and focus on the particular needs of clients, and then clients adjust accordingly. This interchange is reminiscent of a dance whereby one partner moves and the other moves accordingly, affecting

the course of exchange between each partner throughout the dance. For example, an attuned therapist might realize that the client is speaking in a detached manner and encourage the client to inject more aspects of her personal experience into what she is saying. The client might respond accordingly, leading the therapist to continue encouraging this process and perhaps even facilitating a more emotional exploration of the client's content. Stiles (2009) and others (e.g., Castonguay et al., 2010) have acknowledged that the process research of psychotherapy is important in that it allows therapists to tailor treatment to their clients; however, they also acknowledge that responsiveness makes it difficult to determine the exact relationship between a process variable and therapy outcome due to the dynamic therapist-client interaction.

The Therapeutic Alliance

Lambert (Asay & Lambert, 1999), drawing on his years of experience as a psychotherapy researcher, estimated that the therapeutic relationship accounts for 30% of the variance in psychotherapy outcome, double that of the variance accounted for by therapy model or techniques. Norcross and Wampold (2011), who examined many meta-analyses on the subject as part of a task force on evidence-based therapy relationships, similarly concluded that the relationship accounts for how much people improve at least as much as particular treatment modality. A meta-analysis (Horvath, Del Re, Flückiger, & Symonds, 2011) based on over 200 studies found that the relationship between the therapeutic alliance and therapy outcome in individual therapy was a moderate correlation of $r = .275$. A more recent longitudinal meta-analysis (Flückiger et al., 2012) strengthened the findings of the previous study by examining moderators of therapeutic alliance and outcome. Based on 201 articles, the authors found that research design, use of disorder specific manuals, specificity of outcomes, CBT or other types of treatment, and research allegiance did not significantly moderate the relationship between

therapeutic alliance and psychotherapy outcome. Evidently, the therapeutic alliance is an important predictor of psychotherapy outcome. Moreover, it is encouraging that therapists recognize this fact, as demonstrated by a survey by Castonguay and colleagues (2010). These researchers collected data from 121 participants and their therapists, as part of a practice research network, on what were the most helpful and hindering aspects of therapy: therapists identified alliance strengthening as one of the top three helpful aspects of therapy. Participants also identified alliance strengthening as helpful although not as strongly as therapists.

Therapists across theoretical orientations recognize the importance of the therapeutic alliance's positive contribution to therapy. EFFT, for example, explicitly states that the therapeutic relationship is a major change process in therapy (Paivio & Pascual-Leone, 2010). Others, such as exposure therapy and CBT, do not implicate the therapeutic relationship as a sufficient process of change in trauma treatment. Nonetheless, research on a broad range of therapies confirms that the therapeutic relationship is one of the most important psychotherapy processes (Norcross & Wampold, 2011). For example, McLaughlin and colleagues (2014) examined therapeutic alliance patterns in exposure therapy for individuals for post-traumatic stress disorder. Their sample consisted of $N = 116$ participants who underwent 10 weeks of exposure therapy. The researchers looked at individuals who experienced repaired ruptures, those who had un-repaired ruptures, and those who did not experience ruptures at all. They found that those who experienced an alliance rupture that was not repaired had significantly poorer outcomes as measured by PTSD symptomology. Furthermore, higher therapeutic alliance scores predicted better overall treatment outcomes. It is not surprising that 46% of the sample experienced an alliance rupture, given that this figure is consistent with alliance ruptures across differing therapies (Safran et al., 2011). Taken together, the procedures of exposure therapy and

the high frequency of alliance ruptures suggest that establishing a strong therapeutic alliance that provides the client with a sense of safety is a priority in exposure-based therapy.

Cognitive behaviour therapists similarly regard the therapeutic alliance as an important change process. Researchers (Langhoff, Baer, Zubraegel, & Linden, 2008) examined the therapeutic alliance from the perspective of therapists, clients, and outside observers during a cognitive behaviour treatment of 72 individuals with a diagnosis of generalized anxiety disorder (GAD). Several aspects of the alliance were measured including: focusing, empathy, transparency, and progress. Results of the study demonstrated that the CBT therapists had high alliance ratings, which were sustained over the course of therapy as reported by all three perspectives (i.e., therapist, client, and observer). Furthermore, as expected, there was a significant positive relationship between the therapeutic alliance and therapy outcome. Interestingly, this relationship was only found in the ratings of the outside observer and not those of the therapist or the client.

As mentioned, EFTT places an explicit emphasis on the role of the therapeutic alliance as one of its most important change processes. Paivio and Pascual-Leone (2010) identify the therapeutic alliance, in addition to memory work, as a primary change process in EFTT. According to these authors, the main ingredients of humanistic therapies are central to achieving a holistic alliance, including compassion, genuineness, and empathy. The relationship provides a foundation for allowing the client to feel safe and supported in the difficult process of re-experiencing traumatic events and also models and serves a reparative role for previously failed attachment relationships (2010). In a process-outcome study (Paivio et al., 2001) 37 survivors of childhood abuse underwent approximately 16 sessions of EFTT for treatment of their trauma. The authors found that a strong therapeutic alliance was significantly related to an increase in

participants' self-esteem and resolution of their trauma at therapy termination and at 9-month follow-up, independent of their engagement in the imaginal confrontation procedure. Therefore, theory and empirical evidence both speak to the importance of establishing a strong therapeutic alliance to facilitate good client outcome in experiential-humanistic therapies. In summary, theory and research across and within theoretical orientations overwhelmingly point to the therapeutic alliance as a key mechanism of change in psychotherapy.

Emotional Processing

Emotional processing is a broad term used to describe the experience, and subsequent transformation, of an emotion so that it is no longer distressing (Rachman, 1980). In the context of psychotherapy, presumably emotional processing results from the client participating in some type of targeted or focused intervention encouraged by the therapist. What constitutes emotional processing and the interventions that facilitate this therapeutic change process differ by theoretical orientation. Nonetheless, emotional processing has been recognized as an important contributor to psychotherapy outcome (e.g., Greenberg, 2012; Sloan, 2006; Pascual-Leone, Paivio, & Harrington, 2016; and Whelton, 2004).

Emotional processing in exposure-based therapy. Emotional processing in exposure therapy is posited to occur as a function of repeatedly exposing a client to a feared stimulus or stimuli (Foa & Kozak, 1986). Behavioural therapists contend that when presented with the feared stimulus, clients initially experience a high level of emotional arousal (i.e., fear). However, upon successive presentations of the stimulus, arousal gradually attenuates until it no longer produces a highly arousing fear response. As Foa and Kozak (1986) describe it, individuals begin to observe that the perceived characteristics of the stimulus that they fear are absent or at least disproportionate to the actual characteristics of the stimulus. The process of fear attenuation over

time as a result of repeated exposure to a fear stimulus is termed *habituation*, and is considered to be at least one form of emotional processing (Rachman, 1980). In fact, the process of habituation is associated with psychotherapy outcome (Foa & Emmelkamp, 1983; Jaycox, Foa, and Morral, 1998). In their study, Jaycox et al. (1998) followed 37 female survivors of sexual assault who were treated with six sessions of exposure therapy. The researchers then performed a cluster analysis based on participants' reported average distress levels during therapy. Three clusters were formed: (a) Those with high initial emotional engagement (i.e., anxiety) and gradual reduction between sessions; (b) those with high initial engagement and no reduction; and (c) those with moderate initial engagement and no reduction. Results of the study revealed that those in the first group, who experienced high emotional engagement and gradual reduction between sessions, had the best therapeutic outcomes. The authors note that those in the other two groups likely did not fare as well because they did not experience anxiety, which needs to be accessed to decrease it (in the case of those with moderate emotional engagement), and did not relive the event, as opposed to simply remembering the event, during exposure (in the case of those with high emotional engagement and no habituation). Such findings and their interpretation underscore the importance of having some type of emotion distress that a client has access to, and re-experiencing it in order for emotional processing to occur.

Emotional processing in cognitive behaviour therapy. Despite the fact that cognitive behaviour therapy emphasizes the effect that distorted cognitions have on emotion (e.g., Beck, 2011), the way in which emotional processing occurs in-session is not always obvious. From the perspective of the cognitive model, distorted and negative cognitions have a direct effect on one's mood (2011). For example, the automatic negative thoughts, "This is dangerous," and "I can't handle this" will likely elicit an anxiety response in an individual who has experienced

some type of trauma. The goal of the ensuing intervention would be to reduce the frequency of the automatic negative thoughts and precipitating core belief, by changing how one thinks about them, resulting in a reduction in the distressing emotion (2011). Such a description provides a general idea of how emotional processing might occur; however, some researchers (e.g., Samoilov & Goldfried, 2000) have provided a more nuanced view of how successful emotional processing occurs in CBT.

From the perspective of Samoilov and Goldfried, emotional processing occurs as a result of ascribing new meaning to a distressing emotion by using a cognitive reframe. This change can occur by encouraging the client to look at a distorted cognition in a different light, consequently reducing the client's distress. Presumably the client becomes aware that the way that they are viewing something is actually inaccurate (i.e., a distorted cognition). For long-lasting emotional processing to occur, as Samoilov and Goldfried point out, it is ideal for the client to experience the distressing emotion while engaging in the cognitive reframe. When client affect is activated during the meaning-making process, there is a stronger modification of the schema associated with the distressing emotion. In their study of in-session client emotion and therapist responses, researchers (Coombs, Coleman, & Jones, 2002) examined 128 CBT and Interpersonal Therapy (IPT) transcripts. They used the Psychotherapy Process Q-set to identify therapists' attitudes towards emotion and identify other aspects of the therapy process. They then factor analyzed the PQS session ratings to reveal 3 factors, the first of which was "collaborative emotional processing." The types of things that loaded on this factor included attunement to client feelings, non-judgment, empathy, and accurate perception of client experience in session. Not only was the factor present in CBT as well as IPT, but it also significantly predicted positive therapy

outcome. Therefore, emotional processing is arguably a key change process in CBT and is predictive of a good therapeutic outcome.

Emotional processing in experiential therapy. Emotion-focused therapy for trauma, and emotion-focused therapy, in general, follow from the humanistic-experiential traditions of psychotherapy. As such, emotional processing plays a central role in client change (Paivio & Pascual-Leone, 2010). Greenberg and Pascual-Leone (2006) outlined four types of emotional processing that occur in psychotherapy, including EFT and EFTT: (1) emotional awareness and arousal (2) emotion regulation (3) reflection on emotion; and (4) emotional transformation. They state that perhaps the most fundamental form of emotional processing, especially in experiential therapies such as EFTT, is emotional transformation. Greenberg (2002) defined emotional transformation as the process of changing emotion with emotion. In this process, a shift from a maladaptive, general emotional experience to a more adaptive or nuanced emotional experience. A change such as this is accomplished by activating the maladaptive and adaptive emotion simultaneously or an adaptive emotion in response to a maladaptive emotion. In EFTT, and other experiential therapies, emotional transformation is thought to occur via two key mechanisms: depth of experiencing; and the experience of primary adaptive emotions.

Depth of experiencing as emotional processing. Gendlin (1996) considers depth of experiencing to be a form of emotional processing. In EFTT, it is considered both a change process and an intervention (Paivio & Pascual-Leone, 2010). That is, deepened experiencing leads to successful emotional processing and the therapist facilitates client *experiencing* in order to encourage this change. As stated, experiencing is gauged by its depth, or the degree to which clients engage with and explore their feelings and meaning resulting from their distress (Klein, Mathieu-Coughlan, & Kiesler, 1986). At lower levels of experiencing, clients do not speak about

their internal experience and refer only to external events surrounding their distress in a detached manner. In contrast, at higher levels of experiencing, clients fully engage with their internal experience, question these experiences, allow newly emerging internal experiences, and integrate these elements in a meaningful way. As an example, some clients begin therapy by speaking about their traumas in a very impersonal manner, referring only to external factors such as the time of day, or details about the abuser (e.g., demeanor, clothing, etc.). In an effort to deepen the experiencing, and therefore emotional processing, therapists might conjecture at how the client must have felt in their particular situations. If the intervention is successful, clients might respond by speaking more about their internal experience. Gradually, these clients are led to reflect on their experience, what it means to them, and be attuned to other internal experiences that might arise. Therefore, a shift takes place from a vague, detached experience to a more internal, idiosyncratic, and meaningful experience.

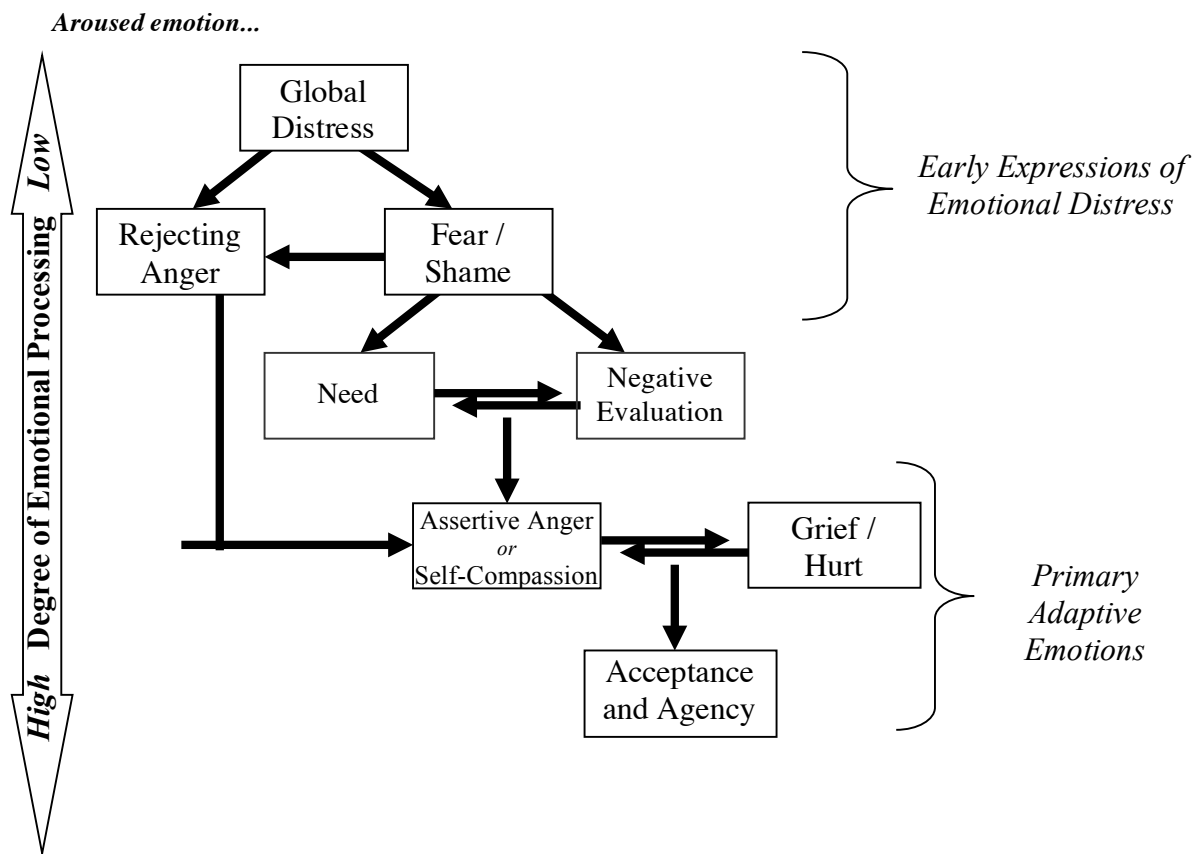
A great deal of research has demonstrated the positive impact of client experiencing on therapy outcome. In a study of 34 individuals who underwent experiential therapy for depression, researchers showed that depth of experiencing in the early and late phases of treatment were predictive of overall treatment outcome (Pos, Greenberg, Goldman, and Korman, 2003). The authors further discovered that experiencing in the late phase of treatment mediated the relationship between early treatment experiencing and therapy outcome and that experiencing increased as therapy progressed. In a similar study, Goldman, Greenberg, and Pos (2005) examined the impact of depth of experiencing on therapy outcome in experiential treatment of 35 depressed individuals, the majority of whom were post-secondary educated, Caucasian, and female, with an average age of 40. Unlike the previous study, the researchers selected themes based on repeatedly discussed topics that were important to the participant. Experiencing was

rated on these themes early in therapy and several times in the last half of therapy. The researchers concluded that depth of experiencing on themes in the last half of therapy significantly predicted therapy outcome above and beyond early experiencing and the therapeutic alliance. However, the predictive power of experiencing was not as strong for emotion themes as it was for emotion episodes, or instances in which participants speak about the experience of an emotion in response to a situation, in the Pos and colleagues (2003) study. In another study, Pos, Greenberg, and Warwar (2009) used a path analysis to examine depth of experiencing, in addition to the alliance, in treatment for depression across the beginning, working, and termination phases of therapy. They concluded that working phase experiencing was the best predictor of therapy outcome. Furthermore, the results demonstrated that a person's early capacity for emotional processing is related to their therapy outcome, especially as it relates to depressive symptoms. Specific to EFTT, Ralston (2006), who used the same sample as the present study (i.e., Paivio et al., 2010), found that client experiencing was moderate to high and significantly related to a decrease in participants' reported distress related to interpersonal problems and the resolution of their trauma during trauma exploration. Specifically, higher levels of client experiencing were associated with a decrease in interpersonal distress and a higher degree of trauma resolution. However, Ralston did not find any change in client experiencing from early to working or termination phases of therapy. An earlier study (Robichaud, 2002) of EFTT, using the Paivio and Nieuwenhuis (2001) sample ($N = 37$), demonstrated a similar relationship between client experiencing and interpersonal distress.

