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An empirical analysis of autobiographical memory specificity subtypes in brief emotion-focused and client-centered treatments of depression

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Abstract
Overgeneral autobiographical memory (ABM) disclosure has been established as a key cognitive marker of clinical depression in experimental research studies. To determine the ecological validity of these findings for psychotherapy treatments of depression, the present study investigated the relationship between change in level of depression and ABM specificity in the context of early, middle, and late therapy session transcripts selected from 34 clients undergoing emotion-focused therapy and client-centered therapy in the York I Depression Study. A hierarchical linear modeling analysis demonstrated that clients disclosed significantly more specific ABMs over the course of therapy. There were no differences in ABM specificity between treatment groups. There was also no evidence that increased specificity differentiated between recovered and unchanged clients at treatment termination.

Keywords: process research; outcome research; experiential/existential/humanistic psychotherapy; depression; brief psychotherapy

The relationship between depressive mood disorder and a bias for overgeneral autobiographical memory (ABM) disclosure has been the focus of intense research interest in cognitive experimental research literature (Williams et al., 2007). In a comprehensive review of the ABM research literature, Williams et al. (2007) concluded that the vast majority of studies (28 of 30) consistently found that, compared with non-depressed controls, clinically depressed individuals demonstrated a bias for overgeneral, nonspecific ABM disclosure and showed difficulties accessing specific, single-event ABM narratives. Specific ABM disclosure is characterized by the description of a singular or episodic event that is more likely to evoke "experience-near" sensory-perceptual imagery and, importantly, affective responses (e.g., "One Sunday we went for a walk in the park and my father told me that he was leaving my mother"), whereas overgeneral ABM, commonly referred to as generic ABM disclosure, is less concrete and represents a collated series of events in summary form (e.g., "Every Sunday my father would take me for a walk in the park").

Borkovec, Ray, and Stöber (1998) have proposed that the lack of specificity in mental rumination results from an avoidance of specific threatening information; by remaining at a general level of information, individuals attempt to avoid the re-activation of painful emotions felt in specific personal experiences (Philippot, Baeyens, Douillez, & Francart, 2004). Similarly, generic, overgeneral memory disclosure is understood to protect against the access of intense, primary emotions that may accompany specific memories (Raes, Hermans, de Decker, Eelen, & Williams, 2003) or to defend against unwanted images and emotional reactions from their pasts (Singer & Salovey, 1993). Although this ABM disclosure strategy may be functionally adaptive in the short run, Conway and Pleydell-Pearce (2000) have noted that the inability to access and integrate specific episodic ABM may result in the following long-term negative outcomes: (a) reduced self-coherence, (b) increased rumination and worry, (c) impairment in social problem solving, and (d) reduced capacity to imagine future events.

All four factors seem to have importance for both the development and the treatment of depressive disorders, and it is striking that the relationship

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between ABM specificity and depression has not yet been specifically addressed in the context of clients undergoing psychotherapy treatments of depression. The purpose of the present study is to address this gap in the psychotherapy research literature and investigate the relationship between change in level of depression and ABM specificity in the context of early, middle, and late therapy session transcripts drawn from the York I Depression Study (Greenberg & Watson, 1998).

There is mounting empirical evidence (Conway & Pleydell-Pearce, 2000; Teasdale, 1999) that a bias toward overgeneral ABM disclosure is associated with the occurrence of depressive mood disorder; however, it is still unclear whether generic ABM disclosures decrease over the course of psychotherapeutic treatments of depression, especially when depressive symptoms remit. To begin to address this important question, Serrano, Latorre, Gatz, and Montanes (2004) investigated whether modifying the tendency toward generic memory reduced the persistence of emotional disorder in a sample of elderly clients. They found that after the completion of a 4-week life review therapy treatment program that focused on specific autobiographical retrieval practice, clients demonstrated significantly reduced levels of generic ABM disclosure, as assessed by the Autobiographical Memory Test (Williams & Broadbent, 1986), when compared with pretreatment scores. Furthermore, participants who demonstrated the greatest increase in specific ABMs improved the most in terms of depressive symptoms, hopelessness, and life satisfaction. These findings suggest that the modification of generic, overgeneral memory may have beneficial consequences in the treatment of depression and the prevention of relapse.

