Affect Integration During and After Open-Ended Psychotherapy: Magnitude of Change and Associations with Concurrent and Post-Treatment Improvements in Symptom Distress and Interpersonal Functioning

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Abstract

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Title: "Affect Integration During and After Open-Ended Psychotherapy: Magnitude of Change and Associations with Concurrent and Post-Treatment Improvements in Symptom Distress and Interpersonal Functioning".

Supervisor: Ole André Solbakken, PhD. Associate Professor, Spec. in Clinical Psychology.

Data: This thesis is based on data from the Norwegian Multi-Site Study of Process and Outcome in Psychotherapy (NMSPOP).

Objective: The aim of the current study was to investigate how Affect Consciousness (AC) changes during and after open-ended psychotherapy, and how AC levels and change may be related to concurrent and post-treatment levels of and improvement in interpersonal functioning and symptom distress. ***Method:*** The sample included a total of 153 patients from a naturalistic outpatient setting. The treatments were based on affect-focused or psychodynamic psychotherapeutic models. Affect integration, symptom distress and interpersonal functioning were assessed using the Affect Consciousness Interview (ACI), the Symptom CheckList-90 (SCL-90) and Inventory of Interpersonal Problems 64 (IIP-64). Assessments were completed at fixed intervals, including prior to treatment, at termination, and at 30 months post-treatment. The data was analyzed using multilevel modeling with linear mixed models. ***Results:*** A significant overall increase in AC over time was found for the treatment and follow-up phases. No significant increase in AC was found for the follow-up phase when analyzed separately from the treatment phase. Significant positive associations were found between AC change and changes in both GSI and IIP scores over time for the treatment phase. No significant post-treatment growth in GSI and IIP scores were found, nor were significant associations detected between AC change during treatment and post treatment changes on GSI or IIP. However, AC change during treatment predicted post treatment GSI and IIP scores. AC levels remained stable after the end of treatment, as well as associations between AC levels, GSI and IIP scores. ***Conclusions:*** The current study indicates that open-ended, psychodynamic psychotherapy focused on affect consciousness is an effective treatment for patients with a wide range of mental disorders, including personality disorders. AC could be considered a relatively stable trait. However, change is possible through psychotherapy and achieved growth seems relatively stable across patients at least 2.5

years post-treatment. AC-levels predicted both level of symptomatic distress and interpersonal problems at termination and follow-up, and improvements in AC were related to symptom and interpersonal changes in treatment. The findings are generally consistent with previous research, strengthening the validity of the AC construct. Suggestions for further research are discussed.

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I would first of all like to thank my Associate Professor and supervisor Ole André Solbakken. My first interest in research on affect in psychotherapy was inspired attending his lectures, and his advice, input and access to data has been invaluable in the writing of this thesis. I would also like to thank Professor Jon Trygve Monsen for the insights provided through the seminars I have attended, as well as his contribution to establishing this area of research. My thanks also go to the participants in the NMSPOP study, especially patients. Feedback and willingness to participate in research is crucial to gaining new knowledge and continuous improvement within the field. I would also like to mention my fiancée and thank her for her patience throughout this process, as well as my parents for their encouragement and support.

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1 Introduction

Almost half of the general population meet the criteria for a psychological disorder at some point in their lives (Kessler et al., 2005; Norwegian Ministry of Health and Care Services, 1999), impacting both the quality of life and the everyday function of many of those affected. About 1/3 of Norwegians on disability aid are so mainly due to psychological problems (Norwegian Labour and Welfare Administration (NAV), 2014). Mental health problems have an annual estimated cost to society of 60-70 billion NOK (Norwegian Ministry of Finance, 2009). Longitudinal research also shows significant relapse rates for common disorders such as depression (Steinert, Hofmann, Kruse, & Leichsenring, 2014).

Extensive research has accumulated over the years establishing the general effectiveness, cost-efficacy and low risks of psychotherapy for a range of psychological problems (American Psychological Association, 2013; Wampold & Imel, 2015). Reviews conclude that overall, about 75% of clients who enter treatment show some benefit (Lambert & Ogles, 2004). Population studies have shown that most people prefer psychological treatment to other types of treatment (Layard, 2006; Livgard, 2017). Current Norwegian health policy stresses the availability of non-pharmaceutical treatment options (Norwegian Ministry of Health and Care Services, 2015).

Since its formation, the field of psychotherapy research has been concerned with which model of psychotherapy produce the best results. In recent years, however, further research into discoveries such as common factors (Rosenzweig, 1936; Wampold, 2001; Wampold & Imel, 2015) and improved research designs, are contributing to and enabling a wider focus into the processes of therapeutic change (Wampold et al., 2017).

Examining the effectiveness of psychotherapy in general and validating specific models of psychotherapy for different life problems is still an important objective driving research (Fonagy & Roth, 2004; Wampold & Imel, 2015). However, an increasing number of studies has aimed to identify not only if, but how psychotherapy may contribute in the process of improving the lives of those seeking help. Identifying variables related to positive outcome may further our understanding of curative factors in therapy and mechanisms of change. The results of this joined effort could have general implications for our theoretical understanding of mental health problems and -accordingly- the organization of mental health care and training of clinicians. Furthermore, on a specific level, it could inform therapists in

developing and preparing interventions tailored to maximize the benefit of therapy for the specific client (Fonagy & Roth, 2004).

A common distinction within psychological theory is between "trait" and "state" (Hamaker, Nesselroade, & Molenaar, 2007; Spielberger, 2006). According to Hamaker et al. (2007), traits have been defined as relatively stable, inter-individual differences in proneness, tendency, style or disposition to behave, feel or think in certain ways. State variation has been defined as relatively rapid and reversible variability that takes place around the specific individual's mean or trend. The distinction between trait and state is central to personality theory (Larsen, Buss, & Wismeijer, 2013). According to the vulnerability-risk model, some trait-type characteristics may contribute to increased vulnerability to or resilience against mental disorders, depending on the nature of the specific trait (Kotov, Gamez, Schmidt, & Watson, 2010; Krueger & Tackett, 2006; Ormel et al., 2013). However, knowledge concerning interrelations between trait and state-associated constructs, especially in a clinical setting, is still limited.

According to Cameron, Ogrodniczuk, and Hadjipavlou (2014), characterization of a construct as an enduring personality trait or a more state-dependent phenomenon is often discussed using the terms absolute or relative stability. Absolute stability refers to the levels of change in construct scores over time. Relative stability refers to the degree to which relative differences between individuals remain stable over time. The latter is usually estimated using test-retest correlations or other measures of covariation.

The idea that exploring emotions in a therapeutic relationship will lead to positive emotional change has been a consistent view in a wide range of psychotherapy traditions (Greenberg & Pascual-Leone, 2006). Several theorists and clinicians, from Freud (1961), through Rogers (1951) and Perls (1969) to Monsen and Monsen (1999) and Greenberg (2002), have appreciated the therapeutic nature of working with affect in psychotherapy. An increasing amount of research has accumulated to support this notion (Greenberg & Pascual-Leone, 2006; Solbakken, Hansen, Havik, & Monsen, 2011). However, empirical and longitudinal studies looking specifically at potential mechanisms of affective change and relation to other outcome variables have been scarce.

Some of those advocating treatments focused on character change more than purely on symptom reduction - like psychodynamic therapies - have suggested broader and longer lasting benefits of such approaches (Shedler, 2010). However, in a 2015 meta-analysis, Kivlighan and colleagues found no significant differences between alternative forms of

psychotherapy when measuring personality change on follow-up. Nevertheless, understanding trait-type constructs and their relation to other measures of psychological functioning may be crucial to uncovering not only what contributes to change in psychotherapy, but what contributes to enduring change and improved resilience to psychological disorders. Previous research has thus pointed out the importance of longitudinal and follow-up studies looking at more specific domains of personality and their relationship to other outcome variables (Kivlighan et al., 2015; Normann-Eide, Johansen, Normann-Eide, Egeland, & Wilberg, 2015; Solbakken, Hansen, Havik, & Monsen, 2012).

The aim of the current study is to investigate how affect consciousness changes in and after open-ended psychotherapy, and how levels of AC may be related to interpersonal functioning and symptomatic distress, using a longitudinal multi-level modelling design. However, before the research questions and expected findings are presented, some background will be provided to explain the rationale behind the study.

1.1 Affect Integration and Affect Consciousness

Within research on feelings, affect and emotion, several constructs and definitions are in use. Although not analogous, many of these have substantial theoretical and empirical overlap (for an overview, see Choi-Kain & Gunderson, 2008; Falkenstrom et al., 2014; Solbakken, Hansen, Havik, et al., 2011; Solbakken, Rauk, Solem, Lødrup, & Monsen, 2017). Examples include emotion regulation (Cole, Michel, & Teti, 1994; Gross, 2007), mentalization (Fonagy & Bateman, 2004), mindfulness (Bishop et al., 2004; Brown, Ryan, & Creswell, 2007; Cole et al., 1994), alexithymia (Sifneos, 1973) and emotional intelligence (Salovey & Mayer, 1990). Examples from research within other traditions will therefore be addressed where relevant.

Affective processes can be defined through a variety of constructs. One such construct is Affect Integration (AI). Affect integration is defined as the functional integration of affect in cognition, motivation and behavior, and is assumed to be a key feature of psychological functioning (Solbakken, Hansen, & Monsen, 2011). Affect integration difficulties have been identified as a component of a wide range of psychological problems (Gude, Monsen, & Hoffart, 2001; Holmqvist, 2008; Lech, Andersson, & Holmqvist, 2008; Monsen, Eilertsen, Melgard, & Ødegard, 1996; Monsen & Monsen, 1999; Solbakken, Hansen, Havik, et al., 2011; Waller & Scheidt, 2004), including personality disorders (Johansen et al., 2016;

Johansen, Normann-Eide, Normann-Eide, & Wilberg, 2013; Normann-Eide, Johansen, Normann-Eide, Egeland, & Wilberg, 2013; Normann-Eide et al., 2015).

When defined this way, affect integration reflects two domains. The first is a more general capability of tolerating and regulating affective activation, i.e processes in which the affects themselves are regulated (Izard, Stark, Trentacosta, & Schultz, 2008; Solbakken, Hansen, Havik, et al., 2011; Solbakken et al., 2012). This first domain is theoretically related to the mainstream perspective on emotion regulation (Gross, 2007).

The second domain of affect integration includes the capacity for accessing and utilizing the adaptive properties of affects – processes in which affects serve as regulators of other domains of functioning (Cole & Deater-Deckard, 2009). This involves processes at both the deliberate, reflective level and the implicit, unreflective level (Solbakken, Hansen, & Monsen, 2011). It includes personal adjustment to developmental tasks and challenges, and could include -but is not limited to- reasoning, decision-making, and goal-directed behavior (Taarvig, Solbakken, Grova, & Monsen, 2015).

