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Agency as a Mechanism of Change in Psychotherapy

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Julia Huber

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Dean: Prof. Dr. Dirk Hagemann
Advisor: Prof. Dr. Henning Schauenburg, Prof. Dr. Svenja Taubner

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Research Articles for Publication

The present dissertation is based on the following research articles, which are referred to by their Roman numerals in the Appendix.

1. **Huber, J.**, Nikendei, C., Ehrenthal, J. C., Schauenburg, H., Mander, J., & Dinger, U. (2018). Therapeutic Agency Inventory: Development and psychometric validation of a patient self-report. *Psychotherapy Research.* Advance online publication. doi: 10.1080/10503307.2018.1447707

2. **Huber, J.**, Born, A.-K., Claaß, C., Ehrenthal, J. C., Nikendei, C., Schauenburg, H., & Dinger, U. (2018). Therapeutic agency, in-session behavior, and patient-therapist interaction. *Journal of Clinical Psychology.* Advance Online Publication. doi: 10.1002/jclp.22700

3. **Huber, J.**, Jennissen, S., Nikendei, C., Schauenburg, H., & Dinger, U. (2018). Agency and alliance as mechanisms of change in psychotherapy. Manuscript submitted for publication.

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"The efforts to respect, preserve, and increase the client's personal freedom takes precedence over most other considerations" (McWilliams, 1999, p. 15).

1. Introduction

1.1. Prelude

Mental health is of great importance for every individual and is getting more and more attention in society (World Health Organization, 2018). In many regards, mental health is a precondition for the development of our emotional and intellectual potential and our role in society and professional life. Nearly one third of the global population suffers from one or more clinically significant mental disorders during their lifetime (Zachary et al., 2014). Impairments in mental health cause suffering and economic costs such as a person's limited overall quality of life, disturbed social relationships, work disability, and narrowed personal freedom. Psychotherapy is a highly effective treatment for a variety of mental disorders (Smith, Glass, & Miller, 1980; Wampold & Imel, 2015). However, we do not yet fully and precisely understand what happens during psychotherapy that helps patients recover.

Referred to as the Dodo bird verdict, different forms of *bona fide* psychotherapies produce equivalent effects. In 1936, Saul Rosenzweig named this principle after Lewis Carroll's novel *Alice's Adventures in Wonderland* from 1865, where the character of the dodo bird declared that everyone wins and gets a prize after a race. Subsequently, many meta-analyses supported the finding that different therapeutic orientations are equally effective (Wampold & Imel, 2015). In addition, the effects that are due to various theory-specific therapeutic practices or interventions are negligible. Accordingly, the theoretically specified mechanisms seem not to be decisive for making psychotherapy work. One solution to resolve the equivalence paradox is to identify the common core of different psychotherapies that determines their effects (Frank & Frank, 1991). The therapeutic alliance between the patient and the psychotherapist, the personal characteristics of the psychotherapist, as well as allegiance, that is, the belief in the effect of a therapy, have an impact on the therapy outcome. The overall success of psychotherapy, however, depends largely on the individual patient.

Patient factors include the severity and chronicity of the mental disorder, critical life events, and personality characteristics that patients "bring to therapy" (Lambert, 2013; Wampold & Imel, 2015). These factors form the basis for more precise and well-defined therapy-related factors such as patients' expectations, motivations, and active participation in psychotherapy (Bohart & Wade, 2013). Previous reviews of process-outcome research identified the quality of the patients' participation in therapy as one of the most important determinants of the therapy success (Bohart & Wade, 2013; Orlinsky, Ronnestad, & Willutzki, 2004).

In the contemporary contextual model, psychotherapy is understood as a social healing practice (Wampold & Imel, 2015). The common factors are considered to be therapeutic and to collectively build a theory about the processes of change. Effectiveness is explained via three pathways: (a) the relationship between the patient and the psychotherapist; (b) the raise of patients' expectations through a disorder model and treatment rationale, and (c) the patient's engagement in health-promoting therapeutic action through specific components, which both the patient and the therapist believe to be effective. The common change factors received substantial empirical support (Wampold & Imel, 2015). These findings suggest that successful psychotherapies involve establishing good alliances, creating beneficial expectations, and getting patients actively involved in a therapeutic process.

To deepen our understanding of how psychotherapy works, it is important to examine the factors that influence the patients' active involvement in the psychotherapy process. Agency, a person's subjective capacity to act, is an important psychological dimension of patients' involvement in the therapy process and a potential mechanism of change underlying the effects of psychotherapy. The construct of agency concerns individuals influence on themselves and their surrounding (Bandura, 2006). In therapy, patients are not recipients of what therapists offer but generators or *agents* of change (Bohart & Wade, 2013). Following this idea, patients can use different therapy approaches, operate on therapists' interventions, and affect their change processes in meaningful ways to achieve their aims.

1.2. The Dissertation Project

The focus of this dissertation is to investigate the role of the patients' agency, that is, their personal influence within the psychotherapy process, in order to improve our understanding of how patients use psychotherapy in a way that makes it helpful. The findings of the present dissertation are supposed to support the theoretical and the empirical comprehension of the patients' salutary activity in the psychotherapy process. This research can not only enrich our theoretical understanding of psychotherapy, but also contribute to therapists' efforts to enhance the patients' active role in clinical practice.

Describing my dissertation project, I will start with theoretical perspectives on human agency in general. Then I will continue with the recognition of individuals' agency in psychotherapy, review previous research on agency in psychotherapy, and present my research aims. Subsequently, I will outline the three research studies of the cumulative dissertation project and their findings. Next, I will show how the empirical studies build on one another and comprehensively discuss the research program. Finally, I will point to limitations and future directions, and will derive conclusions on patients' agency in research and clinical practice.

2. Theory

2.1. Bandura's Social Cognitive Theory

In the social cognitive theory, Bandura (1997, 2001, 2006) adopts an agentic perspective on human development, adaptation, and change. Human agents shape their life circumstances and the courses of their lives. In addition to the influence on the external world, the regulation of on one's inner life is also part of the agentic process.

Bandura (2006) proposed four core properties of human agency: (a) intentionality; (b) forethought; (c) self-reactiveness; (d) self-reflection. First, people form intentions along with action plans and strategies for realizing them. Second, people visualize their futures and

anticipate goals and outcomes to guide and motivate their behavior. A future perspective based on values provides direction, coherence, and meaning to one's life. Third, agency involves linking thought to action, that is, the ability to construct appropriate courses of action and to motivate and regulate their execution through self-regulatory processes. Fourth, through self-awareness, people reflect on their personal functioning and efficacy, the soundness of their inner states and actions, and the meaning of their pursuits. Furthermore, they have the capability to make corrective adjustments if necessary. The meta-cognitive ability to reflect on oneself is the most distinctly human characteristic of agency.

Agency is seen as one part of the causal structure (Bandura, 2006). Human functioning is socially situated and a reciprocal interplay of biological, psychological, and social factors. In many spheres, people do not have direct autonomous control. Besides individual agency, people exercise interpersonal agency: In the exercise of *proxy agency*, people influence others to act on their behalf. In the exercise of *collective agency*, people pool their capacities and act together. By acting as agents, individuals contribute to the course of events. The relative extend of the individuals' contribution to the codetermination depends, among others, on personal resources, types of activities, and situational circumstances. In interpersonal interaction, agents influence each other, thus giving also a response and being a social environment for each other.

2.2. The Interpersonal Circumplex Model

An interpersonal perspective on agency is formulated in the interpersonal circumplex model (IPC; Horowitz et al., 2006; Wiggins, 1982), a model for conceptualizing, organizing, and assessing interpersonal behavior. In the IPC, agency is one of the two orthogonal dimensions that characterize interpersonal behavior. The interpersonal space is organized around the vertical axis of agency, which represents one's influence on others and ranges from dominance to submission, and the horizontal axis of communion, which ranges from friendliness to hostility/indifference. Compared to Bandura's (2006) conceptualization of

human agency that concentrates on one's influence on one's own functioning and life circumstances, the interpersonal perspective on agency focuses on one's influence on others in interpersonal relations. In the IPC model, all interpersonal behavior can be described as a position on the two axes of agency and communion in the interpersonal space. Reciprocity in social interactions implies that a person's position in the interpersonal circle invites complementary interpersonal responses (Kiesler, 1983). A complementary response is considered to be similar to the interaction partner with regard to communion (friendliness invites friendliness, hostility invites hostility) and reciprocal with regard to agency (dominance invites submission, submission invites dominance). The internal reactions that an individual experiences in response to an interaction partner are called impact messages and provide insight into the distinctive interpersonal style of this interaction partner.

2.3. Research Domain Criteria of the National Institute of Mental Health

In the Research Domain Criteria (RDoC) of the National Institute of Mental Health (NIMH, 2010), agency is one sub-construct of the social processes domain related to the perception and understanding of the self. Agency is described as "the ability to recognize one's self as the agent of one's actions and thoughts, including the recognition of one's own body and body parts" (NIMH, 2010, Domain: Systems for Social Processes, para. 3). The construct of agency is used here to distinguish between severe forms of diminished ownership of one's own thoughts or actions and delusions of control inherent in mental disorders such as schizophrenia and psychosis. More broadly, the concept emphasizes the recognition of one's own mental states that cause actions (including body movement) and elicit a response, which is a central foundation of all conceptualizations of agency.

2.4. Agency: Construct Definition and Differentiation

Agency has distinct features but also shared characteristics with the constructs of self-efficacy, locus of control, and mastery. In the following, these constructs will be defined and the overlap and the differentiation will be discussed.

Agency. "To be an agent is to influence intentionally one's functioning and life circumstances" (Bandura, 2006, p. 164).

Locus of Control. Locus of control refers to the belief that a consequence either depends on one's own efforts (internal locus of control) or is controlled by external factors such as fate or powerful others (external locus of control, Rotter, 1966).

Self-Efficacy. Perceived self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71).

Mastery. Mastery is the individual's "concrete experience of learning to cope with situations experienced in the past as very difficult or anxiety provoking" (Grawe, 1997, p. 4) and refers to an individual's prior performance accomplishments (Bandura, 1997).

Agency is an individual's subjective capacity to act, comprising the actual behavior including preceding and subsequent processes. Referring to the Rubicon model of action phases (Heckhausen & Gollwitzer, 1987), agency covers motivational and volitional stages of action, including building of intentions (choice), initiation and realization of intentions (action), as well as deactivating and evaluating actions (reflection). An individual's sense of agency thus involves the process of building, executing, and reflecting on actions stemming from one's own will (e.g., "I want to feel better and look for possible ways.", "I possibly search for a psychotherapy where I work on my problems and realize further agency.", and "I reflect if I am on the right way to achieve my aims."). Locus of control and self-efficacy are cognitive beliefs influencing the likelihood of behavior (e.g., internal control beliefs and optimistic self-efficacy beliefs make actions more likely). Locus of control asks whether control is seen in somebody's hands or external forces (e.g., "If my depressed state gets better depends on me versus fate."). This does not touch the question if someone is capable to achieve an outcome, because one may have control but not the perceived capacity to affect the task at hand (e.g., "It is within my control to feel better but I am not capable of realizing any

changes."). This leads us to self-efficacy expectations that combine having control and believing in one's capacity to exercise control (e.g., "It is within my control and I believe I am capable of eliciting changes."). Mastery experiences can be seen as the outcomes of one's efforts that provide authentic evidence of the successes and failures of one's own performances (e.g., "I've made an appointment with a psychotherapist despite long waiting lists and the option to get rejected.") and, dependent on their appraisal (attribution of control, e.g., "I have had the courage." versus "I was lucky receiving help."; perceived difficulty of the task, e.g., "talking to this person versus leaving a message"), contribute to one's perceived capabilities (Bandura, 1997). A resilient sense of efficacy results from experience in overcoming obstacles through sustained effort.

As the construct differentiation may not seem quite obvious at first glance, there is considerable interrelation between the constructs. Bandura (2006) highlighted the central role of self-efficacy beliefs as a mechanism of personal agency. Peoples' core beliefs in their capabilities to exercise control over events that affect their lives is seen as a foundation of agency. Unless one expects to have the power to effect changes through one's actions, one has little incentive to act or to persevere when facing difficulties. Self-efficacy beliefs function as a determinant of human action and have impact on cognitive, affective, motivational, and decisional processes. Meta-analyses show that efficacy beliefs contribute to performance accomplishments and psychological well-being (Moritz, Feltz, Fahrbach, & Mack, 2000; Multon, Brown, & Lent, 1991). Furthermore, Bandura (1997) postulated four sources of self-efficacy expectations: (a) mastery experiences, (b) vicarious expectations, (c) verbal persuasion, as well as (d) emotional and physiological states. Studies with experimental and longitudinal designs showed changes in agency, depending on the experience of success (Abele, 2003; Abele & Wojciszke, 2007). Thus, the sense of agency is strongly influenced by self-efficacy beliefs and prior mastery experiences (Bandura, 1997).

2.5. Developmental Perspective

According to Bandura's theory (2006), the development of personal agency ranges from perceiving causal relations between environmental events and understanding causation via action to finally recognizing oneself as the agent of the action. Infants likely start to learn with repeated observation of contingent events in which the actions of other people make things happen. As infants develop behavioral capabilities, they can experience that their own actions make things happen. The learning process can be enhanced by linking actions and outcomes, by drawing attention to the produced outcomes, and by highlighting the salience and value of the outcomes (Millar & Schaffer, 1972; Watson, 1979). With the development of representational capabilities, probabilistic and delayed outcomes brought by personal action can be further learning opportunities.

Beyond merely producing effects through actions, agency involves the recognition of oneself as the agent of one's actions, which means that oneself can make things happen (Bandura, 2006). The construction of an agentic self is a more general process including the differentiation between the self and others (Rudolf & Henningsen, 2007). Through proprioceptive and social feedback during transactions with the environment and differentiation between experiences, one's own experience becomes distinguished from other persons.

Furthermore, Knox (2011) described embodied and relational roots of the sense of agency. Human interaction and communicational processes are built on the foundation of bodily action. Within the interaction process, turn-taking is central for developing a sense of agency. Turn-taking is the pattern of behavioral or verbal action and reaction exchanges between individuals (Beebe et al., 2010). The infant's action produces a turn-taking response in the caregiver, which contributes to finding oneself through action and reaction in relationship. When the infants' efforts to affect the caregiver have no effect, regularly evoke adverse reaction, or do not meet reciprocity, they learn that their actions have no effect and

goals of mutuality must be given up. Within the "still face" experiments, the mother's lack of emotional responsiveness causes bewilderment, anxiety, shame and depression in the infant (Tronick, 2007). In the words of Knox (2011, p. 46) "if I can't affect you, then I don't exist" – a defensive state of mindlessness (Rudolf & Henningsen, 2007). The relational patterns become part of the implicit unconsciousness and may inhibit open expression of affection and agency in later life (BCPSG, 2007).

In addition, mentalization emerges in the infant-caregiver relationship through affect mirroring (Fonagy, 2018). Mentalization is the capacity to understand behavior of others and oneself on the basis of intentional mental states. Infants become independent subjects while they are recognized as beings with minds, desires, and feelings of their own. Contingent and marked mirroring of the infant's experiences by a trusted other helps the infant to associate the emotion with his or her expression and to recognize his or her own mental states (Fonagy, 2018; Gergely & Watson, 1996). Absence of a caregiver's attunement or miss-attunement can have serious effects on the infant's psychological development. Emotional responsiveness, affect regulation, and reflective functioning of the caregiver are important conditions for the infant's attachment and a solid sense of agency (Fonagy & Allison, 2014). Insecure attachment and the developmental inhibition of agency can hinder the individuation process.

A longitudinal study assessed the development of self-esteem over a 14-year period in a national probability sample of 7,100 individuals aged 14 to 30 (Erol & Orth, 2011). Self-esteem generally increased during adolescence and young adulthood. At each point in time, emotionally stable, extraverted, and conscientious individuals had a higher self-esteem. Moreover, higher mastery predicted higher self-esteem and moderated the shape of the self-esteem trajectory: An increase in individuals' mastery accounted for a large part of the normative increase in self-esteem. Overall, mastery experiences and the sense of agency contribute to an individual's feelings of self-worth, cognitive and emotion-regulating capacities, and autonomous and outgoing exploration.

2.6. Agency and Psychopathology

When individuals seek psychotherapy they usually do so from a state in which their sense of agency is narrowed. Patients feel that they are not able to influence their situation or to cope with their distress on their own anymore. Jerome Frank used the term demoralization to describe the condition of symptom distress combined with subjective incompetence as a state of self-perceived incapacity to act (de Figueiredo & Frank, 1982). While agency is universally relevant for individuals' developmental processes and mental health, a narrowed sense of agency and associated interpersonal problems are commonly related to depression.

Depression is often at the core of patients' problems or a comorbidity to various mental disorders (Blazer, Kessler, McGonagle, & Swartz, 1994). Phenomenological and etiological perspectives converge on the notion that depressive patients shy away from influencing the conditions around and within them. Phenomenologists described an underlying inhibition of becoming ("Werdenshemmung"; Jaspers, 1913/2013; Küchenhoff, 2017): An individual in a depressed state withdraws from life and social relations due to anxiety, which results in stagnation and halt of personal development. The belief in being able to shape one's life out of one's own potential fades away, which results in a reduced experience of being the agent of one's own life. From an etiological perspective, the experience of helplessness, the loss of control, and its attribution as stable, global, and internal are at the center of the theory of learned helplessness (Seligman, 1975). Classically, Freud's (1917) idea was that in depression individuals could not express their anger towards disappointing others and turned their aggression inward against the self. The word aggression descends from the Latin verb *aggredere* with the twofold meaning of approaching and attacking someone (Dorsch & Becker-Carus, 1976), pointing to the constructive and destructive sides of aggression. In a constructive sense, aggression can be an energizing force, finding expression in assertiveness and self-worth. In depression, however, it comes to a withdrawal of this energy, leaving the individual depleted of a capability to act.

Interpersonal behaviors that have been empirically associated with a risk for depression are lack of assertiveness, excessive reassurance seeking, insecure attachment, shyness, and social withdrawal (Alfano, Joiner, & Perry, 1994; Ball, Otto, Pollack, & Rosenbaum, 1994; Barrett & Barber, 2007; Eberhart & Hammen, 2010; Joiner & Metalsky, 2001). Although depressed patients show heterogeneous interpersonal profiles (Cain et al., 2012; Dawood, Thomas, Wright, & Hopwood, 2013; Simon, Cain, Wallner Samstag, Meehan, & Muran, 2015), most of them suffer from interpersonal problems related to either too little agency (i.e., submission, exploitability, social avoidance), or too little communion (i.e., hostility, coldness). These interpersonal characteristics impede the realization of social needs and contribute to a severe and prolonged depressed mood. Empirically, a submissive interpersonal style is a risk factor for poorer long-term functioning and greater chronicity of depression (Cain et al., 2012).

2.7. Agency in Psychotherapy

It is a key goal across psychotherapeutic traditions to enhance an individual's capacity to act and (re-)build the sense of agency. Therapeutic interventions fostering individuals' agency may come in a different *robe* within the various psychotherapeutic orientations. Psychodynamic psychotherapies help individuals to recognize repetitive dysfunctional relational patterns and to influence those according to today's needs (Gabbard, 2000). Self-introspection, transforming unconscious processes into conscious ones, and strengthening of ego-functions and mentalization are further ways to enhance an individual's subjective capacity to act (Fonagy, 2018; Rudolf, 2010). Cognitive-behavioral therapies target personal agency, for example, by overcoming one's anxieties through exposition and habituation (e.g., Schneider & Margraf, 1998) or by questioning one's automatic thoughts and pathological beliefs and establishing new options of thinking and behavior (Beck, Rush, Shaw, & Emery, 2010; Ellis, 1997). The development of a personally meaningful sense of agency is most explicitly recognized in humanistic psychotherapies. The person-centered approach by Carl

Rogers (1961) focusses on the patients' internally generated capacities for change. A genuine, empathic, and prizing relationship is thought necessary and sufficient to allow patients' natural tendencies towards *actualization*, the development of one's full potentials and possibilities. On this premise, introspective self-examination in a supportive environment enables patients to develop a capacity for self-direction. Systemic therapy helps social systems to change by introducing creative nudges to develop new patterns, for example, when therapists use paradoxical interventions or ask the miracle-question "[…] So when you wake up tomorrow morning, what will be different that will tell you a miracle has happened and the problem which brought you here is solved?" (DeJong & Berg, 1998, p. 77) to help individuals to get aware of their agentic capabilities (de Shazer, 1989).

Ultimately, it is the patients who make use of and get engaged in the tasks of psychotherapy. The way patients progress comprises their degree of involvement, their resonance with therapists and methods, and their effort and creativity to develop ideas and to put them into practice. Personal change may depend in large part on the self-influence individuals bring to bear. People who develop their agentic resources may generate a wider range of options, expand their freedom of action, and become more effective in realizing desired futures (Bandura, 2006; Schunk & Zimmerman, 1994).

2.8. Agency in Psychotherapy Research

The importance of patients' agency was put forth in psychotherapy research by Bohart and colleagues (Bohart & Tallman, 1999; Bohart & Wade, 2013). Following humanistic footsteps (e.g., Rogers, 1961; White, 1959), the underlying conception of the patient is one of an active, creative, adaptive human being with capacities for self-healing. Therapy is thought to be most effective when it provides a context to mobilize the patients' potentials and resources (Flückiger, 2010; Grawe, 1997). This includes the patients' active involvement in the therapy process ("investing life in therapy") that, to a huge part, makes change possible and therapy work.

In psychotherapy, patients can influence their change process in meaningful ways. Actually, patients more than therapists implement the change process (Bergin & Garfield, 1994). Patients do not only absorb therapists' interventions but utilize them and work things out with the facilitative efforts of the therapist and the therapeutic environment. Bohart and Tallman (1999) argue that patients benefit from different therapies as they can use a wide range of methods in order to change. This is one explanation for the Dodo bird finding that different *bona fide* therapies are equally effective that can further explain the benefit of self-help or internet-provided procedures. In addition, the patients' process perspectives (e.g., therapeutic alliance, inter-session processes) correlate with successful outcome, suggesting that the way patients' construe therapy reflects or contributes to a positive therapy process (Bohart & Wade, 2013). Patients' agency in therapy subsumes the patients' active, intentional influence on their process of psychotherapeutic change. Higher agency is assumed to lead to more active participation and a stronger alliance, which is expected to contribute to a more favorable outcome (Bohart & Tallman, 1999; Coleman & Neimeyer, 2015). As there is variability in the degree to which patients affect their therapy process, agency is a possible mechanism of change.