In one of the few studies to explicitly address the relationship between ABM specificity and treatment outcome, Williams, Teasdale, Segal, and Soulsby (2000) found that formerly depressed clients who evidenced a bias for generic ABM before undergoing mindfulness-based cognitive–behavioral therapy (CBT) showed significantly greater increases in specific ABM disclosure after treatment compared with a didactic treatment control group. According to Williams, Stiles, and Shapiro (1999), an overreliance on less specific ABM disclosure makes the recollection of aspects of specific events, a precondition for reframing and reattribution strategies in effective CBT therapy, effortful and unlikely to be successfully completed. However, ABM specificity was measured with the AMT (Williams & Broadbent, 1986) at only two time points: pre- and posttraining. Thus, the stage at which ABM specificity disclosure began to change for clients undergoing treatment remains unknown.

Whereas CBT treatments view specific ABM disclosure as key to meaning reconstruction, emotion-focused therapy (EFT; Greenberg, 2004) and interpersonal therapy (Strupp & Binder, 1984) practitioners view the disclosures of specific ABMs as essential for accessing and differentiating painful emotions that are the basis for new self-understandings (Anderson, Carson, Keefe, & Darchuk, 2004) and personal insight (Angus & Hardtke, 2007). Addressing the role of narrative organization in EFT specifically, Greenberg and Angus (2004) have suggested that the narrative scaffolding of emotional experiences provides a framework for the organization and integration of felt emotions within unfolding action sequences. Accordingly, clients' disclosures of specific, detail-rich ABM narratives may be an important precondition for the development of a shared sense of understanding in the therapeutic relationship (Angus, Lewin, Bouffard, & Rotondi-Trevisan, 2004) and the facilitation of heightened client emotional engagement (Greenberg & Angus, 2004) in EFT and client-centered therapy (CCT) sessions.

Previous process–outcome investigations of EFT and CCT for depression have focused almost exclusively on the significant contributions of expressed emotional arousal and depth of emotional processing (Goldman, Greenberg, & Angus, 2006; Goldman, Greenberg, & Pos, 2005; Missirilian, Toukmanian, Warwar, & Greenberg, 2005; Pos, 2006; Warwar, 2003) to overall treatment outcomes in the context of the York I Depression Study (Greenberg & Watson, 1998). For these studies, researchers segmented early, middle, and late sessions into discrete emotion episodes (EEs; Greenberg & Korman, 1993; Korman, 1991) that identify therapy session narratives in which the client describes an emotion in response to a situation or event, real or imagined. Although it appears that a client's capacity to access and disclose specific ABM narratives may be an important starting point for accessing underlying emotions and constructing new personal meanings, both of which are significant factors for efficacious outcomes in EFT and CCT approaches, no comprehensive study to date has empirically investigated the contribution of ABM specificity subtypes to treatment outcomes in either treatment approach. Additionally, the criteria used for the identification of EEs seem to provide an effective method for locating ABM narratives in therapy session transcripts. In particular, the EE includes a narrative framing of all incidences of emotional expression within therapy and thus represents an inclusive unit of analysis for assessing ABM in therapy transcripts.