The second domain of affect integration is similar to the alternative viewpoint of Cole and Deater-Deckard (2009) on emotion regulation. Both the second domain of affect integration and this view on emotion regulation include capacity for awareness of discrete negative and positive affects, modulation of their intensity and duration, adaptive utilization of the signal and motivational properties of affects, and maintaining and expressing affects in a congruent fashion - according to the demands of the situation (Solbakken, Hansen, & Monsen, 2011). One of the main distinctions between affect integration and emotion regulation, however, can be seen in that the affect integration construct operates with a highly systematic, differentiated distinction between affects (Solbakken, Hansen, & Monsen, 2011).

For this thesis, affect integration is defined through the affect consciousness (AC) construct. AC is defined as the individual's capacity to consciously perceive, tolerate, reflect upon and express the experiences of basic affective activation (Monsen, Monsen, Solbakken, & Hansen, 2008; Solbakken, Hansen, Havik, et al., 2011). AC is thought to be central to structure-building in personality (Johansen et al., 2013).

The AC construct is based on integration of several theoretical perspectives on affect and emotion, in particular Tomkins' affect and script theory (Tomkins, 1978, 2008; Tomkins & Demos, 1995; Tomkins & Karon, 1962) and differential emotion theory (Izard, 1991, 1993, 2007, 2009). Self-psychological perspectives, as promoted by theorists from the

intersubjective tradition (Stolorow & Atwood, 1992; Stolorow, Brandchaft, & Atwood, 1987) - are also central to the theory.

In the AC perspective, up to 11 basic affects are usually included: (1) Interest/Excitement, (2) Enjoyment/Joy, (3) Fear/Panic, (4) Anger/Rage, (5) Shame/Humiliation, (6) Sadness/Despair, (7) Envy/Jealousy, (8) Contempt/Condescension, (9) Disgust/Revulsion, (10) Guilt/Remorse and (11) Tenderness/Care/Devotion (Monsen et al., 2008). These are considered biologically founded responses developed through evolution, as postulated by Darwin (1872), Tomkins (1978) and Ekman (2003) - among others.

The variation in individuals' subjective experience is presumed to depend on the interplay between genetically based biological dispositions and formative experiences, developmental history, and mental representations influencing perception and organizing affective life (Solbakken, Hansen, & Monsen, 2011). The individual patterns organizing affective experience are conceptualized as scripts (Tomkins, 1978). These gradually become automatic and operate mostly on the unconscious or preconscious levels (Monsen & Monsen, 1999; Solbakken, Hansen, & Monsen, 2011; Tomkins & Demos, 1995).

The psychotherapies from which the data in current study is derived are not developed to target personality pathology in particular. However, about half of the included patients fulfilled the criteria for a personality disorder. Findings from personality theory and research on psychotherapy for personality disorders may therefore be relevant to understanding the patient demographic and interpreting results. Current diagnostic manuals maintain a categorical model for personality disorders (American Psychiatric Association, 2013; World Health Organization, 1992). Despite of this, the dimensional nature of personality is widely recognized (Normann-Eide et al., 2015). This implies that there is a continuum between normal and pathological personality, and that distress, symptoms and course of personality-related life problems may vary in severity and across patients (Clark, 2009; Hopwood et al., 2011; Johansen et al., 2016). In this perspective, disturbance of the self and the relational domains are considered among the core features of personality pathology (Normann-Eide et al., 2015). Personality pathology has also been linked to poorer outcomes in therapy (Clarkin & Levy, 2004). As pointed out by Johansen et al. (2016), understanding the processes underlying these domains of personality functioning is therefore important to the development of psychotherapeutic interventions.

1.2 Developmental Perspectives

Personality may be defined as a "set of psychological traits and mechanisms within the individual that are organized and relatively enduring and that influence his or her interactions with, and adaptations to, the intrapsychic, physical, and social environments" (Larsen et al., 2013). AC can be seen as an integrated, trait-type aspect of personality structure, central to the person's way of dealing with problems in the world. Consequently, changes in this organization may carry great potential for improving the person's capacity for healthy adaptation to his or her surroundings (Solbakken, Hansen, & Monsen, 2011). Thus, to understand how mechanisms of change may operate within the context of psychotherapy focused on affect consciousness, it is necessary to understand how the development of personality is understood within the theoretical framework upon which it is based.

The way in which affect is organized in experience in the AC construct is largely built on Tomkins' (Tomkins, 1978; Tomkins & Karon, 1962) script theory, later expanded by Demos (Demos, 2007; Demos, 2016). Tomkins called the basic unit of experience a scene, made up of stimulus-affect-response. According to script theory, multiple scenes are often bundled together, and the patterns and rules inducted from them are called scripts. These are theories that allow us to live seeking rewarding affect and away from punishing affect. Scripts, according to Tomkins, have the cognitive function of providing prediction and explanation of experience. They tend to be self-confirming, but, as he notes, they can yet continually be disconfirmed, modified and regenerated depending on experience.

A similar theory of emotional development was developed by McGinn and Young (1996). While not analogous, the script and schema constructs show considerable theoretical and empirical overlap. According to Young's theory, schemas are formed in early childhood, influenced both by genetic disposition, biological factors and environmental experiences. He stresses that one of the most important etiological ways through which maladaptive schemas develop, is through early, adverse experiences with caretakers, peers or siblings. Experiencing that his or her needs are not satisfied, these schemas evolve within the developing child as a way to make sense of this experience. Young suggests coping may include avoidance, compensation or surrender – strategies that may relieve distress in the short term, but strengthen the maladaptive patterns over time. A basic belief is that different schemas contribute to vulnerability to various categories of personality pathology and psychological distress.

Few studies have addressed AC in children. In a study of 11-year olds with anxiety disorders, consistent relationships were found between AC aspects and the various aspects of mental health (Taarvig et al., 2015). In another study, Taarvig, Solbakken, Grova, and Monsen (2016) found that the children exhibited problems in the way they experienced and coped with a large number of affects, especially fear, shame, guilt, and anger, as well as couplings between affects. The study concluded that attaining capacity to deal adaptively with affect as a likely important contributor to the development of adequate social competence, and that research within this domain may contribute to prevention of psychopathology in children. Research within different age groups is important to the theoretical understanding of AC, and sheds light on understanding continuity of vulnerability and disorders from childhood into adulthood (Zeman, Shipman, & Suveg, 2002).

1.3 Research on Affect in Psychotherapy

Recent research on psychotherapy suggests that learning on a cognitive level alone is not sufficient, and that emotional activation in therapy is necessary to facilitate change, at least within some domains (Berggraf et al., 2014; Goldman, Greenberg, & Pos, 2005; Greenberg & Pascual-Leone, 2006). Procedural learning has thus been pointed out as a possible key component of affective change in psychotherapy (Kennedy & Franklin, 2002). However, the specific mechanisms of change in procedural learning, and associations to other outcome variables are not yet thoroughly understood.

Coombs, Coleman, and Jones (2002) compared the predictive value of collaborative emotional exploration and educative/directive process in cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT). Collaborative emotional exploration predicted positive outcome in both conditions. No such positive association with outcome was found for educative/directive process. This indicates that exploration of emotion is central to positive outcome in therapy, independent of theoretical orientation.

As pointed out by Greenberg (2006), normal cognitive processes can distort or interrupt emotion, and transform adaptive unpleasant emotions into dysfunctional behavior with the purpose of avoiding feeling. In a study of anxiety and depression, Leahy (2002) found that anxiety and depression scores were related to rumination, guilt about emotions, and perception of emotions as not comprehensible and out of control. Validation of emotion in therapy was generally related to less guilt, more differentiated views of emotion, expectation

of shorter duration of the emotional state, and to viewing emotion as more comprehensible, more controllable, more acceptable, and more similar to the emotions of others.

A few longitudinal studies can be found investigating affective change both in therapy and at follow-up. Monsen and colleagues (1995a) conducted a study including patients with personality disorders, with a follow-up time of 5 years. The patients received psychodynamic therapy with focus on affect consciousness. The study found significant and substantial changes in awareness of affect, character-related defenses, and symptoms both during therapy and at follow-up. Furthermore, at the end of treatment, almost three quarters of the patients who met the criteria for diagnoses on both Axis I and II according to Diagnostic and Statistical Manual for Mental Disorders (*DSM-III*, American Psychiatric Association, 1980), no longer met these criteria.

Time is often considered an important factor in psychotherapy. As pointed out in the Solbakken et al. (2012) NMSPOP study, a majority of studies within psychotherapy research are time-limited, i.e the therapists have a fixed number of sessions at their disposal independent of the severity of problems of the individual client. Moreover, a common view has been that those with better function prior to therapy have the highest potential for benefit of therapy, and thus potential for positive change. However, their study showed that when the length of therapy is allowed to vary, this tendency was no longer observed – indicating that the most severely affected clients showed the highest relative levels of change. Other research also suggests that a certain length and intensity is needed for such effects to be observed, especially for populations with personality pathology (Clarkin & Levy, 2004; Doyle, Tarrier, Shaw, Dunn, & Dolan, 2016) or high levels of painful emotion (Coombs et al., 2002).

The association between therapeutic alliance and outcome has accumulated a substantial amount of research, leading to the belief that good alliance may be a prerequisite for productive work with affect in psychotherapy (Horvath, 2005). The Solbakken et al. (2012) study also supports this notion relating specifically to therapies focused on affect consciousness. One hypothesis is that some clients need more time developing trust and a satisfactory working alliance with their therapist in order to come to a point where they can work on their emotional difficulties and thus properly benefit from therapy.

Several studies have been conducted on alexithymia, an AC and personality related construct involving difficulty identifying and distinguishing between feelings and bodily sensations of emotional arousal, difficulties describing feelings to other people, constricted imaginal processes and an externally oriented thinking style (Cameron et al., 2014; Taylor,

Parker, & Bagby, 1990). Alexithymia has been linked to both a range of psychological disorders (Cameron et al., 2014; Cochrane, Brewerton, Wilson, & Hodges, 1993; Cox, Swinson, Shulman, & Bourdeau, 1995; Kim et al., 2008) and interpersonal problems (Inslegers et al., 2012; Kennedy & Franklin, 2002; Vanheule, Desmet, Meganck, & Bogaerts, 2007).

There has been some debate as to whether alexithymia should be considered a state-dependent construct, and whether absolute changes in alexithymia are attributable to fluctuations in emotional distress, such as mental illness or trauma (Grabe et al., 2008). Some studies support this notion, showing alexithymia levels to be dependent on levels of anxiety and depression (Haviland, Hendryx, Shaw, & Henry, 1994; Honkalampi, Hintikka, Laukkanen, Lehtonen, & Viinamaki, 2001). However, others argue that alexithymia is best understood as a fairly stable trait - a notion supported by studies showing that alexithymia levels are mostly independent from changes in medical and psychological symptoms over time (de Haan, van der Palen, Wijdeveld, Buitelaar, & De Jong, 2014; Salminen, Saarijarvi, Aairela, & Tamminen, 1994).