2.9. Previous Research on Agency in Psychotherapy

Most of the existing research on patients' agency in psychotherapy used qualitative designs to reveal how patients actively create and affect the therapy process. Rennie's grounded theory studies (2002) on interpersonal process-recall showed evidence for patient agency in psychotherapy in the form of patients' awareness of themselves and the activities they engaged in to negotiate change. Patients' described perceptions, processing, reflexivity, decision-making, and pursuing courses of actions regarding their therapy, that go beyond their actual expressions in therapy. An interview study with eleven former psychotherapy patients showed that patients considered themselves as agents in the therapy process, that they valued their own contribution and attributed the therapy success to their agentic efforts (Hoener,

Stiles, Luka, & Gordon, 2012). Agency experiences were described in different therapeutic orientations and patients explained how the respective therapy fostered their agency. Patients valued directive approaches for engaging in tasks at hand, enabling patients to take responsibility for themselves. Patients appreciated less directive approaches for the freedom to explore, which empowers patients to come to their own insights. This overlaps with the findings of Williams and Levitt (2007) who interviewed 14 eminent psychotherapists from diverse orientations about their understanding of the role of agency in psychotherapy. The qualitative analysis revealed different therapeutic principles to facilitate patients' agency: (a) self-determination by skill and information building or introspection; (b) acceptance or pushing the limits depending on what is changeable or what is not; and (c) working through obstacles by increasing awareness, exploring and integrating patients' concerns. Across orientations, therapists fostered patients' agency in accordance with patients' capabilities to sustain self-reflexivity, using educational and skill interventions when reflective level is low and introspective interventions when reflexivity is more accessible. In addition, therapists recognized the role of personal control and resistance enabling and hindering change.

Further work shed light on the question of how agency relates to the psychotherapy process, specifically the therapeutic alliance, and symptomatic improvement. Oddli and Rønnestad (2012) studied the alliance formation process in the first three therapy sessions via qualitative analysis of therapy transcripts of nine highly experienced psychotherapists. One main finding was that therapists supported their patients' agency by (a) exploring patients' solution strategies, (b) emphasizing the patients' choice and authority, (c) sharing the basis for treatment decisions and enhancing transparency, and (d) demonstrating collaboration. Thus, patients' agency seemed to be important in the alliance building process. Adler, Skalina, and McAdams (2008) asked 104 former patients to write about their psychotherapy after treatment has ended and coded the narratives. Subsequent quantitative analyses showed that narratives of individuals high in well-being focused on the protagonist's agency while dealing with a

discrete problem. Thus, patients high in well-being after therapy construe stories high in agency about their therapy, while the study's conclusions are limited by the retrospective design. In a subsequent study, Adler (2012) longitudinally explored the association between agency and mental health. Accompanying their therapy process, 47 patients wrote narratives at the beginning of therapy and after each of 12 sessions and answered a questionnaire on mental health. The theme of agency increased over the course of time, which was related to improvements in mental health. Lagged growth curve models demonstrated that changes in agency preceded mental health improvements. The study suggests that patients construe their work in therapy in increasingly agentic terms, which contributes to symptomatic improvement. Coleman and Neimeyer (2015) reviewed empirical studies with measures of patient agency and investigated the relation between agency and the therapeutic alliance as well as between agency and outcome. In this review, agency was, however, defined as patients' *expectations for agency* in psychotherapy and not as patients' actual *experiences of agency* within the therapeutic process. Expectations for agency were positively related to the therapeutic alliance but not to outcome. Overall, the findings suggest that agency may play a role for the formation of the alliance and, when assessed during the therapeutic process, for mental health improvement.

Patients' agency in psychotherapy has further been studied from the interpersonal perspective based on the IPC. As outlined above, agency together with communion is one of the fundamental dimensions of interpersonal behavior in the IPC and describes behavior ranging from dominance to submission. Research studies showed changes in both dimensions during psychotherapy. Decreases in depressive patients' hostile-submissiveness during the course of psychotherapy, assessed by therapists with the Impact Messages Inventory (IMI; Kiesler & Schmidt, 2006), were associated with symptom improvement across several studies (Constantino et al., 2012; Constantino et al., 2016; Dermody, Quilty, & Bagby, 2016). Also, reductions in hostile-submissiveness in interactions with patients' significant others were

associated with positive outcome (Grosse Holtforth, Altenstein, Ansell, Schneider, & Caspar, 2012). Furthermore, based on the structural analysis of social behavior (Benjamin & Cushing, 2000), an observer coding system for the interpersonal process between patients and therapists, patients with high levels of hostility and low levels of autonomy-taking were identified at higher risk for poor outcomes (Critchfield, Henry, Castonguay, & Borkovec, 2007; Henry, Schacht, & Strupp, 1986, 1990). Thus, increasing patients' agency during therapy may improve therapy outcome.

Until now, separate aspects of agency were investigated from different perspectives, primarily relying on qualitative study designs. Even though there is scientific interest in agency and promising research, several gaps in the research literature exist. Noticeably, quantitative studies on agency from the patients' perspective are lacking. Up until now, there has not been a comprehensive investigation of patients' sense of agency in the therapy process and its relation to psychotherapy process factors and outcome.

3. Aims of the Dissertation Project

The overall aim of my dissertation project is to investigate agency as a curative change factor in psychotherapy. Therefore, I focus on agency specific to patients' experiences in psychotherapy, which is based on yet different to conceptualizations of general human agency (Bandura, 2006) and interpersonal agency (Horowitz et al., 2006; Wiggins, 1982). First, in order to assess patients' agency in psychotherapy, there is a need for a patient self-report questionnaire on agency for use in the psychotherapy process. Second, it is important to relate patients' subjective agency to their actual behavior and experience in therapy in order to examine if agency is related to active observable participation and alliance, as proposed theoretically. Moreover, patients' subjective agency in therapy can be related to patients' and therapists' interpersonal behavior according to the IPC. These research questions call for an integration of self- and other-perspectives including observer and therapist assessments.

Ultimately, it is an open task to establish agency as a mechanism of change, predicting change in symptoms over the process of therapy. Psychotherapy change mechanisms are changes that occur inside the patient and that are thought to be triggered by the events taking place in therapy and to produce improvement (Doss, 2004). In order to test agency as a mechanism of change, longitudinal panel data including multiple measurement points from a large sample and sophisticated analytic methods are needed to show that preceding changes in agency predict subsequent changes in symptoms after controlling for previous changes in symptoms and stable trait differences between individuals. Hereby, it is possible to clarify if agency is a precursor of symptomatic outcome or just an epiphenomenon accompanying mental health.

In a threefold project based on three empirical studies, I intended to (1) develop a measure of agency, to (2) relate it to psychotherapy process variables, and to (3) predict therapeutic improvement by changes in patients' agency. The aim of the first study was to develop a patient self-report questionnaire for the assessment of agency in psychotherapy and to investigate its psychometric properties. The aim of the second study was to relate patients' agency to the psychotherapy process with regard to observable in-session behavior and the patient-therapist interaction. The aim of the third study was to assess the role of agency as a mechanism of change, that is, a precursor of symptomatic change over time.

4. Summary of the Empirical Studies

4.1. Study 1: Therapeutic Agency Inventory: Development and Psychometric Validation of a Patient Self-Report

The aim of the first study was to develop a patient self-report questionnaire for agency. So far, studies on the patients' perspective on their agency in therapy and its association to the observable therapy process and the therapy outcome are missing. The rarity of quantitative studies on the patients' sense of agency may be, among other reasons, due to the lack of a patient self-report questionnaire with adequate psychometric properties, allowing repeated

assessments of agency in the therapy process. Previous studies used instruments that were not explicitly dedicated to the assessment of agency. Further, these instruments asked for patients' expectations of taking an agentic role prior to therapy and not for their actual experience of agency within the therapy process. Thus, this study strived to develop and psychometrically evaluate a self-report questionnaire for patients' agency in psychotherapy, which is called Therapeutic Agency Inventory (TAI).

Based on conceptualizations of agency in the literature (Bandura, 2006; Bohart & Tallman, 1999; Bohart & Wade, 2013), we defined therapeutic agency as a patient's intentional influence over the process of psychotherapeutic change. Based on the literature and previous studies on agency, we generated items describing various ways in which patients might experience agency and perceive themselves as having an influence on their therapy. The empirical investigation of the questionnaire involved a sample of 334 participants in psychotherapy including a group of patients from different psychotherapeutic in- and outpatient treatment settings and a group of graduate psychotherapy trainees currently in personal therapy. The psychometric properties of the items were investigated according to Bühner (2010). Moreover, we assessed construct validity of the questionnaire by correlations with other measures and predictive validity by changes in TAI-scores over the course of inpatient psychotherapy and the relation to therapeutic improvement in subsamples.

For the final version of the questionnaire we selected 15 out of 39 items, based on content considerations and analyses of the difficulty (i.e., mean) and discriminant power (i.e., corrected item-total correlation) of the items. We performed exploratory factor analyses, and the following three factors were extracted: (1) *in-session activity*, (2) *therapist-oriented passivity,* and (3) *therapy-related processing*. The subscale *in-session activity* assesses how patients actively contribute during their therapy sessions. The subscale *therapist-oriented passivity* addresses how responsible and influential patients feel in their psychotherapy in relation to their therapist. The subscale *therapy-related processing* captures patients'

processing between sessions including reflections about therapy-related material and the implementation of ideas or actions. Internal consistency was .84 for the total scale and ranged between .73 and .80 for each of the subscales, showing good reliability for the total score and acceptable to good reliability for the subscales. Re-test reliability was adequate. Yielding evidence for convergent validity, the TAI was significantly associated with other psychotherapy process factors (SACiP; Mander et al., 2013), self-efficacy expectations (GSE; Schwarzer & Jerusalem, 1999), therapy-specific control beliefs (TBK; Delsignore, Schnyder, & Znoj, 2006), lower overall psychological distress (OQ-45; Haug, Puschner, Lambert, & Kordy, 2004; Lambert, Hannöver, Nisslmüller, Richard, & Kordy, 2002), and lower depression scores (BDI-II; Beck, Steer, & Brown, 1996; Hautzinger, Keller, & Kühner, 2009). As preliminary indication for predictive validity, changes in agency during inpatient psychotherapy predicted therapy outcome after controlling for baseline distress.

Hence, the TAI is a reliable, valid, and change-sensitive self-report questionnaire that can be used to assess agency in psychotherapy. Due to its focus on the current experience in therapy and its brevity, the TAI can be used for repeated measurements throughout the psychotherapy process. Future research is necessary with regard to a confirmatory factor analysis of the TAI in a new sample and a comprehensive investigation of the predictive validity of agency for symptom change. In addition to the TAI's potential to improve our knowledge of change factors in psychotherapy research, the use of the TAI can enhance our understanding of patient activities, processing, and autonomy in clinical practice. Study 1 and the questionnaire are presented in the Appendix (study 1 Appendix A, TAI Appendix B).

4.2. Study 2: Therapeutic Agency, In-Session Behavior, and Patient-Therapist Interaction

The aim of the second study was to relate patients' subjective agency experiences in therapy to relevant psychotherapy process variables from patient-, therapist-, as well as from observer-perspective based on videotaped therapy sessions in order to clarify how the

patients' sense of agency is reflected in visible therapy behavior and the patient-therapist interaction. More specifically, we were interested whether patients' subjective agency experiences in therapy were related to their actual involvement in the process reflected in active, observable participation and a strong alliance. We further examined associations between patients' agency experience and their interpersonal behavior via impact messages as well as between patients' agency and their therapists' directive interpersonal stance from an observer perspective. The project has a clinical impact as the investigation of the psychotherapy session recordings allows inferring possible adjuvant and hindering conditions from both patients' and therapists' behavior with regard to the patients' agency experience.

In a cross-sectional study, we investigated the associations between patients' subjective agency experiences, their observable in-session behavior, and the patient-therapist interaction during the early phase of psychodynamic psychotherapy. We chose an early therapy session for the analyses because the early psychotherapy process is a sensitive period within the unfolding of psychotherapy with predictive value for therapy outcome (Flückiger, Holtforth, Znoj, Caspar, & Wampold, 2013; Haas, Hill, Lambert, & Morrell, 2002). The sample included 52 depressed patients in psychodynamic psychotherapy at a university-based outpatient training clinic. The patients responded to the TAI (Huber et al., 2018) after session 5. In addition, the patients and the therapists indicated the quality of the therapeutic alliance with the Working Alliance Inventory-Short Form Revised (WAI-SR; Hatcher & Gillaspy, 2006; Wilmers et al., 2008). Based on session recordings, two independent observers assessed the patients' involvement (participation and hostility) with the Vanderbilt Psychotherapy Process Scale (O'Malley, Suh, & Strupp, 1983; Strauß, Strupp, Burmeier-Lohse, Wille, & Storm, 1992) and their interpersonal behavior with the Impact Message Inventory (Caspar, Berger, Fingerle, & Werner, 2016; Kiesler & Schmidt, 2006). Furthermore, the raters assessed the therapists' directiveness with the Therapy Process Rating Scale (Fisher, Karno, Sandowicz, Albanese, & Beutler, 2000).

Results showed that patients who experienced higher agency had stronger therapeutic alliances. Patients who indicated higher agency in their therapy participated more actively in the session according to observer ratings. In addition, patients with higher agency showed less interpersonal hostility assessed via impact messages. Patients' agency was not associated with therapists' directiveness. Overall, patients' sense of agency in psychotherapy was related to more active involvement and affiliative interaction in the therapy session.

The findings support the hypothesis that patients need to feel capable to act in their therapy and affect it in order to benefit from it, even though the cross-sectional study design prevents causal conclusions. Relating to the idea of agency as a mechanism of change, the study provides correlational evidence that patients' sense of agency in therapy is associated with their active involvement in therapy, which is a predictor of outcome (Bohart & Wade, 2013). Study 2 is presented in Appendix C.

4.3. Study 3: Agency and Alliance as Mechanisms of Change

The aim of the third study was to investigate the role of agency as a mechanism of change for symptom improvement in psychotherapy. Moreover, we aimed to compare our analyses with the more established process factor of the therapeutic alliance, and to investigate the role of agency for the alliance formation. Agency is an important intrapsychological dimension of patients' active involvement in the therapeutic process (Bohart & Wade, 2013), which is considered to be a key pathway of a contemporary contextual model of psychotherapy (Wampold & Imel, 2015). However, the majority of empirical support comes from process-outcome studies with correlational designs linking process measures assessed in one or few sessions with outcome (Bohart & Wade, 2013; Orlinsky et al., 2004). Within this study, we examined the reciprocal effects between changes in therapeutic agency, working alliance, and symptoms over time during psychotherapy. Using dynamic models for longitudinal panel data, it is possible to protect against two central threads to causal inferences: reverse causation and unmeasured confounding influences

(Allison, Williams, & Moral-Benito, 2017). We aimed to predict symptom improvement and the alliance formation by prior changes in agency and to replicate the alliance-outcome-prediction.

In a longitudinal study, a sample of 386 patients in psychodynamic outpatient psychotherapy responded to the TAI (Huber et al., 2018), the WAI-SR (Hatcher & Gillaspy, 2006; Wilmers et al., 2008), and the Symptom Checklist-K11 (Lutz, Tholen, Schürch, & Berking, 2006) after sessions 1, 5, 10, 15, and 20. Relations were examined while controlling for autoregressive effects and differentiating within-patient changes over time from between-patient differences, using dynamic panel models in a structural equation modeling (SEM) framework (Allison et al., 2017; Falkenström, Finkel, Sandell, Rubel, & Holmqvist, 2017). We further examined reverse associations and tested stationary assumptions.

Increases in agency predicted subsequent symptom improvement. In addition, increases in alliance also predicted subsequent symptom improvement. Previous changes in symptoms did not predict subsequent agency or alliance experiences (i.e., no reverse effects). For agency and alliance, we found reciprocal effects. Improvements in agency predicted subsequent reductions in the alliance. In addition, while alliance in session 1 was associated with subsequent improvements in agency, later increases in the alliance were associated with reductions in agency experiences.

Findings show agency and alliance as mechanisms of change in psychodynamic psychotherapy. Analyses of the interplay between agency and alliance over time suggested complementary effects between the mechanisms with exception of a promotive effect of an initial strong alliance *base* on later agency experiences in therapy. The study supports the importance of both agency and alliance and further suggests that both mechanisms are independent of each other and may need to be balanced in successful psychotherapies. Study 3 is presented in Appendix D.

5. Comprehensive Discussion

All three empirical research studies focus on patients' agency in psychotherapy. In an evolving research program, we developed and investigated a self-report measure for patients' agency in psychotherapy in the first study, which was applied in the following two studies. In study 2, patients' self-report of agency was investigated in relation to psychotherapy process variables from patient-, therapist-, and observer-perspective in order to inspect relations to the clinically relevant therapy processes of alliance, participation, and interpersonal behavior. In study 3, we tested the role of agency as a predictor of therapeutic change over the course of psychotherapy, using dynamic panel models in a structural equation framework.

The studies build on a theoretical framework of agency and are characterized by a broad and innovative methodology. They contribute to the measurement as well as to the theoretical and empirical understanding of agency in psychotherapy with implications for both research and clinical practice. The conceptualization of patients' agency in psychotherapy in this dissertation was built on the concept of human agency in Bandura's theory (2006) and Bohart and Wade's (2013) understanding of patients as agents of change in psychotherapy. Based on previous work, we defined patients' agency in psychotherapy as patients' intentional influence over the process of psychotherapeutic change. The project involved the development of a patient self-report measure for agency in psychotherapy. Agency as measured by the TAI is comprised of three factors related to patients' activity within session, their reflections and implementations between sessions, and their overall assumption of responsibility relative to the therapist. While the questionnaire development included items reflecting Bandura's four core properties of agency (intentionality, forethought, self-regulation, and self-reflection), more action- and reflection-based items remained in the final version. This was due to the discriminant power and, in particularly, to the difficulty of the items. That is, most of the study participants endorsed high degrees of intentions (e.g., "I have

ideas about what I want to change.") and future-conceptions (e.g., "Sometimes I imagine what I will have achieved after therapy."), while the actual execution (e.g., "I apply ideas from therapy into practice.") and reflection (e.g., "I reflect on what we discuss in therapy often.") appeared more challenging. The phenomenon that high motivation is not translated into action right away is recognized in the intention-action-gap and the necessity of self-regulation strategies such as implementation intentions (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). The empirically informed content alignment of the questionnaire served the discrimination of high versus low agency states and the prevention of ceiling effects. The questionnaire's focus on self-regulation and self-reflection may also be due to the fact that it was designed as a psychotherapy *process* measure. Furthermore, as psychotherapy happens within a dyad, it is of importance to what degree patients rely on their own agency or instead "put it in the therapists' hands". With regard to construct validity and in line with Bandura's conceptualization, therapeutic agency correlated with general self-efficacy expectations, therapy-specific control beliefs, and mastery in the therapy session. As shown by partial correlations, agency was related to – but different from – these constructs and further psychotherapy process factors. Also, as assumed by Bohart and Wade (2013) and Coleman and Neimeyer (2015), patients' agency was related to the therapeutic alliance and visible participation behavior in psychotherapy in an early session. The intraindividual association over time is so far not clear for agency and participation and appears not to be constant for agency and alliance (see study 3 and Future Directions in this discussion). With regard to predictive validity, the studies support the thesis that agency is as a predictor of outcome and a mechanism of change. Herein, we see evidence for Bandura's (2006) and Bohart and Wade's (2013) assumption, that agency is relevant for individuals' change and development.

From a methodological point of view, the research project involved three empirical studies comprising three different methods: the questionnaire development (study 1), the microanalyses of clinical processes, based on rating instruments with two independent

observers yielding reliable assessments (study 2), and the implementation of innovative dynamic panel models in a SEM framework using longitudinal panel data for the study of within-person processes predicting change (study 3). All research questions were investigated in clinical samples with 772 psychotherapy participants in total, providing high power for confirmative hypothesis testing.

The research project has implications for both research and clinical practice. We developed a reliable, valid, and change-sensitive patient self-report questionnaire on agency that can be used in future research and clinical practice for process monitoring. The application of the TAI in clinical practice will likely help therapists and patients to monitor the patients' experience as active agents of change. Joint reflections on patients' agency may encourage patients to influence their psychotherapeutic change processes and to promote a balance between autonomy and connection in the therapeutic relationship. Next, patients' agency experiences were related to clinically meaningful processes, that is, working alliance, patients' participation, as well as patients' and therapists' interpersonal behavior. These analyses support the validity of the agency construct and questionnaire and give clinicians an impression of the interrelatedness of patients' sense of agency to their observable behavior and the dyad's interaction in the therapy session. Lastly, we investigated the role of agency as a mechanism of change, using longitudinal panel data and an appropriate methodological approach. This allowed us to overcome validity threats of correlational designs and yielded stronger evidence for causal inferences. Hereby, we showed that within-person changes in agency contribute to symptom improvement in the therapy process. Our findings suggest that agency is an independent change factor that is complementary to the alliance. We hope that these findings stimulate future research. Under the premise that our findings can be replicated, this research project supports the therapeutic promotion of patients' agency in clinical practice.

5.1. Limitations

Overall, important limitations of the research project involve the naturalistic study designs, the allegiance of the researchers, and the need for replication. Concerning study 1, I see a limitation in the exploratory investigation of the factor structure of the questionnaire. Future work should involve a confirmatory investigation in an independent sample. Concerning study 2, important short-comings are the restricted generalizability by the assessment of the psychotherapy process variables in one single session and the cross-sectional nature of the study. In study 3, we used a longitudinal design with multiple measurements of process and outcome variables, enabling us to investigate within-changes separated from confounding influences and from prior symptom improvement. The results apply to the first 20 sessions of psychodynamic psychotherapy and the reciprocal effects need to be examined in different therapeutic settings, orientations, and populations and with alternative methods of analysis. Given the ethical and conceptual problems of experimental designs in psychotherapy research, panel data have a lot of potential for research questions on causality. The dynamic panel model applied here allows protection against central threats of causality, namely unmeasured confounders and reverse causation (Allison et al., 2017). Future research needs to address convergence with alternative models under various conditions (e.g., Curran, Howard, Bainter, Lane, & McGinley, 2014; Hamaker, Kuiper, & Grasman, 2015). Beyond the limitations by the naturalistic study designs regarding the internal validity, these designs strengthen the confidence in the effectiveness and meaningfulness of the investigated processes under clinical routine practice, contributing to the external validity.

5.2. Future Directions

This dissertation contributes to the literature on agency in psychotherapy. The project resulted in a measurement instrument for agency, established relations to the therapy process including visible therapy behavior and interaction, and, most importantly, provided evidence for its role as a mechanism of change.

What remains unanswered from this dissertation project is the question of how patients' agency may be best promoted in therapy. Patients' agency was not associated with therapists' directiveness in study 2. Future work should explore the interaction of patients' and therapists' agency in further ways. Previous qualitative research identified therapists' strategies to facilitate patients' agency across psychotherapeutic orientations (Williams & Levitt, 2007). These therapeutic strategies can be related to patients' sense of agency in psychotherapy in order to empirically test their differential suitability. Such research could, however, result in findings similar to the Dodo bird verdict, suggesting that different therapeutic orientations and specific interventions do not exceed one another (Wampold & Imel, 2015). Still, establishing the therapist role as support for patients' agency may increase therapists' sensitivity to these patients' experiences (Levitt, Pomerville, & Surace, 2016), their capacity for reflection (Fonagy, 2018) and responsiveness (Stiles & Horvath, 2017), as well as the activation of these resources (Flückiger, 2010). Future research may relate these therapist variables to patients' agency. Indeed, therapists' facilitative interpersonal skills account for variance in therapists' effectiveness in helping patients change (Anderson, Ogles, Patterson, Lambert, & Vermeersch, 2009).