Primary adaptive emotions. Although the research support for depth of experiencing as emotional processing and its relation to outcome is strong, it does not account for specific emotions that a client might experience. Though not mutually exclusive, a somewhat different

mechanism of emotional processing was proposed by Pascual-Leone and Greenberg (2007). With a sample of 34 participants, the majority of whom were women in their early forties, they empirically validated a sequence of emotional processing, whereby clients successfully resolve their distress, as determined by expert raters, by moving through a series of affective and meaning states (see Figure 1 for a summary of the step-by-step model). The early emotional states in their model (i.e., global distress, fear/shame, and rejecting anger; see Pascual-Leone & Greenberg, 2007, for rationale on combining the observations of fear and shame), labeled “early expressions of distress,” were evidenced in individuals who successfully resolved emotional distress and individuals who did not successfully resolve their emotional distress. In contrast, later primary adaptive emotions (i.e., assertive anger, self-soothing, and hurt/grief), labeled “primary adaptive emotions,” were only present in cases where distress was successfully resolved at the end of therapy. According to Pascual-Leone and Greenberg’s research, early expressions of distress are largely undifferentiated, secondary (i.e., defensive rejecting anger), or maladaptive (i.e., traumatic fear or shame) emotions characterized by a high degree of emotional arousal (e.g., sobbing, yelling). These states are often poorly elaborated and not productive in resolving distress. To put it another way, getting “stuck” in these early emotional states is hindering in therapy. Conversely, primary adaptive emotions are more differentiated, personally meaningful, more pertinent to the resolution of distress, and involve more regulated emotional arousal. It is the experience of these more elaborated emotional states that leads to the successful resolution of client distress. Recently, researchers McNally, Timulak, and Greenberg (2014) further validated the sequence of emotional processing through an intensive case study of 16 sessions of EFT treating a female client for depression.

Figure 1. Sequential model of emotional transformations (modified from Pascual-Leone & Greenberg, 2007; with permission).



As Figure 1 depicts, four major emotional processing developments occur as clients move through the sequence to the resolution of their distress. First, most clients begin therapy in a state of global distress, which is marked by a high amount of arousal and relatively little meaning as to the source of their distress (see top of Figure 1). Second, clients become slightly more specific and differentiated in their articulation of their concerns as they express the early states of rejecting anger or fear/shame. Third, the transition from early expressions of distress to primary adaptive emotions occurs only after clients identify an unmet experiential need (e.g., a need to be loved, a need to be respected) or a negative self-evaluation (e.g., a core dysfunctional belief, such as “I’m unlovable;” see middle of Figure 1). Fourth, after identifying an existential need or a negative self-evaluation comes the attribute of new meaning to the client problem, translating into a more positive self-evaluation (e.g., “I deserve to be loved... to have my needs considered”). Such an evaluation marks the transition into the primary adaptive emotions of assertive anger, self-soothing, and hurt/grief, involving further meaning-making and personal elaboration of the source of distress (see bottom of Figure 1). Moving through the sequence culminates in the synthesis of the later emotional states and the resolution of distress, termed acceptance and agency. In this final state, clients accept their distress as a result of identifying that they are able to cope and function despite their experiences, with a strong sense of being able to move forward (i.e., agency).

Additional research has supported the role of sequential emotional processing in contributing to positive therapy outcomes. Recently, researchers (Kramer, Pascual-Leone, Despland, & de Roten, 2015) studied sequential emotional processing in 32 individuals who underwent short-term dynamic psychotherapy for adjustment disorder. The sample was divided in half according to those who experienced a good outcome ($n = 16$) and those who experienced a

poor outcome ($n = 16$) at the end of treatment using the Reliable Change Index (RCI; Jacobson & Truax, 1991) at the end of therapy. They found that the primary adaptive emotion state of hurt/grief (i.e., primary and adaptive sadness) was more often evidenced in those who had a good therapy outcome compared to those who did not. Furthermore, the presence of hurt/grief predicted 19% of the change in depressive symptomology in the good outcome group. Another study on the treatment of borderline personality disorder (Kramer et al., in press) demonstrated that another primary adaptive emotion in the sequential model, assertive anger, mediated symptom reduction in a DBT-like skills training program. A number of case studies (e.g., McNally, Timulak, & Greenberg, 2014; Keogh, 2013) have also demonstrated the contribution of primary adaptive emotions to therapy outcome.

Individual Differences in Change Processes

In summary, the therapeutic alliance and emotional processing are key process variables that contribute to successful therapy outcomes. However, Stiles (2009) points out that individuals enter therapy with different requirements and capacities. While many different kinds of process components such as a stronger alliance, deeper experiencing, or a certain kind of emotional experience are all important to the process of treatment, they also represent relative strengths and weaknesses that clients bring to treatment. As such, responsible and attuned therapists will adjust their interventions and provide more or less of a certain process component based on the needs of clients, a process he terms *responsiveness*. Moreover, Stiles (1996) asserts that it is not always to the client's advantage to focus on a process component that is not in short supply. By focusing on an already abundant process component, therapists are essentially ignoring another process component that could be attended to and developed, thereby contributing to a better therapeutic outcome. For example, if a client enters therapy with the demonstrated ability to readily form a

strong relationship with the therapist, the therapist need not spend a great deal of time on the therapeutic alliance once one has been formed.

Two previously discussed studies (i.e., Jaycox et al., 1998; Pos et al., 2009) have examined individual change process differences in therapy, albeit in different ways. As discussed earlier, Jaycox and colleagues (1998), were able to identify subgroups based on emotional engagement (i.e., anxiety) and emotional processing (i.e., habituation); and those who initially had high anxiety, which gradually attenuated between sessions fared the best in therapy. The implications of these results are meaningful to the discussion of individual differences because they help inform clinicians as to which processes they should or should not facilitate. For example, it would not be advantageous to spend a great deal of time promoting emotional arousal and re-experiencing in individuals in the first group. Instead, the therapeutic effort would perhaps be best spent on the procedures of exposure. In contrast, more time promoting re-experiencing of the trauma would be beneficial for the other two groups because for them that represented a relative need.

From an experiential perspective, Pos et al. (2009) examined the contributions of the therapeutic alliance and depth of experiencing to outcome across three different time points (i.e., beginning, working, and termination phases). With a sample of 74 individuals who received experiential treatment for depression, it was determined that the alliance and depth of experiencing increased over the course of therapy. Interestingly, the therapeutic alliance at the beginning stage of therapy directly predicted a number of therapy outcome measures. However, the best predictor of therapy outcome was depth of experiencing during the working phase of therapy. Moreover, the authors found that the therapeutic alliance during the working phase significantly contributed to experiencing and therapy outcome. The results of this study provide a

number of implications for practicing therapists. First, clients are sometimes limited by their ability to form a strong therapeutic relationship at the beginning of therapy. Therefore, every effort should be made to attend to, and strengthen the therapeutic alliance early in therapy if the client seems to have difficulty establishing a relationship. Second, maintaining the therapeutic alliance is also important as it contributes to depth of experiencing in the working phase of therapy, which opens the way for a distinct potential process of change. Finally, it follows that promoting deepened experiencing contributes to a good therapy outcome over and above the alliance. Further underscoring the importance of experiencing in therapy is the fact that difficulty engaging in experiencing could limit the available change processes, thereby negatively impacting outcome in an experiential therapy.

Attention to individual therapy process differences is especially important in EFTT. Due to the nature of their trauma, clients who have experienced substantial childhood abuse are likely to have difficulty, and differing capacities, for forming relationships with others and attending to, and exploring, their emotional experiences, which are central to EFTT (Paivio & Pascual-Leone, 2010). As previously mentioned, Ralston (2006) demonstrated that higher experiencing, on average, over the course of therapy was associated with good therapy outcomes (i.e., less interpersonal distress and better trauma resolution). However, unlike Pos et al. (2009), Ralston did not examine the relationship between experiencing at different phases of therapy and outcome. Such an investigation would further our understanding of individual differences in EFTT. Therefore, as evidenced by these studies, individual differences in change processes exist and having knowledge of how individuals differ and how those processes affect therapy outcome has the potential to improve EFTT and similar experiential treatments.

Current Study: Purpose and Hypotheses

The general purpose of this study was to examine the contributions of change process to psychotherapy outcome among individuals who have experienced a trauma. It made use of archival data (Paivio et al., 2010) to study the therapeutic alliance and two different proposed mechanisms of emotional processing (i.e., depth of experiencing and primary adaptive emotions) as change processes affecting the effectiveness of EFTT for individuals who have experienced a trauma. Moreover, this study sought to provide a comprehensive overview of individual capacities to engage in these change processes at various stages of therapy and how it might impact overall changes in functioning. Such information can be utilized by therapists to maximize treatment outcomes for their clients.

The current study is unique in that it is one of the first known studies to examine the contribution of both depth of experiencing and primary adaptive emotions as mechanisms of emotional processing in EFTT and experiential therapy, in general. There is a lot of empirical support (e.g., Goldman, Greenberg, & Pos, 2005; Kramer et al., 2015; Pascual-Leone & Greenberg, 2007; Pos et al., 2003) for the ability to predict treatment outcome from depth of experiencing and primary adaptive emotions. However, no study to date has tested both at the same time to see if one is more predictive of outcome than the other. Answering this question is important because should primary adaptive emotions be a better predictor or have unique predictive power, this would suggest that it is important for clients to not only engage in deepened experiencing but that the emotion that is the target for deepened experiencing is also important.

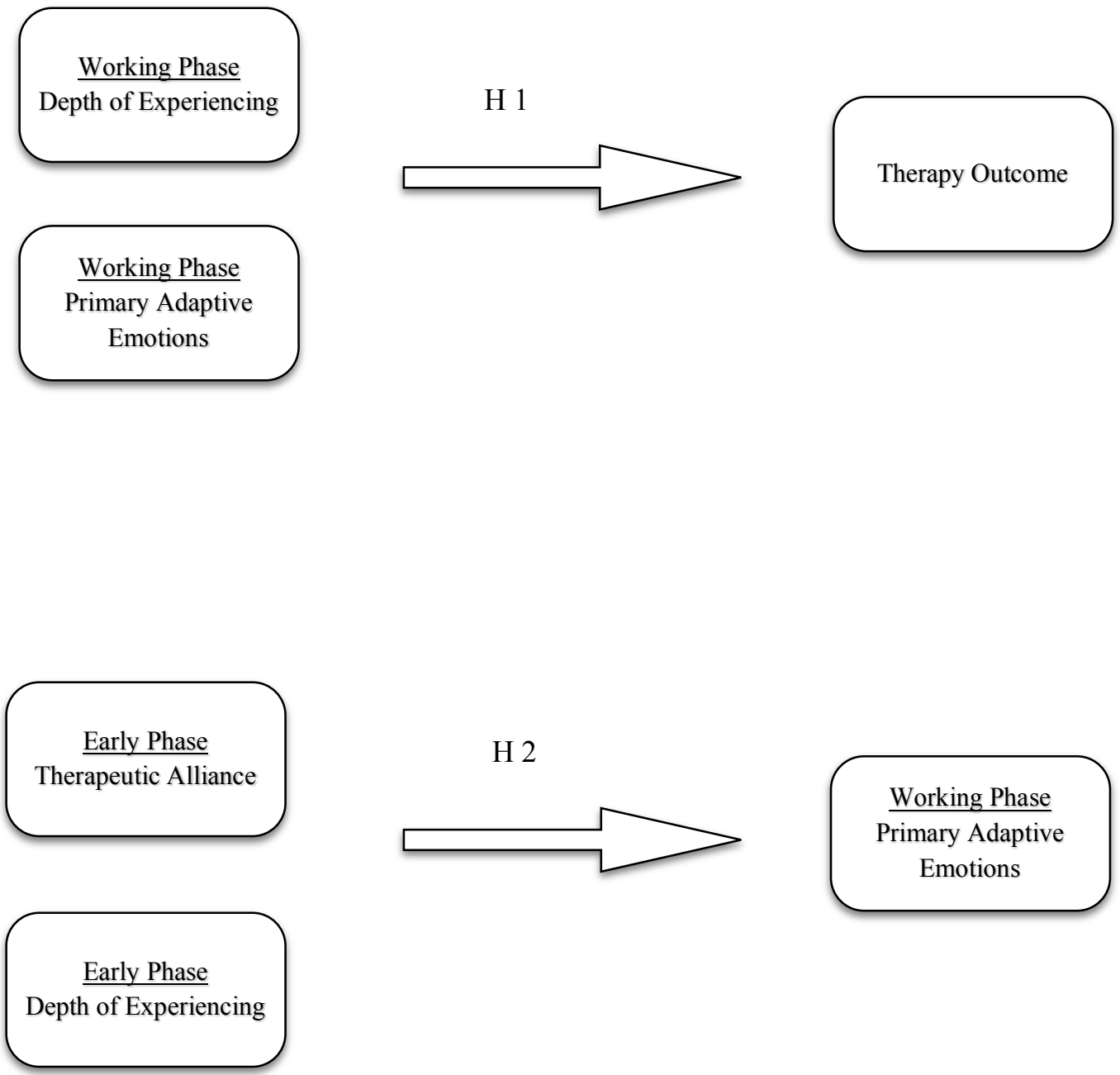
The objective of this study was to approach causal and explanatory models by way of a mediation analysis to illuminate the unique contribution of psychotherapy processes that

maximize the likelihood of successful client outcomes. Working backwards from the contribution of working phase processes to outcome, this study first sought to determine if primary adaptive emotions (from Pascual-Leone & Greenberg's 2007 model) are a unique predictor of therapy outcome above that of depth of experiencing in EFTT. Next, early phase therapeutic alliance and depth of experiencing were used to predict primary adaptive emotions (the hypothesized unique predictor of outcome). Finally, guided by theory (e.g., Pos, Greenberg, & Warwar, 2009) but somewhat exploratory, the study used the best predictors to test a mediation model involving treatment outcome.