As pointed out by Hungr, Ogrodniczuk, and Sochting (2016), patients high on the alexithymia trait present a particular challenge in psychotherapy, as they struggle with the abilities that constitute some of the main processes and goals of psychotherapy: Differentiating, verbalizing and discussing subjective experiences and emotions. This is consistent with a study examining the predictive value of alexithymia for results of treatment in psychodynamic therapy (Leweke, Bausch, Leichsenring, Walter, & Stingl, 2009), where patients initially high in alexithymia showed somewhat less benefit of therapy.

According to a 2014 review (Cameron et al.), alexithymia is partly modifiable through psychotherapeutic interventions. However, the reviewers found that results from studies where the therapies directly targeted symptoms of alexithymia tended to show more significant reductions. Results were less consistent from studies of therapies where alexithymia were measured, but that did not employ interventions with specific intent to achieve changes on this trait.

Taken together, this indicates that low affect consciousness should be taken into account when designing psychotherapeutic interventions for these groups of patients.

1.4 Affect Consciousness, Symptom Distress and Interpersonal Problems

A question within the psychotherapy debate concerns the role of affect consciousness in formation of symptoms, and conversely how affective change may be related to symptomatic relief.

Mackay, Barkham, and Stiles (1998) conducted a close analysis of a client's anger event in psychodynamic-interpersonal therapy. They found that "staying with the feeling", guided by the therapist, helped the client reorganize the experience of anger, relieving elements of depression and hopelessness - transforming it to "adaptive" primary anger. This was further examined by Pos, Greenberg, Goldman, and Korman (2003), showing that depth of emotional processing predicted both decreases in symptoms and increases in self-esteem. It did not, however, predict improvement in interpersonal problems in this study. Choi, Pos, and Magnusson (2016) found similar results in client-centered and emotion-focused therapies with depressed patients, supporting the view that activating and expressing primary adaptive emotion is important in the resolution of self-criticism in depression.

The role of alexithymia in the course of depression has also been investigated. In a follow-up study of inpatients admitted with acute depression who took part in a multimodal treatment program, Gunther, Rufer, Kersting, and Suslow (2016) found that high scores on the externally oriented thinking (EOT) facet of alexithymia at baseline predicted high severity of depressive symptoms at follow up.

The avoidance theory of worry and anxiety (Borkovec, Alcaine, & Behar, 2004; Newman & Llera, 2011), where worry and emotional disclosure are viewed as opposite processes in relation to emotional processing, has gathered an increasing amount of support. In disorders such as generalized anxiety disorder (GAD), worry is viewed as a strategy that prolongs and maintains a negative emotional state and thus helps avoid unexpected negative emotional shifts, or contrast experiences. This pervasive worry may block the natural course of emotional processing (Greenberg & Pascual-Leone, 2006).

Others, like Mennin and colleagues (Fresco, Mennin, Heimberg, & Ritter, 2013; Mennin, 2004; Mennin, Fresco, Ritter, & Heimberg, 2015; Mennin, Heimberg, Turk, & Fresco, 2002), view anxiety disorders primarily as disorders of emotion regulation, and GAD as a syndrome involving difficulties with emotional processing and overuse of cognitive strategies. In a study comparing affect-focused body therapy (APB) to treatment as usual

(TAU) for 61 patients with GAD, Berg, Sandell, and Sandahl (2009) found that patients who had received ABP had improved significantly more on general symptom distress. They also found that AC increased after ABP, with patients with high levels of anxiety at start-up improving the most. However, they did not find an effect of AC on symptomatic outcome, measured directly or as a mediator.

Emotion regulation difficulties may also be involved in other categories of disorders. Previous studies have found a link between affect consciousness and somatoform disorders (Waller & Scheidt, 2004). A recent neuroimaging study on emotion regulation supports this hypothesis, linking suppression of aversive affect and aversive somatic sensations (Fiess, Rockstroh, Schmidt, & Steffen, 2015).

A recent study (Thorberg et al., 2016) included patients with alcohol dependence. The patients received CBT. The results showed a significant increase in the patients' ability to identify and describe feelings, but no change in externally oriented thinking. However these gains were found to be partially mediated by assertion alcohol expectancies, leading the authors to conclude alexithymia was a relatively stable, trait-like factor among treatment seekers.

The role of affect consciousness in eating disorders has also been researched. Lech, Holmqvist, and Andersson (2012) conducted a control-group study on observer-rated affect consciousness and eating disorders. They found significantly lower AC in general in the eating disorder groups, but did not identify a significant correlation between AC and symptoms of eating disorder within the patient sample over 10-11 weeks of treatment. However, a 2013 review (Nowakowski, McFarlane, & Cassin) concluded there is strong support for the view that alexithymia (i.e low AC) is not simply a by-product of eating disorder symptomatology, and recommended treatments incorporate a focus on emotions and emotion regulation. Another systematic review by Pinna, Sanna, and Carpiniello (2015) on treatments for eating disorders concluded that treatments focusing on improving alexithymic traits, and specifically targeting affect, seemed to show greater efficacy.

In a study including 339 participants aged 18-25 investigating the association between child maltreatment and internalizing problems, Brown, Fite, Stone, and Bortolato (2016) found that history of child maltreatment was associated with symptoms of depression, anxiety, and loneliness in emerging adulthood. When testing for indirect effects, part of this association was explained by alexithymia, indicating that reduced affective awareness plays a role in the suffering of victims of child maltreatment.

A common notion relating to psychotherapy is the question of whether or not and how capabilities acquired through therapy will benefit the client outside of therapy, i.e ecological validity or generalizability to "real life"-situations. A common phrase in some schools of psychotherapy is that the goal of the treatment is that the patient should become his or her own therapist (Beck, 2011). The importance of the patient's contribution to the outcome of psychotherapy is well documented (Norcross, 2006; Orlinsky, Grawe, & Parks, 1994). An increasing number of psychotherapeutic approaches are focused on the patient's affective experience (Greenberg & Pascual-Leone, 2006). Basic beliefs include the notion that overcoming avoidance of affect and increased tolerance for and ability to regulate affect in adequately according to context are among the main routes to positive change, related to the self-experience and relations to others (Normann-Eide et al., 2015).

A basic belief in AC theory is that a low level of affect consciousness is likely to reduce the individual's access to the adaptive functions of affect (Solbakken, Hansen, & Monsen, 2011). Low levels of AC has been linked to high distress in a psychiatric population (Monsen et al., 1996; Monsen et al., 1995a). As described above, patterns of affective processing likely develop in early life, in relationship with caregivers (McGinn & Young, 1996). However, it is possible that the development of affect integration continues into adulthood as an interpersonal process through new scenes involving interaction with others (Demos, 2007; Rime, 2009).

Expression and sharing of emotion is considered a vital part of intimacy and formation of close relationships (Butler et al., 2003; Laurenceau, Barrett, & Pietromonaco, 1998). Thus it is likely that difficulties with affective awareness and expression could have an impact on both the self and the quality of interpersonal relations. In a prospective study, Johansen et al. (2016) found a significant association between lower AC levels and relational capacities at baseline.

Other empirical studies have also been conducted investigating the relationship between affect consciousness and interpersonal functioning. A study by Solbakken, Hansen, Havik, et al. (2011), assessing the validity and predictive properties of the AC construct in relation to interpersonal problems, found that two specific affects had specific relationships to interpersonal problems, as measured by the IIP-64. Problems with integration of Anger/Rage had the strongest association with non-assertiveness, while problems with integration of Tenderness/Care had the strongest association with coldness and detachment. The predictive value of AC on interpersonal problems was also supported by a later NMSPOP study

(Solbakken et al., 2012). In addition, a recent validation study (Solbakken et al., 2017) concluded that a reliable and valid assessment of affect integration is possible through a reasonably time-efficient self-report format. The study also showed significant associations between AC and external criteria such as symptom distress and interpersonal functioning.

Normann-Eide et al. (2015) conducted a study of changes in AC in group therapy in patients with avoidant or borderline personality disorder, and associations with clinical status at 3-year follow-up. They found a significant increase in AC during therapy. Moreover, results showed that the AC change contributed significantly to explained variance in interpersonal problems at follow-up. In an earlier study, Normann-Eide et al. (2013) identified discriminant effects for specific affects related to different areas of interpersonal problems. Low AC for pleasant affects was specifically related to communion problems on the interpersonal circumplex, like cold, detached behavior. Low AC for self-boundary affects was found to be related to agency problems, such as non-assertiveness, at follow-up. However, neither of these two studies identified significant associations between AC and global symptom distress scores.

In two studies, one on treatment of depression and one on the recovery of survivors of traumatic sexual abuse, the activation and expression of anger were associated with therapeutic change (Beutler et al., 1991; Van Velsor & Cox, 2001). Specifically, such processing was related to improved self-efficacy and self-assertiveness, both related to the agency domain of the interpersonal circumplex.

A recent study investigated changes in affective activation during therapy in relation to interpersonal problems (Berggraf et al., 2014). The study included patients with Cluster C personality disorders from a randomized controlled study, who received either short-term psychodynamic psychotherapy (STDP) or cognitive therapy (CT). Reductions of hostile-submissive, hostile-dominant, cold, social-avoidant and vindictive behaviors were found in both groups. An earlier study by Schanche, Stiles, McCullough, Svartberg, and Nielsen (2011) found significant associations between decreases in levels of inhibitory affects and increases in levels of activating affects during therapy and higher self-compassion toward the end of treatment for the same patient group. A randomized study compared brief adaptive therapy, short-term dynamic therapy (STDP) and wait list conditions for patients with personality disorders (Winston et al., 1994). The study had an average follow-up time of 1.5 years. The whole sample showed significant improvement on all measures during treatment, and stability at follow-up for both treatment conditions.

In another randomized clinical trial by Watson, Gordon, Stermac, Kalogerakos, and Steckley (2003) process-experiential (PE) therapy, an emotion-focused therapy, was compared with cognitive-behavioral therapy (CBT) for clients with major depression. No significant differences were found between treatment conditions in treating depression, relieving general symptom distress and increasing self-esteem. However, clients receiving PE therapy showed significant more improvement when compared to CBT on interpersonal problems, especially related to increased self-assertiveness and less over-accommodating behavior.

A review of literature on alexithymia also indicates an association between alexithymia and difficulties in labelling and recognizing emotional facial expressions and lexical stimuli (Donges, Kersting, & Suslow, 2014), with implications for interpersonal relations.

A possible theoretical explanation suggested for emotional change in therapy, is that schemas/scripts are re-modulated, allowing for greater tolerance for affective activation, improving capacity for utilization of affect in interpersonal settings, as well as symptomatic relief (Nordahl, Holthe, & Haugum, 2005; Nordahl & Nysaeter, 2005). Any change achieved through therapy therefore may be related to, and enhanced by, increased quality of relationships with other people outside of therapy - impacting overall life satisfaction. This may occur through the empathic attunement of another, and acceptance and validation by another person (Greenberg & Pascual-Leone, 2006). One suggestion is that internal security develops through the experience of existing in the mind of another, and that the soothing functions of another person is gradually internalized (Fosha, 2000; Schore, 2003).