Another question for future research is how therapists' support for patients' agency and alliance interacts with one another. In study 3, we found opposite effects of changes in agency and alliance on one another, except a promotive effect of a strong alliance *base* on later agency. Simultaneously, both agency and alliance contributed to symptom improvement. Just like a caregiver needs to strike a balance between meeting her or his child's attachment needs and supporting the child's autonomous developmental steps, a therapist may need to attune to patients' relational and agentic needs with flexibility. From a clinical perspective, progressive and regressive processes may alternate in therapy with sequences of efforts and easing. In addition, patients may experience individual difficulties and anxieties towards attachment and/or individuation, constituting obstacles for their therapy. When individuals

relied stronger on themselves (e.g., overly autonomous) or on others (e.g., overly dependent) in their development, the other pole of experiences would be both challenging and potentially beneficial. It could be one direction for future research to unfold the role of patients' interpersonal problems as a possible moderator for the effect of agency and alliance experiences in therapy (Dinger & Schauenburg, 2010). The interplay of agency and alliance processes and their relation to symptom improvement may be further investigated in different patient populations.

Moreover, the role of agency as a common change factor needs to be explored in different therapeutic orientations. Coming back to the contextual model of psychotherapy (Wampold & Imel, 2015), it would be interesting to investigate all three paths (relationship, expectations, involvement) in conjunction based on the underlying mechanisms of change.

5.3. Conclusion

I want to conclude with the dialectics in which agency is embedded – the dialectic on agency and surrender, and on agency and communion. An inflated sense of agency may fail to take into account the limits of human control and the influence of unconscious aspects (Safran, 2016). Change cannot be brought about through an act of will alone, so that one part may be concerned with accepting the limits of personal influence by internal and external constraints and to allow surrender. While agency emphasizes the autonomy of an individual, communion describes the involvement of an individual with others (Bakan, 1966). In successful phases of development humans feel that they can be who they are and participate in a community at the same time. Agency might assist human functioning as it corresponds to the capabilities and constraints for human action in reality and is balanced and embedded in relatedness. The dissertation strived for a better understanding of how patients become effective in psychotherapy to enhance and sustain mental health. Patients' agency in psychotherapy appeared as a curative and distinct change factor, which is relevant for mental health improvement.

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8. Declaration in accordance to § 8 (1) c) and (d) of the doctoral degree regulation of the Faculty

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FAKULTÄT FÜR VERHALTENS- UND EMPIRISCHE KULTURWISSENSCHAFTEN

Promotionsausschuss der Fakultät für Verhaltens- und Empirische Kulturwissenschaften der Ruprecht-Karls-Universität Heidelberg
Doctoral Committee of the Faculty of Behavioural and Cultural Studies of Heidelberg University

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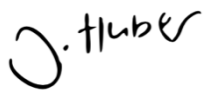

9. Appendix

Appendix A: Study 1

Appendix B: Therapeutic Agency Inventory

Appendix C: Study 2

Appendix D: Study 3

Appendix A: Study 1

Huber, J., Nikendei, C., Ehrenthal, J. C., Schauenburg, H., Mander, J., & Dinger, U. (2018). Therapeutic Agency Inventory: Development and psychometric validation of a patient self-report. *Psychotherapy Research*. Advance online publication. doi: 10.1080/10503307.2018.1447707

Therapeutic Agency Inventory:

Development and Psychometric Validation of a Patient Self-Report

Authors: Julia Huber[1], Christoph Nikendei[1], Johannes C. Ehrenthal[2], Henning Schauenburg[1], Johannes Mander[3] & Ulrike Dinger[1]

[1] Department of General Internal and Psychosomatic Medicine, Center for Psychosocial Medicine, University Hospital Heidelberg, Germany

[2] Institute of Medical Psychology, Center for Psychosocial Medicine, University Hospital Heidelberg, Heidelberg, Germany

[3] Center for Psychological Psychotherapy, University of Heidelberg, Germany

Author Note

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Correspondance concerning this article should be addressed to Ulrike Dinger, Department of General Internal and Psychosomatic Medicine, Center for Psychosocial Medicine, University Hospital Heidelberg, Thibautstrasse 4, 69115 Heidelberg, Germany. E-Mail: Ulrike.Dinger-Ehrenthal@med.uni-heidelberg.de

Abstract

Objectives: Therapeutic agency is defined as a patient's intentional influence over the process of psychotherapeutic change. However, there is a lack of conceptually sound self-report measure with adequate psychometric properties. The aim of this study was to develop and psychometrically evaluate the patient-rated Therapeutic Agency Inventory (TAI).

Method: Based on the literature, we developed items related to therapeutic agency and investigated their psychometric properties in a naturalistic study with a sample of 334 psychotherapy participants. We assessed changes in TAI scores in a subsample of 58 patients over the course of inpatient psychotherapy and related TAI scores to therapeutic improvement.

Results: The TAI consists of 15 items. We performed exploratory factor analyses, and the following three factors were extracted: in-session activity, therapy-related processing, and therapist-oriented passivity. Internal consistency was .84 for the total score and ranged between .73 and .80 for each of the factors. The TAI was significantly associated with other psychotherapy process factors, self-efficacy expectations, control beliefs, lower overall psychological distress, and lower depression scores. Changes in agency during psychotherapy predicted therapy outcome, even after controlling for baseline distress.

Conclusions: The TAI is a reliable, valid, and change-sensitive self-report instrument that can be used to assess agency in psychotherapy.

Keywords: agency; psychotherapy process; common change factor; patient contribution

Clinical or methodological significance of this article: Agency appears to be a relevant common factor in psychotherapy. The Therapeutic Agency Inventory (TAI) is a reliable, valid, and change-sensitive self-report instrument that can be used to assess agency in psychotherapy.

Therapeutic Agency Inventory:

Development and Psychometric Validation of a Patient Self-Report

Patient participation is a common process factor that is crucial for successful outcomes in psychotherapy across different treatment approaches. Orlinsky, Ronnestad, and Willutzki (2004) reviewed multiple process-outcome studies and found that therapy outcome was related to patients' suitability, openness, expressiveness, and cooperativeness as well as the patients' affirmation to the therapist, contribution to the patient-therapist bond, and interactive collaboration with the therapist. According to the authors, "the quality of the patient's participation in therapy appears to emerge as the most important determinant of outcome" (Orlinsky et al., 2004, p. 324). A more recent meta-analysis confirmed a positive association between patients' collaboration and therapy outcomes with a medium-sized effect (Tryon & Winograd, 2011). In addition, patient participation is closely linked to therapeutic alliance (Joseph, Hilsenroth, & Diener, 2014).

However, these studies are limited because the operationalization of patient participation is often indirect, and the underlying constructs remain vague. Similarly, participation and therapeutic alliance are not clearly differentiated. For example, in a meta-analysis conducted by Tryon and Winograd (2011), collaboration was operationalized either as a form of compliance, i.e., completion of homework and treatment adherence, or in terms of aspects of the therapeutic alliance. Bordin (1979) conceptualized working alliance as an emotional bond between the patient and therapist and as an agreement regarding the tasks and goals of treatment. Although agreement requires patient involvement and can be a precondition for mutual therapeutic work, the patient agreement is not equivalent to patient contribution. Similarly, patient contributions cannot be reduced to a single behavioral activity, such as the completion of homework, due to the richness and complexity of the work performed by patients in therapy (Morris, Fitzpatrick, & Renaud, 2016). Thus, clear

differentiation among patient compliance (e.g., session attendance), active participation in therapeutic tasks, and the process of becoming a proactive agent of change is imperative.

We hypothesize that observable participation in psychotherapy is rooted in patients' sense of agency. Agency describes the subjective experience of a person's capacity to act. Rather than being passive victims of circumstances, individuals with a personal sense of agency influence their own lives and determine their own actions (Bandura, 2006; Safran, 2016). Agency is a developmentally acquired sense of the self as an agent or initiator of actions and outcomes (Knox, 2011). Agency enables individuals to influence their personal self-development through four core features. Human agents (a) form intentions; (b) have a future-directed perspective that includes setting goals and anticipating consequences to guide and motivate efforts; (c) regulate themselves to execute actions; and (d) self-reflect on their own functioning (Bandura, 2006). Thus, agency integrates perceptional, motivational, and volitional processes, and its states can vary within a person over time. Previous mastery experiences and self-efficacy expectations are central foundations of the sense of agency (Bandura, 2006).

In addition to the self-oriented perspective, agency comprises an interpersonal impact. According to the interpersonal circumplex (IPC) model, agency is one of two fundamental dimensions that characterize interpersonal behavior. The IPC model is organized according to the dimensions of communion, i.e., degree of friendliness versus hostility and agency, which represents one's influence on others and describes behaviors on a continuum from assertion to submission (Horowitz et al., 2006; Kiesler, 1996; Wiggins, 1982). We hypothesize that patients' sense of agency drives their active participation in therapy. However, it should be noted that observable participation might also result from unquestioned adoption or compliance with the therapists' instructions or the tasks given in therapy. The recipient-based position must be differentiated from true agency in the form of a self-determined, proactive

stance, i.e., the patients use the therapists' input to generate their own perspectives and activities.

In psychotherapy, patients can affect their own process of change in meaningful ways. However, the degree to which patients affect their change process is likely variable, rendering agency a potential intrapsychological mechanism that could affect patient participation and therapeutic improvement. Prior to entering psychotherapy, the patients' personal sense of agency is likely reduced because patients do not believe that they can influence their situation or cope with their distress. Jerome Frank described the condition of symptom distress combined with subjective incompetence using the term demoralization, i.e., a state of self-perceived incapacity to act even at a minimal level (de Figueiredo & Frank, 1982). Although accepting the limits of agency due to internal and external constraints may be important for certain patients, the experience of being an agent in psychotherapy can promote hope, initiate remoralization, and facilitate the activation of resources necessary to solve targeted problems (Frank, 1974; Howard, Lueger, Maling, & Martinovich, 1993). If these experiences occur in the therapeutic context, the patients may generalize their increased self-confidence and sense of control to other life situations. Bohart et al. proposed that patients do not merely absorb their therapists' offerings, but that their sense of agency is a primary generator of change (Bohart & Tallman, 1999; Bohart & Wade, 2013). From this perspective, therapeutic tasks and interventions alone do not lead to therapeutic improvement, but patients' active engagement with these tasks causes notable change. Furthermore, the conceptualization of patient agency and subsequent participation in a contextual model of psychotherapy may help explain the Dodo bird verdict, i.e., different types of bona-fide therapies lead to similar outcomes (Bohart & Wade, 2013; Wampold & Imel, 2015). In summary, agency is likely an important common factor in psychotherapy that should be addressed to enable therapeutic change. In the following sections, we summarize previous studies investigating patient agency in psychotherapy.

Studies exploring patients' sense of agency in psychotherapy have primarily used qualitative methodology. Rennie's grounded theory studies investigating interpersonal process-recall provided evidence regarding patient agency in psychotherapy (Rennie, 1992, 2001, 2002). Patients' experiences included perceptions, processing, reflexivity, decision-making, and pursuing courses of actions. Furthermore, patients continued to work internally, in addition to working conversationally with the therapist. Other qualitative studies retrospectively asked patients about their experiences after the completion of treatment. One interview study involving 11 former patients found that patients value their own contribution to the therapy process and that they attribute the success of therapy to their own efforts as agents regardless of therapeutic orientation (Hoener, Stiles, Luka, & Gordon, 2012). In an investigation involving 104 former patients, narratives about psychotherapies were coded with regard to agency experiences (Adler, Skalina, & McAdams, 2008). The coding system used a 5-point scale that differentiated patients who appeared to have low power over their lives and were at the mercy of circumstances from those who were able to affect their lives, initiate change on their own, and achieve control over the course of their experiences. The agent-oriented reconstructions of psychotherapy were associated with subjective well-being after therapy. Patients with better well-being after therapy described their therapeutic experience as an activation of their own capabilities and strength to overcome their problems. Based on these retrospective studies, the experience of agency is important to patients and might be related to satisfaction and therapeutic outcome.

An understanding of the development of agency in psychotherapy and its relationship to therapeutic change is needed because of the importance of the role of agency. A longitudinal study investigating the weekly narratives of 48 patients over the course of 12 psychotherapy sessions showed increases in agency over time, followed by improvements in mental health (Adler, 2012). A qualitative study that directly investigated therapy sessions provided initial evidence that patient agency could have an impact (Oddli & Rønnestad,

2012). Transcripts of three early psychotherapy sessions from nine experienced psychotherapists with diverse orientations were analyzed to identify the establishment of a therapeutic relationship. A key finding in this study was that all therapists fostered agency in their patients. Therapists explored patients' previous strategies to overcome their problems, emphasized the choices and authority of patients, and invited patients to participate in a co-constructive process. Thus, the promotion of agency during the therapy process is important for the establishment of the therapeutic alliance, which is a predictor of outcome (Horvath, Del Re, Flückiger, & Symonds, 2011).

Research from the IPC tradition provides additional evidence regarding the importance of changes in patient agency during psychotherapy. As previously mentioned, according to the IPC model, agency and communion are the two fundamental dimensions of interpersonal behavior. Both dimensions have been recently shown to change during psychotherapy. Constantino et al. (2012) reanalyzed data from 259 chronically depressed patients who underwent 12 weeks of cognitive-behavioral analysis system psychotherapy (CBASP) in a clinical trial that compared the efficacy of CBASP, nefazodone, and a combination of the two. Decreases in patients' hostile-submissiveness, assessed by therapists with the Impact Messages Inventory (IMI; Kiesler & Schmidt, 2006), were associated with improvements in depression. Based on a second reanalysis of 220 patients from the same sample, reductions in hostile-submissive messages mediated the association between the early therapeutic alliance and outcome (Constantino et al., 2016). In another clinical trial involving 103 depressive outpatients who received cognitive behavioral or interpersonal psychotherapy, pretreatment personality traits predicted the levels of communion and agency during therapy, which were assessed by therapists using the IMI and were associated with improved outcomes (Dermody, Quilty, & Bagby, 2016). Patient agreeableness was associated with lower agency throughout treatment and was linked to poorer treatment responses. Based on the structural analysis of social behavior (SASB; Benjamin & Cushing, 2000), which is a system used to code the

interpersonal process between patients and therapists from an observer perspective, patient hostility and low levels of autonomy-taking were identified as predictors of poor outcomes (Critchfield, Henry, Castonguay, & Borkovec, 2007; Henry, Schacht, & Strupp, 1986, 1990). Thus, increasing patients' sense of agency during therapy may be beneficial for treatment success.

Despite the scientific interest in agency and these promising initial findings, two important gaps exist in the current literature. First, the patient perspective is noticeably lacking in quantitative studies. Second, studies using multiple measurement points that control for previous changes in symptoms and other process variables are needed to establish agency as a true mechanism of change (Falkenstrom, Finkel, Sandell, Rubel, & Holmqvist, 2017; Falkenström, Granström, & Holmqvist, 2014). This gap in the literature may be due to the lack of a patient self-report instrument with adequate psychometric properties allowing repeated measurements of agency. Although Coleman and Neimeyer (2015) recently reviewed measures that could assist in assessments of agency, the authors focused on expectations rather than process measures. Furthermore, the reviewed instruments were not explicitly designed to assess agency, and most studies used subscales of instruments measuring other constructs that only capture certain aspects of agency. In addition, the psychometric properties of certain measures are either insufficient or have not been investigated, which may explain the infrequent use of these instruments to date. Therefore, additional efforts measuring agency during the therapy process are necessary.

Study Aims

The aim of the current study was to develop and evaluate the Therapeutic Agency Inventory (TAI) as a self-report questionnaire to measure patients' experiences of agency in the therapy process. Based on previous conceptualizations of agency (Bandura, 2006; Bohart & Tallman, 1999; Bohart & Wade, 2013), we defined therapeutic agency as a patient's intentional influence over the process of psychotherapeutic change. The sense that one's

mental state causes impactful actions and elicits a response is central to this construct. The newly developed questionnaire assesses patients' perception of themselves as agents in psychotherapy, e.g., experiencing the self as actively involved in the therapeutic change process. We investigated the psychometric properties including reliability, validity, and sensitivity to change of the scale. We expected agency to increase during psychotherapy. The investigation of the factor structure was exploratory. To determine the construct validity, we examined associations with the following variables:

Self-Efficacy Expectations. Bandura (2006) describes self-efficacy expectations as a mechanism that drives human agency, because people are more likely to act if they believe they are capable of acting. We hypothesized that patients with general optimistic self-efficacy expectations become more active as agents in therapy.

General Therapeutic Change Mechanisms. Grawe (1997) specified the following general change mechanisms: working alliance, problem activation, resource activation, clarification, and mastery. In conceptualizing agency as a principal mechanism of change, we hypothesized that a certain degree of overlap exists between agency and the other change mechanisms. Specifically, we hypothesized that agency is highly associated with mastery and agreement on therapeutic tasks and goals because these components capture patients' opportunities to experience themselves as active and effectual in therapy.

Therapy-related Control Expectations. Patient therapy-specific control expectations refer to the expected influence of oneself versus powerful others or the chance for a therapy outcome (Delsignore, Schnyder, & Znoj, 2006). We hypothesized that a positive correlation would exist between agency and internal expectations and that a negative correlation would exist between agency and external expectations because people who believe that they are in control are more likely to become agents in therapy.

Depression and Overall Psychological Distress. Depression and overall psychological distress can hinder a person's sense of agency because these states likely

impede one's capabilities to influence one's situation or cope with distress (de Figueiredo & Frank, 1982). Thus, we hypothesized that a negative association exists between therapeutic agency and these states.

In addition to exploring the overlap between agency and related constructs, we examined TAI associations with patient characteristics and TAI differences across different psychotherapy settings. Regarding the predictive validity, we hypothesized that an improvement in agency during the therapy process would predict the therapy outcome at termination.

Method

Participants

Patients from several different psychotherapeutic treatment settings were invited to participate in the study. In addition, clinical psychology graduate students, who were currently in personal therapy as part of their clinical training, were recruited. Using a naturalistic study design, the data collection aimed to meet the required number of participants for the analyses and gather clinically relevant data from different participants and therapeutic settings. The participants were recruited from three inpatient psychotherapy units at two psychosomatic hospitals, two psychiatric units at a psychiatric hospital (standard psychiatric care), two outpatient psychotherapy clinics, and a psychotherapy training institute. Treatment settings included inpatient and day-clinic units at psychiatric and psychosomatic hospitals, as well as individual outpatient settings. Inpatient treatments comprised weekly individual psychotherapy, group psychotherapy, non-verbal therapies (e.g., art therapy, music therapy and body-oriented therapy), social work counselling, and regular ward rounds. Individual outpatient treatments and trainee therapists' personal therapy occurred weekly. The treatment approaches involved psychodynamic, cognitive-behavioral, and integrative treatments. Psychopharmacological treatments followed routine clinical practice. The clinical diagnoses were made by the psychotherapists/psychiatrists conducting the treatment according to the

International Statistical Classification of Diseases and Health Related Problems (ICD-10; Dilling, Mombour, & Schmidt, 2011) when feasible. The trainee therapists participating in the study were enrolled in a psychodynamic training program involving 50 to 80 sessions of personal therapy in the therapeutic orientation. The original sample consisted of 334 individuals in psychotherapy, but this number was reduced to 321 subjects (63% female, 37% male, M_{age} = 34.39 years, SD_{age} = 12.08 years) due to missing data. Additional sample characteristics are presented in Table 1. Re-test reliability, sensitivity to change over time, and outcome prediction analyses were conducted using a subset of inpatient psychotherapy patients who provided multiple measurements (N = 58, 69% female, 31% male, M_{age} = 35.84 years, SD_{age} = 11.96 years). In this subsample, the measurement time points included baseline, week 2 (N = 58, M_{age} = 35.84 years, SD_{age} = 11.96 years, 69% female, 31% male), week 7 (N = 49, M_{age} = 35.65 years, SD_{age} = 11.64, 65% female, 35% male), and week 8, i.e., the end of psychotherapy (N = 41, M_{age} = 38.27, SD_{age} = 11.55, 68% female, 32% male). Seventeen (29%) patient participants who initially started inpatient treatment dropped out of the study before the end of their scheduled therapy. The only exclusion criterion was insufficient German-language skills. Ethical approval was granted by the local ethics committee of the Medical Faculty of Heidelberg University (S-173/2015).

Measures

Therapeutic Agency Inventory (TAI). The construction of the TAI was based on Bandura's theory of human agency (Bandura, 2006), Bohart's conceptualization of client agency in psychotherapy (Bohart & Wade, 2013), and qualitative studies investigating patient experiences of agency in psychotherapy (Adler et al., 2008; Hoener et al., 2012; Mackrill, 2009). The central element in theoretical discussions of agency is that humans are capable of experiencing themselves as agents who have influence on the courses their lives and therapies take, and possess a sense that they make a personal impact. Therefore, we generated a pool of items representing various ways patients can experience agency and perceive themselves as

having influence in their therapy. We aimed to cover different degrees of agency difficulty. In addition to the study authors, eight psychotherapists assisted in item generation by evaluating the comprehensibility and content relevance of the items. The empirical investigation consisted of a pool of 39 items presented to psychotherapy participants. To ensure feasibility in clinical practice, we intended to select approximately 12- 15 of the 39 items for the final version of the questionnaire. The item selection for the final version was based on content considerations and analyses of the difficulty (i.e., mean) and discriminant power (i.e., corrected item-total correlation) of the items. The participants were asked to evaluate their sense of agency in their current experience of psychotherapy and their interaction with their psychotherapist. The items were answered on a 5-point Likert scale ranging from 1 (*not true*) to 5 (*very true*). The polarity of items describing low experiences of agency was reversed; thus, a higher TAI score reflects a higher degree of agency. The final item selection and psychometric properties of the new scale based on the current analyses are reported in the results section (all 39 preliminary items are presented in the online supplement). The instrument was originally formulated in German, and the study results apply to the German version of the questionnaire. Translation into English was performed by members of the research team and a native bilingual psychology graduate student. Two back-translations into German were performed by a native bilingual psychology student and a native English interpreter student who is fluent in German. The differences were minimal, and the final English version was developed by consensus between the translators and study authors.

General Self-Efficacy Scale (GSE). The GSE (Schwarzer & Jerusalem, 1999) is a self-report inventory designed to assess general optimistic self-beliefs. The scale assesses a person's expectation to cope with a variety of difficult demands and the belief that a successful outcome is attributed to one's personal actions. It consists of 10 items answered on a 4-point Likert scale, and higher scores indicate higher levels of self-efficacy. Previous studies have shown that this scale has good psychometric properties, including reliability,

stability, and validity, and there are norms available (Hinz, Schumacher, Albani, Schmid, & Brähler, 2006; Schwarzer & Jerusalem, 1999). The positive associations found between general self-efficacy and optimism and work satisfaction and negative associations found between general self-efficacy and anxiety, depression, stress, and health complaints confirm the construct validity of the scale. In the current study, the internal consistency was high with a Cronbach's α of .88.

Scale for the Multiperspective Assessment of General Change Mechanisms in Psychotherapy (SACIP). The SACIP (Mander et al., 2013) is a post-session questionnaire measuring the therapeutic alliance based on the revised short form of the Working Alliance Inventory (WAI-SR; Hatcher & Gillaspy, 2006; Munder, Wilmers, Leonhart, Linster, & Barth, 2010) and general change mechanisms in psychotherapy proposed by Grawe (1997). The change factors, including emotional bond, agreement on tasks and goals, problem actuation, resource activation, clarification of meaning, and mastery, are assessed using six subscales. The scale consists of 21 items answered on a 5-point Likert scale. Higher scores indicate greater activation of the process factors from the view of the participant in the respective therapy session. The scale predicted therapy outcomes in previous studies (Mander et al., 2015; Mander et al., 2013). In the current study, the SACIP had a high internal consistency with a Cronbach's α of .95, and the Cronbach's α of the subscales ranged from .74 to .90.