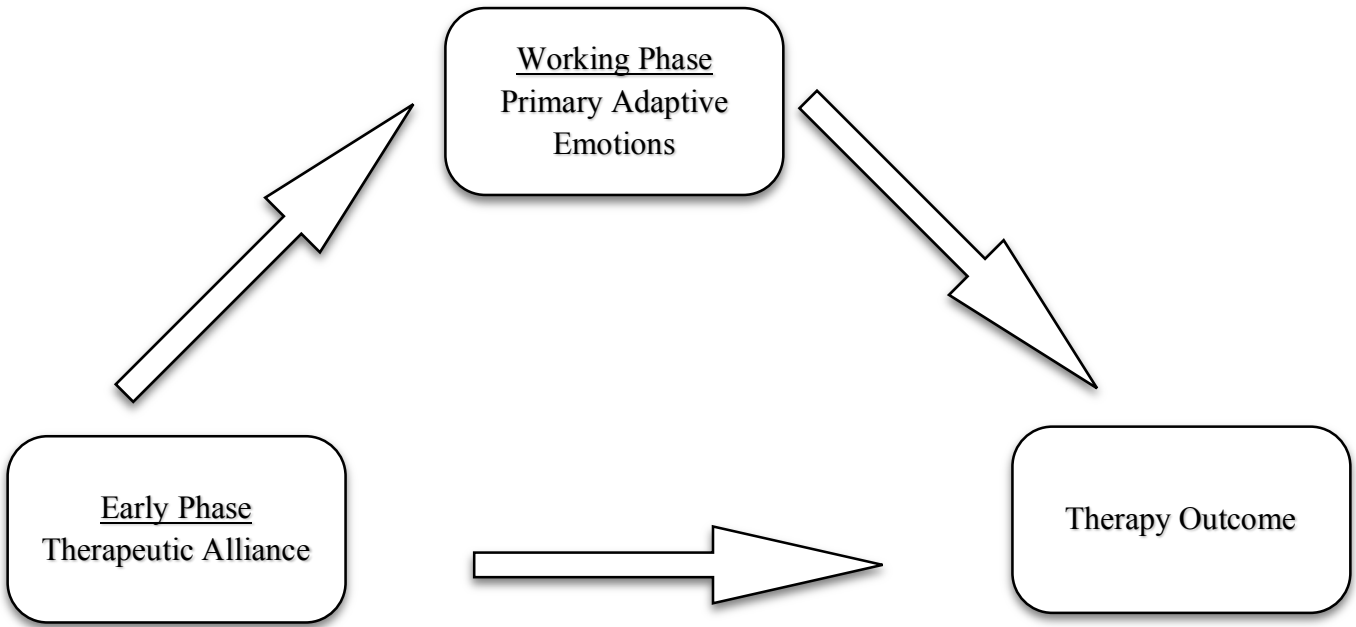
Hypotheses. There are three interrelated hypotheses that work together to allow for a mediation analysis. *Figure 2* provides a schematic diagram to illustrate these hypothesized relationships.

Hypothesis 1: Working phase primary adaptive emotions will predict therapy outcome above and beyond depth of experiencing. Given the fact that certain emotional states (i.e., primary adaptive emotions) are evidenced in cases of successful therapy (e.g., Kramer et al., 2015; Pascual-Leone & Greenberg, 2007), it was hypothesized that minutes spent in primary adaptive emotions would predict therapy outcome above and beyond the depth of client experiencing. It was expected that as the minutes spent in primary adaptive emotions increased, interpersonal distress would decrease. Despite engaging in deepened experiencing in the working phase, individuals who at the same time only experience early expressions of distress (i.e., global distress, fear/shame, and rejecting anger) would likely not fare as well as those who are able to successfully navigate primary adaptive emotions (i.e., assertive anger, self-compassion, and hurt/grief). The foundation of this hypothesis is consistent with the EFTT treatment model (Paivio & Pascual-Leone, 2010). It is also supported by the fact that Singh (2008), in a study of

Figure 2. Proposed hypotheses 1 through 3.



H 3



individuals who underwent EFT for depression or emotional injuries, found that the effect of therapist experiential focus (or a therapist's facilitation of client depth of experiencing) on in-session outcome (as measured by depth of experiencing) was mediated by the proportion of primary adaptive emotions in a sample of which the majority of participants were university-educated women.

Hypothesis 2: Early phase therapeutic alliance will be a better predictor of working phase primary adaptive emotions than early phase depth of experiencing. This hypothesis examined the processes that may be prerequisite for a participant to subsequently engage in primary adaptive emotions. Pos et al. (2009), found that early phase working alliance was directly predictive of experiencing during later phases of therapy and also predictive of therapy outcome. However, early phase depth of experiencing was not directly predictive of therapy outcome. Instead, early depth of experiencing was mediated by later depth of experiencing in predicting outcome. It stands that early depth of experiencing was not always predictive of what occurred later in therapy. This suggests something about the relationship among process variables; namely, it suggests that some variables are more enduring and possibly informed by trait-like dispositions (i.e., the therapeutic alliance) while others (i.e., depth of experiencing) are more mutable and situation-dependent. Furthermore, it suggests that these processes might be nested. That is, as Pos et al. (2009) suggested it is possible that a therapeutic alliance must be established in order for deepened experiencing to occur. Due to its overall robustness (i.e., its relationship to process variables in all phases of therapy, including outcome), it was predicted that the therapeutic alliance at the early phase of therapy would better predict minutes spent in working phase primary adaptive emotions than depth of experiencing. Specifically, it was

hypothesized that a better therapeutic alliance would result in more minutes spent in primary adaptive emotions in the working phase of therapy.

Hypothesis 3: Primary adaptive emotions measured during the working phase will mediate the relationship between early phase working alliance and therapy outcome.

Prior research (Paivio et al., 2001), has demonstrated that early phase therapeutic alliance predicted outcome in EFTT. Nevertheless, some of the variance in the relationship between alliance and therapy outcome is likely better accounted for by primary adaptive emotions. That is, a strong therapeutic alliance provides a foundation for exploration, and emotional processing in particular, which in turn positively contributes to therapy outcome. Therefore, it was hypothesized that the effect of early phase working alliance on therapy outcome would be mediated by minutes spent in working phase primary adaptive emotions.

Hypothesis 4: Accounting for shared variance. In order to increase confidence in the above hypothesis' findings, the same mediation analysis was run with working phase experiencing as a covariate. It was predicted that minutes spent in primary adaptive emotions would significantly mediate the relationship between early phase alliance and therapy outcome when the variance that working phase experiencing shares with primary adaptive emotions was accounted for.

Exploratory Hypothesis 5: The processes that best-predict outcome will vary depending on individual differences. While there has not been much research on this issue many theoretical works, including the work of Stiles (1996; 2009), point to the need for exploratory analyses on subgroups based on participants' individual differences (e.g., demonstrated ability to form a relationship, or demonstrated ability for experiencing). Given the Pos et al. (2009) finding of outcome differences according to differing capacities to engage in

experiencing and a dearth of such research in EFTT, the aim of this exploratory inquiry was to identify individual differences in the early phase that might have a subsequent effect on therapy outcome in EFTT.

Chapter 2: Method

Participants

The sample of $N = 45$ archival participants for the current study was drawn from a prior study (Paivio et al., 2010) on the efficacy of two different versions of EFTT. Participants underwent 16 to 20 sessions of therapy (see Paivio et al., 2010 for an overview) and were originally recruited (from 2002 to 2005) via newsprint advertisements, posters displayed at community health centres, and referrals. Free psychotherapy for the resolution of issues related to childhood abuse (emotional, physical, and sexual) was advertised in exchange for participation in research. The study was approved by the University of Windsor's Research Ethics Board. All participants in the study consented to filling out questionnaires and allowing their therapy sessions to be videotaped and audiotaped for the purposes of subsequent research.

Inclusion and exclusion criteria. To be included in the study, individuals were required to be 18 years of age or older, have a conscious recollection of their childhood maltreatment, and meet criteria for short-term insight-oriented therapy (i.e., motivation, capacity to form a therapeutic relationship, and a capacity to focus on the therapeutic issue; Beutler & Clarkin, 1991) to be included in the study. They were excluded if they were suicidal or homicidal, or had a diagnosis of psychosis, bipolar I disorder, an eating disorder, or a substance use disorder with less than 6 months abstinence as such factors would impose different treatment targets than those intended for study and would complicate the conclusions that could be drawn from the impact of treatment using EFTT. Additionally, those who experienced a traumatic event including domestic violence, and those with a Global Assessment of Functioning (GAF) score of less than 50 were excluded. Screening interviews were conducted by trained graduate students for those ($N = 87$) meeting the initial inclusion and exclusion criteria, including severe emotion dysregulation. The interviews consisted of a 30-minute structured telephone interview and a 90-

minute face-to-face semi-structured selection interview. Interviewers considered candidate's suitability for therapy, mental health history, history of abuse, interpersonal relations, and current level of functioning. Clinical judgment was used to determine ultimate suitability for the study. After accounting for screening and attrition, a total of $N = 45$ individuals were admitted, participated in the study, and completed treatment (for details see Paivio et al., 2010).

Therapy and therapists.

Therapy. EFTT is a manualized individual treatment for individuals who have experienced trauma due to childhood abuse and/or neglect (Paivio & Pascual-Leone, 2010). It incorporates the general principles of EFT, including a focus on changing emotion with emotion and employing Gestalt techniques, such as chair work, to facilitate emotional change (Paivio & Greenberg, 1997). The length of therapy varied but typically lasted 16 to 20 sessions and consists of four phases, which are not necessarily linear: (1) cultivating the alliance; (2) resolving self-related difficulties (i.e., emotion regulation, and reducing fear and shame); (3) resolving trauma and attachment injuries; and (4) terminating the therapeutic relationship and ending treatment. .

Therapists. A total of 11 therapists who were experienced in providing therapy to survivors of trauma conducted therapy for the original study. All therapists underwent approximately 54 hours of training in EFTT before the study began. Four of the therapists were licensed clinical psychologists and faculty members at the University of Windsor. The remainder of the therapists included one master's level student and six doctoral level therapists. Therapists ranged in age from 25 to 57 years of age and seven of the therapists were women.

Measures

Process measures. This study made use of three distinct process measures. Data for two of these (working alliance, client experiencing) were collected as part of previous research. The

third process measure, an emotion coding system, was used for data collection as part of this study.

Working alliance inventory (WAI; Horvath & Greenberg, 1989). The WAI was designed to determine the quality of the therapeutic alliance. It is a 12-item questionnaire and each item is rated on a 7-point Likert scale (1 = never, 7 = always) following the therapy session. Versions for the client and the therapist exist, although the present study will only use participant data from the archival study's data set (published as Paivio et al., 2010). A total score for the working alliance in addition to three subscales (agreement on tasks, agreement on goals, and the bond experienced between therapist and client) is calculated. The current study made use of the total score as reported in Paivio and colleagues (2010) beginning in the third session.

Experiencing scale (EXP; Klein, Mathieu-Coughlan, & Kiesler, 1986). The EXP is a 7-point scale used by trained raters to measure depth of experiencing from videotaped psychotherapy sessions. Specifically, it allows raters to determine the extent to which individuals attend to and explore their idiosyncratic experiences and use this information in resolving personal difficulties (see Appendix B for a summary). At the lowest levels of the scale (i.e., 1 and 2), participants do not speak about their personal experiences or do so in a detached and superficial manner. Intermediate levels (i.e., 3 and 4) are characterized by an individual's internal reaction to external events, including the description, and elaboration of, resulting emotions. The most advanced levels of experiencing (i.e., 5 to 7) involve participants' confrontation of a problem related to an internal experience, a movement toward resolving personal problems, allowing newly emerging feelings, and an integration of these components. The experiencing scale is considered a gold standard of experiential process in psychotherapy and has been demonstrably highly reliable as a predictor of outcome across a number of studies

(Greenberg & Pascual-Leone, 2006). Inter-rater reliability coefficients for modal and peak ratings on the EXP scale have ranged from Pearson correlations of .76 to .92 (i.e., Greenberg & Malcolm, 2002; Klein et al., 1986; Ralston, 2006) and Kappa coefficients of .76 to .84 (i.e., Pos et al., 2003; Ralston, 2006; Singh, 2008).

Classification of affective-meaning states (CAMS; Pascual-Leone & Greenberg, 2005). The CAMS is an emotion coding system. While it is also an operationalization of Pascual-Leone and Greenberg's (2007) model of sequential emotional processing (already presented in figure 1), the theoretical model and the observational coding system are separate and can be used independently. The CAMS is a nominal rating system that allows for coding the presence of emotional states experienced by clients when they are in therapy. Three indicators are used to identify the presence of an emotional state: (a) emotional tone—an emotion or action tendency; (b) involvement—expression (i.e. non-verbal behaviours and emotional arousal) and vocal quality; and (c) meaning—stance and specificity. Each indicator has specific criteria for each that must be met in order for an emotion code to be made. An overview of the coding criteria can be found in Appendix C (the full set of criteria are described in a 105 page coding manual; Pascual-Leone & Greenberg, 2005; available online).

The CAMS includes seven emotion codes plus two other codes that designate meaning-states that are used in time-based coding from video, assigning one emotion code for every minute. The emotion codes are coded mutually exclusively and are: global distress, rejecting anger, and fear/shame, assertive anger, self-compassion, and hurt/grief and acceptance and agency. Furthermore, there are two meaning-states: existential need and negative self-evaluation. These are also coded in time but can be coded in parallel with emotion category codes. Appendix D shows an example of a coding sheet to illustrate how data are collected. Note that emotion

codes can also be grouped together to form the higher order variables: namely, (1) early expressions of distress and (2) primary adaptive emotion, as shown in Figure 1. These higher order variables were used for analyses in the current study.¹

The CAMS has demonstrated good predictive validity of psychotherapy within-session and outcome effects and interrater reliability both with using all available emotional codes and dichotomous variable codes (e.g., Kramer et al., 2015; Pascual-Leone & Greenberg, 2007). Interrater reliability coefficients have ranged from .76 to .86 Kappa (Kramer et al., 2015; Pascual-Leone & Greenberg, 2007; Singh, 2011) when participant utterances were coded from videotaped therapy sessions.

Outcome Measure. A number of outcome measures were used in the original outcome study, (i.e., Paivio et al., 2010) and these include: the Symptom Checklist-90-Revised (SCL-90-R), the Impact of Events Scale (IES-R), the Inventory of Interpersonal Problems (IIP), the Resolution Scale (RS), Beck Depression Inventory (BDI), and the State-Trait Anxiety Scale (STAI), among others. Data from these measures were generally shown to be convergent in the original study although there were some discrepancies (see Paivio et al., 2010). The Inventory of Interpersonal Problems (IIP) was chosen as the outcome measure as the trauma experienced by those in the sample was interpersonal in nature and the IIP captures difficulty in interpersonal functioning. It has been well-established in the literature (e.g., Cloitre et al., 2005; Mullen et al., 1996) that childhood maltreatment is related to substantial difficulty in interpersonal functioning

¹ Specific emotion codes of assertive anger, self-compassion, and hurt/grief were collapsed into “primary adaptive emotions.” Consistent with prior research using the CAMS (e.g., Kramer et al., 2015), the decision to do this was based on the fact that the current study did not have a large sample size and effects were more likely to be detected by grouping emotion codes. Furthermore, conducting analyses with each primary adaptive emotion would have contributed to family-wise error.

in adulthood. Research (e.g., Cloitre, Scarvalone, & Difede, 1997; Zlotnick et al., 1996) suggests that compared to survivors of adult trauma, those who have experienced childhood trauma, uniquely exhibit impairments in interpersonal functioning in both romantic and other interpersonal contexts (i.e., Vandevender, 2014). Therefore, the IIP could potentially capture differences in interpersonal functioning with the abusive other as well as other important interpersonal relationships in participants' lives and perceived changes in interpersonal competencies at the time of therapy.

Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988). The IIP is a 127-item measure of distress stemming from interpersonal sources. Clients rate the severity of their distress in the past 7 days on a 5-point Likert scale (0 = *not at all*, 4 = *extremely*) with higher scores indicating a higher degree of distress. The IIP has demonstrated sound psychometric properties, including test-retest reliabilities ranging from .89 to .98, and an internal consistency reliability of .94 with other outcome measures. A large outcome effect (i.e., Paivio et al., 2010) has already been demonstrated on this data set and so the purpose of selecting this variable is to have a larger effect that process variables might explain. Large effects will consequently reduce the possibility of type II statistical error by increasing the likelihood of finding an effect should one be present. Furthermore, Ralston (2006) found a significant correlation between experiencing and the IIP among clients in the empathic exploration sub-group. For these reasons, the IIP was selected as a promising measure for detecting the impact of therapy process variables on outcome in this study. Participants' IIP scores at baseline, or pre-therapy, and following the completion of therapy were used for analyses in the current study.

Procedure

Variations of the empty-chair task from EFTT used in the treatment were examined to identify episodes where primary trauma was re-experienced and these were chosen to measure depth of experiencing and emotion states. As described by Paivio and et al. (2010), these represent focused and evocative interventions related to the core therapy issues. The interventions, therefore, captured the best of individuals' emotional processing capabilities, resulting in a more valid measurement. The same procedure has been used by other researchers (e.g., Hermann, Greenberg, & Ausza, 2016; Ralston, 2006) to examine emotion in psychotherapy.

Session and event selection. Given that depth of experiencing (EXP) and emotion states (CAMS) were measured in the context of the primary trauma re-experiencing, sessions were chosen in which primary trauma re-experiencing occurred. The first session in which re-experiencing was evidenced was in the fourth session of therapy, termed the early phase, and the second instance of these interventions occurred somewhere between sessions 7 and 11, termed the working phase. This kind of temporal division of phases of therapy has been supported by numerous studies on EFT process (e.g., Pos et al., 2003; Pos et al., 2009).