1.5 Client Perspective

Few studies have specifically investigated the clients' experience of affect-focuses therapies. A survey by Piliero (2004) included clients who had participated in either emotion-focused therapy (Greenberg, 2002), accelerated experiential dynamic therapy (Fosha, 2000) or intensive short-term dynamic psychotherapy (Abbass, 2015). According to Piliero (2004), client reports of experiencing affect in therapy were clearly associated to both satisfaction with therapy and the feeling that change had occurred. In addition, the experience both of the therapist's role as witness to the emotional experiencing and the therapist's affect-eliciting techniques were linked to feelings of satisfaction and change. The overall satisfaction with

affect-focused therapists was very high, with therapists being perceived as attuned to the client's thoughts and feelings, active and emotionally involved in the treatment. A small number, however, said they occasionally experienced intense anger, resentment or other negative feelings toward the therapist. More than 3/4 of clients reported significant, long lasting improvements. Furthermore, the clients reported improvement not only in overcoming specific symptoms, but in several other areas of life. Of those who had previously been in a different type of therapy, 2/3 said that the affect-focused therapy was significantly better.

In all, from a client perspective, it seems that affect-focused therapies not only contribute to reduction of problems and presented symptoms, but that clients report lasting characterological changes.

1.6 Research Questions and Hypotheses

The field of psychotherapy thus presents a complex picture, incorporating a variety of constructs, research designs, target demographics and therapeutic approaches. In sum, substantial research has documented the role of affective processes in psychological functioning. Previous research has established the reliability and validity of the AC construct in general and in terms of associations to external criteria (Solbakken, Hansen, Havik, et al., 2011; Solbakken et al., 2017). However, when comparing research with different approaches, there has been some inconsistency in results relating to the magnitude of change in AC and related constructs during psychotherapy. In addition, most studies have only examined associations between baseline and absolute levels of AC and external criteria. Some studies have identified associations with symptom distress and interpersonal functioning, while other studies have failed to establish associations with one or two of these domains. Few studies have investigated the predictive value of change levels in AC, as well as post-treatment growth curves.

The current study aims to add to this picture, by examining open-ended therapies with a specific focus on AC for a naturalistic outpatient psychiatric population with arguably severe psychopathology using advanced statistical methods and a long follow-up period. The included sample of patients is the largest and most diverse with regards to presented problems in present AC literature. We believe this makes the data the best suited until now to demonstrate effects of this type, as it may lower the risk of restriction of range commonly observed with smaller and less diverse samples.

Theory points to the role of AC in both formation of symptoms and interpersonal problems. According to AC theory, low capacity to perceive, tolerate, reflect upon and express the experiences of basic affective activation can lead to conversion of affect into symptoms and psychological distress. Thus, increased capacity within these domains predict reduction in symptom distress. Furthermore, increased ability to utilize the adaptive properties of affects imply improvements in daily adaptation to different interpersonal situations and increased capacity to form and enjoy close relationships to others – the relative absence of interpersonal problems. As AC can be seen as a trait-type characteristic, these increased capacities to access and utilize affect, insight into one's own behavior, and assumed quality of close relations with others could thus be expected to be enduring and become increasingly beneficial for the individual over time during therapy, as well as after treatment termination.

Based on previous research and theoretical perspectives we expect to find the following results: A significant positive change in AC during therapy (Monsen, Odland, Faugli, Daae, & Eilertsen, 1995b; Normann-Eide et al., 2013, 2015; Solbakken et al., 2012) and a smaller, but significant positive growth at follow-up (Kivlighan et al., 2015; Monsen et al., 1995a, 1995b; Normann-Eide et al., 2015; Shedler, 2010; Solbakken et al., 2012). We expect to find moderate associations between changes in AC and changes during therapy in symptoms (Monsen et al., 1995a; Nordahl et al., 2005; Solbakken et al., 2012) and interpersonal problems (Monsen et al., 1995a, 1995b; Solbakken et al., 2012), moderate associations between both pre-treatment levels of AC and AC change during treatment and levels of symptom distress and interpersonal problems after treatment termination (Monsen et al., 1995a, 1995b; Normann-Eide et al., 2015; Solbakken et al., 2012). We also expect small to moderate associations between changes in AC during treatment and post-treatment changes in symptoms and interpersonal problems (Monsen et al., 1995a, 1995b; Normann-Eide et al., 2015; Solbakken et al., 2012).

To address this objective, the following research questions were formulated:

1. To what extent does affect consciousness (AC) change during open-ended therapy?
2. Is there a post-therapeutic growth in AC?
3. Does change in AC correspond with change in levels of symptom distress and interpersonal problems during therapy?
4. Do what degree are pre- and post-treatment levels of AC and associations with levels of symptom distress and interpersonal problems stable at follow-up?

5. Does change in AC during treatment predict reduction of symptom level and interpersonal problems after therapy has ended?

2 Method

2.1 Participants

This thesis is based on data from the Norwegian Multi-Site Study of Process and Outcome in Psychotherapy (NMSPOP; Havik et al., 1995), a large-scale naturalistic study of outpatient psychotherapy. The participants were recruited from clinics within the Norwegian Public Health Care System. The study had a liberal inclusion policy. Exclusion criteria were age under 18 years, mental retardation, current psychosis, drug/alcohol abuse as the primary problem, and need for emergency hospitalization.

The sample for the present study includes a total of 153 patients. The demographic and clinical characteristics of the sample are as follows: Mean age 35 years (*SD* 9.8, range 18-65); 71% were female. 50% of the patients had diagnoses of affective disorders, mainly Major Depressive Episode. 35% had anxiety disorders, 34% had somatoform disorders and 10% had eating disorders. 51% of the patients had one or more personality disorders (Cluster C 25%, Cluster B 6%, Cluster A 18%, Nos 2%).

2.2 Procedures

The study was approved by The Medical Research Committee for Eastern Norway, and participation was based on informed and signed consent. Trained coordinators (psychologists/psychiatrists) at each of the sites informed, assessed and invited patients to participate in the study.

Diagnostic evaluations were done according to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV; American Psychiatric Association, 1994). Semi-structured Clinical Interviews for DSM-IV for Axis I and II (First, Spitzer, Gibbon, Williams, & Benjamin, 1994) were used. For the assessment of affect integration, the Affect Consciousness Interview (ACI; Monsen et al., 2008) was used prior to treatment, at termination, and 30 months post-treatment. A core battery of questionnaires was completed by the patients. This included measures of symptom distress and interpersonal problems, completed pre-treatment and after sessions 3, 12, 20 and every 20 sessions after that throughout the course of the individual treatments. In addition, the battery was completed

after treatment termination, 6 months post-treatment, 12 months post-treatment, and 30 months post-treatment.

2.3 Treatments

35 therapists in total were recruited and provided the treatment. They all reported working within a psychodynamic theoretical orientation. Of the therapists, 27 received training and supervision in affect-focused therapeutic models: Affect consciousness therapy (Monsen & Monsen, 1999) and affect-focused body therapy (Monsen & Monsen, 2000). The remaining 8 had training and supervision in traditional psychodynamic psychotherapy.

The treatments were open-ended. Each patient/therapist pair was instructed to reach an agreement concerning when the treatment should end, based on their joint evaluation of the progress made in therapy. The mean number of sessions in the study sample was 72. The range was 2 to 364 sessions. 50.3% of the patients completed more than 40 sessions, and 7.8% completed less than eight.

2.4 Assessment Instruments

Affect consciousness (AC) was measured using The Affect Consciousness Interview (ACI), a one and a half to two hours semi-structured interview developed for research and clinical settings to assess the consciousness and integration of 11 basic affects (Monsen et al., 2008). The interview discriminates between five aspects of the experience of these affects: Scenes/elicitors, awareness, tolerance, emotional (nonverbal) expression and conceptual (verbal) expression. The following areas are investigated by the interviewer for each affect: (1) scenes in which the affect is activated, (2) how the patient becomes aware of and recognizes the affect, (3) how the affect impacts upon the patient, how the patient copes with the affect, and what information the patient decodes from the affect activation, (4) to what extent and how the affect is expressed in nonverbal forms (referring to the respondent's consciousness of own voluntary and involuntary nonverbal expressions, including emotional expression) and (5) to what extent and how they affect express the affect verbally (i.e conceptual expression) (Solbakken et al., 2012).

The interviews were administered by the therapists before treatment start-up for each client. They were videotaped, then transcribed and scored according to the Affect Consciousness Scales (ACS). The scales are comprised of four nine-step scales, one for each

of the integrative aspects: Awareness, Tolerance, Emotional Expression, and Conceptual Expression. 1 was the lowest possible score, 9 the highest, and 5 would be considered normal. Solbakken, Hansen and Monsen (2011) describe the administration and rating of the ACI in more detail.

Nine affects are usually rated on these four aspects. This yields a total of 36 indicators of affect integration. Based on these indicators, scores on three different levels can be calculated. Mean score on each of the discrete affects (e.g. mean score on awareness, tolerance, emotional expression and conceptual expression for Anger/Rage, mean score on each of the four aspects of integration (e.g. the mean Tolerance score across all nine affects) and overall mean score (Global AC).

In the present study, only scores for general affect integration (Global AC) are used. Previous analyses of ACI scores have demonstrated good reliability in terms of both internal consistency and inter-rater agreement. Moreover, good construct validity has been shown through good internal structure and systematic convergent and discriminant relationships with external criteria (Solbakken, Hansen, Havik, et al., 2011).

In the present study, six AC raters in total were used. Four were psychology students who had gone through training in the administration and scoring of the ACI. The program included about 50 hours of lectures and practice using a training set comprised of 10 ACIs with expert consensus scores. They received systematic feedback on their ratings during practice. When they reached an acceptable level of agreement with the expert scores, they were certified as reliable raters. Two more raters participated. These were clinical psychologists and researchers experienced in the administration and scoring of the ACI, in addition to being among the developers of the scoring criteria and ACI training set. The same two were responsible for training the student raters. Inter-rater reliabilities for each rater were calculated, using a set of 20 interviews taken from the study sample. Global AC had a mean score of 3.8 (*SD* .62), with interrater reliability of .75-.91 (ICC coefficients; Shrout & Fleiss, 1979).

The Symptom Checklist-90-Revised (SCL-90-R, Derogatis, 1992) self-reported questionnaire was used to measure symptom distress. Intensity of 90 symptoms during the last seven days is rated on 0 to 5 Likert scale, where 0 is labeled not at all and 4 very much. The scores are represented on three global indexes and nine symptom dimensions (Derogatis, Rickels, & Rock, 1976). The Global Severity Index, the average score across all items, is

considered a reasonable indicator of current levels of psychological (Hill & Lambert, 2004). Cronbach's alpha for the GSI in the study sample was .97 at intake.