Questionnaire on Control Expectancies in Psychotherapy (TBK). The TBK (Delsignore et al., 2006) assesses internal and external control expectancies related to psychotherapy. Three subscales measure the expectation that a consequence (e.g., a symptomatic improvement) depends on personal efforts (internal), the therapist's competence (powerful others), or unforeseeable factors (chance). The questionnaire comprises 18 items answered on a 6-point Likert scale. High scores indicate stronger beliefs relating to the respective factor. The moderate correlations observed with global control expectancies and

general self-efficacy highlight the convergent validity of the measure (Delsignore et al., 2006). In the current study, the scales of the TBK had high internal consistencies with Cronbach's α ranging from .81 to .82.

Beck Depression Inventory-II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996; Hautzinger, Keller, & Kühner, 2009) is a self-report inventory that measures symptoms of depression according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994). The BDI-II consists of 21 symptoms, with four statements describing the intensity of each symptom. The depression symptoms are assessed for the preceding two weeks. The scores range from 0 to 63, and higher scores reflect more severe depressive symptoms. The correlations with other measures of depression are high (Kühner, Bürger, Keller, & Hautzinger, 2007). In the current study, internal consistency was high, with a Cronbach's α of 91.

Outcome Questionnaire (OQ-45). The OQ-45 (Haug, Puschner, Lambert, & Kordy, 2004; Lambert et al., 1996) is a self-report inventory designed to measure the degree of overall psychological distress and mental health functioning at the outset of and over the course of psychotherapy. The OQ-45 measures therapeutic change across a wide range of disorders using three subscales, i.e., symptom distress, interpersonal relationships, and social role performance, and provides a total score reflecting general functioning. The questionnaire consists of 45 items answered on a 5-point Likert scale. High scores represent more severe overall psychological distress. This instrument discriminates between clinical and non-clinical samples, is sensitive to the effects of interventions and remains stable in untreated individuals. The convergent validity of this instrument has been demonstrated, and this instrument is moderately to highly correlated with measures of symptom severity and interpersonal problems (Haug et al., 2004). In the current study, the OQ-45 showed a high internal consistency with a Cronbach's α of .95, and the Cronbach's α of the subscales ranged from .60 to .87.

Procedure

All participants completed the TAI in its preliminary 39-item form. This overall sample was used for item selection and factor analyses. Each participant completed one measurement. All further validity assessments were conducted with smaller sample sizes, and thus, subgroups of inpatients completed different instruments in addition to the TAI. The patients were asked to complete additional questionnaires to assess their general self-efficacy (GSE; Schwarzer & Jerusalem, 1999), psychotherapy process factors (SACIP; Mander et al., 2013), therapy-related control expectancies (TBK; Delsignore et al., 2006), depressive symptomatology (BDI-II; Beck, Steer, & Brown, 1996; Hautzinger et al., 2009), and overall psychological distress (OQ-45; Haug et al., 2004; Lambert et al., 1996). The treatment progress at the time of assessment varied among the patients. All patients were required to have had at least one session of individual psychotherapy, but most patients were assessed at an advanced treatment stage (see Table 1 for the measurement times). A subset of 58 patients in inpatient psychotherapy was longitudinally assessed with measurements of agency (TAI[1]) at the start (baseline, T1), during the early phase (week 2, T2), and during the late phase (week 7, T3) of therapy. This subsample of patients also completed the OQ-45 to assess their overall psychological distress at the start (baseline, T1) and end (week 8, T4) of therapy.

Statistical Analysis

For item selection, descriptive item statistics, including the mean, standard deviation, and corrected item-scale correlation, were calculated. After selecting the items for the final version based on the item statistics (i.e., item difficulty, and discriminant power, and variance), the final items were subjected to subsequent analyses to evaluate the psychometric properties of the new measure.

The reliability of the scales was investigated based on internal consistencies using Cronbach's α, and the re-test reliability was assessed using the Pearson correlation of the TAI

[1] TAI in the preliminary 39-item form.

scores with a re-test interval of one week (at weeks 1 and 2 of inpatient psychotherapy).[2] The sensitivity to change was assessed by performing repeated measures ANOVA of the TAI scores at weeks 1, 2, and 7.

The factor structure of the new measure was explored by performing an exploratory factor analysis (EFA), principal axis factoring with an Oblique rotation (Oblimin direct: delta = 0) selected due to anticipated inter-factor correlations. The EFA was repeated with a Varimax rotation and a Maximum Likelihood analysis. Our criteria for the factor extraction included eigenvalues greater than 1 and the scree-test according to Cattell (Bortz, 1999; Tabachnik & Fidell, 2004). As a second step, we investigated the selected factor structure using a confirmatory factor analysis (CFA) with Maximum Likelihood estimation using the same data. We followed the recommendations proposed by Hu and Bentler (1999) to evaluate fit indices and cut-off scores for a good fit as follows: Comparative-Fit Index (CFI) = .95; Root Mean Square Error of Approximation (RMSEA) = .06; and Standardized Root Mean Residual (SRMR) = .08.

To test construct validity, correlations between the TAI and the GSE (Schwarzer & Jerusalem, 1999), SACIP (Mander et al., 2013), TBK (Delsignore et al., 2006), BDI-II (Beck, Steer, & Brown, 1996; Hautzinger et al., 2009), and OQ-45 (Haug et al., 2004; Lambert et al., 1996) were calculated. To examine the specificity of the associations, partial correlations between agency and the other measures were calculated after controlling for BDI-II and GSE. Predictive validity was tested using a structural equation modeling (SEM). We tested whether OQ-45 scores at termination are predicted by (1) TAI score at baseline, (2) change in TAI score throughout the psychotherapy process from week 1 to week 7, and (3) overall psychological distress at baseline. To operationalize the change in TAI scores, we used a

[2] During weeks 1 and 2, patients attended psychotherapy sessions, which might have led to an improvement in agency despite the short period. A measurement interval without any therapy sessions in-between would have allowed for a more rigorous test of the re-test reliability but was not possible due to the data assessment procedure.

latent change score. To determine this latent change score, we fixed the effect of TAI at baseline on TAI at week 7 at 1 (see McArdle, 2009). This approach yields a saturated model. The standard errors were calculated using the bootstrap method. Due to the potentially low precision of SEM because of the limited sample size, the robustness of this preliminary analysis was further examined using Ordinary Least Square (OLS) linear regression analysis for OQ-45 scores at termination as a dependent variable with the predictors described above. In the OLS analysis, the TAI score change was operationalized as a residual change score composed of the residuum, in which the TAI score at week 7 was predicted by the TAI score at week 1. To analyze the patient and setting characteristics, ANOVAs, t-tests for independent samples, and correlation analyses were conducted. The statistical analyses were conducted using SPSS (Version 23), AMOS (Version 22) for the CFA, and R (Version 3.3.2) and R Studio (Version 1.0.136) for the SEM.

Power Analysis

We aimed to obtain a sample of 300 individuals in psychotherapy for the exploratory factor analyses (Bühner, 2010). The required sample sizes for the additional reliability, validity, and sensitivity to change analyses were calculated using G*Power (Faul, Erdfelder, Buchner, & Lang, 2009), assuming a power of .80 and an error probability of $\alpha = .05$ (two-sided). To assess the re-test reliability, a sample of 29 individuals was required to detect a correlation with a large effect size. To investigate construct validity, correlations with moderate effect sizes were assumed, and 84 participants were required to complete each measure for the validity assessment. For analyses of sensitivity to change and prediction of outcome, moderate effect sizes were expected. A sample size of 34 participants was necessary for the repeated measures ANOVA testing the within-subjects factor of time. The preliminary analyses of the associations between agency and the patient characteristics, the differences among the settings, and the predictive-related validity were all exploratory and did not require a priori power analyses.

Results

Item Selection

We investigated the discriminant power, difficulty, and variance of each item and selected items based on statistical and content considerations. We chose items with high discriminant power represented by the part-whole corrected correlation of each item with its scale. The part-whole corrected correlation indicates how well an item represents the scale that is built by the remaining items of the scale. We aimed to select items with a wide range of difficulty represented by the item mean to discriminate between individuals with low and high agency. By consensus, two of the authors (JH and UD) selected items over the full range of difficulty, while preferring those with adequate discriminant power. We excluded two items based on content consideration to prevent possible misunderstandings. Based on these considerations, the final version of the questionnaire consists of 15 items. The means, standard deviations, and part-whole corrected item-scale correlations of the final items are provided in Table 2.

Reliability

The internal consistencies of the total scale and subscale I revealed good reliability, and acceptable values were obtained for the other two subscales (see Table 2). In the subsample with repeated measurements, the re-test reliability was high between TAI scores at weeks 1 and 2 (r_{tt} = .81).

Sensitivity to Change

Regarding the change throughout treatment, TAI scores significantly increased, and a large effect was observed over the course of therapy from week 1 (M = 3.43, SD = .49) to week 2 (M = 3.60, SD = .56), and week 7 (M = 3.95, SD = .52), as shown in Figure 1. Agency significantly differed across the three time points (F(2, 96) = 45.29, p < .001, f = .98; T1 vs. T2: F(1, 48) = 13.80, p = .001, f = .53; T1 vs. T3: F(1, 48) = 67.01, p < .001, f = 1.18).

Distribution

TAI total scores (M = 3.61, SD = .55) were normally distributed, as indicated by a non-significant Kolmogorov-Smirnoff-Test statistic of .048 (p = .07). The skewness (v = -.23) and kurtosis (y = .204) indicated a slightly left-skewed leptokurtic distribution. A histogram is shown in Figure 2.

Exploratory and Confirmatory Factor Analyses

The adequacy of the data for a factor analysis was indicated by a Kaiser-Meyer-Olkin (KMO) score of .87 and a significant Bartlett's test of sphericity, $\chi^2(105)$ of 1378.40, $p < .001$. The principal axis factoring using oblique rotation revealed a three-factor solution, accounting for 43.76% of the variance. Table 2 presents the factor loadings of the items. The first factor describes *in-session activity* in psychotherapy, whereas the second, negatively poled factor indicates *therapist-oriented passivity* without any assumption of personal responsibility for therapy and change. The third factor reflects *therapy-oriented processing,* which may occur between sessions in everyday life in the form of reflecting on therapy or testing new behaviors. One item showed relevant cross loading to another factor (see Table 2). The inter-correlations of the extracted factors are r = .39 for factors I and II, r = .60 for factors I and III, and r = .19 for factors II and III. The analyses using the other EFA methods produced conceptually identical results (not presented here due to space considerations). The size of the subsamples based on settings did not allow a comparison of the factor structure in all settings. Because the largest subgroup represented the inpatient setting, all analyses were repeated with inpatients only. The established factor structure was conceptually comparable between the total sample and the inpatient-only group, except for the final item, which had a higher cross loading for factor I, likely due to the higher amount of time in therapy in the inpatient setting. The CFA of the data from the entire sample indicated a significant deviation from the predicted model, χ^2 (87) = 215.13, $p < .001$. The fit indices of the proposed 3-factor structure were close to an appropriate model fit (CFI = .918, RMSEA = .066, SRMR = .062).

Construct Validity

The correlations between TAI and the other measures are depicted in Table 3. Therapeutic agency was moderately to highly correlated with general self-efficacy (GSE; Schwarzer & Jerusalem, 1999). TAI scores were also highly correlated to mastery (SACIP; Mander et al., 2013) and moderately positively correlated with agreement on tasks and goals, emotional bond, resource activation, and clarification (SACIP subscales; Mander et al., 2013). Furthermore, therapeutic agency was moderately associated with higher internal control experiences in therapy (TBK; Delsignore et al., 2006), whereas control experiences linked to powerful others or chance were moderately related to lower therapeutic agency. Therapeutic agency was also moderately linked to lower depression severity (BDI-II; Beck, Steer, & Brown, 1996; Hautzinger et al., 2009) and lower overall psychological distress (OQ-45; Haug et al., 2004; Lambert et al., 1996). These analyses were repeated after controlling for depression (BDI-II) and self-efficacy (GSE), and the association patterns remained the same, as shown by the partial correlations provided in Table 3.

Exploratory Analyses: Associations with Patient Characteristics, Setting Differences, and Predictive Validity

Patients with depression showed significantly lower levels of agency (n = 235, M = 3.55, SD = 0.54) compared with patients without depression (n = 34, M = 3.76, SD = 0.56; $t(267) = -2.06$, $p = .04$), but no significant differences were observed in the manifestation of all other diagnoses (all $p > .05$). Agency was not significantly associated with chronicity of psychological impairment (n = 167, M = 9.65 years, SD = 8.67 years, $r = -.13$, $p = .10$).

Agency significantly differed across the various therapeutic settings ($F(2, 318) = 22.81$, $p < .001$, $f = .38$, all post hoc tests $p > .05$), and the lowest level of agency was observed in inpatient psychotherapy (n = 202, M = 3.48, SD = 0.51), followed by outpatient psychotherapy (n = 89, M = 3.77, SD = 0.57), and trainee therapists' personal therapy (n = 30, M = 4.07, SD = 0.35). These results are depicted in Figure 3.

As a preliminary indication of the predictive validity, we analyzed the association between agency at baseline and throughout the course of therapy and outcome. The parameter estimates from the SEM of outcome (OQ-45 at termination) using the three predictors of overall psychological distress at baseline, agency at baseline, and change in agency from baseline to week 7 are shown in Table 4.[3] Although agency at baseline was not predictive of the outcome after controlling for the other two predictors, an increase in agency throughout treatment was associated with a better outcome.

Discussion

The aim of this study was to develop and empirically investigate a patient self-report measure of therapeutic agency. Our empirical investigation of a rationally generated item pool resulted in the selection of 15 items. The newly developed TAI demonstrated reliability and validity. In this sample, internal consistency of the total scale was good, and that of the subscales ranged between acceptable and good. Re-test reliability was adequate.

The EFA suggested that the measure is constructed of three factors with 5 items each: (1) *in-session activity*, (2) *therapist-oriented passivity*, and (3) *therapy-oriented processing*. The same data were re-analyzed by performing a CFA. CFA of these factors demonstrated adequate model fit, with the exception of CFI (Hu & Bentler, 1999), which is still considered acceptable according to others' recommendations (Kline, 2005; Marsh, Hau, & Grayson, 2005). In the current study, exploring the factor structure across different settings was not possible because the subgroup sample sizes were too small for a factor analysis. Thus, this three-factorial structure must be verified by performing a confirmatory factor analysis in a new sample.

[3] A parallel examination of the predictive validity was performed using an OLS linear regression analysis of the criterion OQ-45 termination scores, and the change in TAI score was operationalized as a residual change score; this examination produced conceptually similar results.

The subscales of the TAI differentiate three aspects of agency. First, *in-session activity* assesses how patients actively contribute during their therapy sessions. Second, *therapist-oriented passivity* captures how responsible and influential patients feel in their psychotherapy in relation to the therapist. Third, *therapy-related processing* addresses patients' processing, including reflections about therapy-related material and the implementation of ideas or actions, between sessions. The structure of agency suggested here relates to earlier conceptualizations of agency and patients' contribution in psychotherapy. Agency includes patients' contribution and perceived activity during psychotherapy sessions, thus capturing the relevance of patient participation in psychotherapy (Orlinsky et al., 2004), although the relationship between patient self-reported in-session activity and observable behavior has not been empirically established to date. Regarding *therapist-oriented passivity*, the importance of patients' self-determination and assumption of responsibility for therapeutic change has also been reported by studies investigating the locus of control and control expectations in psychotherapy (Delsignore & Schnyder, 2007; Levenson, 1992; Rotter, 1966). This subscale can capture patients' difficulty to gain a sense of agency and develop a passive stance and feelings of dependency on the therapist to guide them through the therapeutic process. The psychotherapeutic interaction evoked by this dependency shows aspects of a medical model of psychotherapy in which the patient relates in a passively compliant manner, and the therapist is viewed as giving directions (Wampold & Imel, 2015). The *therapy-related processing* subscale is consistent with Mackrill (2009), who noted that patients' agency occurs beyond the therapy session and may encompass self-reflection, establishment of connections among experiences in different contexts, and the use of these experiences to elicit change. Consistently, inter-session processes, such as representations of therapy and the therapist, recreation of therapeutic dialogue, or completion of homework assignments, have been related to therapy success (Mausbach, Moore, Roesch, Cardenas, & Patterson, 2010; Zeeck, Hartmann, & Orlinsky, 2004).

The associations between agency and related measures relevant to the psychotherapeutic process support the construct validity of the instrument. Expectedly, moderate to strong associations were observed with agreement on therapeutic tasks and goals and the experience of mastery in the psychotherapy sessions. The relationship between agency and therapeutic alliance corresponds with findings on patient participation (Joseph et al., 2014). A mutual agreement regarding therapeutic tasks and goals may increase patients' opportunities to experience themselves as active and involved in the process, thus potentially fostering their active participation. Patients' experiences of agency might also strengthen the working alliance (Oddli & Rønnestad, 2012). In addition, a high sense of agency in psychotherapy is related to the experience of mastery, which describes the experience of learning to cope with difficult situations, in therapy sessions (Grawe, 1997). Thus, agency experiences in psychotherapy are associated with an increased capacity to act and progress to overcome one's problems. Furthermore, agency was positively associated with the process factors of emotional bond, problem activation, resource activation, and clarification of meaning. The association between agency and general self-efficacy expectations is consistent with Bandura's view that enabling beliefs in one's efficacy constitutes a necessary foundation for agency and may motivate future actions (Bandura, 2006). Future studies should determine whether agency is a cause or a consequence because correlational analyses do not allow causal inferences. In addition to expectations of one's efficacy, expectations of one's control in psychotherapy overlap with agency in the following way: Agency was associated with the belief that therapeutic success depends on personal efforts rather than on the therapist's competence or chance (Delsignore et al., 2006). Furthermore, higher agency was moderately associated with less severe psychological distress and depressive symptoms, indicating that agency may play a role in therapeutic change. Most associations between agency and associated constructs were moderate. We hypothesize that these findings were due to patients' successful differentiation between general self-efficacy in their life and the therapy-specific

experience of agency as well as between their expectations regarding their responsibility in therapy and their actual sense of agency in therapy. Notably, most correlations with related measures remained moderate even after controlling for variance due to depressiveness and self-efficacy expectations, indicating that the TAI captures unique variance that is not accounted for by previous instruments. However, given the significant associations between agency and all the studied variables, future studies should further explore discriminant validity. Agency in psychotherapy is significantly related to other process factors in psychotherapy, as well as to expectations, and lower symptomatic impairment, while also remaining separate from and not fully explained by the established constructs.

Agency differed across various investigated psychotherapeutic settings, and the lowest scores were observed in the inpatient psychotherapy setting, followed by outpatient psychotherapy and training therapists' personal therapy settings. The progress of psychotherapy at the time of assessment varied across settings and likely influenced participants' agency levels. The different degrees of agency could be due to the varying overall mental health and psychological well-being of the participants in the three groups because agency is linked to depression and symptomatic impairment. Furthermore, inpatient psychotherapy could negatively affect patients' sense of agency because it allows for a temporal relief from everyday burdens and challenges that might promote a desire to be taken care of by others (Nikendei et al., 2016). The use of medication could influence a patient's sense of agency. In addition, inpatients, outpatients, and trainee therapists may have differed in their readiness to change (Prochaska, 2010; Rudolf, Grande, & Oberbracht, 2000; Stiles, 2001). Future studies should relate agency from the patient's perspective to readiness to change and participation from an observer's perspective.

Patients' sense of agency generally increased during the inpatient psychotherapy process. This finding is consistent with a study conducted by Hoener et al. (2012), in which, initially, patients described therapy expectations and wishes as being fixed by an expert. Later

on, patients gradually came to value therapy because of the opportunities for becoming active, involved, and responsible for their own lives. By engaging in these opportunities, patients felt empowered by their therapeutic work.

Regarding the preliminary investigation of the TAI's predictive validity, the change in agency throughout the therapy process predicted the therapy outcome after controlling for baseline functioning. In contrast, agency at the start of psychotherapy was not predictive of the outcome after controlling for baseline functioning. Therefore, gaining a sense of agency during psychotherapy appears to be favorable for the change process, whereas patients' experience of agency at the start of therapy does not appear to determine the effect of therapy. This finding expands upon previous findings showing that changes in expectations towards agency prior to therapy predict functioning at the start of therapy (Irving et al., 2004). However, the second assessment of agency was close to the assessment of outcome and predicting session-by-session changes in which the predictor and outcome were assessed simultaneously was not possible. Due to potential reciprocal causation, we cannot preclude that the increase in therapeutic agency is a part of the outcome. Furthermore, we were unable to control for therapist differences in this naturalistic study. In the analyses over time, the sample size was only sufficient to detect large effect sizes. Thus, our preliminary findings of the predictive validity of agency require replication and must be treated with caution. Moreover, a longitudinal analysis involving a larger sample and multiple measurements of agency, psychological distress, and additional process factors is necessary to determine whether agency is a relevant mechanism of change in psychotherapy that predicts therapeutic change in addition to established process factors.

Because psychotherapy is a dyadic process, patient's sense of agency may partially depend on the therapist's agency according to the principle of interpersonal complementarity (Kiesler, 1996). In this model, a person's behavior invites a desired reaction that stands at a similar position on the circumplex's horizontal dimension of communion (i.e., degree of

hostility vs. friendliness) and at an opposite position on the vertical dimension of agency (i.e. degree of dominance vs. submissiveness; Horowitz et al., 2006). Future studies should investigate how therapists' agency (e.g., IMI; Kiesler & Schmidt, 2006) and directiveness (e.g., Therapy Rating Scale Revised; Fisher, Karno, Sandowicz, Albanese, & Beutler, 2000) relate to patients' agency and therapeutic change. On the one hand, complementary interpersonal responses are thought to reduce negative affect (e.g., dominance in reaction to submissiveness). On the other hand, addressing maladaptive interpersonal patterns and experiencing novel, initially threatening responses may be necessary for improvement (e.g., less therapist dominance to promote adaptive assertiveness). Thus, knowledge about a patient's interpersonal style could help therapists match their level of directiveness and avoid the complementary pull that maintains maladaptive interpersonal patterns (Constantino et al., 2016; Lichtenberg & Tracey, 2003). In addition, approaches, such as motivational interviewing (Miller & Rollnick, 2002), in which the therapists refrain from taking the role of change advocates, as well as several therapeutic principles across therapeutic orientations that foster patients' self-determination, such as the facilitation of introspection, skill building, or working through constraints, can support patients' agency (Westra, Constantino, & Antony, 2016; Williams & Levitt, 2007).

Finally, we address the dialectic between agency and surrender in life and psychotherapy. Becoming an agent is essential to having an influence on one's life and one's functioning. However, a narrowed or excessive sense of agency might impede a patient's capacity to constructively use psychotherapy to a certain degree. Safran (2016) notes that an inflated sense of agency can be a potential risk factor because it may fail to consider the limits of human control and the influence of unconscious aspects. Therapeutic change cannot occur through an act of will alone. Thus, psychotherapy needs to consider the limits of personal influence due to internal and external constraints. For example, an obsessive patient who has a strong wish to remain in charge of others may need to accept that many things in life remain

outside of his or her control. This patient may benefit from reducing efforts to influence the therapy session, giving rise to the emerging therapeutic process and relationship. However, actively allowing acceptance may be one expression of agency. Agency could assist the therapeutic process if it corresponds to the capabilities and constraints of human action in reality.