Previous studies of client ABM narratives in psychotherapy sessions have been constrained by

either (a) an exclusive focus on the analysis of content themes embedded within client narratives, such as the core conflictual theme method (Luborsky, Barber, & Diguer, 1992) or (b) small sample sizes that limited the generalization of clinical research findings. For instance, Rotondi-Trevisan (2002) conducted a series of intensive case analyses to assess the frequency and pattern of ABM specificity within the context of three good-outcome and three poor-outcome clients undergoing EFT for depression. The Narrative Processes Coding System (NPCS; Angus, Levitt, & Hardtke, 1999) was used to divide therapy transcripts into topic segments, wherein each segment was labeled according to relationship focus and the topic segment content or issue being discussed. Next, the NPCS was used to reliably identify ABM narratives within external narrative sequences drawn from full therapy sessions, using Singer and Moffitt's (1992b) criteria for the categorization of single-event (specific) and generic (overgeneral) ABMs. The results of a series of independent-samples *t* tests indicated no significant mean differences between the good- and poor-outcome groups in terms of the overall frequency of single-event and generic ABMs across therapy sessions. When stage of therapy was taken into account, results indicated that good-outcome clients disclosed significantly more generic memories in early-stage sessions than did poor-outcome clients. The two groups did not differ significantly in their frequency of single-event and generic ABM disclosure during any other stage of therapy.

In summary, psychotherapy research findings to date appear to suggest that the bias found in depressed clients toward overgeneral ABM disclosure may have important implications for psychotherapeutic treatments of depression that rely on (a) clients' disclosures of specific ABMs for accessing and differentiating primary emotions (Greenberg & Angus, 2004), (b) productive problem solving and the capacity to formulate future goals and plans (J. S. Beck, 1995), and (c) narrative reconstruction and increased self-coherence (Conway & Pleydell-Pearce, 2000; White, 2004). However, key methodological limitations identified in previous investigations of ABM specificity in psychotherapy have constrained generalization of ABM specificity theory to clinical settings. Therefore, at present, it is still unclear whether, in the context of psychotherapeutic treatments of depression, overgeneral ABM disclosure decreases over the course of treatment and whether increased ABM specificity is related to the remittance of depression.

The present study is the first in the field of psychotherapy research to assess ABM specificity at early, middle, and late stages of therapy for depressed clients undergoing brief EFT and CCT and to investigate the relationship between ABM specificity and overall treatment outcomes. The objectives for the present study are twofold. First, within the context of the York I Depression Study (Greenberg & Watson, 1998), we investigate whether ABM specificity subtype—single event versus generic—changes over time (early, middle, and late stages of therapy) in EFT and CCT treatments of depression. Second, we determine whether changes in ABM specificity predict therapeutic outcome, as assessed at treatment termination. Based on the premise that clients' disclosures of specific (single-event) ABMs may be an important precondition for the development of a sense of shared understanding in the therapy relationship (Angus et al., 2004) and heightened client emotional engagement during EFT and CCT therapy sessions (Greenberg & Angus, 2004), it is hypothesized that single-event ABM subtypes will significantly increase from early- to late-stage therapy sessions for clients in both treatment groups. Furthermore, because increased ABM specificity has been noted in clients who have recovered from depression after treatment (Williams et al., 2000), it is hypothesized that clients who have recovered at therapy termination will evidence greater increases in single-event ABMs subtypes compared with clients who have remained unchanged.

METHOD

Participants

Clients. The sample consisted of 34 clients (25 women and 9 men) who participated in the York I Depression Study (Greenberg & Watson, 1998). Their mean age was 39.64 ($SD = 11.97$) years. Thirty-one identified themselves as White, three as Asian, and one as Latino. All participants met criteria for major depressive disorder on the Structured Clinical Interview for the DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1989) and had Beck Depression Inventory (BDI; A. T. Beck, Steer, & Garbin, 1988) scores of 16 or higher. Fourteen clients (41%) had at least one SCID-diagnosed Axis II personality disorder. Seventeen were assigned to CCT and 17 to EFT.