Interpersonal problems were assessed using the 64-item circumplex version of the Inventory of Interpersonal Problems (IIP-64; Horowitz, Alden, Wiggins, & Pincus, 2000). The IIP-64 includes two item types. The first 39 items begin with "It is hard for me to…", while the remaining 25 items are statements about "Things that you do too much". The individual items are rated on a 5-point Likert scale ranging from not at all (0) to very much (4). Previous research has consistently linked the general (*g)* factor of the IIP-64 to both symptom severity and negative affectivity (Tracey, Rounds, & Gurtman, 1996). The second (Agency) and third (Communion) factors, comprising the IIP-64 circumplex structure, have shown good fit with a quasi-circumplex model and distinct convergent-discriminant patterns of correlation with different forms of personality pathology. This points to good construct validity and supports the notion that the IIP-64 adequately represents the distinctions of interpersonal functioning it is theoretically expected to represent (Monsen, Hagtvet, Havik, & Eilertsen, 2006). The IIP-Global, the overall score of the IIP-64, was used as an indicator of general interpersonal problems. Cronbach's alpha for the IIP-64-Global in the study sample was .93 at intake.

2.5 Statistical Analyses

In uncovering mechanisms of change, and the relationship between such mechanisms, several methodological issues arise. For one, such research demands repeated measures of both the mechanism and outcome variables. Recent research on clients' trajectories of change suggests that change curves may be diverse, and may "ebb and flow" more than traditional dose-effect and good-enough level models suggest (Owen et al., 2015). Hence, models should be implemented to account for this phenomenon.

More sophisticated analytic tools for the study of change in longitudinal data, such as multi-level modelling (Hox, 2010; Singer & Willett, 2003), permits handling prediction of change while still maintaining relevant covariance between predictors and outcome variables. Another advantage is that such models is that they are based on more reliable and powerful individual growth models. This produces higher statistical power and better handling of dependency within observations on the same subjects, counteracting an important source of

confounding that often has been an issue in previous research (Fitzmaurice, Laird, & Ware, 2011).

Multilevel modeling was therefore chosen as method of analysis for the current study, using the linear mixed models option in version 21.0 of SPSS. The data analytic strategy is in accordance with literature within the field, where multilevel modeling is recommended for the analysis of longitudinal data (Hox, 2010; Singer & Willett, 2003). In longitudinal data analyses, it is possible to nest measurements within individuals, so that measurements represent units at the first level and individuals represent units at the second level. The data included in the present study consist of measurements made at multiple points in time at level 1, which are related to each individual at level 2. The data meets requirements suggested by Singer and Willett (2003) for longitudinal multilevel analyses as all outcomes change systematically over the course of time, are measured on continuous scales, and were assessed at three or more points in time for each patient.

Multi-level modelling offers several advantages. One is differences in the number of measurements within each individual, such as missing data. Estimations derived from multi-level modelling growth curves takes missing data into account, reducing the impact of such potential sources of error (Hedeker & Gibbons, 1997; Hsiao, 2007). As a consequence, variation in the number of assessments within a given time frame, such as is the case when treatment length varies, does not represent a problem. It also allows inclusion of data from patients who were only assessed at one or two occasions. However, in a multi-level model, cases with only one measurement can only be used to calculate the intercept - not the slope.

Another advantage of multilevel modeling is that it offers several ways of defining the passage of time and points of measurement (Hox, 2010; Singer & Willett, 2003). According to Singer & Willett (2003), time should ideally be specifically tailored to match the research question(s). In the present study, this would be predicting overall response to treatment independent of treatment length. The data are derived from open-ended therapies, and treatment length varies significantly across patients. In these cases it is ideal if the slope of a given multilevel model can be organized so that it represents the overall response to therapy, independent of time in treatment. For achieving this goal pre-treatment, end of treatment and follow-up assessments were treated as fixed occasions, and placed at a constant distance across all patients - as pointed out by Solbakken et al. (2012), this enables us to utilize both the precise and realistic models of individual patterns of longitudinal change and the statistical power allowed by multi-level modelling. We can thus estimate and predict the

overall magnitude of change both during ongoing treatment and during the follow-up phase, regardless of variations in the length of the individual treatments.

2.6 Preparatory Data Analyses

Singer and Willett (2003) recommend visual inspection of raw score and individual ordinary least scores (OLS) plots when applying multi-level modelling. This makes it possible to assess whether a linear or non-linear model will best fit the data. Such inspections and assessments were conducted systematically for all dependent variables. Individual R^2-values for estimated linear and non-linear developmental trajectories were examined. This was further tested by comparing goodness of fit with the data for time variables transformed to both linear and logarithmic trajectories. Bayesian Information Criterion (BIC) and Akaike's Information Criterion (AIC) for all outcome variables were compared. For the overall model of change in AC during treatment and follow-up, the log-transformed model performed better than the linear. Hence, for further analyses, a Lg^{10}-transformed time-variable (log time) was adopted. For the separate phases model, a 2-piece linear model was better suited. For the analyses of changes in symptoms and interpersonal problems in the follow-up phase linear models had the best fit in both cases.

2.7 Multi-Level Modelling

Models were created for each research question. First, an overall model was created for assessing overall AC change for all three phases. A second model set was then created for assessing AC change in the treatment and follow-up phases separately. In addition, separate models were created assessing the associations between AC and GSI and AC and IIP Global for the treatment and follow-up phases. This yielded a total of five model sets.

The multi-level models contained two levels of analysis. The levels represented repeated measurements over time nested within individuals. Measurement occasions were treated as fixed, and time variables were centered and recoded for the analyses so that the first measurement occasion in each model had the time value of 0, while the last had the time value of 1. Any intermittent measurement occasions were coded to represent the relative passage of time from one occasion to the next. Thus the coefficient for the slope of each model is easily interpretable as the total amount of change in the respective outcome variable across the total number of measurement occasions.

For the analysis of estimated Global AC change across all phases, a null model (Model 0) containing only the mean Global AC was computed. This enabled assessment of the variation in Global AC across times of measurement. The second model (Model 1) included a calculation of the fixed effect of the Lg^{10}-transformed time variable (log time), plus a random effect of the intercept. In the next model (Model 2), a random effect of slope was also added, allowing developmental slopes to vary independently across patients.

To investigate changes in AC during the treatment and follow-up phases separately, two model sets were computed. The first set contained pre and post treatment AC-data (T1 and T2), the second post treatment and follow-up AC-data (T2 and T5). The null models (Model 0) were computed with linear time, including a random effect of the intercept only. The second model included a calculation of the fixed effect of the linear time variable, in addition to both intercept and developmental slope being allowed to vary randomly across patients (Model 1).

For examination of the associations between changes in AC during treatment and concurrent change on the two general outcome variables (GSI and IIP-Global) a third set of models were computed based on the first set above. As above, the null model (Model 0) contained only a fixed effect of time and a random intercept, while in the second model (Model 1), a random effect of slopes was added. In the third model, growth curve estimated changes on the GSI was added as a predictor of AC change (Model 2). Then a fourth model was computed in which GSI change was removed and growth curve estimated change on the IIP-Global was included as a predictor of AC change (Model 3). The predictor variables were standardized before they were entered into the analyses for ease of interpretation.

The fourth and fifth model sets constituted growth curve estimations of post-treatment changes in symptoms and interpersonal problems based on data gathered post treatment, and 6, 12, and 30 months thereafter. They were created separately for the GSI and IIP, but the calculations were otherwise identical. The null models (Model 0) were computed with linear time, including a random effect of the intercept. The second model (Model 1) included calculation of the fixed effect of the linear time variable, in addition to both intercept and developmental slope being allowed to vary randomly. For the third model, pre-treatment AC levels and growth curve estimated change in AC during treatment were added as predictors of both intercept and slope of the GSI- and IIP-Global growth trajectories, respectively (Model 2). Again, predictor variables were standardized before they were entered into the analyses for ease of interpretation.

As an additional estimate of the strength of association between measures of change, a correlation analysis between AC-change, IIP-change and GSI-change was conducted based on multilevel growth curve estimated change scores.

2.8 Effect Size

Cohen's d was computed in order to make results comparable to other studies in the literature. As is customary in longitudinal multilevel modelling we used growth curve estimated change scores and divided them by the pooled standard deviation of estimated scores across all measurement occasions to calculate d.

3 Results

3.1 Overall Change

Results from the multilevel analyses of overall change in AC across treatment and follow-up are presented in table 1. The intercept denotes the estimated average baseline value. Time denotes the average estimated change during treatment and follow-up.

There was a significant positive effect of time on AC, i.e an overall increase in AC over time. However, model 1, in which the intercept, but not the individual slopes, for each participant was allowed to vary randomly, proved a marginally better fit than model 2.

Table 1. *Results of multilevel analysis: Overall AC change from pre-treatment through 2.5 years follow-up.*

	Model 0	Model 1	Model 2
	Est	Est	Est
Fixed effects			
Intercept	3.87** (.05)	3.87** (.05)	3.87** (.05)
Time	.28** (.08)	.27** (.06)	.27** (.06)
	Est	Est	Est
Residual	.41** (.03)	.20** (.02)	.18** (.03)
Var in intercept		.20** (.03)	.22** (.05)
Cov intercept/slope	-	-	–.36 (.05)
Var in slopes			.06 (.09)
AIC	735.036	662.295	665.777

Note. Standard errors are in parentheses. Var = variance, Cov = covariance. Time = logtransformed time. Estimations were done by the method of restricted maximum likelihood (REML). * $p < .05$; ** $p < .01$.

3.2 Comparing Treatment and Follow-Up Phases

The next set of multilevel models analyzed the treatment and follow-up phases separately. Results are found in table 2. The results showed a significant increase in AC over time in the treatment phase, but not during the follow-up phase.

Table 2. *Results of multilevel analysis: AC change during and after treatment.*

	Treatment phase		Follow-up phase	
	Model 0	Model 1	Model 0	Model 1
	Est	Est	Est	Est
Fixed effects				
Intercept	3.86** (.05)	3.86** (.05)	4.08** (.06)	4.08** (.06)
Time	.21** (.05)	.21** (.05)	.05 (.07)	.05 (.07)
	Est	Est	Est	Est
Residual	.16** (.02)	.07** (.02)	.22** (0.03)	.12** (.03)
Var in intercept	.23** (.04)	.33** (.05)	.19** (0.05)	.27** (.05)
Cov	-	–.10** (.03)	-	–.08* (.04)
Var in slopes		.19 (.00)		.19 (.00)
AIC	486.088	490.075	405.899	409.686

Note. Standard errors are in parentheses. *SD* .00 = model does not converge. Var = Variance, Cov = Covariance, Time = linear time. Estimations were done by the method of restricted maximum likelihood (REML). * $p < .05$; ** $p < .01$.

3.3 Treatment Phase: Associations between Changes in AC, Symptoms and Interpersonal Problems

Details of the multilevel models estimating the relationship between AC change during treatment and growth curve estimated change on the GSI and IIP can be found in Table 3. A positive estimate for a given predictor's interaction with time indicates that an increase on the scale of the predictor (changes in symptoms and interpersonal problems, respectively - a change of one constitutes an improvement that is one standard deviation greater than average in the predictor) produces a corresponding increase in overall AC change. Conversely, a negative estimate implies a corresponding decrease in the change rate of AC over time.