Limitations and Future Directions

The limitations of this study include the exploratory investigations of the factor structure. A confirmatory investigation using an independent sample of psychotherapy participants will be necessary to verify the three factors. Because the current investigation was primarily based on inpatient psychotherapy patients, subsequent studies should focus on outpatients and should determine whether a similar factor structure can be replicated in this setting. In addition, analyses of construct validity should examine the differences in agency experiences based on patient, therapy, and setting characteristics using distinct samples with adequate sizes. The reliability of the *therapist-oriented passivity* subscale was only acceptable and may be improved by revisions. The item "I feel trapped in my current state" describes a general state of incapacity to act and may be revised to better reflect the psychotherapeutic situation (e.g., "I am stuck in my therapy process"). This subscale focuses more on individuals' open needs and wishes (e.g., "I would like to receive more tips and advice from my therapist") and less on individuals' self-accomplished influence than the other subscales. The reasoning for this was that strong wishes to remain passive and be taken care of may hinder a person's sense of agency and thereby reflect low overall agency levels. However, the focus on different psychological entities (e.g., intentions, motivations, actions, and reflections) might impact factor structure and reliability.

The naturalistic study design is another limitation. This design did not permit documentation of the number of eligible participants who refused to participate, thus limiting our conclusions regarding the generalizability of the psychotherapy sample. The current

design did not allow a determination of whether agency causes subsequent symptom changes. In the subsample with repeated measurements, we selected week 7 as the final time point of assessment of TAI change to allow a determination of whether agency improves during the psychotherapy process. However, agency improvement and outcome, which was assessed only one week later, could have been entangled.

The construct of agency captures an important aspect of patient contributions to the therapeutic change process and is relevant for clinicians and theorists from different therapeutic orientations. The TAI is a reliable and valid self-report instrument that can be used to assess agency in psychotherapy. Due to its focus on the current patient experience and its brevity, the TAI is well suited for repeated assessments throughout the psychotherapy process. Pending tasks include a confirmatory examination of the factor structure of the TAI in a new sample and comprehensive investigation of the predictive validity of agency for therapeutic change to establish agency as a true mechanism of change. In addition to the TAI's potential to deepen our understanding of change factors in psychotherapy research, the application of the TAI in clinical practice can enrich our understanding of patient activities, processing, and autonomy. The use of the TAI in therapy will likely direct therapists' and patients' attention to the question of whether the patients experience themselves as active agents of change. This may help patients strive to influence their psychotherapeutic change process and promote a balance between autonomy and connection in the therapeutic relationship.

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Tables

Table 1

Sample Description

Participant and psychotherapy characteristics	Inpatient psychotherapy sample (n = 202)	Outpatient psychotherapy sample (n = 89)	Trainee therapist sample (n = 30)
Age	M = 33.92 (SD = 11.98)	M = 35.41 (SD = 12.40)	M = 32.00 (SD = 4.23)
Gender	68% female 32% male	54% female 46% male	88% female 13% male
Clinical diagnoses by therapists[a]	n (%)	n (%)	
Affective disorder	169 (93%)	66 (76%)	
Anxiety disorder[b]	80 (44%)	38 (44%)	
Eating disorder	38 (21%)	10 (12%)	
Somatoform disorder	36 (20%)	11 (13%)	
Substance use disorder	10 (6%)	0 (0%)	
Adjustment disorder	7 (4%)	9 (10%)	
Other disorder	18 (10%)		
Personality disorder	33 (18%)	13 (15%)	
Measurement point in therapy (sessions)	M = 3.65 (SD = 3.61)	M = 20.17 (SD = 16.03)	M = 40.88 (SD = 22.23)

Note. [a] Data regarding the clinical diagnoses were available for 183 inpatients and 87 outpatients; valid percentage values were extracted from the available data. Multiple diagnoses were available for 131 (72%) inpatients and 46 (53%) outpatients due to comorbidity. [b] Anxiety disorders, including obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD).

Table 2

Item and Scale Characteristics and Factor Loadings from the Exploratory Factor Analysis

Item	*M*	*SD*	r_{is}	I	II	III
In therapy, I personally contribute to changing my situation.	3.78	0.90	.61	.65		
I work hard during therapy sessions.	4.06	0.90	.59	.63		
If I don't like something about my therapy, I address my concerns with my therapist.	3.37	1.02	.48	.61		
I take an active part in determining the course of my therapy.	3.69	0.99	.54	.61		
I play an active role in my therapy.	3.85	0.84	.68	.55		
I would like my therapist to tell me what to do. [r]	2.97	1.11	.34		.66	
I would often like my therapist to make decisions for me. [r]	3.36	1.20	.36		.65	
I would like to receive more tips and advice from my therapist. [r]	2.63	1.12	.29		.60	
I have little influence on my therapy. [r]	3.72	1.02	.50		.48	
I feel trapped in my current state. [r]	2.10	1.08	.43		.44	
I reflect on what we discuss in therapy often.	4.32	0.85	.37			.67
I further pursue suggestions from therapy on my own.	3.38	0.97	.42			.57
I try out new things between sessions.	3.79	0.82	.56			.53
I put ideas from therapy into practice.	3.58	0.91	.52			.52
I develop my own ideas on how to reach my therapy goals.	3.49	0.91	.49	.31		.40
Cronbach's α			.84	.80	.73	.79

Note. Factor loadings < .3 are omitted. I = in-session activity, II = therapist-oriented passivity, III = therapy-related processing. [r] = recoded items. The analyses involved 321 psychotherapy participants in total, including 202 inpatients, 89 outpatients, and 30 trainee therapists.

Table 3

Correlations between the Therapeutic Agency Inventory (TAI) and Related Instruments and Symptom Measures

Measures	TAI	TAI (/BDI)	TAI (/GSE)	TAI I	TAI II	TAI III
Self-efficacy (GSE) (*n* = 192)	.37***	.23**	-	.42***	.21**	.22**
Change mechanisms (SACIP) (*n* =100)	.43***	.38***	.40***	.29**	.17	.51***
Emotional bond	.33**	.24*	.29**	.23*	.14	.39***
Agreement	.36***	.31**	.35***	.27**	.07	.50***
Problem activation	.27**	.33**	.32**	.19	.04	.40***
Resource activation	.30**	.29**	.30**	.18	.18	.33**
Clarification	.32**	.27**	.31**	.21*	.17	.34**
Mastery	.47***	.41***	.41***	.33**	.26*	.45***
Control expectancies (TBK) (*n* = 90)						
Internality	.34**	.33**	.29**	.27**	.21*	.26*
Powerful others	-.33**	-.33**	-.37***	-.11	-.44***	-.14
Chance	-.39***	-.36**	-.36**	-.16	-.40***	-.27**
Depression severity (BDI-II) (*n* = 193)	-.37***	-	-.20**	-.33***	-.36***	-.13
Outcome (OQ-45) (*n* = 162)	-.35***	-.17*	-.24**	-.20*	-.40***	-.13
Symptom distress	-.31***	-.07	-.18*	-.23**	-.37***	-.04
Interpersonal relations	-.31***	-.19*	-.25**	-.11	-.31***	-.26**
Social role performance	-.28***	-.16*	-.21 *	-.16*	-.25**	-.14

Note. TAI = Therapeutic Agency Inventory; TAI (/BDI), TAI (/GSE) = partial correlations with TAI after controlling for BDI/GSE; TAI I = in-session activity; TAI II = therapist-oriented passivity; TAI III = therapy-related processing. Sample size variation is due to the data assessment procedure. Samples represent inpatients. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 4

Parameter Estimates for Predicting Therapy Outcome (OQ-45 at the end of therapy)

	Estimate (standardized estimate)
OQ-45 at baseline	0.34 (0.43) **
TAI at baseline	-8.15 (0.23)
TAI change during therapy	-17.07 (0.42) **

Note. Parameter estimates from structural equation modeling. Measurement time points during inpatient psychotherapy included baseline (week 1), change during therapy (from week 1 to week 7 using a latent change score), and outcome (week 8) in 58 patients from inpatient psychotherapy. OQ-45 = Outcome Questionnaire. TAI = Therapeutic Agency Inventory.

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

Table for Online Supplement

Item and Scale Characteristics of the Preliminary 39 Items with Factor Loadings on the 3 Factors Extracted from Exploratory Factor Analysis Based on the Final 15 Items

No	Item	*M*	*SD*	r_{is}	I	II	III
1	I have objectives for my therapy.	4.49	0.73	0.36	.37		
2	In therapy, I think about the motives of my behavior.	4.45	0.82	0.30	.42		
3^{+}	I take an active part in determining the course of my therapy.	3.86	0.99	0.57			-.52
4	When my therapist makes a suggestion, I consider whether it is useful to me.	4.24	0.77	0.46			-.31
5	My view of my therapy goals helps me change my behavior.	3.69	0.99	0.49	.46		
6	I correct my therapist when I don't feel well understood.	3.91	1.02	0.40			-.59
7	I know what I need from my therapist.	3.31	1.00	0.53			-.55
8^{+}	I work hard during therapy sessions.	4.19	0.85	0.61			-.54
9	I express my wishes to my therapist.	3.69	1.00	0.38			-.73
10	I count on my therapist to bring things into order. [r]	3.46	1.13	0.04		.56	
11	I reflect upon how I can use therapy for myself.	4.37	0.70	0.40	.53		
12	The success of therapy primarily depends on me.	4.26	0.84	0.30	.33		

13	I think about my role in therapy.	3.88	0.99	0.40	.41		
14	I keep my therapy goals in mind.	3.84	0.99	0.47	.41		
15	I often feel defenseless in therapy. [r]	3.77	1.10	0.40			-.32
16	I feel very responsible for what happens in therapy.	3.45	1.02	0.28			
17+	I would like my therapist to tell me what to do. [r]	3.11	1.14	0.34		.74	
18	I expect my therapist to fix me. [r]	3.64	1.19	0.28		.71	
19	I have ideas about what I want to change in the near future.	3.69	0.91	0.56	.44		
20	I express my view even if it contradicts my therapist's view.	3.66	1.07	0.49			-.63
21+	I feel trapped in my current state. [r]	2.54	1.26	0.43		.35	-.36
22+	I have little influence on my therapy. [r]	3.90	1.04	0.50		.41	
23+	I take an active role in my therapy.	3.93	0.89	0.66			-.51
24	I make my own decisions in therapy.	3.70	0.94	0.55			-.51
25	I follow the advice of my therapist. [r]	2.44	0.81	-0.12	-.42	.44	
26+	I try out new things between sessions.	3.44	0.99	0.46	.50		
27+	I reflect on what we discuss in therapy often.	4.36	0.81	0.40	.73		
28	I try out new things in therapy.	3.49	0.96	0.51	.41		-.33

29+	If I don't like something about my therapy, I address my concerns with my therapist.	3.45	1.04	0.55			-.69
30+	In therapy, I personally contribute to changing my situation.	3.97	0.84	0.71	.33		-.53
31	After a session, I think about my therapy.	4.46	0.72	0.33	.63		
32+	I further pursue suggestions from therapy on my own.	3.90	0.84	0.62	.67		
33	I can influence how my problems develop.	3.70	0.99	0.59	.30		-.33
34	I make myself an expert on my complaints.	3.21	1.19	0.39			-.36
35+	I would like to receive more tips and advice from my therapist. [r]	2.85	1.18	0.29		.41	
36+	I apply ideas from therapy into practice.	3.67	0.90	0.60	.52		
37+	I develop my own ideas on how to reach my therapy goals.	3.56	0.88	0.60	.47		
38+	I would often like my therapist to make decisions for me. [r]	3.44	1.22	0.38		.62	
39	Sometimes I imagine what I will have achieved after therapy.	3.56	1.16	0.26	.51		

Note. Factor loadings < .3 are omitted. The analyses involved 321 psychotherapy participants in total, including 202 inpatients, 89 outpatients, and 30 trainee therapists. TAI I = in-session activity, TAI II = therapist-oriented passivity, TAI III = therapy-related processing. [r] = recoded items. + These items are in the final version of the questionnaire.

Figures

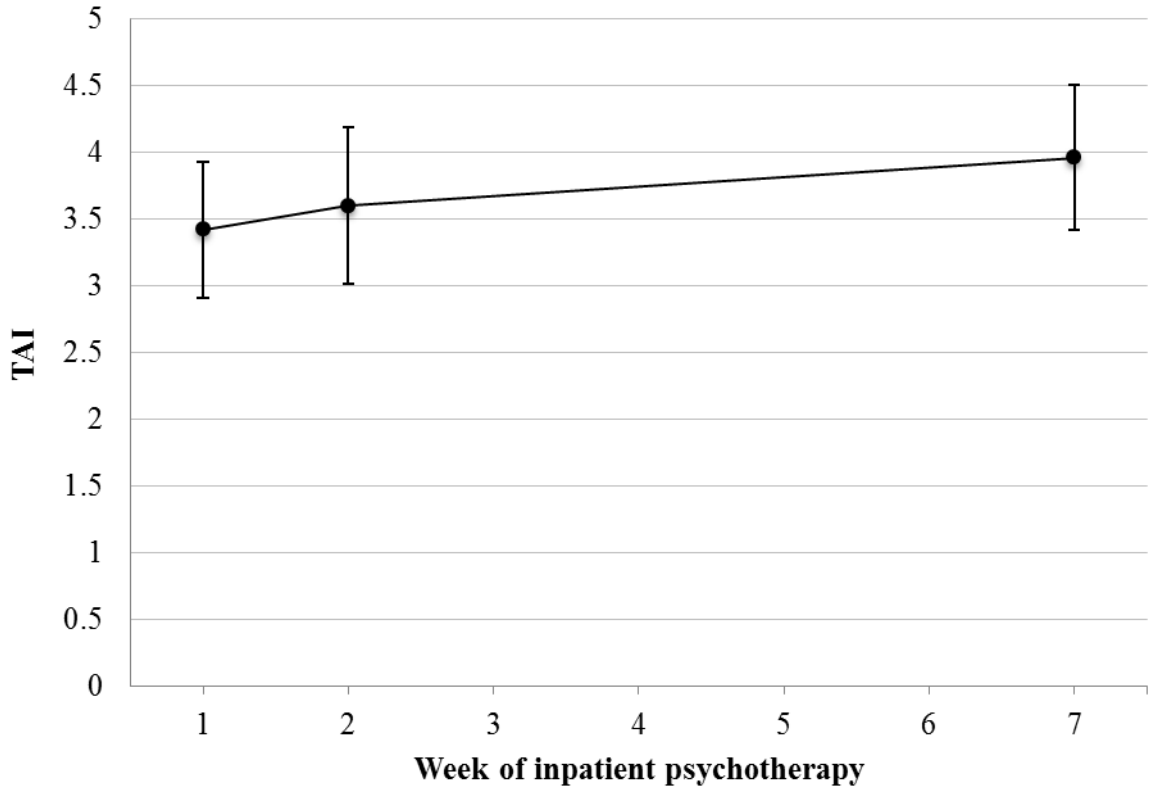

Figure 1. Therapeutic agency (TAI) during the 8-week inpatient psychotherapy process, assessed at weeks 1, 2, and 7 (n = 58). The means and error bars, indicating the standard deviations, are shown.

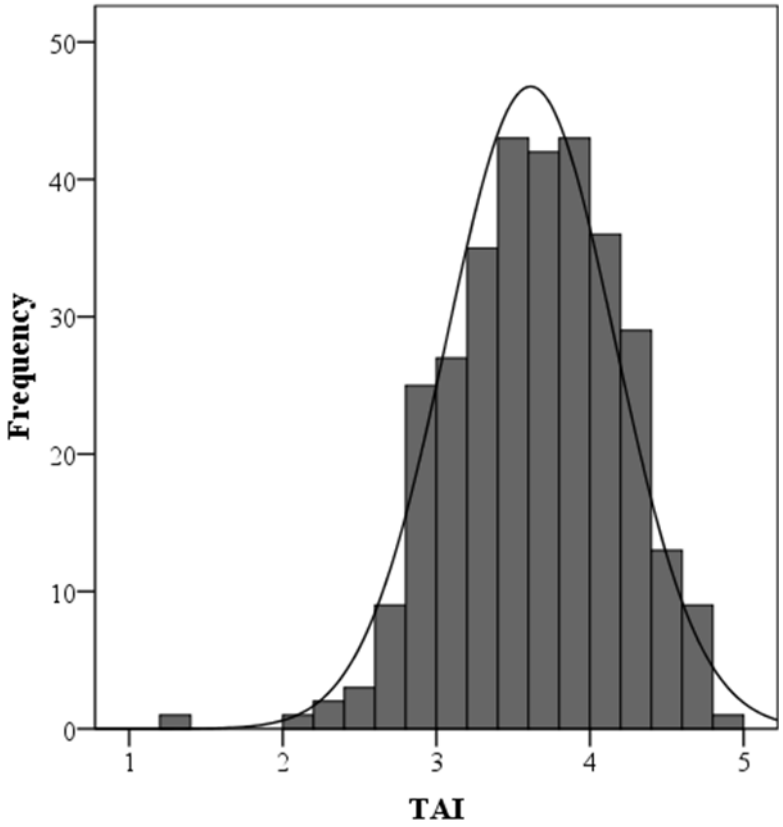

Figure 2. Histogram of the Therapeutic Agency Inventory (TAI) scores with a normal curve ($N = 321$).

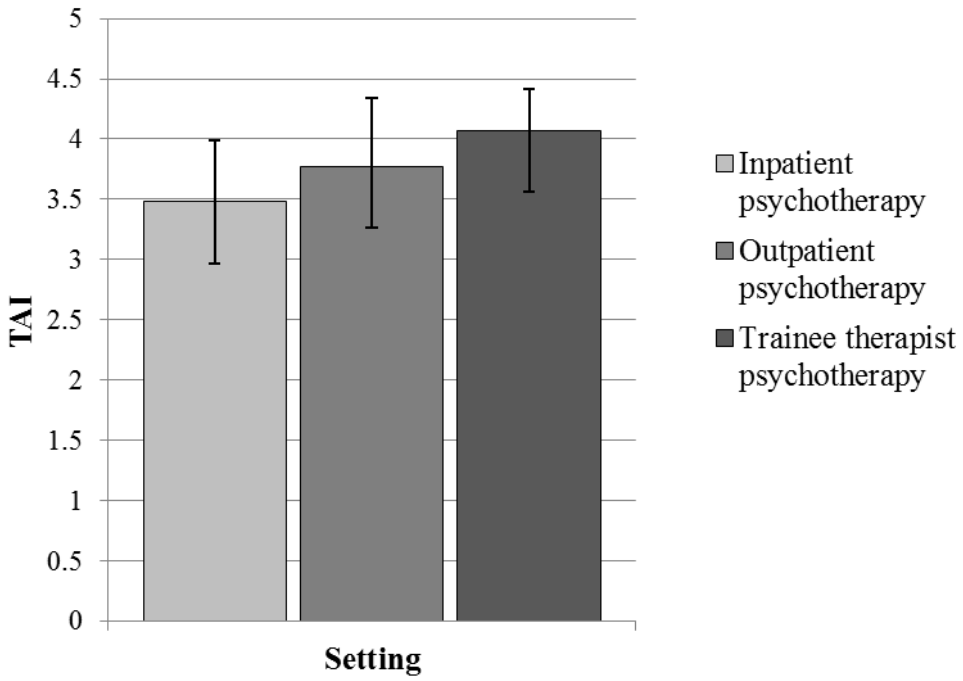

Figure 3. Therapeutic agency (TAI) in different psychotherapeutic settings (n = 202 inpatients, n = 89 outpatients, n = 30 trainee therapists). The means and error bars, indicating the standard deviations, are shown.

Appendix B: Questionnaire "Therapeutic Agency Inventory"

Huber, J., Nikendei, C., Ehrenthal, J. C., Schauenburg, H., Mander, J., & Dinger, U. (2018). Therapeutic Agency Inventory: Development and psychometric validation of a patient self-report. *Psychotherapy Research*. Advance online publication. doi: 10.1080/10503307.2018.1447707

German version:

Therapeutic Agency Inventory (TAI)

Im Folgenden finden Sie eine Reihe von Aussagen, die sich auf Erfahrungen beziehen, die Menschen in ihrer Therapie oder mit ihrer/ihrem Therapeutin/en machen können. Bitte entscheiden Sie bei jeder Aussage, inwieweit sie auf Ihre Therapie aktuell zutrifft. Beurteilen Sie dies auf fünf Stufen von 1 = „stimmt nicht“ bis 5 = „stimmt genau“.

		stimmt nicht	stimmt kaum	stimmt teils	stimmt eher	stimmt genau
1	Ich bestimme den Verlauf meiner Therapie aktiv mit.	1	2	3	4	5
2	Ich entwickle Ideen, wie ich meine Therapieanliegen erreichen könnte.	1	2	3	4	5
3	Ich arbeite in den Therapiesitzungen intensiv mit.	1	2	3	4	5
4	Ich wünsche mir mehr Tipps und Ratschläge von meiner/m Therapeutin/en.	1	2	3	4	5
5	Ich fühle mich in meinem Zustand gefangen.	1	2	3	4	5
6	Ich denke viel über das nach, was wir in der Therapie besprechen.	1	2	3	4	5
7	Ich möchte, dass mir mein(e) Therapeut(in) sagt, was ich zu tun habe.	1	2	3	4	5
8	Wenn mir etwas in der Therapie nicht gefällt, spreche ich das an.	1	2	3	4	5
9	Ich habe wenig Einfluss auf meine Therapie.	1	2	3	4	5
10	Ich nehme eine aktive Rolle in meiner Behandlung ein.	1	2	3	4	5
11	Anregungen, die ich in der Therapie bekomme, führe ich selbst weiter.	1	2	3	4	5
12	Ich probiere zwischen den Sitzungen Neues aus.	1	2	3	4	5
13	Ich wünsche mir oft, dass mein(e) Therapeut(in) mir Entscheidungen abnimmt.	1	2	3	4	5
14	Ich setze Ideen aus der Therapie um.	1	2	3	4	5
15	Ich trage in der Therapie selbst dazu bei, dass sich an meiner Situation etwas ändert.	1	2	3	4	5

English version:

Therapeutic Agency Inventory (TAI)

Below you will find a list of statements referring to experiences people may make with their therapy or therapist. Please decide for each statement to what extent the statement describes your own current experience on a scale between 1 = "not true" and 5 = "very true".

		not true	rather not true	partly true	rather true	very true
1	I take an active part in determining the course of my therapy.	1	2	3	4	5
2	I develop my own ideas on how to reach my therapy goals.	1	2	3	4	5
3	I work hard during therapy sessions.	1	2	3	4	5
4	I would like to receive more tips and advice from my therapist.	1	2	3	4	5
5	I feel trapped in my current state.	1	2	3	4	5
6	I reflect on what we discuss in therapy often.	1	2	3	4	5
7	I would like my therapist to tell me what to do.	1	2	3	4	5
8	If I don't like something about my therapy, I address my concerns with my therapist.	1	2	3	4	5
9	I have little influence on my therapy.	1	2	3	4	5
10	I play an active role in my therapy	1	2	3	4	5
11	I further pursue suggestions from therapy on my own.	1	2	3	4	5
12	I try out new things between sessions.	1	2	3	4	5
13	I would often like my therapist to make decisions for me.	1	2	3	4	5
14	I put ideas from therapy into practice.	1	2	3	4	5
15	In therapy, I personally contribute to changing my situation.	1	2	3	4	5

Appendix C: Study 2

Huber, J., Born, A.-K., Claaß, C., Ehrenthal, J. C., Nikendei, C., Schauenburg, H., & Dinger, U. (2018). Therapeutic agency, in-session behavior, and patient-therapist interaction. *Journal of Clinical Psychology*. Advance Online Publication. doi: 10.1002/jclp.22700

Therapeutic Agency, In-Session Behavior, and Patient-Therapist Interaction

Authors: Julia Huber[1], Ann-Kathrin Born[1], Christine Claaß[1], Johannes C. Ehrenthal[2], Christoph Nikendei[1], Henning Schauenburg[1], Ulrike Dinger[1]

[1] Department of General Internal and Psychosomatic Medicine, Center for Psychosocial Medicine, University Hospital Heidelberg, Germany

[2] Institute of Medical Psychology, Center for Psychosocial Medicine, University Hospital Heidelberg, Germany

Author Note

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Correspondence concerning this article should be addressed to Ulrike Dinger, Department of General Internal Medicine and Psychosomatics, Center for Psychosocial Medicine, University Hospital Heidelberg, Thibautstrasse 4, 69115 Heidelberg, Germany. E-Mail: Ulrike.Dinger-Ehrenthal@med.uni-heidelberg.de

Abstract

Objectives: The aim of this study was to investigate associations between patients' subjective agency, their observable in-session behavior, and the patient-therapist interaction during the early phase of psychotherapy.