Ralston (2006) made use of therapists' post-session notes to determine the sessions in which primary trauma re-experiencing occurred and where they were roughly located on the videotape in the archival data set. The markers for the beginning of the re-experiencing intervention were quite clear and involved expert confirmation. They also reflected two variations of the empty chair task that Paivio et al., 2010, described as "imaginal confrontation" or "evocative empathy." For the purposes of this document, I will refer to emotion episodes from either of these intervention variations interchangeably as "the re-experiencing intervention." The

beginning of the re-experiencing procedure was marked by the therapist pulling out an empty chair and directing the participant to imagine a past abusive other. It ended when there was no further discussion with the imagined other or processing of thoughts and feelings related to the interaction. The beginning of re-experiencing could also have been marked by the therapist directing the participant to focus on a traumatic childhood abuse memory or material. The end of the procedure was marked by an absence of further exploration related to the material. The time markers determined by Ralston ($N = 30$) and Jongsma (2014; $N = 14$) were used as a guide to find the beginning (and end) of the re-experiencing intervention for the current study. The criteria for indicating the beginning and end of the re-experiencing intervention were confirmed before proceeding with the CAMS rating of the episodes. The dominant CAMS emotion code was identified for every minute of the intervention that followed and the number of minutes spent in primary adaptive emotions was determined for each session².

Archival WAI ratings. For the purposes of this study, the working alliance was only measured in the early phase of therapy. Therefore, the average of total WAI scores for sessions 3 and 4 was calculated to yield an early phase working alliance score, giving an accurate indication of the therapeutic alliance. The WAI ratings were collected and are available as archival data from Paivio et al. (2010) and, with permission, this variable was used in the current study. See Appendix A for individual items.

² In a parallel data exploration, all analyses involving the CAMS were also completed using *proportion* of minutes spent in primary adaptive emotions. However, the decision to use raw number of minutes spent in primary adaptive emotions (rather than proportions) was twofold: 1) raw number of minutes spent in primary adaptive emotions yielded similar or slightly more predictive results (but never from non-significant to significant); and 2) it was felt that proportion of minutes might have washed out data from clients who spent a small amount of time in primary adaptive emotions but had longer emotion episodes. The current study used emotion episodes as a framework for identifying time spent in primary adaptive emotions and was not interested in the length of emotion episodes per se. However the case, examining the data both ways (raw and proportional) did not reveal any noteworthy differences in the findings to be presented.

Archival EXP ratings: Procedures and reliability of existing data. Experiencing ratings for this study were used with permission, from an archival data set (Paivio, et al., 2001), which was coded by Ralston (2006) and Jongasma (2014). Two graduate students were trained to rate EXP from videotaped therapy sessions by Dr. Sandra Paivio, an expert rater. The students underwent 20 hours of training in the form of reviewing literature on the EXP scale, consulting training manuals, and practice coding on videotapes of EFTT not included in the sample to achieve interrater reliability. Each utterance, defined as a complete thought, was rated on the EXP in each instance of the primary trauma re-experiencing intervention. The complete episode was then assigned a modal and peak experiencing level. Watson, McMullen, Prosser, and Bedard (2011) found that peak experiencing was the best index of client experiencing in the working phase of therapy. Furthermore, a meta-analysis (Pascual-Leone & Yeryomenko, in press) revealed that there was no reliable difference between peak and modal EXP scores in the degree to which they predicted therapy outcome. With this considered, peak EXP scores, as opposed to modal scores, were used in the present study. Training was terminated when the raters reached a level of 80% agreement on both mode and peak EXP ratings. The level of interrater reliability for modal EXP was $k = .70$ and $k = .77$ for peak experiencing. According to Fleiss (1981), agreement above $k = .75$ is considered an excellent level above chance.

CAMS Ratings.

Training and reliability. Two advanced doctoral students rated time spent in primary adaptive emotions from videotaped therapy sessions using the CAMS. The primary rater (the author) had over 100 hours of prior CAMS rating experience on written trauma narratives under the supervision of an expert rater (Dr. Antonio Pascual-Leone), and reached levels of excellent

reliability on previous research projects using this measure. Both raters spent approximately 40 hours training together to achieve an acceptable level of interrater reliability. As part of their training, each rater reviewed the original CAMS manual (i.e., Pascual-Leone, 2005) and Pascual-Leone and Greenberg's (2007) study involving the CAMS, and coded sessions not being used in the current study with an expert rater (Dr. Antonio Pascual-Leone). Both raters resolved discrepancies following the rating of overlapping sessions. They also regularly consulted with the expert rater to ensure conformity to coding guidelines and the validity of ratings. Each of the seven emotion codes (i.e., global distress, fear/shame, and rejecting anger, assertive anger, self-soothing, and hurt/grief, acceptance and agency) and two meaning states (i.e., Existential need, negative evaluation) were coded as they occurred during the primary trauma re-experiencing interventions. The primary rater rated the entire data set with the secondary rater rated 35.7% of the data set. The CAMS raters were both fully blind and independent from the raters that coded EXP process ratings.

Data management of CAMS ratings. In this study, individual emotion codes from the CAMS were made for each minute of primary trauma re-experiencing episodes. They were then collapsed into either early expressions of distress or primary adaptive emotions according to their position in the model (see Figure 1). This procedure was conducted during the analysis stage in the interest of reducing the number of predictors and increasing statistical power. In short, global distress, rejecting anger, and fear/shame are considered “early expressions of distressing emotion” and were grouped into an overarching variable; while assertive anger, self-compassion, hurt/grief, and acceptance and agency are considered “primary adaptive emotions”. Analyses were conducted on the number of minutes spent in primary adaptive emotion states for the main hypotheses and exploratory analyses.

Data Analysis

Power analysis. Although relatively little research has been conducted on the contribution of emotional processing states (i.e. the CAMS) and the outcome measure of interest (i.e., the IIP), Kramer et al. (2015) examined the frequency of primary adaptive emotions on outcome using the BDI-II. In a previous study of EFFT (i.e., Paivio et al., 2010) the BDI-II and IIP demonstrated similar effects, thereby allowing for the best approximation of the current study's likely effect size for the analysis of power for the main analysis of interest (i.e., testing of the first hypothesis). In Kramer et al.'s study, a very large effect, $d = 1.23$ was evidenced. Therefore, using G*Power statistical software (Faul et al., 2009) with an estimated large effect size (i.e., $f^2 = .35$), an alpha significance level of $p = .05$, a power level of .8 ($1 - \beta = .8$) and 2 predictors, a sample size of $N = 31$ is recommended. The present study's sample size of $N = 45$ exceeded this recommendation giving the study more statistical power. Moreover, Stevens (1986) stated that, when a large effect is expected, as is the case in this study, multiple regression analysis is relatively robust to sample size. Stevens (2009) also put forth the guideline of $n = 15$ people per predictor for adequate power and statistical analyses, which the current study exceeded.

Testing Hypothesis 1: Predicting therapy outcome from types of emotional processing in the working phase of therapy. A hierarchical regression was completed to test whether or not minutes spent in working phase primary adaptive emotions predicted therapy outcome, using the IIP (with pre-IIP score as a covariate), above and beyond depth of experiencing. Working phase depth of experiencing levels (EXP) was entered as the first variable followed by minutes spent in primary adaptive emotions (CAMS) to determine if they added to

the prediction of therapy outcome (IIP). Therefore therapy outcome was regressed on to depth of experiencing and then minutes spent in primary adaptive emotions.

Testing Hypothesis 2: Predicting working phase primary adaptive emotions from early phase therapeutic alliance and depth of experiencing. A forward stepwise linear regression was conducted to test whether early phase therapeutic alliance (WAI) is a better predictor of minutes spent in working phase primary adaptive emotions than early phase depth of experiencing (EXP). The two variables (i.e., early phase WAI ratings and EXP scores) were regressed on minutes spent in primary adaptive emotions (CAMS) in the working phase of therapy.

Testing Hypothesis 3: Working phase primary adaptive emotions as a mediator of early phase working alliance and therapy outcome. A mediation analysis was planned where working phase primary adaptive emotions would be tested as a mediator of early phase working alliance and therapy outcome. According to Baron and Kenny (1986) there are necessary conditions that must be satisfied in order to establish a variable as a mediator of two other variables. The necessary conditions specific to this analysis were: (1) determining that there was a significant relationship between early phase working alliance and outcome (IIP); (2) determining that there was a significant relationship between early phase therapeutic alliance and minutes spent in working phase primary adaptive emotions; (3) determining whether or not working phase primary adaptive emotions affect outcome. If these conditions were met, the last step would have been to determine that primary adaptive emotions fully mediate the relationships between early phase working alliance and outcome. However, these individual conditions could not be satisfied by the current data, thereby precluding a mediation analysis.

Testing Hypothesis 4: Accounting for shared variance. The purpose of this hypothesis was to replicate the data analyses of Hypothesis 3 while taking into account client experiencing as a covariate during the working phase to account for any shared variance between experiencing and minutes spent in primary adaptive emotions. As previously mentioned, the necessary conditions to establish a mediation were not met; therefore, this analysis was not conducted.

Exploration of Hypothesis 5. In the interest of further exploring individual differences and their effect on working phase therapy processes and therapy outcome, a series of three regression analyses was conducted. First, to examine how individuals' ability to establish a relationship with their therapist effects later therapy processes and outcome, participants were divided into two groups based on their WAI scores in the early phase. A median split was used to identify those with the highest early phase WAI scores and used in a regression analysis to examine whether working phase alliance, depth of experiencing, or minutes spent in primary adaptive emotions best-predicted outcome. In a parallel process, those with the lowest WAI scores were then examined to see whether working phase alliance, depth of experiencing, or minutes spent in primary adaptive emotions best-predict outcome.

In the second set of regressions, a similar process was completed by dividing participants on early phase depth of experiencing. Those participants with the highest scores on peak experiencing were used in a regression to predict outcome by way of working phase alliance, experiencing, and minutes spent in primary adaptive emotions. The parallel process examined working phase predictors of outcome for participants with low experiencing early in therapy. In the third and final set of analyses, participants were divided into groups based on minutes spent in primary adaptive emotions early in therapy. Groups who demonstrated high vs. low/absent minutes spent in primary adaptive emotions were included in regression analyses that predicted

outcome using working phase alliance, depth of experiencing, and minutes spent in primary adaptive emotions.

Given the exploratory intention of these latter sets of analysis, this specific inquiry may relax the conventional cut-offs for hypothesis testing and any conclusions that were drawn will be made very tentatively. The results of these analyses have the potential to inform clinicians which interventions to use with which subset of participants to achieve optimal levels of emotional processing (i.e. via working on the alliance, experiencing, and/or reaching primary adaptive emotions) later in therapy.

Chapter III: Results

Demographics

Although $N = 45$ participants were included for analyses in the archival Paivio et al. (2010) study, missing data allowed for the analysis of $N = 42$ participants in the present study. In instances where additional data was missing, the sample size is indicated for those particular analyses. Of the sample used in this study, 59.1% of participants ($n = 26$) were female and the remainder ($n = 18$) were male. They ranged from 21 to 71 years of age with a mean age of 45.75 ($M = 45.75$, $SD = 12.53$) and were mostly of European descent ($n = 39$; 88.6%) followed by Aboriginal ($n = 2$; 4.5%) and *Other* identified ethnicities ($n = 3$; 6.8%). The majority of participants ($n = 18$; 40.9%) were married, with 27.3% ($n = 12$) identifying themselves as divorced or separated, 22.7% ($n = 10$) as single, 6.8% ($n = 3$) as common law, and 2.3% ($n = 1$) as a widow. Among the participants, 61.4% ($n = 27$) reported having an undergraduate degree, 22.7% ($n = 10$) a high school diploma, and 15.9% ($n = 7$) a graduate degree. Approximately half of the sample ($n = 23$; 52.3%) reported full-time employment, 27.3% ($n = 12$) unemployment, and 20.5% ($n = 9$) part-time employment. A total of 36.4% ($n = 16$) of the sample reported an annual household income greater than \$60,000, with 34.1% ($n = 15$) reporting a household income between \$20,000 and \$39,000, 15.9% ($n = 7$) an income between \$40,000 and \$59,000, and 13.6% ($n = 6$) an income less than \$20,000.

Client Treatment Characteristics

Among the participants, 61.4% ($n = 27$) met the diagnostic criteria for PTSD according to the PTSD Symptom Scale Interview (PSS-I; Foa, Riggs, Dancu, & Rothbaum, 1993) and 86.4% ($n = 38$) reported receiving counselling services in their lifetime. A total of 24 ($n = 24$; 54.5%) of participants reported being sexually abused, 9 (20.5%) emotionally abused, 6 (13.6%), physically abused, and 5 (11.4%) neglected. The perpetrators of the abuse were identified as follows: 50%

Father ($n = 22$), 25% Mother ($n = 11$), Other 13.6% ($n = 6$), Relative 6.8% ($n = 3$), and Brother 4.5% ($n = 2$).

Client Experiencing Reliability

Ratings of client depth of experiencing were taken from two archival studies (i.e., Jongsma, 2014; Ralston, 2006). As previously mentioned, peak experiencing was chosen, as recommended by Watson et al. (2011), who found that peak experiencing was the best index of client experiencing in the working phase of therapy. The peak experiencing (EXP) level in each of the source studies was determined in a similar manner. Each videotaped therapy episode was divided into 5-minute segments and each speech turn (defined as two or more words) was assigned an EXP score. The peak EXP score was then determined for the 5-minute segment and then the overall episode. In the Ralston study, there was 33% overlap among raters with a reliability of $k = .80$. In the Jongsma study, reliability was established by coding the videos of 15 participants from the Ralston study until a $k = .75$ was achieved. An additional 15 participants from the Ralston sample were coded by Jongsma, resulting in interrater reliability of $k = .90$ for peak EXP. Agreement above $k = .75$ is considered an excellent level above chance according to Fleiss (1981). The remainder of participants (i.e., $n = 17$) were coded by Jongsma alone.

CAMS Reliability

Two advanced doctoral students independently rated 1-minute segments on the seven emotion codes (i.e., global distress, fear/shame, and rejecting anger, assertive anger, self-soothing, and hurt/grief, acceptance and agency) and two meaning states (i.e., existential need, negative evaluation) of the CAMS. The emotion code that was determined to be the most characteristic of the participant's experience in that minute was chosen. The primary rater (the author) rated 100% of the data set, while the secondary rater rated 34.1% ($n = 30$) of the data set.

Following the reported measurement of reliability, observed discrepancies in coding were discussed and resolved following the end of each session segment to prevent rater drift. Initially, an attempt to reach an agreement on the code was made. However, in rare circumstances, the primary rater decided on the final code. Interrater reliability ranged from $\kappa = .70$ to $\kappa = 1$ with an average of $\kappa = .927$. These findings are consistent with literature on the CAMS and are in line with Fleiss' (1981) assertion that agreement above $k = .75$ is considered an excellent level of agreement above chance.

Family-Wise Error

A number of analyses were conducted for this study, particularly in the investigations of individual differences. However, owing to the exploratory nature of the study, type I error was not controlled for in favor of a broader exploration of possible process relationships. Instead, Cohen's d effect sizes were calculated for all analyses of individual differences.

Hypothesis 1: Working Phase Primary Adaptive Emotions will Predict Therapy Outcome Above and Beyond Depth of Experiencing

A hierarchical multiple regression analysis was conducted to determine whether or not working phase primary adaptive emotions predicted self-reported distress related to interpersonal distress above and beyond depth of experiencing. The data met the statistical assumptions for a multiple regression analysis. Multicollinearity was not observed among the variables, though working phase primary adaptive emotions and experiencing were moderately correlated ($r = .465, p < .001$). An independent variable outlier and three dependent variable outliers were identified; however, none were influential. The outliers seemed to be genuine and not the result of coding error; therefore, there was no justification for eliminating them and they were retained for the analysis. Due to missing IIP data, the analysis only included $N = 42$ individuals.

Participants' pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences. Participants' peak working phase depth of experiencing scores were then entered in the second block, followed by amount of minutes participants spent in primary adaptive emotions in the working phase in the third block.