The results demonstrated significant positive associations between positive AC change and improvements in GSI and IIP scores over time, respectively. As an additional measure of the predictive value of AC change, correlations were calculated between growth curve estimated AC change and corresponding change scores from the other outcome variables. Correlation analysis yielded a Pearson's *r* of .27 between AC-change and GSI-change, which was significant at $p > .01$. The correlation analysis of AC change and IIP change, yielded a Pearson's *r* of .38, significant at $p > .01$. These associations correspond to a level of explained

variance where AC-change explains about 15% of the variation in change on the IIP, while it explains about 7% of the variation in GSI change scores.

Table 3. *Results of multilevel analysis: AC change during treatment. Associations with GSI and IIP change.*

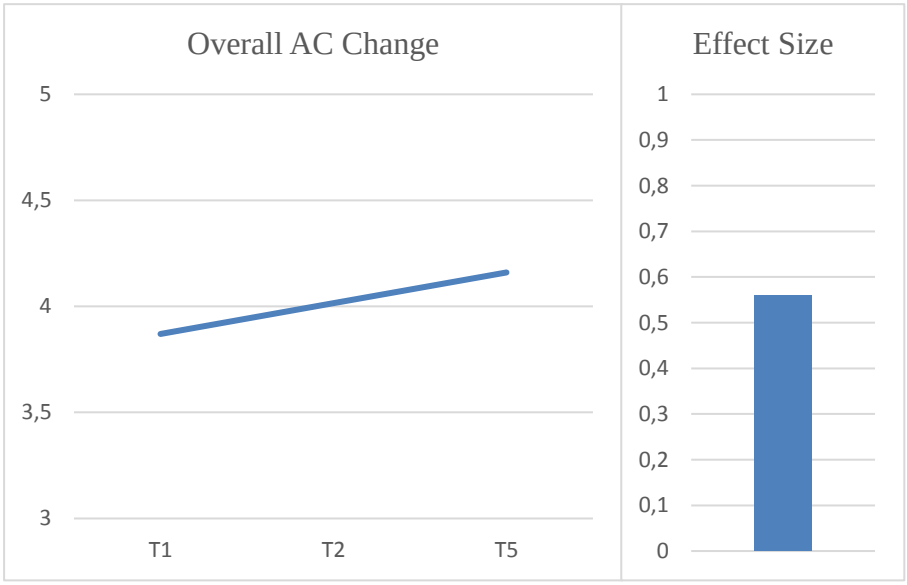
	Model 0	Model 1	Model 2	Model 3
	Est	Est	Est	Est
Fixed effects				
Intercept	3.86** (.05)	3.86** (.05)	3.86** (.05)	3.87** (.05)
Time	.21** (.05)	.21** (.05)	.20** (.05)	.20** (.05)
GSI change			–.04 (.05)	
IIP change				–.08 (.05)
Time*GSI change			.15* (.06)	
Time*IIP change				.21** (.05)
	Est	Est	Est	Est
Residual	.16** (.02)	.07** (.02)	.15** (.02)	.14** (.02)
Var in intercept	.23** (.04)	.33** (.05)	.24** (.04)	.25** (.04)
Cov intercept/slope	-	–.10** (.03)	-	-
Var in slopes		.19 (.00)		
AIC	486.088	490.075	487.972	479.789

Note. Standard errors are in parentheses. Var = variance, Cov = covariance, Time = linear time, GSI/IIP change = standardized growth curve estimated change. Estimations were done by the method of restricted maximum likelihood (REML). * $p < .05$; ** $p < .01$.

3.4 Effect Sizes

The effect size (Cohen's *d)* was calculated for overall AC change across the sample, indicating an average improvement during and after treatment of .56 standard deviations. According to the classifications of magnitude suggested by Cohen and later expanded by Sawilowsky, this effect can be placed within the moderate range (Sawilowsky, 2009).

Figure 1. *Results of multilevel analysis: Estimated effect sizes of overall change through all phases (left) and effect size (right) for the entire sample.*



3.5 Predicting Post-Treatment Levels and Growth: GSI

Details of the multilevel model analyses examining AC change during treatment as a predictor of post treatment status and change on the GSI and IIP are presented in tables 4 and 5, respectively.

Table 4 shows a significant negative association between pre-treatment AC levels and GSI scores at the end of treatment. In addition, there was a significant negative association between AC change during therapy and GSI levels at the end of treatment. I.e, higher levels of AC pre-treatment and AC change during treatment predicted lower symptom levels -as measured by the GSI- at the start of the follow-up phase.

No significant effect of time was found on GSI levels during follow-up, nor were significant interaction effects between time and AC change and time and AC pre-treatment scores. I.e, measured GSI symptom levels were not significantly reduced on average at follow-up compared to post-treatment, nor was post treatment change on the individual level associated with pre-treatment levels of AC or AC change during therapy.

Table 4. *Results of multilevel analysis: Prediction of post-treatment change on the GSI.*

	Model 0	Model 1	Model 2
	Est	Est	Est
Fixed effects			
Intercept	.82** (.04)	.82** (.04)	.82** (.05)
Time	–.01 (.01)	–.01 (.01)	–.01 (.01)
AC pre-treatment			–.36** (.05)
AC change			–.20** (.05)
Time*AC pre-treatment			.02 (.01)
Time*AC change			–.01 (.01)
	Est	Est	Est
Residual	.08** (.01)	.07** (.01)	.07** (.01)
Var in intercept	.33** (.03)	.37** (.03)	.29** (.04)
Cov intercept/slope		–.15* (.01)	–.01 (.01)
Var in slopes		.01** (.01)	.01 (.01)
AIC	1157.464	1143.793	553.824

Note. Standard errors are in parentheses. Var = variance, Cov = covariance, Time = linear time. Estimations were done by the method of restricted maximum likelihood (REML). * $p < .05$; ** $p < .01$.

3.6 Predicting Post-Treatment Levels and Growth: IIP

Table 5 shows the corresponding multilevel analyses for the IIP scores. The results show a significant negative association between pre-treatment AC levels and IIP scores at the end of treatment. In addition, there was a significant negative association between AC change during therapy and IIP levels at the end of treatment. In other words, higher levels of AC pre-treatment and AC change during treatment predicted lower levels of interpersonal problems – as measured by the IIP – at the beginning of the follow-up phase.

As with the GSI, there was no significant effect of time on IIP levels during follow-up, nor were there significant interactions between time and AC pre-treatment and time and AC change scores. I.e, measured interpersonal problems were not on average significantly reduced at 2.5 years follow-up compared to post-treatment, nor was such change on the individual level associated with pre-treatment levels of AC or AC change during therapy.

Table 5. *Results of multilevel analysis: Prediction of post-treatment change in IIP.*

	Model 0	Model 1	Model 2
	Est	Est	Est
Fixed effects			
Intercept	1.18** (.03)	1.18** (.03)	1.17** (.04)
Time	–.02 (.01)	–.02 (.01)	–.02 (.01)
AC pre-treatment			–.28** (.04)
AC change			–.16** (.04)
Time*AC pre-treatment			.01 (.01)
Time*AC change			–.01 (.01)
	Est	Est	Est
Residual	.07** (.01)	.06** (.01)	.06** (.01)
Var in intercept	.29** (.02)	.30** (.03)	.21** (.03)
Cov intercept/slope		–.01 (.01)	–.01 (.01)
Var in slopes		.01** (.01)	.01 (.01)
AIC	979.022	966.459	479.912

Note. Standard errors are in parentheses. Var = variance, Cov = covariance, Time = linear time. Estimations were done by the method of restricted maximum likelihood (REML). * $p < .05$; ** $p < .01$.

4 Discussion

The overall goal of this study was to investigate the predictive value of levels and magnitude of change in affect consciousness (AC) during and after open-ended psychotherapy. The first research question examined the level of change in affect consciousness during therapy. Secondly, we examined the presence of post-therapeutic growth in AC, with a follow-up period of 2.5 years. The third, fourth and fifth goal was to examine possible links between AC and AC change, symptom severity and interpersonal problems, during and after therapy. The investigations were conducted using multilevel modelling and analyses of growth curve estimated change scores.

4.1 AC Change during Therapy

Regarding our first research question, we found a moderate, but significant overall positive increase in AC during open-ended therapy.

As presented earlier, AC could be classified a "trait"-type characteristic which is related to other constructs such as personality and character. There has been some inconsistency in earlier studies with regards to changes in constructs such as alexithymia and AC, and the magnitude of change (or lack thereof), supports the view that AC could be considered a relatively stable trait. Meanwhile, comparing the studies introduced earlier, it seems that a pattern may be forming where the studies in which patients arguably had the most severe pathology and the length of treatment was longer generally reported greater magnitudes of change. If this is indeed the case, The Monsen et al. (1995a) study stands out, reporting substantial effect sizes in a patient group with severe and complex pathology during psychodynamic therapies lasting up to several years. This is accompanied by the Normann-Eide et al (Normann-Eide et al., 2013, 2015) studies – which included only patients with personality pathology in long-term treatment. This places the current and Solbakken et al. (2012) studies, which included the most heterogeneous patient group and highly variable treatment lengths, after these - followed by several studies identifying less substantial to no effects (Berg et al., 2009; Cameron et al., 2014; Doyle et al., 2016; Gude et al., 2001; Lech et al., 2012). If integration of affect is a process that evolves over time and affective scripts are formed and reinforced primarily through interplay between biological factors and experience and relations in childhood (Demos, 2007; Demos, 2016; McGinn & Young, 1996), it makes

sense that -once established- insight into and change of such patterns are difficult and take time. A moderate magnitude of change is thus in accordance with theoretical predictions (Solbakken, Hansen, Havik, et al., 2011) and previous research.

The NMSPOP study is - to our knowledge - the first showing change in affect consciousness measured by the Affect Consciousness Interview (ACI) in such a large and heterogeneous outpatient population during individual psychotherapy. More than half of the included patients had one or more personality disorders - a factor previous research has linked to poorer outcomes (Clarkin & Levy, 2004) and likely a higher need for intensity and/or duration of therapy (Doyle et al., 2016). Other studies have found poorer outcomes of shorter therapies for patients with high levels of painful emotions (Coombs et al., 2002). In addition, previous research has pointed to alexithymia as a particular challenge to outcome of psychotherapy (Hungr et al., 2016). However, in the Solbakken et al. (2012) NMSPOP study, treatment effects did not differ in terms of symptomatic relief and increased interpersonal functioning for those patients diagnosed with a personality disorder before treatment and those without PD. The present study also showed no significant association between severity of pathology at start-up and degree of change in affect consciousness during therapy. These results thus gives credence to the notion that keeping treatment open-ended may compensate for the risk of reduced outcome of therapy for these patients.

Another important finding from the analysis in the current study, is that allowing the slopes of the individual client to vary did not provide a better fit based on AIC scores. This could be an indication of low variance in outcome, i.e few outliers in terms of AC-trajectories – implying that the average trajectory of change proved a good fit and that most patients in the patient sample experienced benefit of therapy in terms of AC improvement. However, assessing the degree to which the observed statistically significant change is of a *clinically* significant magnitude, would require comparison with other meaningful observational or self-report data – as provided in the further analysis.