Method: The sample included 52 depressed patients in psychodynamic psychotherapy. After session 5, the patients' agency and the quality of the therapeutic alliance were assessed. Based on session recordings, two independent observers rated the patients' involvement, their interpersonal behavior, and the therapists' directiveness.

Results: Higher agency was associated with stronger therapeutic alliances. Patients who indicated higher agency in their therapy participated more actively in the session and showed less hostile impact messages. Patients' agency was not related to therapists' directiveness.

Conclusions: Patients' sense of agency in psychotherapy was associated with more active involvement and affiliative interaction. The findings support the idea that patients need to feel capable of acting within and having influence on their therapy in order to benefit from it.

Keywords: agency; depression; psychotherapy process; alliance; participation; interpersonal

Therapeutic Agency, In-Session Behavior, and Patient-Therapist Interaction

Agency describes the subjective experience of a person's capacity to act and is one of the major psychological forces that shape human life. Together with its counterpart communion, agency is considered as one of the two fundamental modalities of human existence and relatedness to the social world (Bakan, 1966; Blatt, 2004; Digman, 1997). The interpersonal circumplex model describes all interpersonal behavior as a combination of communion, ranging from friendliness to hostility/indifference and agency, ranging from assertion to submission (Horowitz et al., 2006; Wiggins, 1982). While communion describes an individual's connection and cooperation with others, agency is concerned with an individual's autonomy, mastery, and the ability to influence the course of his or her own life (Bandura, 2006). The sense that one's own mental states cause impactful actions and elicit a response in the world is central to the experience of agency (Knox, 2011). It is therefore strongly connected to an individual's sense of meaning and purpose.

Depression is often associated with a decreased sense of agency. From a phenomenological perspective, scholars described an underlying inhibition of becoming (original "Werdenshemmung"; Jaspers, 1913/2013; Küchenhoff, 2017): A depressed individual withdraws from life due to anxiety and lack of social relationships, which leads to stagnation and halt of personal becoming and development. The belief in being able to shape one's future using one's own potential fades away, which results in a reduced experience of being the agent of one's own life. The theory of learned helplessness places the experience of helplessness, the loss of control, and its attribution as stable, global, and internal at the center of depression etiology (Seligman, 1975). Although there are heterogeneous interpersonal profiles in depressed samples, the majority of depressed patients struggle with interpersonal problems related to either too little agency (i.e., submission, social avoidance, exploitability), or too little communion (i.e., coldness, hostility; Dawood, Thomas, Wright, & Hopwood, 2013; Locke et al., 2017; Simon, Cain, Wallner Samstag, Meehan, & Muran, 2015). These

interpersonal features thwart the fulfillment of social needs and contribute to an intensified and prolonged depressed mood. Submissive interpersonal styles predict poorer long-term functioning and higher chronicity of depression (Cain et al., 2012).

It is therefore a key goal across different psychotherapy traditions to improve an individual's capacity to act and (re-)establish more agency and autonomy (Bohart & Wade, 2013; Levitt, Pomerville, & Surace, 2016). Part of the previous research specifically focused on patients' agency within the psychotherapeutic situation, that is, patients' influence over the process of psychotherapeutic change. In psychotherapy, agency can be expected to function as a mechanism of change for therapeutic improvement. In this view, change is assumed to result from patients' experiences of themselves as effective agents who actively use therapeutic experiences to deal with their problems (Bohart & Wade, 2013). Previous research showed that active patient participation during psychotherapy predicts better therapy outcome (Orlinsky, Ronnestad, & Willutzki, 2004; Tryon & Winograd, 2011), which supports part of the hypothesized mechanism between agency and outcome. In addition, patients' agency experiences have recently been connected to the therapeutic alliance and the experience of mastery in the therapy session (Huber et al., 2018). Both can be seen as indicators of patients' capability to make use of psychotherapy. However, an empirical investigation of the relationship between patients' subjective agency experience and their active participation in psychotherapy is missing.

According to interpersonal theory, agency is not independent of the current relational experience, which is demonstrated by the principle of reciprocity. Reciprocity in social relationships implies that a person's position in the interpersonal circle invites complementary interpersonal responses (Kiesler, 1983). With respect to affiliation, complementarity reflects similar behavior (friendliness invites friendliness, hostility begets hostility). With respect to control, complementarity reflects opposite behavior (dominance invites submission, whereas submission invites dominance). The internal reactions that a person experiences in response to

an individual's behavior are called impact messages and usually provide insight into that individual's characteristic interpersonal style.

The most prominent complementary "pitfalls" for interaction partners of submissive and/or hostile individuals are (a) to dominate a person in response to submissive behavior and b) to act in a hostile manner in response to hostile detached behavior (McCullough, 2000). Recent studies assessed depressive patients' interpersonal impact messages on the dimensions of agency and communion both within the therapeutic dyad (Constantino et al., 2016) and in interactions with significant others (Grosse Holtforth, Altenstein, Ansell, Schneider, & Caspar, 2012) over the course of psychotherapy. Decreases in hostile-submissiveness were associated with improvements in depression. It is unclear, however, how patients' subjective experiences of agency in psychotherapy correspond to their interpersonal behavior based on the interpersonal circumplex. In addition, patients' agency experiences may be associated with therapists' interpersonal behavior, as inherent in the concept of interpersonal complementarity.

Therapist directiveness is defined as the degree to which a therapist is the primary agent of the therapeutic process through the adoption of a specific interpersonal stance or the use of specific techniques (Beutler, Harwood, Michelson, Song, & Holman, 2011). Reciprocity suggests that patients low in agency pull for therapists' control and dominance (e.g., to do the work of therapy for them) and that highly directive therapists invite patients to act in a submissive and passive way (e.g., to take advice).

Study Aims

Overall, patients' agency is expected to be relevant for the effect of psychotherapy via patients' beneficial and active use of therapy. This may be reflected in a strong therapeutic alliance and active involvement in the therapy process. Moreover, patients' therapeutic agency might be related to patients' general interpersonal behavior and psychotherapists' interpersonal stance. The aim of this study was to investigate associations between patients'

sense of agency in therapy and (1) the working alliance, (2) patients' observable participation, (3) patients' interpersonal behavior, and (4) their therapists' directive stance.

(1) While previous studies showed an association between patients' agency and the alliance in the view of the patients, the current study seeks to replicate this finding and expand it to the psychotherapists' view. We expect a positive association between agency and alliance.

(2) To date, patients' subjective agency has not been related to their observable behavior in the therapy session. We assume that patients' subjective agency experiences will be associated with active involvement (i.e., high participation, low hostility) in the session.

(3) It is unclear how patients' experiences of agency in psychotherapy correspond to their interpersonal behavior based on the interpersonal circumplex. We expect patients' agency experiences to be reflected in more assertive and less hostile impact messages.

(4) Interpersonal theory postulates complementarity between patients and therapists on the dimension of agency. This claim has not yet been empirically tested for patients' subjective sense of agency in psychotherapy. We assume an inverse relationship between patients' agency and therapists' directiveness.

Method

Participants and Recruitment

The patients were recruited via a university-based outpatient training clinic for psychodynamic psychotherapy. In a clinical intake interview, experienced clinicians determined a general indication for outpatient psychodynamic psychotherapy and assigned the patients to a psychotherapist trainee performing the treatment. During the intake interview, the patients were informed and invited to participate in the study. The clinical intake interview was followed by the Structured Clinical Interview (SCID-I and -II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997; First, Spitzer, Gibbon, & Williams, 1996; Wittchen, Zaudig, & Fydrich, 1997) to assess the patients' diagnoses according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association,

1994). Fifty-two (N = 29/56% female, M_{age} = 35.88 years, SD_{age} = 13.27 years) out of 70 patients with depressive symptoms according to the non-standardized clinical intake interview were interested in the study and fulfilled the inclusion criteria for study participation: (a) age between 18 and 70, (b) fluency in German language, (c) acute depressive disorder, and (d) completed questionnaire and video data on session 5. Patients were eligible if they had a diagnosis of a current, not remitted depressive disorder including major depression episode (N = 39/75%), double depression (N = 6/12%), dysthymia (N = 4/8%), or depressive disorder unspecified (N = 3/6%) according to DSM-IV and reported at least mild depression severity in the Beck Depression Inventory-II (BDI-II > 9; Beck, Steer, & Brown, 1996; Hautzinger, Keller, & Kühner, 2009; *range* = 11 - 41, M = 22.41, SD = 7.67). In addition to their depressive disorder, 29 patients (56%) had one or more current comorbid axis I diagnoses including anxiety disorders (N = 22/42%), somatoform disorders (N = 9/17%), eating disorders (N = 3/6%), substance use disorders (N = 2/4%), psychotic disorders (N = 1/2%), and five patients (10%) fulfilled criteria for a comorbid personality disorder (N = 2/4% avoidant, N = 1/2% paranoid, N = 1/2% narcissistic, N = 1/2% borderline personality disorder). Most patients of the sample had German nationality (N = 47/90% German, N = 1/2% Croatian, N = 1/2% Chilean, N = 3/6% missing data). With regard to marital status, 29 patients (56%) were single, 15 (29 %) were married, 7 (14%) were divorced, and 1 patient (2%) did not provide any information. With regard to education level, 27 participants (52%) completed basic secondary school, 13 (25%) advanced secondary school with entrance qualification for university, 9 completed (17%) university or college, and 3 (6%) did not provide any information. All patients gave informed-consent and the ethical review board approved the study.

Psychotherapy and Psychotherapists

The patients received long-term psychodynamic psychotherapy at a university-based outpatient training clinic. Psychodynamic psychotherapy was conducted under standard

conditions of the German psychotherapy guidelines as described in the following. Psychodynamic psychotherapy, according to the German psychotherapy guidelines (Psychotherapie-Richtlinie, 2009), is informed by psychoanalytic theory and addresses currently active neurotic conflicts as well as deficits in personality functioning, which are assumed to cause and/or maintain the patients' health problems. The treatment accounts for the phenomena of transference, countertransference, and resistance. Compared to classical psychoanalysis, the therapeutic process is characterized by a focus on a limited number of treatment goals, an avoidance of deep regressive processes, and a lower number of sessions. In the German health system, psychotherapy starts with up to five preparatory sessions to clarify the clinical diagnosis, the treatment indication, and rationale, and to establish an agreement on the therapy goals and a joint consensus for psychotherapy including the application for coverage by a patient's health insurance. After approval of reimbursement, the patients receive individual psychotherapy sessions that usually take place once a week and last 50min. Additional antidepressant medication through an external psychiatrist was possible but was not administered by the psychotherapists.

The psychotherapists were 35 psychologists and three medical residents (N = 31/82% female, M_{age} = 35.29 years, SD_{age} = 4.74 years) who had been enrolled in a psychodynamic psychotherapy training program for an average of 4.24 years (SD = 1.28). Therapists each contributed between one and five patients to the sample (M = 1.84, SD = 0.89). Psychotherapists received regular supervision every fourth therapy session for 50min. Supervision was conducted by psychotherapists with at least five years of clinical experience after their state license for independent practice and at least three years of teaching experience in psychotherapy training programs.

Measures

Structural Clinical Interview for DSM-IV Axis I and II (SCID-I and –II). The SCID (First et al., 1997; First et al., 1996; Wittchen et al., 1997) is a semi-structured interview to determine DSM-IV axis I and II diagnoses for mental and personality disorders. It has demonstrated adequate to good re-test and inter-rater reliability for axis I and axis II diagnoses (Zanarini et al., 2000).

Beck Depression Inventory-II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996; Hautzinger et al., 2009) is a self-report questionnaire on depression severity according to DSM-IV criteria. The BDI-II consists of 21 depression symptoms that are evaluated with four different statements, each one with regard to the last two weeks. The BDI-II highly correlates with other depression scales and distinguishes well between different grades of depression severity, indicating good validity (Kühner, Bürger, Keller, & Hautzinger, 2007). Internal consistency in the present study was good with Cronbach's $\alpha = .81$.

Therapeutic Agency Inventory (TAI). The TAI (Huber et al., 2018) is a self-report questionnaire on patients' subjective sense of agency in psychotherapy. The TAI assesses patients' intentional influence over the process of psychotherapeutic change with three subscales: in-session activity, therapist-oriented passivity, and therapy-related processing. In-session activity assesses how patients actively contribute during therapy sessions (e.g., "I take an active part in determining the course of my therapy."). Therapist-oriented passivity asks how responsible and influential patients feel in their therapy in relation to the therapist (e.g., "I would like to receive more tips and advice from my therapist.", reverse item). Therapy-related processing indicates reflections about the therapy-related material and the implementation of ideas or actions between sessions (e.g., "I further pursue suggestions from therapy on my own."). Each subscale has five items, which are answered on a 5-point-scale. Validity of the instrument is supported by positive associations with general self-efficacy expectations, control expectations in psychotherapy, common change mechanisms (e.g.,

alliance, mastery), and negative correlations with psychological distress and depression scores (Huber et al., 2018). In the initial psychometric evaluation study, changes in agency during psychotherapy predicted symptom improvement after controlling for baseline distress, showing evidence for criterion related validity of the TAI. For the current study, we used the overall mean as an indicator of patients' subjective sense of agency in therapy. Reliability of the TAI total score is indicated by high internal consistency and high re-test reliability (r_{tt} = .81; Huber et al. 2018). In the current study, Cronbach's α = .87.

Working Alliance Inventory-Short Revised (WAI-SR). The WAI-SR (Hatcher & Gillaspy, 2006; Wilmers et al., 2008) is a self-report questionnaire for patients and therapists to assess the therapeutic alliance via the three factors of Bordin's pantheoretic model of the working alliance (Bordin, 1979). The WAI-SR assesses the therapeutic alliance with the three subscales bond, agreement on tasks, and agreement on goals with four items each, which are answered on a 5-point-scale. Previous studies showed support for the validity of the WAI-SR by associations with other alliance measures and prediction of therapy outcome (Munder, Wilmers, Leonhart, Linster, & Barth, 2010; Zilcha-Mano, 2017). Internal consistency of the total scale in the present study was excellent for the patient version with Cronbach's α = .91 and the therapist version with Cronbach's α = .92

Vanderbilt Psychotherapy Process Scale (VPPS). The VPPS (O'Malley, Suh, & Strupp, 1983; Strauß, Strupp, Burmeier-Lohse, Wille, & Storm, 1992) was designed to assess salient aspects of the psychotherapeutic process from an observer perspective. The VPPS consists of seven scales, two of them assessing patient involvement (participation and absence of hostility). The two scales are assessed with eight and six items respectively; items are rated on a 5-point-scale. The rating is based on patients' in-session behavior and their general attitude. The validity of the instrument is demonstrated by differences between theoretical orientations in conformance with expectations and predictive validity of the process scales for therapy outcome (Strauß et al., 1992). In the current study, only the two subscales on patient

involvement were used. Inter-rater reliability for two observers was good with intra-class-correlation (*ICC)* = .81 for the participation subscale and *ICC* = .81 for the hostility subscale. Internal consistency was excellent for the participation subscale with Cronbach's α = .90 and low for the hostility subscale with Cronbach's α = .27.

Impact Message Inventory (IMI). The IMI (Caspar, Berger, Fingerle, & Werner, 2016; Kiesler & Schmidt, 2006) assesses the interpersonal impact messages of a person as reported by an observer. The ratings are based on the dimensions of communion and agency of the interpersonal circumplex (Kiesler, 1983). Observers score their own response to a person's interpersonal pulls or invitations ("When I'm together with this person, I have the feeling that…"), providing insight into the person's distinctive interpersonal style. For example, if a respondent endorsed a feeling in charge with the target person, this would reflect that the target person is evoking dominance from the respondent through his or her submissiveness. The IMI includes 64 items rated on a 4-point-scale and is divided into eight octants with eight items each. Initial data from the German version indicate promising results on psychometric properties (Caspar et al., 2016). Inter-rater reliability in the current study ranged from fair to excellent for the subscales with ICC_{range} = .52-.82. The IMI demonstrated good to excellent internal consistencies of the scales in the range of Cronbach's α = .86-.94.

Therapy Process Rating Scale (TPRS). The TPRS (Fisher, Karno, Sandowicz, Albanese, & Beutler, 2000) is a rating instrument to assess the therapy process from an observer perspective along several dimensions of therapist behaviors. The 11 items of the directiveness subscale assess the degree to which a therapist sets the pace and direction of therapy and controls the topics and activities of therapy. Directiveness is indicated by the introduction or change of topics, the restriction of responses, the offer of direct instruction or information, and by interpretations or confrontations which may thwart patients' experiences. The scale ranges from 1 (*never* or *up to 20% of time*) to 5 (*very frequently* or *up to 100% of time*). The validity of the instrument is supported by differences between various types of

treatments, with cognitive therapies being more directive than others (Malik, Beutler, Alimohamed, Gallagher-Thompson, & Thompson, 2003). Inter-rater reliability in the current study was high with *ICC* = .82. Internal consistency was poor with Cronbach's α = .56.

Procedure

All patients took part in a diagnostic SCID-I and -II interview and psychometric questionnaire assessment (BDI-II) prior to the beginning of the therapy. The patients were interviewed by trained graduate students who held a B.Sc. or M.Sc. degree in psychology. We investigated a sample of patients with a depressive disorder because a reduced sense of agency and related interpersonal problems lie at the core of depression. After the diagnostic phase, psychotherapy sessions with a trainee therapist in psychodynamic therapy started. We chose session 5 for the investigation of the hypotheses in the current study because the early psychotherapy process is a sensitive period in the unfolding of psychotherapy and is predictive for therapy outcome (Flückiger, Holtforth, Znoj, Caspar, & Wampold, 2013). Following routine procedures, the patients and the therapists answered questionnaires to monitor psychotherapy process parameters after session 5. These included the TAI for the patients and the WAI-SR for the patients and their therapists. Videotaped fifth sessions were assessed by two independent observers (two female graduate students who held a B.Sc. degree in psychology, M_{age} = 27, SD_{age} = 0.71) for the patients' involvement (VPPS), the patients' interpersonal behavior (IMI), and the therapists' directiveness (TPRS). Rating measures were applied to 10-min sequences. The raters were trained in the assessment until high inter-rater reliability (*ICC* > .9 after assessment of six therapy sessions) was established. Having reached this, 31 sessions were rated by both observers to assess *ICC* and 21 further sessions were rated by one observer only. The mean rating of the sessions rated by two observers was used for subsequent analyses.

Statistical Analyses and Power Calculation

Descriptive statistics including mean and standard deviation were calculated for each study variable. The hypothesized associations of agency with alliance, observable involvement (participation and absence of hostility), interpersonal impact messages, and therapists' directiveness were investigated with Pearson's correlations. The power calculation with G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) assumed a power of .80 and an error probability of $\alpha = .05$ (one-sided). According to a sensitivity analysis, a sample size of $N = 52$ enables us to detect a moderate correlation of $r = .34$.

Results

Descriptive statistics of all measures are presented in the online supplement. Correlations between therapeutic agency and working alliance, patients' involvement, patients' impact messages, and therapists' directiveness are shown in Table 1. Patients with higher agency had better self-rated therapeutic alliances (WAI-SR; large effect). Although not meeting cut-off level for statistical significance, the same trend was found in the psychotherapists' assessment (WAI-SR; $p = .058$, small to moderate effect). Patients with higher agency showed significantly more active participation in the session (VPPS), with a moderate effect size. Further, there was a nonsignificant trend that higher agency was correlated with less hostile behavior in the session (VPPS; $p = .061$, small to moderate effect). Higher agency was significantly associated with less hostile impact messages (IMI) with a small to moderate effect. Patients' agency was not related to therapists' directiveness (TPRS).

Discussion

This study investigated associations between depressed patients' agency experiences in therapy, their observable in-session behavior, and the interaction with their psychotherapists in an early therapy session. Patients' agency was associated with more active participation observed in the session and less interpersonal hostility assessed via impact

messages. A higher sense of agency in therapy was further associated with a better working alliance. Patients' agency did not vary depending on their therapists' directive stance.

Patients with a higher sense of agency in psychotherapy showed more active participation in the early therapy session. This result is of importance as participation in therapy is a key predictor for therapy success (Orlinsky et al., 2004). It is in line with theoretical predictions that patients' subjective agency would lead to increasing effort and productive activity in therapy (Bohart & Wade, 2013; Coleman & Neimeyer, 2015). However, it is important to keep in mind that, due to the cross-sectional nature of our study, the analysis does not allow any causal conclusions. In addition, the moderate association indicates some overlap of agency and participation, but the internal experience and the external observable behavior only converge to some degree. Thus, patients' internal sense of agency in therapy does not necessarily translate into observable activity in therapy. This is in line with Rennie's findings (2002) that patients often do not share all of their thoughts and experiences with their therapist, but reflect quietly and use therapy in ways not intended by or shared with their therapist. From this perspective, patients may sometimes appear passive or dependent but still feel agentic. Similarly, patients who appear very active in the session do not necessarily have a high sense of agency. This, for example, may be due to a lack of success of patients' efforts, leaving them devoid of any mastery experiences. Relevant third variables, for example, extraversion or general verbal activity (Coleman & Neimeyer, 2015), can further affect patients' participation in therapy and may have to be taken into account as control variables in future studies.