In the first block, participants' centered pre-IIP scores ($M = .00$, $SD = 70.48$) were entered into the regression equation and significantly predicted post-IIP scores ($M = 160.53$, $SD = 91.25$; See Table 1 for means) $R^2(40) = .365$, $R^2_{adj} = .349$, $F(1, 40) = 23.02$, $p < .001$. In the second block, working phase peak experiencing ($M = 4.74$, $SD = .857$) significantly added to the prediction of outcome (i.e., IIP) above and beyond pre-test outcome scores ($\Delta F[1, 39] = 4.28$, $p = .045$), $R^2(39) = .428$, $R^2_{adj} = .399$, $\Delta R^2 = .063$, $F(2, 39) = 14.59$, $p < .001$. Based on the interpretation of beta weights and structure coefficients (See Table 2 for a summary), client experiencing was a good predictor of interpersonal distress ($\beta = -.252$; $r_s^2 = -.245$, $p = .045$), such that a one-unit increase in client experiencing corresponded to a .252 decrease in interpersonal distress. However, the raw number of minutes spent in working phase primary adaptive emotions ($M = 2.64$, $SD = 3.07$) did not significantly add to the prediction of outcome (i.e., IIP) above that of working phase peaking experiencing ($\Delta F[1, 38] = .026$, $p = .873$, *ns*), despite the overall model being significant, $R^2(38) = .428$, $R^2_{adj} = .383$, $\Delta R^2 = 0.00$, $F(3, 38) = 9.49$, $p < .001$.

Hypothesis 2: Predicting Working Phase Primary Adaptive Emotions from Early Phase Therapeutic Alliance and Depth of Experiencing

A stepwise regression analysis was conducted to determine if early phase therapeutic alliance was a better predictor of working phase primary adaptive emotions than depth of

experiencing. The data met the statistical assumptions for a multiple regression analysis. Two independent variable outliers and two dependent variable outliers were evidenced; however, none of these outliers were influential. The outliers seemed to be genuine and not the result of a coding error; therefore, there was no justification for eliminating them and they were retained for the analysis. Early phase client experiencing ($M = 4.79$, $SD = .813$; See Table 1 for means) was the only variable entered into the regression equation as a significant predictor of working phase minutes spent in primary adaptive emotions ($M = 2.64$, $SD = 3.07$), $R^2(40) = .116$, $R^2_{adj} = .094$, $F(1, 40) = 5.24$, $p = .027$. The interpretation of the beta weight indicates that for every one-unit increase in early phase experiencing, there is a .340 increase in minutes spent in working phase primary adaptive emotions ($p = .027$).

Hypotheses 3 and 4: Working Phase Primary Adaptive Emotions as a Mediator of Early Phase Working Alliance and Therapy Outcome

The mediation analyses were not completed as planned because they did not meet Barron and Kenny's (1986) conditions for a mediation analysis (also see Preacher & Hayes, 2004). Specifically, no mediation analysis was conducted because there were no significant relationships between: early phase working alliance and outcome ($p = .45$), early phase working alliance and working phase primary adaptive emotions ($p = .54$), and working primary adaptive emotions and outcome ($p = .51$).

Hypothesis 5: Individual Differences and Other Exploratory Analyses

Working alliance subgroups. The first pair of exploratory analyses examined which working phase processes (i.e., alliance, experiencing, and primary adaptive emotions) best-predicted outcome according to participants' ability to establish a relationship with their therapist in the early phase of therapy. Two groups were established by conducting a median split on the

Table 1
Means, Standard Deviations, and Ranges for Variables in Hypotheses 1 and 2

Variables	Mean	Standard Deviation	Minimum	Maximum
IIP Scores				
Pre (centered)	0.00	70.48	–	–
Post	160.53	91.25	6.00	352.00
Early Phase Peak EXP	4.79	.813	4.00	6.00
Working Phase Peak EXP	4.74	.857	4.00	6.00
Minutes Spent in Working Phase PAEs	2.64	3.07	0.00	15.00

IIP = Inventory of Interpersonal Events; EXP = Experiencing; PAEs = Primary Adaptive Emotions

Table 2
Regression Coefficients for Working Phase Primary Adaptive Emotions and EXP in Predicting Outcome

	B	SE B	β	t	Structure Coefficient
Step 1					
Constant	160.53	11.36		14.13	–
Centered Pre-IIP	.783	.163	.604	4.80*	–
Step 2					
Constant	287.58	62.40		4.61	–
Centered Pre-IIP	.748	.158	.578	4.75*	-.854
Working Phase EXP	-26.81	12.97	-.252	-2.07*	-.228

Note $R^2 = .365$, $R^2_{adj} = .349$ for Step 1; $\Delta R^2 = .063$, $\Delta R^2_{adj} = .399$ for Step 2; * $p < .05$

early phase scores, resulting in a group of $n = 18$ with high average working alliance scores (averaging over the third and fourth sessions) and another group of $n = 23$ who had low average working alliance scores (averaging over the third and fourth sessions).

Confirming the discrimination of median split sub-samples. Using median splits is a practical method for creating high vs. low subgroups. However, before moving on to compare the role of process variables across these groups, it was necessary to confirm that the median splits were meaningful in terms of raw scores and in the context of treatment outcomes. To ensure that the high and low groups did, in fact, statistically differ, an independent samples t-test was conducted and showed that those in the high alliance group had significantly higher alliance scores in the early phase ($M = 79.17$, $SD = 3.93$) than those in the low alliance group ($M = 65.17$, $SD = 6.02$), $t(39) = -8.53$, $p < .001$, $d = 2.75$. It should be noted that the high versus low designation being used here is relative, as the working alliance scores in the sample were generally quite high in objective terms and relative to some other treatment studies (Paivio et al., 2010)

See Table 3 for a summary of means and t-tests in this section. As a follow-up, another independent samples t-test was conducted to determine if the high and low alliance groups differed in the working phase. The results indicated that those in the high alliance group also had significantly higher alliance scores in the working phase ($M = 80.12$, $SD = 4.20$) than those in the low alliance group ($M = 72.00$, $SD = 7.49$), $t(39) = -4.12$, $p < .001$, $d = 1.20$. Thus, participants in the high versus low alliance subsamples expressed a difference in the process at both time points.

Given the individual differences between groups in alliance at multiple time points, if one seeks to examine the impact of process, it is important to also confirm that these sub-groups were not actually a simple reflection of predisposed outcome groups. Thus, as a pre-treatment

manipulation check of sorts, I examined and found no significant difference between the low ($M = 230.17, SD = 64.44$) and high ($M = 233.55, SD = 81.21$) alliance groups' pre-test outcome scores, $t(39) = -1.49, p = .883, ns, d = .046$. Similarly, there was no significant difference between the low ($M = 150.70, SD = 90.36$) and high ($M = 175.40, SD = 95.13$) alliance groups' final outcome scores, $t(39) = -.849, p = .401, ns, d = .266$. There was a significant baseline ($M = 233.55, SD = 81.21$) to post-therapy ($M = 175.40, SD = 95.13$) decrease in interpersonal distress for the high alliance group, $t(17) = 2.83, p = .012, d = .657$. The low alliance group also exhibited a significant baseline ($M = 230.17, SD = 64.44$) to post-therapy ($M = 150.70, SD = 64.44$) decrease in interpersonal distress, $t(22) = 5.97, p < .001, d = 1.01$.

High alliance group. Participants' ($n = 18$) pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences and, as expected ($M = .000, SD = 81.21$), were a significant predictor of post-IIP scores ($M = 175.40, SD = 95.13$), $R^2(16) = .270$, $R^2_{adj} = .224$, $F(1, 16) = 5.91, p = .027$. However, working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly add to the prediction of outcome above pre-test outcome scores ($\Delta F[3, 13] = .527, p = .672, ns$), $R^2(13) = .349$, $R^2_{adj} = .149$, $\Delta R^2 = .063$, $F(4, 13) = 1.742, p = .201, ns$.

Given that there were no significant predictors of outcome, it was important to determine whether the groups had any process differences at all. Therefore, alliance was compared across time for this subgroup. A paired samples t-test was conducted to determine if early phase and working phase alliance scores differed within this subsample of individuals who reported high alliance in the early phase. It revealed that alliance in the working phase ($M = 80.12, SD = 4.20$) did not significantly increase from the early phase ($M = 79.17, SD = 3.93$) of therapy for the high alliance group, $t(17) = -1.45, p = .165, ns, d = -.233$.

Low alliance group. Participants' pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences. Participants' average working alliance scores, working phase depth of experiencing scores, and working phase minutes spent in primary adaptive emotions were then entered in the second block.

Participants' ($n = 23$) pre-test IIP scores were, as expected ($M = .000$, $SD = 64.44$), a significant predictor of post-IIP scores ($M = 150.70$, $SD = 90.36$), $R^2(21) = .500$, $R^2_{adj} = .476$, $F(1, 21) = 21.00$, $p < .001$. Average working phase alliance ($M = 72.00$, $SD = 7.49$), peak experiencing in the working phase, and minutes spent in primary adaptive emotions in the working phase added to the prediction of outcome (i.e., IIP) above and beyond pre-test outcome scores ($\Delta F[3, 18] = 6.33$, $p = .004$), $R^2(18) = .757$, $R^2_{adj} = .703$, $\Delta R^2 = .257$, $F(4, 18) = 13.99$, $p < .001$. However, interpretation of beta weights and structure coefficients (see Table 4 for a summary), revealed that average working phase alliance, for those participants who had low initial early phase working alliance scores, was the only significant predictor of interpersonal distress ($\beta = -.401$, $p = .005$; $r_s^2 = -.320$). Specifically, a one-unit increase in working phase average alliance corresponded to a .401 decrease in interpersonal distress.

Given this finding, it was worth investigating if there was a significant change in working alliance from early to working phase for the low early alliance score subgroup. A paired samples t-test was conducted and revealed that alliance in the working phase ($M = 72.00$, $SD = 7.49$) did significantly increase from the early phase of therapy ($M = 65.17$, $SD = 6.02$) for the low alliance group, $t(22) = -5.16$, $p < .001$, $d = 1.01$.

Experiencing sub-groups. The second pair of exploratory analyses examined which working phase processes (i.e., alliance, experiencing, and primary adaptive emotions) best - predicted outcome according to participants' ability to engage in experiencing in the early phase

Table 3
Summary of t-test Results for Alliance Subgroups

Variables	Mean	SD	Minimum	Maximum	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Early Phase High WAI	79.17	3.93	72.50	84.00	-8.53	< .001	2.75
Early Phase Low WAI	65.17	6.02	51.00	71.50			
Working Phase High WAI	80.12	4.20	70.80	84.00	-4.12	< .001	1.20
Working Phase Low WAI	72.00	7.49	52.20	82.40			
High WAI Pre-IIP	233.55	81.21	48.00	379.00	-1.49	.883	.046
Low WAI Pre-IIP	230.17	64.44	105.00	333.63			
High WAI Post-IIP	175.40	95.13	11.00	346.46	-.849	.401	.266
Low WAI Post-IIP	150.17	90.36	6.00	352.00			
High WAI Pre-IIP	233.55	81.21	48.00	379.00	2.83	.012	.657
High WAI Post-IIP	175.40	95.13	11.00	346.46			
Low WAI Pre-IIP	230.17	64.44	105.00	333.63	5.97	< .001	1.01
Low WAI Post-IIP	150.70	90.36	6.00	352.00			
Working Phase High WAI	80.12	4.20	70.80	84.00	-1.45	.165	-.233
Early Phase High WAI	79.17	3.93	72.50	84.00			
Working Phase Low WAI	72.00	7.49	52.20	82.40	-5.16	< .001	1.01
Early Phase Low WAI	65.17	6.02	51.00	71.50			

IIP = Inventory of Interpersonal Events; WAI = Working Alliance Inventory

Table 4
Regression Coefficients for Best Predictor of Outcome for Low Alliance Group

	B	SE B	β	t	Structure Coefficient
Step 1					
Constant	150.70	13.64		11.05	–
Centered Pre-IIP	.992	.216	.707	4.58*	–
Step 2					
Constant	575.93	114.37		5.04	–
Centered Pre-IIP	.944	.165	.673	5.74*	.659
Working Phase WAI	-4.85	1.52	-.401	-3.20*	-.320
Working Phase EXP	-14.99	14.81	-.139	-1.01	-.206
Working Phase AMM	-3.58	5.81	-.085	-.616	-.146

Note $R^2 = .500$, $R^2_{adj} = .476$ for Step 1; $\Delta R^2 = .257$, $\Delta R^2_{adj} = .703$ for Step 2; * $p < .05$

of therapy. Two groups were established by conducting a median split, resulting in those with early phase high average experiencing scores in sessions 4 through 6 ($n = 22$) in one group and those with early phase low experiencing scores in sessions 4 through 6 ($n = 19$) in another group.

Confirming the discrimination of median split sub-samples. Before moving on to compare the role of process variables across these groups, it was important to confirm that the median splits were indeed meaningful. Thus, similar to the alliance subgroups, a number of supplemental analyses were performed with the experiencing subgroups to examine group differences. The first analysis was performed to ensure that the high and low experiencing groups did, in fact, significantly differ on experiencing in the early phase of therapy. The results of the independent samples t-test showed that those in the high experiencing group had significantly higher experiencing scores in the early phase ($M = 5.41$, $SD = .503$) than those in the low experiencing group ($M = 4.00$, $SD = 0.00$), $t(39) = -12.18$, $p < .001$, $d = 3.96$. Notice that the low versus high groups being used in this study are relative to the participants in this study as the overall peak experiencing scores in the early phase of therapy are considered generally high when compared to the psychotherapy process literature, where the average early phase peak experiencing score (i.e., $M = 3.57$; for a meta-analysis on this topic see Pascual-Leone & Yeryomenko, in press).

See Table 5 for a summary of means and t-tests in this section. Another independent samples t-test showed that those in the high experiencing group also had significantly higher experiencing scores in the working phase ($M = 5.00$, $SD = .817$) than those in the low experiencing group ($M = 4.37$, $SD = .761$), $t(39) = -2.55$, $p = .015$, $d = .798$. Furthermore, there was no significant difference between the low ($M = 233.75$, $SD = 70.81$) and high ($M = 229.85$, $SD = 73.42$) experiencing groups' pre-test outcome scores, $t(39) = .172$, $p = .864$, ns , $d = .054$.

Similarly, there was no significant difference between the low ($M = 183.99$, $SD = 86.84$) and high ($M = 142.15$, $SD = 94.13$) experiencing groups' outcome scores, $t(39) = 1.47$, $p = .149$, ns , $d = .462$. There was a significant baseline ($M = 229.85$, $SD = 73.42$) to post-therapy ($M = 142.15$, $SD = 94.13$) decrease in interpersonal distress for the high experiencing group, $t(21) = 5.30$, $p < .001$, $d = 1.04$. The low experiencing group also exhibited a significant baseline ($M = 233.75$, $SD = 70.81$) to post-therapy ($M = 183.99$, $SD = 86.84$) decrease in interpersonal distress, $t(18) = 3.20$, $p = .005$, $d = .628$.

High experiencing group. To determine if any of the therapy processes predicted outcome in those who evidenced high experiencing in the early phase of therapy, participants' ($n = 22$) pre-test IIP scores ($M = .000$, $SD = 73.42$) were centered and entered in the first block of the analysis to control for pre-test differences. It was determined that pre-test IIP scores were a significant predictor of post-IIP scores ($M = 142.15$, $SD = 94.13$), $R^2(20) = .354$, $R^2_{adj} = .322$, $F(1, 20) = 10.96$, $p = .003$. However, the second block, which included working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly add to the prediction outcome above pre-test outcome scores ($\Delta F[3, 17] = 1.09$, $p = .379$), despite the overall model being significant, $R^2(17) = .458$, $R^2_{adj} = .331$, $\Delta R^2 = .104$, $F(4, 17) = 3.60$, $p = .027$. A paired samples t-test was conducted to determine if early phase and working phase experiencing scores differed. Interestingly, it revealed that experiencing in the working phase ($M = 5.00$, $SD = .817$) significantly decreased from the early phase of therapy ($M = 5.41$, $SD = .503$) for the high alliance group, $t(21) = 2.25$, $p = .036$, $d = -.604$.