4.2 AC Change after Therapy

Concerning our second research question, we did not find any significant post-therapeutic growth in AC when results from treatment and follow-up phases were analyzed separately.

The most important implication of this finding, however, may be that even though no post-therapeutic growth was observed, neither was any post-therapeutic *decline*. In other

words, this is a good indication that the change achieved in therapy was enduring, at least up to 2.5 years after termination. These findings are consistent with the high degree of stability of the AC change achieved in therapy in previous research (Monsen et al., 1995a, 1995b; Normann-Eide et al., 2013, 2015).

Also to be noted, it is possible that individual potential for change on such trait-type characteristics is limited. It could thus be questioned to which degree - as the therapies were allowed to vary in length according to the needs and progress of the specific client - this hypothetically limited potential for change may have been fully utilized within the patient group. On the other hand, the patients in the Monsen et al. (1995a) spent substantially longer time in therapy on average, which may have been reflected in the larger effect sizes found in that study. It thus seems that effects of time and intensity are complex and warrant further research.

The statistically significant, moderate changes in affect consciousness in this sample and stability at follow-up 2.5 years after suggest that outpatient psychotherapy focusing on affect consciousness may be beneficial in terms of integration of affect for a patient population with a variety of psychological problems, as well as high rates of comorbidity and personality pathology. This is in accordance with alexithymia research indicating differences in results depending on whether or not therapies focused on this specific trait (Cameron et al., 2014). However, as this was a single study and no comparison condition was included, we cannot conclude that this approach is superior to other therapeutic approaches (Kivlighan et al., 2015). Nonetheless, present findings point to the possibly crucial role of tailoring the contents and length of therapy to the specific client, in favor of an open-ended approach when focusing on long-term affective change.

4.3 Associations between AC, Symptom Distress and Interpersonal Problems during Therapy

With regards to our third research question the results from the present study showed a significant association between changes in affect consciousness (AC) and symptom distress, as measured by the global severity index (GSI) of the SCL-90, during therapy. The correlation analyses showed that change in affect consciousness accounted for about 7 % of variance in change in symptom distress.

Monsen et al. (1995a) found a substantial, significant increase in AC and reduction in symptom scores during therapy, but the association between these changes was not measured directly. The Normann-Eide et al. (2015) study found a significant increase in AC during therapy, but no association between AC change and reductions in symptom distress. Berg et al. (2009) found an increase in AC and reductions in symptoms, but did not identify AC as a mediator of change. Similarly, Lech et al. (2012) found corresponding increase/decrease for patients with eating disorders, but no association between domains. In the Pos et al. (2003) study, an increase in emotional-processing skill was found, including an association between emotional processing and reported reduction of symptoms. An association has also been found between affective processing and reductions in self-criticism, a core attribute in depression (Choi et al., 2016). These studies include a variety of research designs, methodological and therapeutic approaches, which likely have influenced the results. The findings from the current study is thus according with expected results and in line with the studies previously identifying associations between change in affective processing and symptom distress.

The current results are consistent with theoretical predictions of AC theory that improvements in affect integration domains, including the capacity to perceive, tolerate, reflect upon and express the experiences of basic affective activation, predicts reduction of symptom distress in therapy through reduced conversion of affect into symptoms. The assumption of conversion of affect has received some support in neuroimaging studies (Fiess et al., 2015). Although a majority of patients in the current study report concurrent increases in affect consciousness and reductions in symptoms, more empirical and longitudinal research is needed to further understand the causal mechanisms involved in therapeutic change. The results of the current study show that a substantial amount of variance in symptomatic change is yet unaccounted for. Other factors may thus be involved, the direction of causality may be reversed or bi-directional/transactional, and mechanisms and pathways of change may be different for unique subgroups of patients, including for different categories of disorders.

The present study found a significant association between AC change and reduction of interpersonal problems, as measured by the global score of IIP-64, during therapy. Correlation analyses showed that change in AC accounted for about 15% of variance in IIP Change scores. Change in AC was thus a predictor of positive growth within the interpersonal domain. The results indicate that increased affect consciousness is also likely to incorporate increased capacity for positive interpersonal relationships, including increased tolerance for

intimacy, regulation of social interaction and motivation and ability to realize personal goals (Solbakken, Hansen, & Monsen, 2011). As described by Monsen and Monsen (1999), AC therapy is a treatment consistently focused on helping the patient recognize and label affects, facilitating reflection, and verbal and conceptual expression of affect in relation to another person. The therapies also address the role of the self in initiation, maintenance, termination and avoidance of social contact. These are capabilities closely related to interpersonal skills (Butler et al., 2003; Laurenceau et al., 1998). In this understanding, some of the observed effects may indeed be attributable to the AC therapeutic approach, which targets some of the processes theoretically measured by the IIP constructs. However, changes in AC are theoretically assumed to precede changes in relational style (Solbakken, Hansen, & Monsen, 2011). It is therefore possible that some of the observed effects are attributable to common variance or a third/confounding variable.

Findings from previous studies have been inconsistent, with some studies failing to identify an association between change in affective processes and reduction of interpersonal problems (Pos et al., 2003). Results from the current study, are, however, in line with the Normann-Eide (Normann-Eide et al., 2013, 2015) and Monsen (Monsen et al., 1995a) studies, as well as studies using similar constructs (Berggraf et al., 2014; Beutler et al., 1991; Van Velsor & Cox, 2001; Watson et al., 2003). These discrepancies may be attributable to several factors, including research design and methodological limitations, sample sizes, time and intensity of treatments, and focus on affect integration as an aspect of personality in the current, Monsen et al. and Normann-Eide et al. studies.

In conclusion, the results show that psychotherapy focused on AC is beneficial and is associated with growth within both the interpersonal domain and with symptom reduction, with AC showing adequate construct validity and predictive properties in an outpatient naturalistic psychotherapeutic setting.

4.4 Associations between AC, Symptom Distress and Interpersonal Problems after Therapy

Regarding our fourth research question, we did not find a significant post-therapeutic reduction in symptom distress. Neither was such reduction found in interpersonal problems. No significant association was observed between AC change level during therapy and reductions in symptom distress or interpersonal problems at follow-up. Our hypotheses of

such associations were thus not supported. However, both absolute pre-treatment level of affect consciousness and changes in affect consciousness during treatment predicted level of symptom distress and interpersonal problems post-treatment, as investigated in our fifth research question. In addition, by implication (as there was no significant variation in slopes during the follow-up phase), absolute AC levels predicted levels of both symptom distress and interpersonal problems at follow-up. In sum - when controlled for baseline levels of AC, changes in AC predict end status after therapy both in symptom distress and interpersonal functioning. This implies that those reporting higher changes in AC throughout the course of therapy report less distress from symptoms and less relational problems at termination than those with the same baseline levels, but lower response to therapy with regards to AC. The findings are thus in line with previous studies showing relative stability at follow-up (Monsen et al., 1995b; Normann-Eide et al., 2015; Solbakken et al., 2012; Winston et al., 1994), but gives a clearer and more detailed picture of the processes and trajectories of change.

Several factors may account for these results. One is that at least a proportion of the patients included in the study sought help at a time where they actually experienced a higher level of symptom distress – i.e had a mental disorder. Symptom levels may thus have been lower and more stable after therapy, with the variation being too low to establish an association with the obtained increase in AC.

How do these findings relate to the phrase "becoming one's own therapist" (Beck, 2011)? Several interpretations are possible. In terms of continuing change after therapy – i.e significant further reduced reduction in symptom distress – the results do not offer support. However, if being one's own therapist implies internalized capacities that contribute to keeping symptom levels stable, the results could be taken in favor. Even though level of change in affect consciousness was not found to predict further post-therapeutic reductions in symptomatic distress, the results do suggest that change from enduring, maladaptive patterns of affect integration is possible through psychotherapy, making way for new self-structures, indicating increased resilience to symptom distress after termination. Although this finding is not sufficient to conclude that none of the patients experienced relapse of symptoms during the 2.5 year follow-up period, the stable average levels of symptom distress post-treatment can be seen as an indication that relapse rates were generally low within the patient group. Further research is needed to investigate this hypothesis.

Results from the present study did not find a significant decrease in interpersonal problems in the follow-up phase. Neither did the analysis identify an association between AC

change during therapy and level of interpersonal problems after therapy. Our hypothesis regarding this question was thus disconfirmed. However, results did show relative stability of the gains in AC and associations between AC and interpersonal functioning, implying stable benefits of the increased relational capacities attained during therapy.

The present study had a follow-up period of 30 months. Building friendships and close relations is a process that may take time for some individuals, especially as an adult. It thus cannot be ruled out that the follow-up period simply was too short for the patients to properly benefit from the changes in AC through increased social support and quality of new and existing interpersonal relations. One factor supporting this notion was the fact that for both symptoms and interpersonal problems the estimated slopes in the analyses of post treatment development indicated some further improvement, even though the coefficients were not large enough to be statistically significant with the current time frame for follow-up. With the same trend continuing across further measurement points, the effects would reach statistical significance at some point.

It is also possible that the nature of the relationship between patient and therapist differ from "normal" relationships in ways associated with improved interpersonal functioning. Research on common factors show that therapist attributes, empathetic attunement and alliance account for a high proportion of variance in outcome (Wampold & Imel, 2015). Degree of intensity of focus on and sharing of affective experience and examination and reflection upon relational patterns has also been shown to predict outcome (Greenberg & Pascual-Leone, 2006). Patients may simply not seek these qualities or nature of help in their relationships outside of therapy. A proportion of patients may thus not to the same degree experience these possible curative factors on a regular basis – implying less potential for change after therapy has ended.

The results show that AC improvement through therapy made significant contribution to both symptom distress and the interpersonal domain of functioning. Maturation, according to psychodynamic self-psychology, is conceptualized through the qualities of interpersonal relationships (Stern, 1985). It could thus be argued that integration of an affective focus, increased success in awareness, recognition and expression of affect is related to a more adaptive personality functioning (Nordahl et al., 2005; Normann-Eide et al., 2015). The interpersonal process between patient and therapist may therefore be a facilitator of personal and interpersonal growth, and results show such change as stable and enduring up to 2.5 years after termination. Indeed, it cannot be ruled out that some of this change may be attributed to

the empathic attunement, acceptance and validation experienced in therapy (Leahy, 2002) contributes to increased internal security, and that the soothing functions of the therapeutic or other close relationships become increasingly and enduringly internalized (Fosha, 2000; Schore, 2003).

4.5 Other Findings

The analyses included correlation analyses between AC change and measurements of symptom distress, and interpersonal problems. However, the analyses also showed a significant covariance between symptomatic distress and interpersonal problems themselves. Thus, changes within these two domains may account for changes in the other. The lack of possibility to identify causality in correlational data thus has implication for the interpretation of results, including common variance, confounding variables and direction of causality.