Therapists and therapist training. Eight female and three male therapists participated in the study. One of the therapists was a psychiatrist, four had PhDs in clinical psychology, and six were advanced doctoral students in clinical psychology. Before training for the study, all the therapists had at least 2 years of CCT and an average of approximately 5.5 years of

therapy experience. There was one exception: a therapist who had been trained initially in CBT but had received 12 weeks of CCT and supervision and was judged as competent to administer the treatment. The therapists' prior training and experience in the use of the active experiential therapy tasks ranged from 12 weeks of training to a number of years of experience ($M = 1.5$ years; Greenberg & Watson, 1998).

All therapists received 24 weeks of additional training for the study based on manuals devised for this project (Greenberg, Rice, & Elliott, 1993; Greenberg, Rice, & Watson, 1994). They received training in CCT for 8 weeks, systematic evocative unfolding for 6 weeks, two-chair work for 6 weeks, and empty-chair work for 4 weeks. Training was provided by the originators of the manuals of these interventions. The therapists were supervised on one pilot client before the project. During the first half of treatment with their pilot client, therapists implemented CCT, and during the second half they added the active experiential interventions. Each therapist served as his or her own control by seeing an equal number of clients in each of the two modalities.

Raters. Different raters were used for the various procedures entailed in this methodology. Two clinical psychology advanced doctoral students (both White females, one in her late 20s and the other in her mid-40s) identified EEs. Three raters (a White female advanced doctoral student in her early 30s, a White female clinical psychology graduate student in her early 20s, and a White male clinical psychology graduate student in his early 20s) identified narrative sequences within EEs. Two White female clinical psychology graduate students in their mid-40s identified ABM subtypes within external narrative sequences.

Treatments

Participants were randomly assigned to one of two experiential treatment modalities: CCT or EFT. Treatment consisted of 15 to 20 one-hour weekly sessions ($M = 17.6$ sessions). All sessions were both audio- and videotaped.

CCT (Rogers, 1957, 1961). In CCT, the therapist emphasizes three necessary conditions: unconditional positive regard, empathy, and congruence. Therapists were trained in CCT using manuals developed specifically for this purpose (Greenberg et al., 1994, as cited in Greenberg & Watson, 1998; Rice & Greenberg, 1990).

EFT (Greenberg et al., 1993). EFT adopts client-centered therapeutic conditions (i.e., unconditional positive regard, empathy, and genuineness) and integrates the use of experiential interventions, such as gestalt interventions (e.g., empty-chair or two-chair dialogues, focusing techniques, and systematic evocative unfolding), according to the presence of specific client markers. The main objective of EFT is the evocation and restructuring of maladaptive emotional schemes that are perceived to be the source of distress (Greenberg et al., 1993).

Measures

EEs (Greenberg et al.,1993; Korman, 1991). These are in-session segments in which a client expresses having experienced an emotional response or demonstrates an action tendency in relation to a real or imagined situation (Korman, 1991). They are composed of two main components: the situation (e.g., being criticized by a superior) and the emotional response (e.g., "I felt stupid") or an action tendency associated with the emotional response (e.g., "I was so embarrassed that I left work early"). An EE is identified according to thematic content related to the emotional response, beginning when the emotional response is expressed in the therapy transcript and ending when a new emotional response emerges.

NPCS (Angus et al., 1999). This is a two–step method that allows researchers to reliably subdivide therapy transcripts into narrative process subtypes (Angus, Levitt, & Hardtke, 1996). External narrative sequences were of sole interest for this study because they capture client discourse that is focused on the description of personal life events and provide specific criteria for the identification of ABM narratives embedded within EEs. The NPCS has demonstrated interrater agreement for identifying narrative process sequences (range = 83–88%, Cohen's $\kappa = .75$; Angus et al., 1999).