Low experiencing group. Participants' pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences. Participants' average working

Table 5
Summary of t-test Results for Experiencing Subgroups

Variables	Mean	SD	Minimum	Maximum	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Early Phase High EXP	5.41	.503	5.00	6.00	-12.18	< .001	3.96
Early Phase Low EXP	4.00	0.00	4.00	0.00			
Working Phase High EXP	5.00	.817	4.00	6.00	-2.55	.015	.798
Working Phase Low EXP	4.37	.761	4.00	6.00			
High EXP Pre-IIP	229.85	73.42	105.00	379.00	.172	.864	.054
Low EXP Pre-IIP	233.75	70.81	48.00	333.63			
High EXP Post-IIP	142.15	94.13	6.00	346.46	1.47	.149	.462
Low EXP Post-IIP	183.99	86.48	11.00	352.00			
High EXP Pre-IIP	229.85	73.42	105.00	379.00	5.30	< .001	1.04
High EXP Post-IIP	142.15	94.13	6.00	346.46			
Low EXP Pre-IIP	233.75	70.81	48.00	333.63	3.20	.005	.628
Low EXP Post-IIP	183.99	86.48	11.00	352.00			
Working Phase High EXP	5.00	.817	4.00	6.00	.225	.036	-.604
Early Phase High EXP	5.41	.503	5.00	6.00			
Working Phase Low EXP	4.37	.761	4.00	6.00	-2.11	.049	.688
Early Phase Low EXP	4.00	0.00	4.00	0.00			

IIP = Inventory of Interpersonal Events; EXP = Experiencing

alliance scores, working phase depth of experiencing scores, and working phase minutes spent in primary adaptive emotions were then entered in the second block.

Participants' ($n = 19$) pre-test IIP scores were ($M = .000$, $SD = 70.81$) a significant predictor of post-IIP scores ($M = 183.99$, $SD = 86.84$), $R^2(17) = .419$, $R^2_{adj} = .385$, $F(1, 17) = 12.27$, $p = .003$. Together, in the second block, once again, working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly add (i.e., there was no change in R^2) to the prediction of outcome (i.e., IIP) above and beyond pre-test outcome scores ($\Delta F[3, 14] = 1.94$, $p = .170$, *ns*). However, the second block was found to be significant, $R^2(14) = .590$, $R^2_{adj} = .472$, $\Delta R^2 = .170$, $F(4, 14) = 5.03$, $p = .010$., due to the fact that peak working phase experiencing ($M = 4.37$, $SD = .761$), when not grouped with the other two process variables, was identified as a significant predictor of outcome (i.e., IIP) above and beyond pre-test outcome scores. Based on the interpretation of beta weights and structure coefficients (see Table 6 for a summary) peak working phase experiencing, for those participants who had low initial early phase experiencing scores, was a good predictor of interpersonal distress ($\beta = -.402$, $p = .043$; $r_s^2 = -.391$), such that a one-unit increase in working phase average alliance corresponded to a .402 decrease in interpersonal distress. Such findings indicate, that the lack of a significant predictive change was likely due to the fact that working phase peak experiencing was grouped with the other two non-predictive process variables. Therefore, the analysis was re-run with pre-test outcome scores and working phase experiencing as the only predictors. In this analysis, working phase experiencing did significantly add to the prediction of outcome above and beyond pre-test outcome scores ($\Delta F[1, 16] = 4.48$, $p = .050$) and the second block regression model was significant, $R^2(16) = .546$, $R^2_{adj} = .489$, $\Delta R^2 = .127$, $F(2, 16) = 9.63$, $p = .002$. The interpretation

Table 6
Regression Coefficients for Best Predictor of Outcome for Low EXP Group

	B	SE B	β	t	Structure Coefficient
Step 1					
Constant	184.00	15.62		11.78	–
Centered Pre-IIP	.794	.227	.647	3.50**	–
Step 2					
Constant	352.41	143.72		2.45	–
Centered Pre-IIP	.612	.229	.499	2.68*	.711
Working Phase WAI	.707	1.82	.070	.389	-.020
Working Phase EXP	-45.84	20.57	-.402	-2.23*	-.391
Working Phase AMM	-10.83	8.98	-.225	-1.21	-.222

Note $R^2 = .419$, $R^2_{adj} = .385$ for Step 1; $\Delta R^2 = .170$, $\Delta R^2_{adj} = .472$ for Step 2; * $p < .05$, ** $p < .001$

of beta weights and structure coefficients confirmed that working phase experiencing was a good predictor of outcome³ ($\beta = -.364$, $p = .05$; $r_s^2 = -.423$).

Given that working phase experiencing was a significant predictor of outcome for the low experiencing group, it was worth investigating if there was a significant change in working alliance from early to working phase for the low early experiencing score subgroup. A paired samples t-test was conducted and revealed that peak experiencing in the working phase ($M = 4.37$, $SD = .761$) significantly increased from the early phase of therapy ($M = 4.00$, $SD = 0.00$) for the low experiencing group, $t(18) = -2.11$, $p = .049$, $d = .688$.

Primary adaptive emotion subgroups. The final pair of exploratory analyses examined what working phase processes (i.e., alliance, experiencing, and primary adaptive emotions) best-predicted outcome according to the amount of minutes spent engaged in primary adaptive emotions in the early phase of therapy. Two groups were established by conducting a median split, resulting in those who spent a longer amount of time in primary adaptive emotions in the early phase sessions 4 through 6 ($n = 22$), labeled the high primary adaptive emotion group, and those who spent less time in primary adaptive emotions in early phase sessions 4 through 6 ($n = 19$), labeled the low primary adaptive emotion group. See Table 7 for a summary of means and t-tests for in this section.

High primary adaptive emotion group. Participants' ($n = 19$) pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences and ($M = .000$, $SD = 65.82$) significantly predicted post-IIP scores ($M = 148.50$, $SD = 89.83$), $R^2(17) =$

³ Given their similar findings, a chi-square analysis was conducted to determine if the low alliance and low experiencing groups consisted of different individuals. The two groups were not significantly related, $\chi^2(1, N = 41) = .717$, $p = .397$, ns , $\phi = .132$.

Table 7
Summary of t-test Results for Primary Adaptive Emotion Subgroups

Variables	Mean	SD	Minimum	Maximum	<i>t</i>	<i>p</i>	Cohen's <i>d</i>
Working Phase High PAE	3.05	2.37	0.00	7.00	1.11	.283	-.326
Early Phase High PAE	5.41	.503	1.00	11.00			
Working Phase Low PAE	1.73	2.29	0.00	9.00	-2.11	.049	.688
Early Phase Low PAE	0.00	0.00	0.00	0.00	-3.53	.002	1.07

IIP = Inventory of Interpersonal Events; PAE = Primary Adaptive Emotions

.213, $R^2_{\text{adj}} = .167$, $F(1, 17) = 4.60$, $p = .047$. However, working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly add to the prediction of outcome above pre-test outcome scores ($\Delta F[3, 14] = 2.06$, $p = .151$, *ns*), $R^2(14) = .454$, $R^2_{\text{adj}} = .298$, $\Delta R^2 = .241$, $F(4, 14) = 2.91$, $p = .060$, *ns*. A paired samples t-test was conducted to determine if early phase and working phase primary adaptive emotion scores differed among the high primary adaptive emotion group. It revealed that minutes spent in primary adaptive emotions in the working phase ($M = 3.05$, $SD = 2.37$) did not significantly differ from minutes spent in primary adaptive emotions in the early phase of therapy ($M = 3.95$, $SD = 3.01$) for the high alliance group, $t(18) = 1.11$, $p = .283$, *ns*, $d = -.326$.

Low primary adaptive emotion group. Participants' pre-test IIP scores were centered and entered in the first block of the analysis to control for pre-test differences. Participants' average working alliance scores, working phase depth of experiencing scores, and working phase minutes spent in primary adaptive emotions were then entered in the second block.

Participants' ($n = 22$) pre-test IIP scores were ($M = .000$, $SD = 77.29$) a significant predictor of post-IIP scores ($M = 172.81$, $SD = 94.71$), $R^2(20) = .526$, $R^2_{\text{adj}} = .503$, $F(1, 20) = 22.22$, $p < .001$. In the second block, working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly add to the prediction of outcome (i.e., IIP) above and beyond pre-test outcome scores ($\Delta F[3, 17] = .138$, $p = .936$, *ns*) despite the overall model being significant, $R^2(17) = .538$, $R^2_{\text{adj}} = .429$, $\Delta R^2 = .011$, $F(4, 17) = 4.94$, $p = .008$. A paired samples t-test was conducted to determine if early phase and working phase primary adaptive emotion scores differed. It revealed that primary adaptive emotion minutes in the working phase ($M = 1.73$, $SD = 2.29$) significantly increased from the early phase of therapy ($M = 0.00$, $SD = 0.00$) for the low alliance group, $t(21) = -3.53$, $p = .002$, $d = 1.07$. The high and low primary

adaptive emotion groups did not have any significant predictors of outcome; therefore, it was not necessary to conduct any further post-hoc analyses. See Table 8 for a complete summary of findings

Table 8

Results Summary Table

Hypothesis/Question	Analysis Type	Finding	P-value	Effect Size
1. Working phase primary adaptive emotions will predict therapy outcome above and beyond depth of experiencing	Hierarchical Regression	Working phase client experiencing predicted outcome; Minutes spent in working phase primary adaptive emotions did not	$\Delta R^2: p = .045$ $R^2: p < .001$	$R^2_{adj} = .399$ $\Delta R^2 = .063$
2. Predicting working phase primary adaptive emotions from early phase therapeutic alliance and depth of experiencing	Stepwise Linear Regression	Early phase working experiencing was the only significant predictor of working phase primary adaptive emotions	$R^2: p = .027$	$R^2_{adj} = .094$
3. and 4. Working phase primary adaptive emotions as a mediator of early phase working alliance and therapy outcome	Mediation	Conditions of mediation analysis were not satisfied; therefore, analyses not conducted	N/A	N/A
5. What processes best-predicted outcome for different subgroups?				
Working Alliance Subgroups:				
Confirming the discrimination of median split sub-samples				
Was there a difference in alliance scores between the high and low alliance groups in the early phase of therapy?	t-test	High alliance group had higher alliance scores than the low alliance group in the early phase of therapy	$p < .001$	$d = 2.75$
Was there a difference in alliance scores between the high and low alliance groups in the working phase of therapy?	t-test	High alliance group had higher alliance scores than the low alliance group in the working phase of therapy	$p < .001$	$d = 1.20$
Was there a difference between the high and low alliance groups on baseline outcome scores?	t-test	No difference between high and low groups'	$p = .883, ns$	$d = .046$
Was there a difference between the high and low alliance groups on outcome scores?	t-test	No difference between high and low groups'	$p = .401, ns$	$d = .266$
Was there a change in baseline to outcome scores for the high alliance group?	t-test	Significant baseline to outcome decrease in distress related to interpersonal problems	$p = .012$	$d = .657$
Was there a change in baseline to outcome scores for the low alliance group?	t-test	Significant baseline to outcome decrease in distress related to interpersonal problems	$p < .001$	$d = 1.01$
High alliance group				
Did working phase alliance, experiencing, or minutes spent in primary adaptive emotions predict outcome for the high alliance group?	Hierarchical Regression	Working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly predict outcome	$\Delta R^2: p = .672$ $R^2: p = .201$	$R^2_{adj} = .149$ $\Delta R^2 = .063$

Did the working alliance change over time for this subgroup?	t-test	There was no significant difference in working alliance from early to working phase	$p = .165$	$d = -.233$
Low alliance group				
Did working phase alliance, experiencing, or minutes spent in primary adaptive emotions predict outcome for the low alliance group?	Hierarchical Regression	Working phase alliance significantly predicted outcome	$\Delta R^2: p = .672$ $R^2: p = .201$	$R^2_{adj} = .149$ $\Delta R^2 = .063$
Did the working alliance change over time for this subgroup?	t-test	There was a significant increase in working alliance from early to working phase	$p < .001$	$d = 1.01$
Experiencing Subgroups:				
Confirming the discrimination of median split sub-samples				
Was there a difference in experiencing scores between the high and low experiencing groups in the early phase of therapy?	t-test	High experiencing group had higher experiencing scores than the low experiencing group in the early phase of therapy	$p < .001$	$d = 3.96$
Was there a difference in experiencing scores between the high and low experiencing groups in the working phase of therapy?	t-test	High experiencing group had higher experiencing scores than the low experiencing group in the working phase of therapy	$p = .015$	$d = .798$
Was there a difference between the high and low experiencing groups on baseline outcome scores?	t-test	No difference between high and low groups' baseline outcome scores	$p = .864, ns$	$d = .054$
Was there a difference between the high and low experiencing groups on outcome scores?	t-test	No difference between high and low groups' outcome scores	$p = .149, ns$	$d = .462$
Was there a change in baseline to outcome scores for the high experiencing group?	t-test	Significant baseline to outcome decrease in distress related to interpersonal problems	$p < .001$	$d = .104$
Was there a change in baseline to outcome scores for the low experiencing group?	t-test	Significant baseline to outcome decrease in distress related to interpersonal problems	$p = .005$	$d = .628$
High experiencing group				
Did working phase alliance, experiencing, or minutes spent in primary adaptive emotions predict outcome for the high experiencing group?	Hierarchical Regression	Working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly predict outcome	$\Delta R^2: p = .379$ $R^2: p = .027$	$R^2_{adj} = .331$ $\Delta R^2 = .104$
Did experiencing change over time for this subgroup?	t-test	There was a significant decrease in experiencing from early to working phase	$p = .036$	$d = -.604$
Low experiencing group				
Did working phase alliance, experiencing, or minutes spent in primary adaptive emotions predict outcome for the low experiencing group?	Hierarchical Regression	Working phase experiencing significantly predicted outcome	$\Delta R^2: p = .05$ $R^2: p = .002$	$R^2_{adj} = .489$ $\Delta R^2 = .127$
Did experiencing change over time for this subgroup?	t-test	There was a significant increase in experiencing from early to working phase	$p = .049$	$d = .688$

Primary Adaptive Emotion Subgroups:				
High primary adaptive emotion group	Hierarchical Regression	Working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly predict outcome	$\Delta R^2: p = .151$ $R^2: p = .060$	$R^2_{adj} = .298$ $\Delta R^2 = .241$
Did experiencing change over time for this subgroup?	t-test	There was no difference between minutes spent in primary adaptive emotions from early to working phase	$p = .283$	$d = -.326$
Low primary adaptive emotion group	Hierarchical Regression	Working phase alliance, experiencing, and minutes spent in primary adaptive emotions did not significantly predict outcome	$\Delta R^2: p = .936$ $R^2: p = .008$	$R^2_{adj} = .429$ $\Delta R^2 = .011$

Chapter IV: Discussion

This was the first study to simultaneously examine both depth of experiencing and time spent in primary adaptive emotions as mechanisms of change in EFTT and experiential psychotherapy, in general. It followed the recent developments in other studies (e.g., Pos et al., 2003; Pos et al., 2009; Wong, 2016), which examined experiencing and primary adaptive emotions in the context of the therapeutic alliance at different phases of therapy.

This study was composed of two steps that contribute to the elaboration of a causal and explanatory model of how specific psychotherapy processes (i.e., therapeutic alliance, client experiencing, and time spent in primary adaptive emotions) contribute, at different time points, to final therapy outcome. The first of these two steps, guided by previous research on primary adaptive emotions (e.g., Choi, Pos, & Magnusson, 2016; Kramer et al., in press; Kramer et al., 2015), determined if time spent in primary adaptive emotions during the working phase of therapy was a unique predictor of EFTT outcome above and beyond depth of experiencing. The second step examined hypothesized relationships between client processes: whether alliance or depth of experiencing during the early phase was the better predictor of time spent in primary adaptive emotions later on, during the working phase. Identifying the best predictor of working phase primary adaptive emotions was important in approaching a causal chain of promoting a good client outcome.

The final step of this study was guided by the responsiveness approach (Kramer & Stiles, 2015; Stiles, 1996) to studying individual differences. It sought to determine how individuals' capacities to engage in the psychotherapy processes examined (i.e., therapeutic alliance, experiencing, and time spent in primary adaptive emotions) impacted their later engagement in these processes and therapy outcome. Findings from this aspect of the study would inform

clinicians on how to tailor treatment to individuals who evidenced higher or lower abilities to engage in a certain psychotherapy process in order to maximize the likelihood of good outcome.

As a whole, the aim of this study was to further elucidate the psychotherapy change processes, across stages of therapy, that have the potential to affect outcome in emotion-focused therapy for individuals who have experienced a trauma stemming from childhood maltreatment. The findings have strong implications for guiding therapists' focus on certain processes that relate to therapy outcome in general and for subgroups of individuals for whom these processes may differ.