Patients with the experience of higher agency in therapy showed less interpersonal hostility. This finding was significant for the IMI hostility subscale only. Since the VPPS hostility subscale showed low internal consistency in this study, we decided to discuss the IMI findings here primarily. Patients who feel agentic, that is, self-efficient in therapy, may have less reason to mistrust or dislike their therapist for absent improvement and may be less prone

to project hostile feelings (Clarkin, Yeomans, & Kernberg, 2008). At the same time, low interpersonal hostility may make it easier for patients to collaborate with their therapist and to make use of their therapy. In previous research, a stronger alliance predicted reductions in patients' hostile-submissiveness, which in turn were related to improvements in depression (Constantino et al., 2016). Besides establishing a good alliance, the experience of agency might help to abandon maladaptive interpersonal ways of relating. Feeling strengthened within oneself may make it less necessary to protect against interpersonal threats. This can be tested in future research with a longitudinal study design. Surprisingly, patients with higher agency experiences were not rated as significantly more assertive or dominant (r = .22, ns). It might be that patients who feel agentic and collaborate well with the therapist do not appear as dominating. Instead, the patient and the therapist might emerge as acting in concert. In addition and accordance with previous research, depressive patients were characterized by lower overall dominance (Caspar et al., 2016). Due to a possible problem to significantly detect small effects and low variance in depressive patients' dominance, studies with larger samples need to replicate and expand on this finding.

We did not find a statistically significant association between patients' perceptions of their agency and observer ratings of therapists' directiveness (r = -.15, ns). There are several possible explanations for this finding. From the perspective of interpersonal complementarity, we had assumed an inverse relationship between patients' agency and therapists' directive interventions. In this view, patients who are passive and non-agentic would "invite" more directive interventions from their therapists. Therapists who behave more directively with passive clients might do so because this familiar pattern can help patients to feel more comfortable and thus might limit patients' distress in the short-term. Previous research on the interaction of patient and therapist characteristics suggested that an inverse relationship between patient resistance and therapist directiveness is favorable for therapy success (Norcross & Beutler, 2014). This supports the view that a complementary interpersonal

pattern may facilitate collaborative work. In contrast, interpersonal change, which is, "stepping out" of maladaptive interpersonal cycles, would require therapists to limit their complementary reactions to their patients' interpersonal pulls and to gradually invite patients to move with more flexibility in the interpersonal space. This idea was supported by research from Constantino et al. (2016) who could show that reductions in chronically depressive patients' hostile-submissiveness during therapy predicted outcome. Further, the finding of the current study may be specific to the assessment of agency in an early therapy session and in the patients' subjective experience. The time of the therapy and patients' readiness to change may play a role, as therapists initially may react more complementarily to their patients' interpersonal behavior to limit anxiety to a tolerable degree. Over the course of therapy, they may increasingly challenge patients' dysfunctional ways of interpersonal relating. Moreover, the therapeutic interaction may include more complex dynamics. Patients have flexibility and capacity to find what they perceive as helpful from the therapists' repertoire (Hoener, Stiles, Luka, & Gordon, 2012), while therapists show responsiveness to their patients' needs and opportunities for agency (Stiles & Horvath, 2017; Williams & Levitt, 2007). Thus, patient and therapist behavior may influence one another in a more subtle and individual way.

Patients with higher agency experiences in therapy showed a stronger working alliance. This is in line with theoretical assumptions and previous empirical findings (Coleman & Neimeyer, 2015; Huber et al., 2018; Oddli & Rønnestad, 2012) and is important because the alliance is a key predictor of therapy success (Flückiger, Del Re, Wampold, & Horvath, 2018). The current study finding adds to previous quantitative studies that found a relation between the alliance and expectations on agency (Coleman & Neimeyer, 2015) to actual experiences of agency in the therapy process. It further replicates findings on the association between agency and alliance from an inpatient setting (Huber et al., 2018) to psychotherapy outpatients. Altogether, the positive association between agency and the therapeutic alliance appears consistent. Furthermore, patients' agency experiences were not

only related to a better alliance in the patients' view, but also tended to correlate with therapists' ratings of the working alliance (r = .27, p = .058). Taken together with the data on the IMI, patients' agency experiences in therapy tend to be associated with positive and productive patient-therapist interactions.

It is noteworthy that most of the associations between therapy process measures and therapeutic agency were found for the TAI subscale on *therapy-related processing*. This finding is in line with research on inter-session-processes which have been linked to positive therapy process and outcome (Hartmann et al., 2016). It also draws attention to the work of Mackrill (2009), who pointed out that patients' agency is cross-contextual and extends beyond the actual therapy session. The agency-subscale *therapy-related processing* concerns patients' continuing engagement with psychotherapy between sessions, for example, by thinking about therapy-related material or by applying ideas from therapy to everyday life. Therapy-related processing may require especially high agentic efforts as patients need to rely more on themselves between sessions when the therapist is not present. Overall, to make use of one's session accomplishments may also be of importance for the internalization and generalization of therapeutic experiences to be able to feel really independent once treatment is terminated.

Limitations and Conclusion

The study allows new insights into patients' subjective experiences of agency in therapy and how these relate to their actual behavior and interaction observed in the session. An important limitation is the cross-sectional design, preventing causal conclusions on how patients' agency relates to the therapeutic process and subsequent symptomatic improvement. As patient and therapist behavior may appear in a certain way in one session, the generalizability is restricted. Another limitation is the low internal consistency of the TPRS and the VPPS hostility subscale and the relatively low inter-rater reliability of the IMI subscales friendly-submissive and hostile-submissive. Low item correlations appear to be a frequent problem of the TPRS directiveness scale (e.g., Karno & Longabaugh, 2005), while

for the VPPS hostility scale, a floor effect with only very few incidents deviating from zero may have complicated a reliable assessment. Since several instruments (VPPS, IMI, TPRS) were rated by the same observers, there might be some shared rater variance. Furthermore, the patient sample size was not sufficient to detect small associations with adequate power and the number of patients treated by one therapist did not allow us to investigate therapist effects. One could guess that the amount of therapists' directive interventions might be more similar for different patients treated by one therapist as compared to patients treated by others. In the current study, we only investigated trainee therapists with a psychodynamic orientation, which might limit the diversity of directive interventions. Future studies could examine larger and more heterogeneous samples.

Overall, the current study provided insight into how patients' agency in therapy is related to their in-session behavior and the patient-therapist interaction in an early therapy session. Agency was associated with a stronger therapeutic alliance, more active participation, and less interpersonal hostility. There was no relation between patients' agency and therapists' directive stance. The findings support the claim that patients need to feel capable of acting and influencing their therapy process to benefit from it.

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Tables

Table 1

Correlations between Agency, In-Session Behavior, and Patient-Therapist Interaction

In-session behavior and patient-therapist interaction	Therapeutic agency (TAI)	TAI I activity	TAI II passivity	TAI III processing
Working Alliance (WAI-SR) Patient	.61 ***	.53 ***	.40 **	.58 ***
WAI-SR bond	.56 ***	.44 **	.39 **	.56 ***
WAI-SR tasks	.52 ***	.43 **	.39 **	.48 ***
WAI-SR goals	.48 ***	.49 ***	.24	.43 **
Working Alliance (WAI-SR) Therapist	.27 +	.28 *	.24	.27 +
WAI-SR bond	.20	-.02	.31 *	.16
WAI-SR tasks	.25 +	.18	.19	.23
WAI-SR goals	.25 +	.18	.19	.24 +
Vanderbilt Psychotherapy Process (VPPS)				
VPPS patient participation	.29 *	.15	.21	.32 *
VPPS patient hostility	-.26 +	-.21	-.10	-.31 *
Impact Message Inventory (IMI)				
IMI friendly-dominant	.18	.15	.13	.16
IMI dominant	.22	.21	.12	.19
IMI hostile-dominant	.12	.18	-.01	.14
IMI hostile	-.27 *	-.15	-.19	-.32 *
IMI hostile-submissive	-.10	-.07	-.13	-.01
IMI submissive	-.15	-.13	-.07	-.15
IMI friendly-submissive	-.10	-.08	-.06	-.05
IMI friendly	.10	.02	.07	.16

Therapist Directiveness (TPRS)	-.15	-.07	-.10	-.19

Notes. TAI I = in-session activity, TAI II = therapist-oriented passivity, TAI III = therapy-related processing. $N = 52$.

$^{+}p < .10$. $^{*}p \leq .05$. $^{**}p < .01$. $^{***}p < .001$.

Table for Online Supplement

Descriptive Statistics of Measures

Measures	*M*	*SD*	*Min*	*Max*
Therapeutic Agency Inventory (TAI) [1-5]	3.71	0.51	2.47	4.71
TAI in-session activity [1-5]	3.98	0.59	2.80	5.00
TAI therapist-oriented passivity [1-5]	3.47	0.71	1.80	4.80
TAI therapy-related processing [1-5]	3.66	0.61	2.20	4.80
Working Alliance Inventory (WAI-SR) Patient [1-5]	3.74	0.60	2.42	5.00
WAI-SR tasks [1-5]	3.36	0.67	2.00	5.00
WAI-SR goals [1-5]	3.74	0.77	1.50	5.00
WAI-SR bond [1-5]	4.17	0.75	2.25	5.00
Working Alliance Inventory (WAI-SR) Therapist [1-5]	3.56	0.52	2.56	5.00
WAI-SR tasks [1-5]	3.09	0.65	1.40	5.00
WAI-SR goals [1-5]	3.30	0.66	2.00	5.00
WAI-SR bond [1-5]	4.04	0.55	2.86	5.00
Vanderbilt Psychotherapy Process Scale (VPPS)				
VPPS patient participation [1-5]	4.16	0.43	3.15	4.71
VPPS patient hostility [1-5]	1.06	0.09	1.00	1.38
Impact Message Inventory (IMI)				
IMI friendly [1-4]	2.76	0.60	1.13	3.88
IMI friendly-submissive [1-4]	2.71	0.53	1.25	3.63
IMI submissive [1-4]	2.47	0.68	1.13	3.88
IMI hostile-submissive [1-4]	2.45	0.60	1.13	3.38
IMI hostile [1-4]	1.97	0.69	1.13	3.63
IMI hostile-dominant [1-4]	2.09	0.59	1.19	3.44

IMI dominant [1-4]	2.13	0.60	1.25	3.56
IMI friendly-dominant [1-4]	2.47	0.58	1.13	3.81
Therapy Process Rating Scale (TPRS)				
TPRS Directiveness [1-5]	2.50	0.32	1.85	3.12

Notes. $N = 52$.

Appendix D: Study 3

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Agency and Alliance as Mechanisms of Change in Psychotherapy

Authors: Julia Huber, Simone Jennissen, Christoph Nikendei, Henning Schauenburg, Ulrike Dinger

Department of General Internal Medicine and Psychosomatics, Center for Psychosocial Medicine, University Hospital Heidelberg, Germany

Author Note

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Correspondence concerning this article should be addressed to Ulrike Dinger, Department of General Internal Medicine and Psychosomatics, Center for Psychosocial Medicine, University Hospital Heidelberg, Thibautstrasse 4, 69115 Heidelberg, Germany. E-Mail: Ulrike.Dinger-Ehrenthal@med.uni-heidelberg.de

Abstract

Objective: This study examined the reciprocal effects between changes in therapeutic agency, working alliance, and symptoms during psychotherapy. We aimed to predict symptom improvement by previous changes in either agency or alliance. In addition, we examined whether alliance development was predicted by previous changes in agency.

Method: A sample of 386 patients in psychodynamic outpatient psychotherapy answered the Therapeutic Agency Inventory, the Working Alliance Inventory-SR, and the Symptom Checklist-K11 after sessions 1, 5, 10, 15, and 20. Dynamic panel models were estimated using structural equation modelling. Associations were tested while controlling for autoregressive effects and differentiating within-person changes over time from between-person differences.

Results: Increases in agency predicted subsequent symptom improvement. Similarly, increases in alliance predicted subsequent symptom improvement. For agency and alliance, we found reciprocal effects over time.

Conclusions: Findings show evidence for agency and alliance as mechanisms of change in psychodynamic psychotherapy. The study supports the importance of both agency and alliance and further suggests that both mechanisms may need to be balanced in successful psychotherapies.

Keywords: psychotherapy process, mechanism of change, agency, alliance, symptoms

Public Health Significance: This study highlights the importance of including patients as active agents of change in psychotherapy. Patients who experience higher intentional influence over the process of psychotherapeutic change show an improved symptom response.

Agency and Alliance as Mechanisms of Change in Psychotherapy

Once psychotherapy research provided compelling evidence for the overall efficacy and effectiveness of psychotherapy, it has become a major aim to understand the processes that lead to change (Lambert, 2013). According to a contemporary contextual model of psychotherapy, psychotherapeutic effects can be explained by three common pathways (Wampold & Imel, 2015): (a) the relationship between the patient and the psychotherapist; (b) the creation of patients' expectations; and (c) patients' engagement in therapeutic activity based on specific components of therapies that both the patient and the psychotherapist believe to be effective. Common mechanisms of change are one explanation for the repeated meta-analytic finding that different bona-fide therapies yield similar results (Wampold & Imel, 2015). Moreover, findings of correlational studies support all three proposed common pathways of change. Flückiger, Del Re, Wampold, and Horvath (2018) showed a robust moderate correlation between alliance and outcome in over more than 30.000 treatments (r = .278). Another meta-analysis demonstrated that therapy-related expectations are positively associated with therapy outcome (r = .119; Constantino, Arnkoff, Glass, Ametrano, & Smith, 2011). In addition, previous reviews of process-outcome studies suggested that the patients' participation in psychotherapy is one of the most important determinants of outcome (Bohart & Wade, 2013; Orlinsky, Ronnestad, & Willutzki, 2004).

These findings suggest that successful psychotherapy involves establishing good alliances, creating beneficial expectations, and getting patients actively involved in a therapeutic process. However, correlational analyses do not prove the causal role of the process factors because those might also be a result of previous symptom change rather than promoters of therapeutic change or be affected by third variables. The use of longitudinal panel data is one possibility to overcome validity threats of correlational designs, yielding stronger evidence for causal conclusions. First, modelling lagged associations over time allows inferences about the direction of causality as it is possible to account for the correct

temporal sequence. Second, the isolation of within-person changes over time from stable between-person differences rules out confounding influences due to the effects of unobserved stable attributes of individuals (Allison, Williams, & Moral-Benito, 2017; Curran & Bauer, 2011; Falkenström, Finkel, Sandell, Rubel, & Holmqvist, 2017).

Recent advances in psychotherapy research focused on in-depth examinations of the alliance as a potential active ingredient in therapy (e.g., Zilcha-Mano, 2017). This research was based on the ongoing discussion and previously mixed findings, whether or not alliance predicts later symptom change, even after controlling for early symptomatic change (e.g., Barber et al., 1999; Barber, Connolly, Crits-Christoph, Gladis, & Siqueland, 2000; Barber et al., 2014; Hendriksen, Peen, Van, Barber, & Dekker, 2014). The disentanglement of trait-like (between) and state-like (within) components showed that improvements in the alliance during treatment have a significant effect on outcome, independent of the patient's general ability to form alliances (Zilcha-Mano, 2017). Therefore, the role of the therapeutic alliance as a true curative factor and mechanism of change has previously been (re-)established. Since no other process factor has gained a similar level of attention and methodological sophisticated investigation (Wampold & Imel, 2015), this type of research lacks for other potential mechanisms of change. Specifically, patients' engagement in therapeutic activity, a key pathway of common factor models of psychotherapy (e.g., Wampold & Imel, 2015) that received empirical support in a large number of studies with correlational designs (Bohart & Wade, 2013; Orlinsky et al., 2004), needs examination using longitudinal panel designs.

Therapeutic Agency

Within psychotherapy, patients have the capacity to affect their own change process in meaningful ways. Agency, a person's subjective capacity to act, is an important psychological dimension of patients' active involvement in the therapeutic process (Bohart & Wade, 2013). With a sense of agency, individuals are able to influence their own functioning and life circumstances (Bandura, 2006; Safran, 2016). According to Bandura's theory of human

agency (2006), people influence their own self-development through four core features. Human agents (a) form intentions, (b) visualize the future including goals and anticipated consequences to guide their efforts, (c) react upon themselves to construct courses of actions and regulate their execution, and (d) reflect upon themselves and their personal functioning. Thereby, agency includes intentional, motivational, volitional, and reflective processes (Huber, Nikendei, et al., 2018). Agency states can vary within a person from time to time, while previous mastery experiences and self-efficacy expectations are central foundations.

Building on Bandura's theory (2006), therapeutic agency is defined as patients' intentional influence over the process of psychotherapeutic change (Huber, Nikendei, et al., 2018). In psychotherapy, patients' sense of agency is seen as a primary generator of change, as patients make use of the psychotherapeutic environment and their psychotherapists' support in order to initiate and sustain change and growth (Bohart & Wade, 2013; Levitt, Pomerville, & Surace, 2016). Furthermore, patients' agency may be important to address in order to foster the alliance as well as patients' active participation in therapy (Bohart & Wade, 2013; Coleman & Neimeyer, 2015). The therapist may take responsibility for offering an empathic and supporting therapeutic relationship, and simultaneously introduce or suggest therapeutic goals and tasks. The patient needs to respond to this relationship offer and develop trust in the therapist. At the same time, the patient is expected to become an active part in the therapeutic work by, for example, reflecting, experiencing, and/or practicing new behaviors. This may result in a process of negotiating the therapeutic work (Bordin, 1979; Safran & Muran, 2000), where agency and alliance could represent complementary processes leading back to the dialectical human needs for autonomy and connection (Bakan, 1966; Blatt & Zuroff, 1992; Bowlby, 1969).

Previous studies with qualitative designs suggested that patients' sense of agency may contribute to the building of the therapeutic alliance and mental health improvements over the process of psychotherapy. Oddli and Rønnestad (2012) analyzed transcripts of therapy

sessions from highly experienced psychotherapists and found that the therapists fostered their patients' agency while establishing the therapeutic alliance. For example, therapists explored patients' attempts and strategies to overcome their problems, emphasized the patients' choice and authority, and invited patients to a collaborative process. A study by Adler (2012) showed increases in the theme of personal agency in patients' weekly narratives over the course of therapy followed by improvements in mental health. The degree to which patients described themselves as affecting their own lives and achieving control over their experiences and problems accompanying therapy predicted change in mental health. Bohart and Wade (2013) reviewed further research supporting the role of agency in therapy, but acknowledged a need for more empirical studies with valid measures of patient agency.

The first quantitative studies used correlational designs and investigated the association between patient-reported agency and the therapeutic alliance as well as between agency and outcome. In a review on patients' *expectations for agency* in psychotherapy, Coleman and Neimeyer (2015) found a positive relationship between agency expectations and the therapeutic alliance, but not between agency expectations and outcome. Directly focusing on agency during the therapeutic process, Huber, Born, et al. (2018) showed that patients' subjective experience of agency during an early session of psychodynamic psychotherapy correlates with both patients' observable participation and their assessment of the therapeutic alliance. There is further preliminary evidence that increases in agency during inpatient psychotherapy predict outcome, when controlled for psychological distress at baseline (Huber, Nikendei, et al., 2018). However, as mentioned before, multiple longitudinal assessments of agency and symptoms are necessary to examine whether or not agency emerges as a true mechanism of change in psychotherapy.

Study Aims

The aim of the current study was to examine agency as a potential mechanism of change during the therapy process. We examined change in agency as a within-person

predictor for change in subsequent symptoms, while controlling for autoregressive effects as well as for between-person differences and considering reverse causality. In order to compare our findings for agency with a more established process factor, we further aimed to replicate previous studies on the alliance as a predictor of subsequent symptom improvement. Finally, we examined the effect of changes in agency on subsequent changes in the alliance. The temporal relationships between (1) agency and symptoms, (2) alliance and symptoms, and (3) agency and alliance were examined over 20 therapy sessions with five measurement points (every fifth session after session 1). Based on the previous research outlined above, we expected a positive effect of both agency and alliance on symptom improvement. In addition, we expected a positive effect of agency on alliance development.

Method

Participants

A sample of 386 patients in outpatient psychotherapy at a university-based training clinic (63% female, M_{age} = 35.9 years, SD_{age} = 12.8 years, age range = 18-68) fulfilled the inclusion criteria of German language fluency and at least one process assessment of agency. Exclusion criteria were bipolar or psychotic disorders. In total, 240 to 332 participants contributed data to each measurement point. On average, patients contributed 3.6 assessments (SD = 1.3) over the course of therapy. Sociodemographic data and clinical diagnoses of the study participants are presented in Table 1. All patients gave informed-consent and the study was approved by the ethical review board.

Psychotherapy

The patients received psychodynamic psychotherapy at a university-based outpatient training clinic in Germany. The standard procedure of the German health care system requires patient and psychotherapist to first meet for preparatory and diagnostic sessions, which are followed by an application for insurance coverage of psychotherapy. After approval of reimbursement by the public health insurance, individual psychodynamic psychotherapy

sessions usually take place once a week and last 50 minutes. Most therapies are conducted as long-term therapies. Long-term dynamic therapies in Germany typically last 60 to 100 sessions. In our study, only the early therapy phase was investigated (see Procedure section).

Psychotherapists

Psychotherapists were 85 psychologists (M.Sc. or Ph.D.) or medical residents in psychiatry or psychosomatic medicine (89.4% psychologists, 80% female, M_{age} = 32.8 years, SD_{age} = 5.6 years, age range = 25-50). Psychologists had been enrolled in a university-based postgraduate psychodynamic psychotherapy training program for an average of 1.8 years (*SD* = 0.7) and had clinical experience of at least 1800 hours in psychiatric and psychosomatic hospitals at the beginning of their training in the outpatient clinic. Medical doctors were residents in psychiatry or psychosomatic medicine and had previous clinical experience in mental health hospitals for an average of 3.3 years (*SD* = 3.1) prior to their training in the outpatient clinic. Therapists each contributed 1 to 10 patients to the sample (*M* = 4.6, *SD* = 2.5). Every fourth therapy session, psychotherapists received supervision for 50 minutes. Supervision was conducted by psychotherapists with at least five years of clinical experience after their state license for independent practice and at least three years of teaching experience in psychotherapy training programs.

Measures

Structural Clinical Interview for DSM-IV Axis I and II (SCID-I and II). The SCID (First, Gibbon, Spitzer, Williams, & Benjamin, 1997; First, Spitzer, Gibbon, & Williams, 1996; Wittchen, Zaudig, & Fydrich, 1997) is a semi-structured interview to determine axis I and II diagnoses for mental and personality disorders based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994). The SCID is the most common instrument used for diagnostic evaluation in research, but is not yet available for the DSM-V (American Psychiatric Association, 2013)

in German. The SCID for DSM-IV demonstrated adequate to good reliability for axis I and axis II diagnoses (Zanarini & Frankenburg, 2001).

Therapeutic Agency Inventory (TAI). The TAI (Huber, Nikendei, et al., 2018) is a self-report questionnaire that assesses patients' subjective sense of agency in psychotherapy. The TAI assesses patients' intentional influence over the process of psychotherapeutic change with three subscales: in-session activity, therapist-oriented passivity, and therapy-related processing. In-session activity assesses how patients actively contribute to the therapy sessions (e.g., "I take an active part in determining the course of my therapy."). Therapist-oriented passivity asks how responsible and influential patients feel during their therapy in relation to the therapist (e.g., "I would like to receive more tips and advice from my therapist."). Therapy-related processing indicates reflections about the therapy-related material and the implementation of ideas or actions between sessions (e.g., "I further pursue suggestions from therapy on my own."). Each subscale has five items, which are answered on a 5-point scale. The overall mean was used in this study; higher scores indicate higher agency. Validity of the instrument is supported by moderate positive associations with general self-efficacy expectations, control expectations in psychotherapy, common change mechanisms (e.g. alliance, mastery), and negative correlations with psychological distress (Huber, Nikendei, et al., 2018). In the initial psychometric evaluation study, changes in agency during inpatient psychotherapy predicted outcome after controlling for baseline distress, showing preliminary evidence for criterion related validity of the TAI. Internal consistency of the total scale in the current study was high (Cronbach's α range = .80-.86).