ABM specificity. This was assessed using Singer and Moffitt's (1992b) scoring manual for memory narrative subtypes, which was adapted for use with psychotherapy transcripts (Angus et al., 1996). Included in the refinements of this method for psychotherapy transcripts was the addition of an initial step in the coding procedure to determine whether the ABM in question met criteria for definition of a personal memory related to self (Brewer, 1996). Additionally, the category of "not ABM" was further subdivided into three subtypes: not autobiographical (about someone or something other than the client); not a memory (autobiographical but not a memory, e.g., semantic information

conjecture or future plans); and too short to code (fewer than four lines of client and therapist dialogue). For the purposes of this study, single-event ABM and generic ABM subtypes were the sole categories of interest. The original manual was determined to achieve an average interrater agreement of 93% (Cohen's $\kappa = .78$, Singer & Moffitt, 1992a).

BDI (A. T. Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). This 21-item inventory is used to assess depression. It has high internal consistency and correlates highly with other self-report measures of depression and with clinicians' ratings of depression ($r = .60$–$.90$; A. T. Beck et al., 1988). Scores of 10 and above are considered symptomatic of depression. Test–retest reliability has been reported to be .65 (Ogles, Lambert, & Sawyer, 1995).

Procedure

Treatment adherence. All therapists received manual-based training and were monitored through audio- and videotapes for adherence to treatment before and during therapy sessions. A full description of treatment adherence procedures and results is provided in Greenberg and Watson (1998). Both CCT and EFT required the provision of empathy for adherence for treatment protocols. Therapists in both conditions were rated as sufficiently high on average tape-rated empathy, and the two treatments were not significantly different on rated empathy. One case in each condition was eliminated because the treatment failed to adhere to the manual.

Transcript selection. Two sessions from the early, middle, and late stages of therapy were selected for each of the 34 clients involved in the York I Depression Study. The initial session was excluded in all cases, under the assumption that the focus of the session was on discussion of the presenting problem and the establishment of therapeutic alliance (Bordin, 1994; Horvath, 2001; Safran & Muran, 2000; Weerasekera, Linder, Greenberg, & Watson, 2003). The second and third sessions were selected to represent the early sessions. Late sessions were the two sessions that occurred before the final session of therapy. The middle sessions were chosen from among those sessions occurring anytime after the third session and before the final three sessions of therapy. The term "middle" was chosen to characterize a working stage of therapy that comes after the alliance is developed and before the last few sessions of therapy, in which clients are usually engaged in more reflective processes (Horvath & Bedi, 2002).

Preparation of transcripts for analysis. Three steps were involved in preparing the transcripts for analysis. EEs were identified by two advanced doctoral students in clinical psychology. Raters independently segmented transcripts into EEs; each EE was demarcated by identifying the situation and the corresponding emotion or action tendency. Reliability of EE sampling was based raters' agreement on both the situation and emotion for each EE as well as agreement of the location of the EE within approximately a half page of a transcript (Cohen's $\kappa = .79$; Warwar, 2003). The kappa represented average agreement between the pair of raters.

Narrative sequences were identified in the context of EEs. Three trained graduate students, blind to outcome, used the NPCS to identify narrative process modes within the context of EEs and demonstrated good interrater agreement (Cohen's $\kappa = .88$–$.95$). Interrater agreement was determined based on an average between pairs of raters. External narrative sequences were of exclusive interest for further analysis.

Once external segments were identified, they were subsequently coded by two trained graduate students for ABM specificity. According to both the NPCS manual (Angus et al., 1999) and the ABM coding system (Singer & Moffitt, 1992b), ABMs were identified as one of four mutually exclusive categories: singe event, generic, extended, and combination. Whenever the combination category was encountered (e.g., single event and generic), a decision was made based on the prevalence of one category over the other in the combination. Using these criteria, the trained raters achieved high interrater reliability (Cohen's $\kappa = .77$–$.88$; Hollis-Walker, 2005). The kappa represented average agreement between the pair of raters. As noted in the Measures section, single-event (specific) and generic ABM subtypes were the sole categories of interest in the present study.

Once all single-event and generic ABM subtypes were identified, a proportion for each ABM subtype was calculated at the EE level (i.e., if there were two single-event ABMs and two generic ABMs within an EE, the proportion of single-event ABMs was 50%, and the proportion of generic ABMS was 50%). For the hierarchical linear modeling (HLM) analyses, the proportion of ABM subtype at the EE level represented ABM specificity.