Summary of Key Findings

Working phase client experiencing, not time spent in primary adaptive emotions, as operationalized in this study, was predictive of treatment outcome (the implications of this are discussed further on). In the early phase of therapy, client experiencing, not the therapeutic alliance, was the best predictor of time spent in working phase primary adaptive emotions. Furthermore, this was one of very few studies to identify processes predictive of therapy outcome by client subgroup. Specifically, the therapeutic alliance in the working phase of therapy was identified as the best predictor of therapy outcome for those who were not as strong at forming an alliance with their therapist early in therapy relative to the rest of the sample. For those who did not exhibit deepened experiencing, relative to others in the sample, early in therapy, the best predictor of therapy was working phase depth of experiencing.

Client Experiencing was the Best Predictor of Therapy Outcome

Participants' highest level of experiencing in the working phase of therapy ($M = 4.74$, $SD = .857$) was the best predictor of outcome. Specifically, higher levels of experiencing were associated with reduced interpersonal distress in EFTT. According to these findings, spending

time engaging with primary adaptive emotions from Pascual-Leone and Greenberg's (2007) model was less important than simply describing any feeling or personal experience (i.e. level 4 on the experiencing scale) or exploring a problem or need related to a feeling or personal experience (i.e., level 5 on the experiencing scale). After accounting for outcome scores at baseline, peak experiencing in the working phase of therapy explained 6.3% of the variance in therapy outcome. Baseline outcome scores and working phase experiencing, together, accounted for almost 40% of the variance in therapy outcome. This amount of variance explained by experiencing was similar to that of other studies (i.e., Ralston, 2006; Robichaud, 2002) of experiencing in EFTT: 4.1% and 10.2%, respectively. Robichaud demonstrated that higher levels of peak experiencing, collapsed across therapy, were related to lower levels of interpersonal distress. Ralston's findings were similar but only apparent during an EFTT-specific technique. It must be noted that, in contrast to the current study, both of those studies used average modal experiencing scores across the course of therapy in their analyses. Finally, the peak experiencing level observed in the working phase ($M = 4.74$, $SD = .857$) of the current study is consistent with the average peak experiencing level found in Pascual-Leone and Yeryomenko's (in press) meta-analysis of client experiencing (i.e., $M = 4.23$, $SE = .58$).

In general, the finding that working phase depth of experiencing predicted therapy outcome supports previous findings that deepened levels of experiencing beyond the early phase of therapy is related to better therapy outcomes in EFT (e.g., Goldman et al., 2005; Pos et al., 2003; Pos et al., 2009) and in psychotherapy in general (Pascual-Leone & Yeryomenko, in press). However, one important difference was noted: The current study found a relationship between deepened experiencing during the working phase of therapy and, specifically, a reduction in interpersonal distress. Conversely, Goldman et al. and Pos et al. did not find a

relationship between these two variables in their studies of treatment for depression. The current study, on the other hand, treated individuals for the sequelae of childhood maltreatment, which is more interpersonal in nature and possibly more sensitive to a measure of distress related to interpersonal difficulties. Another possibility for the difference in findings is that Goldman et al. and Pos et al. measured depth of experiencing at different time periods than those examined in the current study. Goldman et al. averaged experiencing scores in the second half of therapy; Pos et al. measured experiencing at the second to last session; but the current study measured experiencing in the working phase (i.e., sessions 7-11 or mid-therapy) of therapy.

Although prior studies (e.g., Choi, Pos, & Magnusson, 2016; Kramer et al., in press; Kramer et al., 2015) have demonstrated a relationship between sequential emotional processing and therapy outcome, this study was the first to examine the relationship in the context of EFTT. Although unexpected, the lack of evidence of a relationship between primary adaptive emotions in the working phase of therapy and outcome may not be inconsistent with EFTT theory. In phase 2 of EFTT, which comprises most of the working phase of therapy, there is a strong focus on resolution of self-related difficulties, including resolving primary maladaptive emotions (e.g., fear, shame, and guilt) and accessing needs but not often the full emergence of primary adaptive emotion.

The finding that experiencing, as opposed to primary adaptive emotions, is the best predictor of outcome for those who demonstrated an ability to engage in experiencing is consistent with a recent study (Wong, 2016) on experiencing and primary adaptive emotion in EFT for depression. In that study, Wong classified $N = 55$ participants as either *experientially distant* (ED) or *experientially engaged* (EE) based on their early modal experiencing scores. For those in the EE group, who had modal experiencing scores above 3, working phase experiencing,

not primary adaptive emotions, was the best predictor of therapy outcome. It is possible that this demonstrated early ability to engage in deepened experiencing is the process by which these clients resolved their distress.

A further explanation for the lack of a relationship between time spent in primary adaptive emotions and outcome in this study is more methodological and statistical in nature. Specifically, it is possible that individuals who are survivors of childhood maltreatment vary in the main emotion states they present with (according to the sequential model) as they begin therapy and the target emotion that will allow for a successful conclusion to therapy. According to Paivio and Pascual-Leone (2010), it is not uncommon for clients entering therapy to be “stuck” in differing maladaptive emotional states even though their presenting concern (i.e., childhood maltreatment) is the same. For example, they explain that a client might consistently collapse into diffuse, unspecified sadness (i.e. global distress) when confronting the abuse they suffered. The therapeutic goal in such cases might be to promote anger, specifically primary adaptive (assertive) anger, directed at asserting one’s needs and rights with the understanding that one was not deserving of the abuse. However, another client who presents with more rage might present as “stuck” in a unproductive rejecting anger towards an abuser. An obvious goal in that case would be to encourage the client to identify a need and then express more nuanced assertive anger, but the client might alternatively benefit from mourning the loss of his or her childhood or the opportunity to have a loving and supportive parent, without blame (i.e., primary adaptive hurt/grief).

In contrast, previous studies of sequential emotional processing (i.e., Kramer et al., in press; Kramer et al., 2015) had participants whose presenting problems may have directly mapped on to a primary adaptive emotion from the sequential model. In the Kramer et al. (2015)

study, the sample consisted of individuals with adjustment disorder and depressive symptoms. An adjustment disorder implies a major life change or stress, coupled with the fact that these individuals had depressive symptoms, loss was reportedly a common theme. Consistent with this presentation, the findings of that study demonstrated that the primary adaptive emotion of hurt/grief accounted for the most variance in therapy outcome. Kramer et al. (in press) was even more specific in its targeted primary adaptive emotion, which examined the treatment impact of DBT-based psychoeducation on emotion regulation skills with a specific focus on problematic anger. Because individuals in the current study had presenting problems that arguably less clearly mapped onto a specific primary adaptive emotion (as treatment target), the presence of any primary adaptive emotion (not one in particular) was used in analyses. Thus, compared to the aforementioned studies, there was likely less variance in *grouped* primary adaptive emotions than in a single primary adaptive emotion, resulting in a null finding. Individual emotional states were not used in this study because the number of emotion states would have further inflated family-wise error in an already large study. Additionally, examining each emotion state in the context of all of the analyses conducted would not have been economical.

Even still, it is important to point out that the absence of a relationship between time spent in primary adaptive emotions in the working phase of therapy and therapy outcome in the study does not mean that primary adaptive emotions are unimportant in EFTT. Perhaps the methodology used, or the outcome measure chosen, did not lend themselves to finding a significant relationship between time spent in primary adaptive emotions and outcome. Indeed, trauma is a very common comorbidity for a number of the disorders for which primary adaptive emotions (measured using the CAMS) have proven to be successful predictors, indicating the null findings should be interpreted with caution.

Early Phase Experiencing was the Best Predictor of Time Spent in Working Phase Primary Adaptive Emotions

The current study was unique in that it was one of the first known investigations of predictors of time spent in primary adaptive emotions. Contrary to what was hypothesized, early phase alliance was not the best predictor of time spent in primary adaptive emotions in the working phase of therapy. Instead, early phase experiencing was the best predictor of emotion processes in that a deeper level of experiencing early in therapy corresponded to more minutes spent in primary adaptive emotions later on. This means that individuals who began with a better capacity for experiencing in therapy were ultimately able to reach higher levels of primary adaptive emotion in the working phase of therapy.

It was originally hypothesized that the early working alliance would be the best predictor of time spent in primary adaptive emotions, based on the findings of Pos et al. (2009). They demonstrated that, compared to experiencing, working alliance was a more robust predictor of later therapy processes and outcome and that early experiencing was not related to later processes other than experiencing. However, the relatedness of experiencing and primary adaptive emotion in the current study makes sense given that they are both types of meaning-making, or making sense of personal experience through emotional exploration, and hence related to emotional processing. For example, while the experiencing scale reflects the depth with which clients make meaning, coding primary adaptive emotion (i.e., using the CAMS) reflects the direction or breadth with which clients explore meaning. Although not completely analogous, Singh (2008) found that participants experienced a higher proportion of primary adaptive emotions when therapists promoted higher level of experiencing in their interventions.

Such a finding lends some support to the currently observed relationship between client experiencing and time spent in primary adaptive emotions.

Mediation Models: The Conditions Were Not Ripe

As mentioned, the mediation models could not be explored as planned because Barron and Kenny's (1986) conditions for testing a mediation model were not met. There was no relationship found between (1) early phase working alliance and outcome; (2) early phase working alliance and working phase primary adaptive emotions; and (3) working phase primary adaptive emotions and outcome. The absence of relationships for these conditions was previously discussed.

However, given that Pos et al. (2009) found that high working alliance scores in the early phase of therapy were related to decreases in interpersonal distress at therapy outcome, the absence of relationship between these two variables in the current study is surprising. One possibility for the discrepancy between these findings is the unique characteristics of the population studied: the current study's sample consisted of survivors of childhood maltreatment while Pos et al.'s sample consisted of individuals who were depressed. The fact that an early capacity to form an alliance was not related to a decrease in distress might be explained by the interpersonal nature of the traumas suffered by this sample. The link between childhood trauma involving attachment injuries and interpersonal problems in adulthood has been well established (e.g., Paradis & Boucher, 2010; Riggs, 2010; Styron & Janoff-Bulman, 1997). Given these longstanding interpersonal difficulties, it is possible that even though, on average, childhood maltreatment survivors formed strong early alliances (Paivio & Patterson, 1999), this might not immediately translate to the alleviation of more deeply ingrained interpersonal difficulties they struggle with outside of therapy. This is likely due to the unique nature of the therapeutic

relationship in EFTT involving empathy, attentiveness, validation, and non-judgement (Paivio & Pascual-Leone, 2010) that might facilitate the quicker formation of a relationship. Despite the mediation model being untestable in the current data set, important information about these processes for certain subgroups can still be gleaned from the examination of individual differences.

Individual Differences: Which Clients Respond to What In-Session Processes?

One of the most unique aspects of this study was the exploration of working phase processes that best-predicted outcome for subgroups based on their relative strengths or weaknesses early in treatment. These analyses took into consideration functioning across therapy by examining processes (i.e., alliance, experiencing, and time spent in primary adaptive emotions) at the beginning of therapy (i.e., median split into subgroups), the working phase of therapy (i.e., the best predictor of outcome), and therapy outcome. The novel results of these investigations show a clear pattern, which have important implications for therapy. Specifically, they point to the possibility of prescribing differential treatment emphases for specific subpopulations that could conceivably be identified pre-treatment.

Individual differences in working alliance. Individuals who were able to form a strong alliance with their therapist early in therapy did not differ from those who did not, in the amount of interpersonal distress reported either before or after therapy. In fact, both groups enjoyed a significant decrease in interpersonal distress after the completion of therapy. This means that irrespective of their difference in the process of therapeutic alliance, the quality of the alliance was probably adequate in both cases, and both groups were equally able to reduce their interpersonal distress. However, as will be explained, it seems the two groups took different process pathways to recovery.

When alliances were strong from the get go, no predictors were found. Ultimately, for individuals who were readily able to form a strong relationship with their therapists early in therapy, none of the examined processes (i.e., neither alliance, experiencing, nor time spent in primary adaptive emotions) in the working phase of therapy were significant predictors of interpersonal distress following therapy. Additionally, the alliance for this subgroup did not actually differ from early ($M = 80.12, SD = 4.20$) to working ($M = 79.17, SD = 3.93$) phase of therapy. Together these null findings suggest that, given the small subgroup sample size, or the methods of this study, the process changes were not detectable.

When alliances were weaker, shoring up on the relationship predicted change. For individuals who demonstrated relatively lower alliance scores at the beginning of therapy, the best predictor of interpersonal distress following therapy was working phase alliance. Specifically, a stronger alliance in the working phase of therapy predicted decreased interpersonal distress at the end of therapy. On average, the therapeutic alliance significantly increased from the early ($M = 65.17, SD = 6.02$) to working ($M = 72.00, SD = 7.49$) phases of therapy for this group with quite a large effect evidenced ($d = 1.01$).

Differences in alliance capacities may have implications for the pathways to change. Alliance in the working phase of therapy was the best predictor of decreased interpersonal distress for participants who initially had difficulty forming a strong relationship with their therapists. However, as discussed, this was not the case for those who were more quickly formed a strong relationship early in therapy. The difference in these findings may be explained by Stiles' (1996) concept of *responsiveness* in psychotherapy. Those who less quickly formed an alliance with their therapists were in "short supply" of the relational component of therapy at the beginning of therapy. As such, they had a large potential for increase in their

ability to establish a relationship with their therapists and they subsequently exercised this area for growth. Given the known literature (e.g., (Horvath, Del Re, Flückiger, & Symonds, 2011) on mechanisms of change, it is likely that this growth in alliance formation facilitated a decrease in interpersonal distress. On the other hand, those who already developed strong relationships with their therapists early on in treatment were not in “short supply” and did not subsequently evidence a significant change in their relationship with their therapist. Furthermore, they did not significantly improve in their alliance with the therapist by the working phase, and the alliance in the working phase was not subsequently related to decreases in interpersonal distress.

These findings echo Stiles’ (1996) statement that, “More of a good thing is better when one is not already getting enough” (Stiles, 1996, p. 915). In summary, despite having similar outcomes, each group apparently took a different path that resulted in a decrease in interpersonal distress. For those with difficulty establishing an alliance early in therapy, the therapeutic alliance in the working phase of therapy was crucial. For those who had established an alliance early in therapy, no significant predictor of a decrease in interpersonal distress was found. Although it is not known what is contributing to outcome for these individuals, it is likely to be something other than the alliance. A number of process-outcome studies have shown a steady increase in alliance over time for their samples as a whole. However, they did not look at subgroups (e.g., Pos et al., 2009; Ralston, 2006). The current findings are revealing in that they show no change for one group but change for the other. It seems likely that studies finding an overall pattern of change in the alliance do so because similar sub-groups would be averaged. The implication of this for better interpreting the literature on alliance as a change process could be that the alliance could contribute to outcome for some clients and not others but these differential effects are washed out as a result of taking an average across all clients. Therefore, it

is important for future researchers to examine the therapeutic alliance in the context of individuals' early capacities to form a relationship with their therapists.

Individual differences in the depth of experiencing. Clients who engaged in deepened levels of experiencing in the early phase of therapy did not differ on their level of interpersonal difficulties, either before or after therapy, from those who, comparatively, did not exhibit levels of experiencing that were, comparatively, not as deep, in the early phase of therapy. Furthermore, irrespective of their baseline process, both groups reported a significant pre-to-post decrease in interpersonal distress. As with the alliance groups, both of the experiencing groups benefited from a decrease in interpersonal distress but took different pathways to doing so.

When experiencing was high from the get go, no predictors were found. For those individuals who were able to engage in deepened experiencing in the early phase of therapy, none of the working phase processes (i.e., alliance, experiencing, and time spent in primary adaptive emotions) examined were significant predictors of interpersonal distress. Moreover, experiencing actually significantly decreased from the early ($M = 5.41, SD = .503$) to working ($M = 5.00, SD = .817$) phase of therapy for this group of clients ($d = -.604$). Such a finding likely represents a regression toward the mean. That is, on average, these individuals demonstrated high levels of experiencing that are not typical (Pascual-Leone & Yeryomenko, in press) and as therapy progressed, a regression toward their more accurate levels of experiencing were evidenced.