4.6 Limitations

A limitation of the study is that no control group was included. Results should thus be interpreted with some caution. No control group makes it necessary to consider possible influence of repeated testing and instrumentation, natural history, statistical regression and age-related maturation (Cook & Campbell, 1977). However, the size, consistency and endurance of results across patients and comparability to previous studies (eg. Monsen et al., 1995a; Normann-Eide et al., 2015) make maturation and natural history less likely explanations for the results. Nonetheless, the lack of a control group must be taken into account when assessing the general efficacy of the treatments.

Another limitation is related to the nature of open-ended therapies. It is possible that since timing of termination is decided in collaboration between patient and therapist, that a proportion of the therapies were ended when stable improvement was attained. If individual potential for change is limited, this would imply residual potential for post-treatment change to be reduced compared to time-limited treatments. However, such a conclusion would require further comparative and longitudinal research.

Even though this study is classified as naturalistic, it is possible that the therapists included in the study are not representative of the average therapist. It cannot be ruled out that willingness to participate in a study where their role as professional is under scrutiny is an

indication of factors that set them apart (Solbakken et al., 2012). In addition, other therapist factors not investigated may have influenced results.

In a naturalistic outpatient setting with patients with a variety of disorders, it is reasonable to assume at least some of the patients received additional treatment, such as psychopharmaceutical treatment for depression or nutritional supervision for eating disorders. The discrete effects of the psychotherapy can therefore not be isolated, and supplemental treatments may have contributed to the overall outcomes.

Another factor that may have directly or indirectly influenced results, is the subjective interest of the coordinators and therapists in showing favorable results for their preferred model of psychotherapy. Most of the included data (SCL-90 and IIP-64) are self-report measures. Although these are both widely used and validated tools of measurement within their respective areas of functioning, positive bias/placebo in the results cannot be ruled out – especially as the study did not include a control condition.

The AC model operates with a highly differentiated definition of affect. However, for the present study, only the global scores were used. A common issue with global and composite scores is that their overall predictive value may be reduced due to variation in predictive value among their sub-components (DeVellis, 2017). Previous research has shown differences in association, change and predictive value for discrete affects (Beutler et al., 1991; Normann-Eide et al., 2013; Solbakken et al., 2012; Solbakken et al., 2017; Taarvig et al., 2015; Van Velsor & Cox, 2001). It is therefore possible that the inclusion of data on affects earlier shown to be less predictive of change may have underestimated the predictive value of AC for discrete affects within the global AC score.

Interpersonal problems include the two domains of Agency and Communion. The present study used only the global score from the IIP, the IIP-G, as an indication of interpersonal problems. Earlier studies have found discriminant and convergent associations for different affects. Typical associations include integration of self-boundary related affects and the agency domain and integration of pleasant affects and communion domain of interpersonal functioning, specifically Anger/Rage and non-assertiveness and Tenderness/Care and coldness and detachment (Normann-Eide et al., 2013; Solbakken, Hansen, Havik, et al., 2011). Thus, possible differences in change between these two domains have not been uncovered – possibly camouflaging effects of other magnitudes within one or the other of these domains. Similar effects may also have been observed for the SCL-90.

Another limitation involves the applied methods and therapeutic approaches. Both the Affect Consciousness Interview and the open-ended treatments can be somewhat time-consuming. Although a shorter, self-report measure of AC has been developed showing promising results in terms of reliability and validity (Solbakken et al., 2017), it may not be an adequate replacement under all conditions. Furthermore, although preliminary results point to time as an important factor to outcome (Solbakken et al., 2012), further research is needed to understand the effects of time compared to other factors.

Some of the patients included in the analysis had some missing data-points. Even though multi-level modelling is less vulnerable to bias from missing data, it is not impossible that the characteristics of the non-included data, including possible drop-outs, may have influenced the end results.

The included patients constituted a heterogeneous group in terms of characteristics and presented symptoms. Although the participants as a whole showed significant improvement in AC, with significant associations to external criteria, sub-groups were not identified and analyzed separately. It is thus not possible to confidently conclude with regards to the efficacy of open-ended therapy focused on affect consciousness for any particular diagnosis. In addition, the results may not be generalizable to other forms of treatment and for samples with characteristics different from participants included in the current study.

4.7 Clinical Implications

The current study in context could have implications for clinical practice. First of all, the results warrant optimism with regards to psychotherapy. It adds to the notion that change of a trait-type aspect of functioning, such as affect consciousness, is possible for a typical outpatient group with a wide range of psychological problems, including personality pathology. Baseline levels of AC have previously been associated with degree of psychopathology (Normann-Eide et al., 2013). The results indicate that characterological change from maladaptive towards more adaptive ways of utilizing one's affects is possible, and that psychotherapy focused on affect consciousness may be a route to such change. However, attaining this goal may rely on allowing the length of therapy to be adjusted according to the needs of the specific patient (Coombs et al., 2002; Solbakken et al., 2012).

The other is that such growth in the capacity to perceive, tolerate, express and reflect upon affect is associated with reduction both in the level of distress experienced from

symptoms, but also likely in the capacity to form and enjoy healthy relationships with others, as reflected by reduction of interpersonal problems. This is in accordance with research on patients' subjective experience of affect-focused therapies (Piliero, 2004). The results thus imply increased ability to regulate affects themselves (Gross, 2007), and that affects serve as regulators of other areas of functioning (Cole & Deater-Deckard, 2009). In this sense, it can be argued that the relative stability of AC also has some desirable aspects. These include realistic hope that change achieved through therapy will be enduring and is unlikely to be reversed, and that increased integration of affect in experience may grant increased resilience to other psychological difficulties in a long-time perspective. However, such a conclusion requires association with other observations and external criteria, and warrant further research with longer follow-up phases.

The results strengthen the validity and predictive properties of the Affect Consciousness construct and the theoretical model upon which it is based. The Affect Consciousness Interview (ACI) could be a valuable tool for clinicians in both treatment planning and assessment of patients' progress in and after therapy. Alternatively, the shorter Affect Integration Inventory (AII) –a shorter self-report measure of affect integration- could be considered as a substitute (Solbakken et al., 2017).

4.8 Recommendations for Further Research

The study conducted was naturalistic, using data from an outpatient context. The included group had a high degree of heterogeneity, with several areas of psychological problems represented among the patients. In addition, the length of individual therapies varied among patients.

Multi-level analysis calculations take individual growth curves into account. Although the analyses from the current study indicated low variation between patients in terms of outcome, possible sub-groups among the participants were not investigated. Variations between groups were thus not identified, possibly camouflaging intergroup differences. Identifying such hypothetical groups would be important in uncovering possible factors that may account for reduced or increased benefit of therapy. Such factors could include, but is not limited to: Demographic variables, diagnoses/symptom clusters, personality traits/disorders etc. As an example, Lech et al. (2012) found lower AC among patients with eating disorders compared to controls, but no association between observer-rated AC and symptomatic relief

in the patient group. Poor affect integration may influence the lives and distress levels of patients in ways not covered by the constructs applied in the current study. Thus, more research, especially longitudinal studies, are needed to uncover the significance of affect integration in experienced distress, life satisfaction, and formation and treatment of specific disorders. This may be achieved using different research designs and additional measures, including qualitative approaches, as pathways of change may differ according to the nature of the problems experienced by different subgroups of patients.

The therapies focused particularly on increasing the patients' capacity to perceive, tolerate, express and reflect upon their affective experience. Although the patients improved significantly in global affect consciousness simultaneously with their time in therapy, the analysis does not allow us to confidently conclude the change was attributable to this specific focus. Previous research has been somewhat inconsistent in terms of differentiating between different psychotherapeutic approaches with regards to variations in change in affect-related constructs (Berggraf et al., 2014; Cameron et al., 2014; Kivlighan et al., 2015; Watson et al., 2003). Future research could thus include a comparison condition, or examine at a more specific level which interventions contribute the most to change in affect consciousness using a moment-to-moment process-outcome approach.

The results of the current study, taken together with results from previous research (Coombs et al., 2002; Monsen et al., 1995a, 1995b; Solbakken et al., 2012), points to time as an important factor in therapeutic change. As the therapies were open-ended, time in therapy varied among patients. However, factors associated with the patients who stayed longer in therapy were not examined. This could allow further examinations of the effects of time and intensity of therapy and their association with long-term gains, including risk of relapse using follow-up data. This may shed further light on the general outcome and cost-efficacy of this type of treatment for different mental disorders.

The follow-up period for the current study was 2.5 years, and the results showed a high degree of stability in AC after termination of therapy. However, the possible role of AC as a possible vulnerability or protective factor requires further research. In light of the findings from the Taarvig et al. (2015) study, in addition to research within the alexithymia tradition (Brown et al., 2016; Cameron et al., 2014; Gunther et al., 2016; Inslegers et al., 2012; Taylor et al., 1990; Thorberg et al., 2016), future research could specifically focus on longitudinal data, identifying the onset of problems with affective awareness and the role of such difficulties in different phases in the development of mental disorders and interpersonal

problems. The Brown et al. (2016) study reported levels of alexithymia as a moderator between adverse childhood experiences and internalizing problems. More research and inclusion of other outcome criteria would grant further understanding of the long-time stability or variability of trait-type constructs. In addition, it could help uncover their possible contribution to resilience against symptom distress and interpersonal problems within different age groups both in the general population and among patients in treatment, as well as help timing and tailoring of early interventions (Taarvig et al., 2015, 2016; Zeman et al., 2002).

Future research could also investigate and further differentiate between aspects of affect integration, including categories for different aspects of AC, such as awareness, tolerance, verbal and conceptual expression. In addition, the AC construct differentiates between discrete affects. Future research could thus examine the individual contribution to change for each affect, and their association with other outcome variables. Theoretical predictions include associations between integration of discrete affects and specific symptoms or interpersonal problems, such as fear-anxiety and anger-self-assertion (Normann-Eide et al., 2013; Solbakken et al., 2012), as well as couplings between affects (Taarvig et al., 2016). In sum, a higher degree of differentiation is needed to further understand the phenomenological properties of affects, including signal and motivational properties of discrete affects, and the associations between them. This may in turn be essential to fully understand how affect integration influences psychological problems and mental health, and the mechanisms of change for different life problems. In turn, this could inform the development of interventions tailored to maximize benefit for each specific sub-group and individual (Fonagy & Roth, 2004).

4.9 Conclusion

The current study indicates that outpatient individual open-ended psychodynamic psychotherapy focused on affect consciousness may be an effective treatment for patients with a wide range of mental disorders, including personality disorders. AC could be considered a relatively stable trait. However, the present study shows change is possible through psychotherapy. Results from the present study showed significant change in AC during therapy, and stability of achieved change up to at least 2.5 years post-treatment. Magnitude of AC change predicted change in symptom distress and interpersonal problems

during therapy, and absolute level of AC predicted levels within both areas at termination and follow-up. Also, change in AC during treatment predicted post treatment levels of symptoms and interpersonal problems. However, change in AC predicted neither post-therapeutic increase nor decrease in symptom distress and interpersonal problems. The findings are generally consistent with previous research, strengthening the validity of the AC construct and highlighting the role of AC in trajectories of therapeutic change. As neither a comparison or control condition was included, the results should be considered preliminary and thus be interpreted with some caution.

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