Outcome categorization. To categorize therapeutic outcome in a statistically reliable way, Jacobson and Truax's (1991) method for determining clinically significant change was applied to the sample. Based on this two-step formulation, a cutoff score was established for the BDI to determine whether

clients' posttreatment scores passed this point, putting them closer to the mean of the functional population than to the mean of the dysfunctional population at therapy termination. Calculations concluded that the BDI cutoff score for our sample was 11.08. Therefore, clinically significant change was determined to be a shift from a pretherapy BDI score of 16 or greater (as determined by the inclusion criteria of the original study by Greenberg & Watson, 1998) to a posttherapy score of 11.08 or less. Next, the reliable change index (RCI) was conducted to determine whether the client's change from pre- to posttest was reliable rather than simply a result of measurement error (McGlinchey, Atkins, & Jacobson, 2002). For the RCI calculations in the present study, we used a BDI test–retest reliability of .65 (Ogles et al., 1995; Watson & Bedard, 2006). Based on these two criteria, individuals were classified as recovered (i.e., passed both cutoff and RCI criteria), improved (i.e., passed RCI criteria but not the cutoff), or unchanged (i.e., passed neither criteria). For the purposes of the present study, only two groups were used for analyses: recovered ($n = 22$) and unchanged ($n = 7$).

RESULTS

HLM and the York I Depression Study

An HLM approach is similar to a multiple regression model in that both calculate estimates of parameters and their standard errors. However, whereas the standard regression has a single error term, the HLM has error terms for each random effect included in the model. In HLM, regression coefficients are referred to as fixed effects and the error terms are called *random effects* (Raudenbush & Bryk, 2002). The HLM method simultaneously conducts both between- and within-subjects analyses, which allows for a fine-tuned examination of the complex nature of the data gathered for psychotherapy process research (see Gibbons et al., 1993).

The York I Depression Study data are longitudinal with a nested, multilevel structure. There are four nested levels of random effects: dyads, sessions within dyads, EEs within sessions, and narrative sequences within EEs. The random levels used for particular analysis depend on the level of the response variable. For example, a response variable measured at the EE level would require three random levels in the analysis. The data are considered unbalanced because the number of observations varies across and within random levels. Hierarchical linear regressions were performed with the linear mixed-effects modeling function in the nonlinear mixed-effects modeling package (Pinheiro, Bates, DebRoy, & Sarkar, 2007) using the R statistical language (R Development Core Team, 2007). Specific hypotheses were tested with Wald's tests using estimated regression coefficients and their estimated variances.

Statistical Analysis

Testing for changes in proportions of single-event versus generic ABM by stage of therapy. Mean proportions of single-event ABM by stage of therapy, outcome group, and treatment type are presented in Table I. To determine whether there was an increase in proportions of single-event ABMs from early to late stages of therapy, a hierarchical linear regression was conducted using the proportions of ABM subtypes (single event and generic) within EEs as the response variable and stage as the explanatory variable, with random intercepts for dyads and sessions within dyads. Findings from this analysis demonstrated significant variation in proportions of single-event ABM between stages of therapy, $F(2, 147) = 3.194$, $p = .044$. In particular, there was a significant increase in the proportion of single-event ABMs from early to late, $t(147) = 2.002$, $p = .047$, and middle to late, $t(147) = 2.373$, $p = .019$, stages of therapy (Figure 1). These findings indicate that clients' disclosures of single-event ABMs increased significantly over the course of therapy.