When experiencing was low, deepening experience predicted change. For individuals who exhibited lower levels of experiencing early in therapy, depth of experiencing in the working phase of therapy was the best process predictor of reduced interpersonal distress. These deepened levels of experiencing in the working phase of therapy were subsequently

associated with an improvement in interpersonal distress. These individuals also evidenced an increase in experiencing from the early ($M = 4.00$, $SD = 0.00$) to working phase ($M = 4.37$, $SD = .761$) of therapy with a large effect ($d = .688$), which is consistent with prior research (i.e., Pascual-Leone & Yeryomenko, in press).

Depth of experiencing differences may have implications for the pathways to change. Working phase experiencing was the best predictor of decreased interpersonal distress for clients who had difficulty engaging in deepened experiencing early in therapy but not for those who readily engaged in deepened experiencing early on. Like those of the alliance, these findings can potentially be explained by therapist *responsiveness* (Stiles, 1996). For those who had difficulty engaging in deepened experiencing early in therapy, deepened experiencing from the early to working phases of therapy offered an opportunity for growth in this process, and this likely led to a decrease in interpersonal distress. However, clients who evidenced deepened experiencing in the early phase of therapy did not show a significant further increase in deepened experiencing. In fact, they experienced the opposite trend, a significant decrease in experiencing from the early to the working phase of therapy, corresponding to a moderate effect ($d = -.604$). For high initial experiencers, their experiencing levels in the working phase was not related to a decrease in interpersonal distress. In summary, as was the case with alliance subgroups, despite having similar outcomes, the high versus low depth of experiencing sub-group seem to have taken different process paths that ended in a decrease in interpersonal distress. For those with difficulty engaging in deepened experiencing early in therapy, experiencing in the working phase of therapy was of utmost importance.

Individual differences in time spent in primary adaptive emotions. Given the lack of a relationship found between working phase time spent in primary adaptive emotions and

outcome, unsurprisingly, there were no significant relationships established between working phase processes (i.e., alliance, experiencing, and time spent in primary adaptive emotions) and interpersonal distress for those who spent either a lot of time or little time in working phase primary adaptive emotions. The implications of this have already been discussed.

Different strokes for different folks: A final comment on individual differences.

Despite achieving similar (successful) outcomes, the low and high alliance and experiencing groups took different pathways to doing so. This study has demonstrated that, for those who were initially lower in the alliance and experiencing in therapy, strengthening their sub-optimal process (either the alliance or experiencing) was likely the pathway to achieving a successful therapy outcome. Those who were lower in these components, shored up on these processes over the course of the working phase of therapy, which then predicted low levels of interpersonal distress. However, this begs the question, ‘how did the those who demonstrated a strong alliance and deepened experiencing early in therapy achieve a successful therapeutic outcome?’ One possibility is that they used their existing strength process strength (alliance or experiencing) to achieve a successful outcome. It seems plausible that those in these groups were engaging in the processes that they had a proficiency for but that statistical significance was not observed due to methodological choices (e.g., median splitting point) or for reasons of statistical power.

Clinical Implications

The findings of the current study have a number of implications for clinical practice as it relates to using EFTT for clients who survived childhood maltreatment. In general, it would likely be in the best interest of clients who suffered childhood trauma if their therapists focused on deepening clients’ level of experiencing. Doing so would likely result in decreased levels of interpersonal distress following the completion of therapy. Specifically, therapists should

encourage their clients to elaborately describe their emotional and personal experiences, explore any arising problems or needs related to these experiences, promote the emergence of new feelings, and integrate these emotional experiences in the service of better understanding their presenting problem.

The results of the current study further demonstrate that when it comes to the therapeutic alliance and client experiencing, it would be wise for therapists to appropriately respond to the individual process needs of a given client, who may pertain to one or another of the identified sub-groups. This means that for clients who have difficulty quickly forming a relationship with their therapists, the therapists should redouble their efforts on alliance-building activities. As recommended by Paivio and Pascual-Leone (2010), therapists should focus on conveying empathy and compassion; validating the client's experience providing the client with information on trauma and the therapy process; discuss the roles of the therapist and client; and offer hope. Recommendations such as these are what Roger's (1957) termed necessary and sufficient conditions for personality change in psychotherapy, which included unconditional positive regard for the client, empathic understanding by the therapist, and communication of this understanding.

The same principle applies to clients who have difficulty engaging in deepened experiencing early in therapy. For this subgroup of clients, therapeutic efforts should be aimed at promoting deeper levels of experiencing, such as encouraging a rich exploration of emotion along with promoting the identification of accompanying needs or problems and facilitating the emergences of new emotion along with a synthesis of all the client's experience. Research (Adams, 2010) has demonstrated that when clients are deliberately encouraged to deepen their experiencing, they are nine times more likely to follow the lead of the therapist and deepen their

experiencing, in comparison to when the therapist simply matches their current level of experiencing. Tailoring treatment based on an individual's early demonstrated ability to engage in these processes (i.e., alliance or experiencing), or being an *appropriately responsive* therapist (Stiles, Honos-Webb, & Surko, 1998), holds the most promise for better outcomes (i.e., a decrease in interpersonal distress). It is important to note, however, that processes (e.g., alliance or experiencing) clients demonstrate early on in treatment, of course, cannot be altogether neglected. Instead, the issue is a matter of emphasis, more therapeutic effort should be invested in the process that a client is having difficulty with early in therapy.

Limitations and Future Directions

Limitations. With respect to the overall study, one drawback in the current study is its reliance on event selection used by Ralston (2006) that centered on the imaginal confrontation and evocative empathy procedures. These procedures seemed to be a rich source of therapeutic material for coding emotion, given their evocative nature. However, one might be left wondering if an effect for time spent in primary adaptive emotions would have been found should coding have been completed outside of these specific intervention procedures or if a different event selection procedure had been used. For example, *emotion episodes* (EEs; Greenberg & Korman, 1993), where clients speak about the experience of an emotion in response to some situation, might have provided more breadth for examining the effect of specific emotions on therapy outcome. That event selection procedure has also been successfully used by other researchers for the study of therapy processes (e.g., to apply the coding of client experiencing, or primary adaptive emotion; Pos et al., 2003; Pos et al., 2009; Wong, 2016). Though time intensive, it would be a noteworthy investigation for the future.

Furthermore, the current study was largely exploratory, and a number of statistical analyses were completed. For this reason, a univariate outcome measure was chosen, as it would have been unfeasible to complete the same number of investigations while taking into account a multivariate outcome. Therefore, the results of this study must be interpreted with caution as they only apply to therapy outcome as measured by reports of interpersonal distress. Along the same line of reasoning, single primary adaptive emotions from Pascual-Leone and Greenberg's (2007) sequential processing model were not explored one by one. Doing so would have resulted in excessive analyses given the number of planned investigations.

Finally, one must be judicious in generalizing the results outside of a childhood maltreatment population treated with an experiential therapy. However, the processes investigated are nevertheless common processes across therapeutic orientations. The therapeutic alliance has been demonstrated to account for much of the variance in therapy outcome (Norcross & Wampold, 2011) and emotional processing has also been demonstrated to be an important predictor of therapy outcome across orientations (e.g., Coombs, Coleman, & Jones, 2002; Greenberg & Pascual-Leone, 2006; Jaycox et al., 1998; Pascual-Leone & Yeryomenko, in press). For these reasons, it is possible that the results might generalize to other populations or types of therapies, but they should be formally investigated in those contexts. Finally, the present sample was predominately Caucasian, female, and a largely university-educated. Therefore, one must be careful in generalizing results to others outside of these demographics.

Future directions. Given the aforementioned limitations, researchers should make use of the complete therapy session or choose a different type of event selection to determine if time spent in primary adaptive emotions has an effect on therapy outcome. Researchers would also benefit from testing the relationship between time spent in primary adaptive emotions and other

outcome variables (e.g., Post-Traumatic Growth Inventory, OQ-45, Quality of Life Scale) including multivariate measures. Given that prior research has used individually identified primary adaptive emotions (e.g., grief, or assertive anger, etc.) to predict outcome (see Kramer et al., in press; Kramer et al., 2015), it would be interesting to investigate the effect of specific primary adaptive emotions on the outcome in EFTT. It would also be interesting to investigate whether the alliance and experiencing are nested processes. Specifically, it is possible that the therapeutic alliance is a prerequisite for experiencing among individuals who have difficulty forming an alliance early in therapy.

Conclusion

In summary, the greater the depth of clients' experiencing in the working phase of therapy, the less interpersonal distress clients reported following therapy. Contrary to what was hypothesized, time spent in primary adaptive emotions in the working phase of therapy was not related to interpersonal distress at the end of therapy. However, the greater the depth of experiencing clients demonstrated in therapy, the more minutes they spent engaged in primary adaptive emotions such as grief, assertive anger, or self-compassion. Among individuals who had difficulty establishing an alliance with their therapists early in therapy, higher alliance levels in the working phase of therapy were related to decreases in interpersonal distress following therapy. Similarly, for those clients who had difficulty reaching deepened levels of experiencing early in therapy, higher levels of experiencing in the working phase of therapy were related to decreases in interpersonal distress following therapy. The findings of this study lend further support to the importance of promoting experiencing in therapy. Furthermore, they are consistent with EFTT theory, which posits the therapeutic alliance and deepened experiencing as the two most central mechanisms of change in therapy (Paivio & Pascual-Leone, 2010).

Perhaps the most important contribution this study makes to the literature on psychotherapy process is, first, demonstrating that therapy process subgroups exist and, second, that they have different process needs. Much psychotherapy research is reported at the group level, which does not account for, or washes out, individual differences. The findings of such studies are not always useful to clinicians who are directly confronted by the individual differences among their clients. However, the current study offers recommendations that are closer to the individual-level, based on findings that clinicians would likely find useful. From the perspective of clinical work, the significance of individual difference findings point to the importance of a therapist being responsive to clients' demonstrated abilities at the beginning of therapy. Although therapists are engaging in interventions in psychotherapy, it is also important for them to continually engage in the ongoing assessment of clients' processing capacities, and the specific kind of process work a given client seems to make use of. This ongoing process-assessment would help the therapists to appropriately respond to their clients' *process* needs with the goal of alleviating distress.

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Appendix A

Working Alliance Inventory

1.	I feel uncomfortable with _____.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
2.	_____ and I agree about the things I will need to do in therapy to help improve my situation.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
3.	I am worried about the outcome of these sessions.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
4.	What I am doing in therapy gives me new ways of looking at my problem.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
5.	_____ and I understand each other.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
6.	_____ perceives accurately what my goals are.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
7.	I find what I am doing in therapy confusing.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
8.	I believe _____ likes me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
9.	I wish _____ and I could clarify the purpose of our sessions.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
10.	I disagree with _____ about what I ought to get out of therapy.						

	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
11. I believe the time _____ and I are spending together is not spent efficiently.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
12. _____ does not understand what I am trying to accomplish in therapy.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
13. I am clear on what my responsibilities are in therapy.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
14. The goals of these sessions are important for me.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
15. I find what _____ and I are doing in therapy is unrelated to my concerns.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
16. I feel that the things I do in therapy will help me to accomplish the changes that I want.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
17. I believe _____ is genuinely concerned for my welfare.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
18. I am clear as to what _____ wants me to do in these sessions.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
19. _____ and I respect each other.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
20. I feel that _____ is not totally honest about his/her feelings toward me.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

21.	I am confident in _____'s ability to help me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
22.	_____ and I are working towards mutually agreed upon goals.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
23.	I feel that _____ appreciates me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
24.	We agree on what is important for me to work on.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
25.	As a result of these sessions I am clearer as to how I might be able to change.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
26.	_____ and I trust one another.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
27.	_____ and I have different ideas on what my problems are.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
28.	My relationship with _____ is very important to me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
29.	I have the feeling that if I say or do the wrong things, _____ will stop working with me.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
30.	_____ and I collaborate on setting goals for my therapy.						
	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
31.	I am frustrated by the things I am doing in therapy.						

	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
32. We have established a good understanding of the kind of changes that would be good for me.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
33. The things that _____ is asking me to do don't make sense.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
34. I don't know what to expect as the result of my therapy.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
35. I believe the way we are working with my problem is correct.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always
36. I feel _____ cares about me even when I do things that he/she does not approve of.	1	2	3	4	5	6	7
	Never	Rarely	Occasionally	Sometimes	Often	Very Often	Always

Appendix B

Experiencing Scale Level Summary (Klein et al., 1986; Paivio & Pascual-Leone, 2010)

- | | |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 1 | External events not pertaining to client |
| Level 2 | Events pertaining to client with a behavioural or intellectual elaboration of thoughts but not emotions |
| Level 3 | Client reacts to external events with some reference to feelings but in a behavioural or descriptive manner |
| Level 4 | Client describes feelings and personal experiences |
| Level 5 | Client explores a problem or need related to his/her feelings and personal experiences |
| Level 6 | Client focuses on a newly emerging or more fully recognized feeling |
| Level 7 | Client integrates newly emerging feelings with other feelings in a way that links these experiences together to promote an expansive understanding of the main issue |

Appendix C

CAMS Coding Criteria

		Global Distress	Fear & Shame	Rejecting Anger
<i>Emotion</i>	A. <i>Emotion/Action</i>	Vague, whining, hopeless, pain, self-pity, irritable, confusion	withdraw/ close down: fear, shame, lonely, empty	distance/ destroy: frustration, hate, disgust
<i>Involvement</i>	B. <i>Arousal</i> C. <i>Voice</i>	high, >4 emotional; external	emotional; focused	high, >4 emotional; external
<i>Meaning</i>	D. <i>Stance</i> E. <i>Specificity</i>	non-agentic, no direction unknown, avoid, minimal	deep & enduring pain clear & specific	protector stress wrongdoing not Self
		Negative Evaluation		Need
<i>Emotion</i>	A. <i>Emotion/Action</i>	"I am... unlovable/worthless/ ... abandoned/destroyed		"I need... recognition/support/ approval/affection/autonomy...
<i>Involvement</i>	B. <i>Arousal</i> C. <i>Voice</i>	emotional; focused		focused
<i>Meaning</i>	D. <i>Stance</i> E. <i>Specificity</i>	absolute, internally attrib., stable		simple, internally attrib., stable need is unmet, a self-observation

	Self-Soothing	Assertive Anger	Hurt/Grief
<i>Emotion</i> A. <i>Emotion/Action</i>	caring/tenderness/nurturing reflexive, imaginary, attributed	Anger: self/rights -affirmation entitlement, boundary setting	Hurt: recognizing one's hurt, Grief: sadness over loss
<i>Involvement</i> B. <i>Arousal</i> C. <i>Voice</i>	emotional; focused	moderate-high, >3 emotional; focused	high, >4 emotional; focused
<i>Meaning</i> D. <i>Stance</i> E. <i>Specificity</i>	adaptive & healthy action refers to Self	agentic, entitlement position clear & specific	wound Impact/Say goodbye clear & specific
	Mixed/Uncodable		End Coding
A.	Presence of emotional state <ul style="list-style-type: none"> not sufficient info for id no 2 coherent statements potential codes, w no certainty 	Absence of emotional state <ul style="list-style-type: none"> drop in arousal, and evocativeness 	
B.	A code must be made for continuity	<ul style="list-style-type: none"> change in topic, not evocative OR	
C.	List potential codes I.e. <ul style="list-style-type: none"> Process interrupted, Blending states. 	<ul style="list-style-type: none"> change in level of analysis, not evocative I.e. <ul style="list-style-type: none"> Psycho-educational discussions, Unfocused intellectualization, Humour dissipates a state of high arousal, therapist begins to end the session 	

Appendix D

CAMS Coding Sheet

Session

#: client _____ **session** _____

Coder Name: _____

CAMS - Coding Sheet

Template is for training & discussing ratings; data entry is often entered horizontally

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Location <i>(Event, transcript, video, time segment)</i>				Variable 1 <i>(continuous/time-based)</i>	Variable 2 <i>(Event-based)</i>	Notes on Variable 1	Notes Var. 2
Episode	page	Start time	End time	Emotion Code	Need/Neg.Eval	Emotion Notes	Need/Neg.Eval Notes
e.g.	1	1:54	3:36	GD	--	"It feels awful, I wish I could just get this over with"	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

Vita Auctoris

Shawn Joseph Harrington was born in 1986 in Windsor, Ontario where he graduated from Catholic Central High School in 2004. He obtained a Bachelor of Arts [H] in Psychology with Thesis in 2008 and a Master of Arts in Adult Clinical Psychology in 2010 from the University of Windsor. He completed his Pre-doctoral residency at Horizon Health Network in Fredericton, New Brunswick with rotations in health, rehabilitation, and inpatient psychology.