Testing for differences in proportions of single-event versus generic ABM by treatment type. To determine whether there were overall treatment differences in the proportions of ABM specificity subtypes, an HLM analysis was conducted using stage (early, middle, and late) and treatment type (EFT vs. CCT)

Table I. Mean Proportions of Single-Event ABMs by Stage of Therapy, Outcome, and Treatment Type

		Stage of therapy		
Treatment Type	*N*	Early	Middle	Late
CCT				
Total	14	0.48	0.49	0.59
Recovered	10	0.42	0.46	0.56
Unchanged	4	0.60	0.58	0.66
EFT				
Total	15	0.42	0.40	0.51
Recovered	12	0.48	0.41	0.49
Unchanged	3	0.19	0.34	0.70
Combined				
Total	29	0.45	0.45	0.55
Recovered	22	0.45	0.44	0.53
Unchanged	7	0.46	0.49	0.65

Note. ABM = autobiographical memory; CCT = client-centered therapy; EFT = emotion-focused therapy.

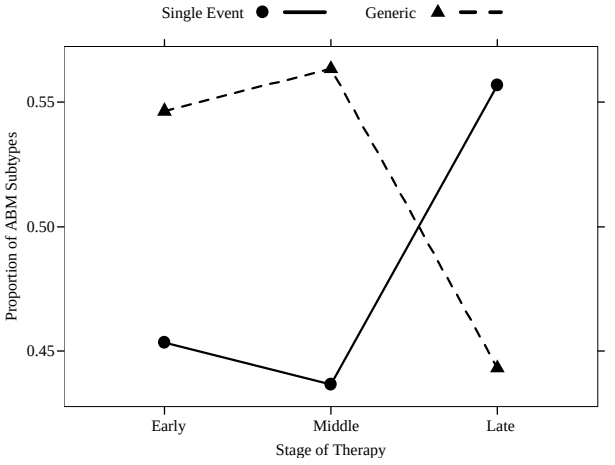

Figure 1. Proportions of ABM subtypes by stage of therapy. (ABM = autobiographical memory; SE = single-event ABMs. Significant increase in SE from middle to late and from early to late stages of therapy.)

as explanatory variables. Findings from this analysis demonstrated no evidence that ABM specificity (i.e., the proportion of single-event vs. generic ABM) differed between treatment types, $F(3, 32) = 1.028$, $p = .393$, suggesting that all components involving treatment could be omitted from the model.

To test for further differences in ABM specificity between treatment groups, a model was constructed with stage, treatment type, and Stage × Treatment Type interactions. A test for interaction effects was not significant, $F(2, 145) = 0.131$, $p = .877$. A test for main effects, using an additive model with stage and treatment without interactions, was then fitted and yielded nonsignificant findings, $t(32) = -1.682$, $p = .102$. The average percentage of single-event ABMs across the stages of therapy (early, middle, and late) was 52.07% for CCT dyads and 43.51% for EFT dyads. The estimated difference was 8.57% with a 95% confidence interval of −1.81% to 18.94%. These findings revealed no significant differences in single-event ABM disclosure in EFT versus CCT dyads.

Testing for differences in proportions of single-event versus generic ABMs by outcome. To determine whether there were overall outcome group differences in the proportions of ABM specificity subtypes, an HLM analysis was conducted using stage (early, middle, and late) and outcome group (recovered vs. unchanged) as explanatory variables. Findings from this analysis demonstrated no evidence that ABM specificity (i.e., the proportion of single-event vs. generic ABM) differed between outcome groups, $F(3, 27) = 0.49$, $p = .692$, suggesting that all components involving outcome could be omitted from the model.

To test for further differences in ABM specificity between outcome groups, a model was constructed with stage, outcome group, and Stage × Outcome Group interactions. A test for interaction effects was not significant, $F(2, 124) = 0.394$, $p = .675$. A test for main effects, using an additive model with stage and outcome without interactions, was then fitted and yielded nonsignificant findings, $t(27) = 0.809$, $p = .426$. The average percentage of single-event ABMs across the stages of therapy (early, middle, and late) was 47.23% for recovered clients and 52.46% for unchanged clients. The estimated difference was 5.23%, with a 95% confidence interval of −8.03% to 18.49%. These findings revealed no significant differences in single-event ABM disclosure in clients who were recovered versus those who were unchanged at therapy termination.

DISCUSSION

This study was designed to investigate whether the disclosure of ABM specificity subtypes changes over the course of psychotherapy and to determine whether changes in ABM specificity were predictive of recovery from depression at therapy termination. An examination of proportions of single-event (specific) ABM versus generic (overgeneral) ABM demonstrated a significant increase in single-event ABM from early to late and from middle to late stages of therapy. This pattern of ABM disclosure was consistent for the sample as a whole, irrespective of treatment type or therapeutic outcome. Thus, although clients were shown to begin therapy disclosing more generic ABM subtypes, they left therapy disclosing a higher proportion of single-event ABMs. In contrast, the hypothesis that higher ABM specificity would predict better therapeutic outcome was not supported. Specifically, the present study found no significant differences in the proportion of single-event ABMs disclosed by recovered versus unchanged EFT and CCT clients who participated in the York I Depression Study. These findings seem to suggest that rather than ABM specificity being a determinant of the therapeutic process, the process of psychotherapy may naturally unfold in a manner that leads to the disclosure of greater specificity of autobiographical memory. This is consistent with results reported by Williams et al. (2000), who found that clients in both a CBT intervention group and a didactic (control) treatment group showed evidence of a significant pre–post reduction in overgeneral ABM disclosure.

Although the disclosure of specific ABM on its own may not be sufficient for good therapeutic outcome, given the abundant research identifying the connection between overgeneral ABM and

depression and in light of the limitations of the present study, it may be premature to conclude that ABM specificity is a benign variable. For example, one limitation of the present study is the unbalanced sample sizes of the therapeutic outcome groups. Whereas the recovered group consisted of 22 clients, the unchanged group had only seven; it is possible that a larger sample size would allow for more conclusive results regarding the role of ABM specificity in therapeutic outcome and the more accurate detection of differences between outcome groups. Another limitation was the singular use of the BDI to determine outcome. It is possible that a more comprehensive assessment of outcome may have yielded different findings.

Indeed, it may be that there are additional factors or pathways through which specificity influences the therapeutic process. In particular, it is possible that increased ABM specificity is facilitative of other process variables that impact therapeutic outcome. For example, Greenberg and Angus (2004) have suggested that memory narratives in which strong emotional expression occurs may be key markers of personal significance for the client and thus provide a framework for identifying what is felt, about whom, in relation to what need or issue (Angus et al., 2004; Greenberg, 2004; Greenberg & Angus, 2004; Whelton, 2004). In this respect, it may be important to investigate increased specificity in ABM within the context of expressed emotional arousal. Many researchers contend that the disclosure of specific or single-event memories is associated with higher emotional arousal and argue that the construction of detailed descriptions of a specific event requires the evocation of visual or experiential imagery that is more likely to evoke deeper emotional arousal (e.g., Raes et al., 2003; Singer & Moffitt, 1992a; Singer & Salovey, 1993; Williams, Stiles, & Shapiro, 1999). Moreover, expressed emotional arousal has been repeatedly demonstrated as an important process variable associated with therapeutic outcome (see Missirlian et al., 2005; Pos, Greenberg, Goldman, & Korman, 2003). As such, future research examining moment-by-moment ABM disclosure as it co-occurs with emotional processes may be useful for determining how these variables are related and whether their relationship leads to decreases in depression.

Although more in vivo research is required to more clearly understand the importance of ABM specificity in psychotherapy, the finding that a general tendency toward greater specificity in ABM occurs over the course of psychotherapy has important implications because it confirms that the overgeneral bias in depression is subject to change. Because overgeneral autobiographical memory is a variable that has been repeatedly identified as a cognitive marker of potential or present depression, the elaboration of ABM specificity as a potentially potent process indicator is a promising step.

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