Working Alliance Inventory-Short Form Revised (WAI-SR). The WAI-SR (Hatcher & Gillaspy, 2006; Wilmers et al., 2008) is a self-report questionnaire for patients to assess the therapeutic alliance according to Bordin's pantheoretic model of alliance (Bordin, 1979). The WAI-SR assesses the alliance with three subscales: agreement on goals, agreement on tasks, and bond. Each subscale has four items, which are answered on a 5-point

scale. The overall mean was used in this study; higher scores indicate better alliances. Previous studies showed support for the validity of the WAI-SR by associations with other alliance measures and by prediction of therapy outcome (Busseri & Tyler, 2003; Munder, Wilmers, Leonhart, Linster, & Barth, 2010; Zilcha-Mano, 2017). Internal consistency of the total scale in the present study was high (Cronbach's α range = .90-.93).

Symptom Checklist Short Form (SCL-K11). The SCL-K11 (SCL-K11; Lutz, Tholen, Schürch, & Berking, 2006) is a 11 item short form of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1977), a prominent measure in psychotherapy outcome studies (Lambert, 2013). The SCL-K11 serves the assessment of depression and anxiety, the symptoms with the highest prevalence in the population, and it is sensitive for the measurement of change over the therapy process (Lutz et al., 2006). The items are answered on a 5-point scale with regard to symptom distress during the last week. Higher scores indicate more severe symptoms. Convergent validity of the instrument is shown in high correlations with the general symptom index of the SCL-90-R (Derogatis, 1977) and the Beck Depression Inventory-II (Beck, Steer, & Brown, 1996). Internal consistency in the present study was high (Cronbach's α range = .87-.91).

Procedure

The patients were recruited via a university-based outpatient training clinic in Germany. In a clinical intake interview, experienced clinicians determined a general indication for outpatient psychodynamic psychotherapy and assigned the patients to a psychotherapist trainee performing the treatment. During the intake interview, the patients were invited to participate in the study and provided informed consent. In a diagnostic appointment at baseline, all patients took part in a SCID-I and -II interview and questionnaire assessment. The patients were interviewed by trained graduate students who held a B.Sc. or a M.Sc. degree in psychology. After every fifth psychotherapy session (following sessions 1, 5, 10, 15, 20), patients answered the SCL-K11, WAI-SR, and TAI questionnaires. We

concentrated our analyses on change over 20 sessions of psychotherapy, because this dose allows reliable change to occur for a large proportion of patients (Lambert, Hansen, & Finch, 2001). At the same time, this time frame provides an adequate number of measurement time points for panel data analysis (Falkenström et al., 2017).

Data Analytic Strategy

Our study hypotheses were tested employing a random intercept dynamic panel model approach (Allison et al., 2017; Falkenström et al., 2017), using maximum likelihood estimation (ML) in a structural equation modeling (SEM) framework. These models allow for an estimation of within-person effects over time while controlling for stable between-person differences such as personality traits (i.e., trait agency) and higher-level factors (i.e., therapist effects) by including a latent random intercept. Autoregressive effects in the dependent variable as well as lagged associations between predictor and dependent variable are estimated simultaneously to assess the effect of change in the predictor on subsequent change in outcome while controlling for previous changes in the outcome variable. Compared to other modeling strategies, this approach is considered superior because endogeneity bias (correlations between predictors and the error term of outcome equations) is avoided by estimating the between-person component and its relationship to the lagged dependent variable using latent variable modeling in a SEM framework (Falkenström et al., 2017). Furthermore, nested models can be compared to examine reverse associations and to explicitly test stationary assumptions (i.e., equality of variances and covariances between different points in time). In contrast to classical autoregressive cross-lagged models, relationships between variables are tested according to the hypothesized direction and potential additional reverse associations are then tested in a next step.

For all three study hypotheses, the modeling strategy was as follows: First, we tested the basic random intercept dynamic model assuming constant means of both predictor and outcome variable (no detrending), constant autoregressive and lagged effects (stationarity of

covariances), as well as homoscedastic residual variances in outcome between measurement occasions (stationarity of variances). We decided a priori to not detrend the outcome variable because we expected the trend over time to be largely caused by the treatment (Falkenström et al., 2017). Based on theoretical considerations, reverse causation between predictor and dependent variables was deemed plausible. Thus, we modeled these reverse associations as a variation of the basic model. Next, we successively relaxed assumptions of stationarity of covariances and variances. All model variations were compared to the basic model to choose the model that fit our empirical data best. In addition to the chi-square fit statistic, we compared the model fit via the Comparative Fit Index (CFI), the Standardized Root Mean Square Residual (SRMR), and the Root Mean Square Error of Approximation (RMSEA). Comparative Fit Indices ≥ .95, RMSEA ≤ .06, and SRMR ≤ .08 suggest good fit (Hu and Bentler, 1999). SEM was performed with R (Version 3.3.2) and R Studio (Version 1.0.136) using the R packages *lavaan*, *lme4*, *data.table*, and *haven*.

Results

Prediction of Symptoms by Agency

For the prediction of SCL-K11$_t$ by TAI$_{t-1}$, controlling for the effect of SCL-K11$_{t-1}$, the model assuming separate variances for each measurement point yielded a significant better model fit compared to the basic model (see Table 2), while the assumption of reverse causation or different covariances for the measurement points did not significantly improve model fit, reverse causation: $\Delta \chi^2(6) = 6.551$, $p = .364$, non-stationarity of covariances: $\Delta \chi^2(3) = 6.496$, $p = .090$. The fit of the final model as shown in Table 2 is considered good according to CFI and SRMR (Hu & Bentler, 1999) and approximately appropriate for RMSEA (Kline, 2005; Marsh, Hau, & Grayson, 2005). In the final model, the effect of TAI$_{t-1}$ on SCL-K11$_t$, controlling for the effect of SCL-K11$_{t-1}$, was significant and estimated to be $\beta = -0.043$ (see Table 3). The autoregressive effect of SCL-K11$_{t-1}$ on SCL-K11$_t$ was not significant, $\beta = 0.072$, $SE = 0.075$, $p = .338$, 95% confidence interval (CI) [-0.075, 0.219]. The model

predicting change in symptoms from previous change in agency is shown in Figure 1 with standardized coefficients for the parameter estimates.

Prediction of Symptoms by Alliance

For the prediction of SCL-K11$_t$ by WAI-SR$_{t-1}$, controlling for the effect of SCL-K11$_{t-1}$, the model assuming separate variances for each measurement point again yielded a significant better model fit compared to the basic model (see Table 2), while the assumption of reverse causation or different covariances for the measurement points did not significantly improve model fit, reverse causation: $\Delta\ \chi2(6) = 9.791$, $p = .134$, non-stationarity of covariances: $\Delta\ \chi^2(3) = 5.859$, $p = .119$. The fit of the final model as is shown in Table 2 is considered good according to CFI and SRMR (Hu & Bentler, 1999) and approximately appropriate for RMSEA (Kline, 2005; Marsh, Hau, & Grayson, 2005). In the final model, the effect of WAI-SR$_{t-1}$ on SCL-K11$_t$, controlling for the effect of SCL-K11$_{t-1}$, was significant and estimated to be $\beta = -0.050$ (see Table 3). The autoregressive effect of SCL-K11$_{t-1}$ on SCL-K11$_t$ was not significant, $\beta = 0.062$, $SE = 0.056$, $p = .261$, 95% CI [-0.047, 0.171]. The model predicting change in symptoms from precedent changes in the alliance is shown in Figure 2 with standardized coefficients for the parameter estimates.

Prediction of Alliance by Agency

For the prediction of WAI-SR$_t$ by TAI$_{t-1}$, controlling for the effect of WAI-SR$_{t-1}$, the model assuming reverse causation and separate covariances for each measurement point yielded a significant better model fit compared to the basic model (see Table 2), while the assumption of different variances for the measurement points did not significantly improve model fit, $\Delta\ \chi^2(3) = 3.168$, $p = .367$. The fit of the final model as is shown in Table 2 is considered good according to CFI and SRMR (Hu & Bentler, 1999) and approximately appropriate for RMSEA (Kline, 2005; Marsh, Hau, & Grayson, 2005). In the final model, the effect of TAI$_{t-1}$ on WAI-SR$_t$, controlling for the effect of WAI-SR$_{t-1}$, was significant and ranged from $\beta = -0.199$ to -0.229 (see Table 3). The autoregressive effect of WAI-SR$_{t-1}$ on

$WAI\text{-}SR_t$ was significant, β = 0.236, *SE* = 0.084, *p* = .005, 95% CI [0.071, 0.401]. The reverse effect is shown in significant covariances between WAI_{t-1} and TAI_t, WAI_1 and TAI_5: β = 0.184, *SE* = 0.037, 95% CI [0.112; 0.256], *p* < .001, WAI_5 and TAI_{10}: β = -0.030, *SE* = 0.014, 95% CI [-0.058; -0.002], *p* = .035, WAI_{10} and TAI_{15}: β = -0.040, *SE* = 0.013, 95% CI [-0.066; -0.014], *p* = .003. The model predicting changes in the alliance from previous changes in agency is shown in Figure 3 with standardized coefficients for the parameter estimates.

Discussion

This study investigated agency and alliance as mechanisms of symptom change as well as the association between agency and alliance over time using dynamic panel models. Our findings support agency and alliance as mechanisms of change in psychotherapy. Increases in agency predicted subsequent symptom improvement between sessions 1 to 20 of psychodynamic psychotherapy. Similarly, increases in the alliance predicted symptom improvement. Contrary to our hypothesis, increases in agency predicted subsequent decreases in the alliance throughout sessions 1 to 20. At the same time, higher early alliances at session 1 were associated with subsequent increases in agency, while later increases in the alliance were associated with subsequent decreases in agency throughout sessions 5 to 20.

Our first main finding was the theoretically expected association between agency and symptoms on the within-person level, ensuring temporal precedence and controlling for between-person influences. Specifically, an increase in agency predicted subsequent symptom improvement, controlling for prior changes in agency and between-person-differences. This finding is in line with theoretical assumptions (Bohart & Tallman, 1999; Coleman & Neimeyer, 2015) and augments previous correlational findings of a positive association between agency and outcome (Bohart & Wade, 2013; Huber, Nikendei, et al., 2018). Using longitudinal panel data, we were able to eliminate some of the validity threats to cross-sectional correlation designs. Within the dynamic panel models, we controlled for the possibility that process and outcome are caused by between-person differences in agency,

other unmeasured patient characteristics, or prior symptom improvement. Since within-person changes in agency (i.e., agency increases from session 1 to 5, from session 5 to 10, etc.) were followed by subsequent symptom reduction, these findings indicate that a change in agency can add to the explanation of the overall therapy effect. In fact, agency was predictive for the course of symptoms but not vice versa. The finding supports the theoretical notion that patients' experience of being influential in psychotherapy may have a curative effect. This contributes to the broader idea that the patients' therapeutic activity is beneficial for their recovery and may be one of the determinants that make psychotherapy work (Bohart & Wade, 2013; Wampold & Imel, 2015).

Our second main finding was the replication of the alliance-outcome association on the within-person level, ensuring temporal precedence and ruling out confounding between-person influences. Specifically, a strengthened therapeutic alliance predicted subsequent symptom reduction, controlling for prior changes in the alliance and patients' general trait-like tendencies to form a strong alliance. This finding supports theoretical views of the alliance as a curative factor in psychotherapy (Alexander & French, 1946; Rogers, 1951), converges with previous empirical research (Zilcha-Mano, 2017), and extends prior studies by drawing on recent methodological advances (Falkenström et al., 2017). In the current study, change in alliance predicted symptomatic change but not the other way around. Thus, change in symptoms did not predict the development of the alliance. The issue of reverse causation from symptoms to subsequent changes in the alliance received mixed evidence in the past (for a review see Crits-Christoph, Connolly-Gibbons, & Mukherjee, 2013; Falkenström, Granström, & Holmqvist, 2013; Zilcha-Mano, Dinger, McCarthy, & Barber, 2014) and may require further research in the future. One hypothesis is that the frequency and timing of assessments have an impact on the existence of the effect. The relatively long duration between assessments in our study (minimum of 5 weeks) may have contributed to lower reverse effects between process factors and symptoms.

Our third main finding refers to the association between agency and alliance over the course of psychotherapy. Increases in agency predicted decreases in the alliance, controlling for prior changes in alliance and between-person-differences. We further found evidence for reverse causation and for non-stationarity of covariances for the relationship between agency and alliance. Thus, the reverse association between agency and previous alliance varied between different points in time. While the *initial* alliance (i.e., session 1) was related to subsequent improvements in agency, later *increases* in the alliance (i.e., session 5 to 10, etc.) were associated with lower subsequent agency experiences. In addition, the magnitude of the reverse associations varied between points in time: The association between initial alliance and subsequent agency was not only different in direction but also considerably higher in magnitude compared to later pathways (see Figure 3). This complex pattern of findings requires theoretical consideration. Our initial hypothesis was that patients' sense of agency would contribute to the formation of the therapeutic alliance. We expected that when patients experience themselves as influential in their therapy, they might co-determine the tasks and goals of their therapy and become involved in the emotional bond, leading to a stronger alliance. Previous research showed a positive correlation between patients' agency and the alliance at the between-person level (Coleman & Neimeyer, 2015; Huber, Born, et al., 2018; Huber, Nikendei, et al., 2018). Thus, patients with higher agency also report a stronger alliance. However, there may be theoretical arguments that agency and alliance run opposite to each other on a within-person level, which need to be tested empirically in future studies.

Therapy-specific agency and alliance may be seen as indicators for the broader constructs of agency and communion, which are considered the fundamental modalities of human existence and relatedness to the social world (Bakan, 1966). Therapeutic agency, which comprises of an individual's experience of influence in therapy, may be seen as an indicator for overall agency, that is, autonomy, mastery, and the ability to influence the course of one's own life. The therapeutic alliance, on the other hand, covers an individual's

agreement and a degree of cooperation with the therapist, which are more closely related to the topic of communion, that is, the degree of connection, closeness, and warmth with others. In the interpersonal circumplex model (IPC; Horowitz et al., 2006; Wiggins, 1982), agency (i.e., assertion to submission) and communion (i.e., friendliness to hostility/indifference) form the two orthogonal axes that define interpersonal behavior. The idea of two distinct modalities and orthogonal axes implies that a movement on one vector is not necessarily related to the movement on the other vector, making both constructs independent of each other. In the current psychotherapy study, we found an opposite pattern of growing more versus less agentic and experiencing more versus less connection and agreement with the therapist. This finding indicates that the two processes may function as opposites to one another, which is supported by findings from attachment theory and research (Bowlby, 1969). There, children's observable attachment behavior (e.g., staying close to the mother, crying) is complementary to their exploration behavior (e.g., independent play). Thus, if a child experiences a secure relationship, she or he will become more and more curious and will start to explore the world (Ainsworth, Blehar, Waters, & Wall, 2015). It is important to keep in mind that the initial ("reverse causation") effect between alliance and agency was positive in this study: An initially strong alliance in session 1 was associated with more agentic experiences later in therapy. Thus, a good alliance *base* might encourage patients' agency in psychotherapy. Later on, the experience of higher agency might lead to a greater attribution of therapy effects to the patient and take some credit away from the therapist. At the same time, it is important to note that both agency and alliance contribute to a positive symptomatic outcome. Their opposite within-person effects suggest that both mechanisms are independent change factors.

Future studies might look at individual differences as moderators of these effects, because it may be that "different folks need different strokes". As outlined above, agency may more broadly represent the domain of becoming individuated, while alliance may stand for the domain of getting connected. Blatt (1974) from a psychodynamic tradition and Beck

(1983) from a cognitive-behavioral tradition stressed the importance of differentiating psychopathology focusing on issues of self-definition such as autonomy and self-criticism from psychopathology focusing on interpersonal issues such as dependency, helplessness, and feelings of loss and abandonment. Different personality vulnerabilities may have therapeutic implications with regard to agency and alliance in therapy: overly dependent patients may benefit from an increase in agency, while overly self-reliant patients may need more experience of cooperation and a positive alliance (Dinger & Schauenburg, 2010). In addition, future research may further unfold the role of agency and alliance in different forms of psychotherapy.

Although the process factors were robust predictors of the symptom trajectory in the present study, the magnitude of the within-person associations was small. However, we predicted within-person changes in the outcome variable from within-person changes in the predictor variable exempted from any between-person variance, which typically results in considerably lower effects compared to between-person predictors of levels or intercepts for an outcome variable (Klein et al., 2003). In addition, the current study investigated associations over time in outpatient psychotherapy with measurement points in every fifth session, while other recent studies used session-to-session assessments (e.g., Falkenström et al., 2013). Thus, both the statistical method as well as the long time interval between assessment points might have contributed to the small effect sizes. Furthermore, the naturalistic data set strengthens our confidence in the meaningfulness of the results for clinical practice. In line with theoretical considerations and previous empirical work (Adler, 2012; Bohart & Wade, 2013; Hoener, Stiles, Luka, & Gordon, 2012; Levitt et al., 2016; Oddli & Rønnestad, 2012; Williams & Levitt, 2007), this study highlights the role of patients' agency in psychotherapy. In addition, we provide further evidence that patients' agency may indeed be a curative factor for symptom relief. If these findings hold replication, they provide evidence for the benefit of enhancing patients' agency in psychotherapeutic practice.

Limitations

Agency, alliance, and symptoms were all measured by patients' self-report. Assessing patients' subjective perspective was an intentional decision in this study, because the acknowledgement of patients as primary change agents calls for the inclusion of their perspective (Bohart & Wade, 2013). One disadvantage of this decision is that the associations could be inflated by shared method variance due to multiple assessments by the same individual. However, the most recent meta-analysis of the alliance-outcome-association suggests that the predictive value of patients' and therapists' alliance ratings is similar (Flückiger et al., 2018). In an analysis of a two-person perspective on alliance and outcome, patient-reported changes in the alliance were more robust predictors for subsequent session outcome compared to therapist ratings (Zilcha-Mano et al., 2016).

Using panel data, it is possible to rule out two central threats to causal inferences in nonexperimental process-outcome research, namely unmeasured confounding variables and reverse causation. At the same time, this raises estimation difficulties due to endogeneity, which need to be addressed for valid conclusions about the reciprocal effects (Allison et al., 2017). The ML-SEM that was adopted in the current study produced approximately unbiased estimates in the simulation studies by Allison et al. under all studied conditions, and was superior to the generalized method of moments using lagged instrumental variables. However, it is an empirical question under which conditions this holds true and if the results can be reproduced using different models for data analysis. Alternative model strategies are, for example, the random intercept-cross lagged panel model (RI-CLPM; Hamaker, Kuiper, & Grasman, 2015), in which latent within-person deviation scores are used to estimate within-person effects and their associations, or the multivariate latent curve model with structured residuals (LCM-SR; Curran, Howard, Bainter, Lane, & McGinley, 2014), which additionally introduces a linear time slope to protect against unobserved confounders that are related with

a linear time trend. Future research needs to address convergence of these models under various conditions.

Finally, the generalizability of the findings of the current study is restricted to the study setting involving the first 20 sessions of psychodynamic psychotherapy at an outpatient training clinic. This requires replication in different clinical populations, therapeutic settings and orientations.

Conclusion

The findings demonstrate that increases in agency predict subsequent symptom improvement in psychodynamic psychotherapy. In addition, changes in the alliance accounted for symptom improvement. Analyses of the interplay of agency and alliance over time suggested opposite effects between the two process factors with exception of a promotive effect of the initial alliance on agency. In sum, both agency and alliance may function as influential mechanisms of change in psychotherapy. We hope to stimulate further research on patients' agency in psychotherapy.

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Tables

Table 1

Sample Description

Characteristic	*n (%)*
Nationality	
European	350 (99.2%)
Latin America	2 (0.6%)
Northern America	1 (0.3%)
Education	
Basic secondary school	169 (46.9%)
Advanced secondary school	114 (31.7%)
University or college degree	71 (19.7%)
Other	6 (1.7%)
Employment	
Employed	226 (63.1%)
Student or apprentice	84 (23.5%)
Homemaker	10 (2.8%)
Retired	12 (3.4%)
Unemployed	26 (7.3%)
Marital status	
Single	227 (58.7%)
Married	125 (32.4%)
Divorced	27 (7.3%)
Widowed	7 (1.6%)

Clinical diagnoses	
Affective disorder	277 (71.8%)
Anxiety disorder	188 (48.7%)
Somatoform disorder	65 (16.8%)
Eating disorder	32 (8.3%)
Substance use disorder	15 (3.9%)
Adjustment disorder	37 (9.6%)
Personality disorder	60 (15.5%)

Note. Data were available for 92-100% of the sample for the respective characteristics due to data assessment; valid percentage values were extracted from the available data. Clinical diagnoses are according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). The category anxiety disorder includes post-traumatic stress disorder (PTSD) and obsessive compulsive disorder (OCD). Overall, 224 patients (59.6%) received more than one diagnosis; the average number of DSM-IV diagnoses was 2 (*SD* = 1.2).

Table 2

Model Selection

	Model fit		Model comparison
ML-SEM	Basic model	Final model	Basic vs. final model
TAI_{t-1} → $SCL\text{-}K11_t$	$\chi^2(23) = 52.682^{**}$	$\chi^2(24) = 41.875^{*}$	Basic model vs.
	CFI = .960	CFI = .973	non-stationarity of
	RMSEA = .085	RMSEA = .075	variances
	SRMR = .068	SRMR = .057	$\Delta\chi^2(3) = 9.467^{*}$
$WAI\text{-}SR_{t-1}$ → $SCL\text{-}K11_t$	$\chi^2(28) = 61.538^{***}$	$\chi^2(25) = 52.534^{**}$	Basic model vs.
	CFI = .963	CFI = .970	non-stationarity of
	RMSEA = .082	RMSEA = .078	variances
	SRMR = .064	SRMR = .057	$\Delta\chi^2(3) = 8.178^{*}$
TAI_{t-1} → $WAI\text{-}SR_t$	$\chi^2(28) = 101.311^{***}$	$\chi^2(19) = 33.714^{*}$	Basic model vs. reverse
	CFI = .917	CFI = .983	causation and non-
	RMSEA = .147	RMSEA = .080	stationarity of variances
	SRMR = .193	SRMR = .067	$\Delta\chi^2(9) = 71.765^{***}$

Note. ML-SEM = Maximum Likelihood-Structural Equations Model; TAI = Therapeutic Agency Inventory; WAI-SR = Working Alliance Inventory-Short Form Revised; SCL-K11 = Symptom Checklist Short Form.

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$

Table 3

Estimates from Dynamic Models for the Effect of Predictor on Outcome Variables

				95% CI	
ML-SEM	β	*SE*	*p*	LL	UL
TAI_{t-1} → $SCL\text{-}K11_t$	-0.043	0.019	.022	-0.080	-0.006
Non-stationarity of variances					
$WAI\text{-}SR_{t-1}$ → $SCL\text{-}K11_t$	-0.050	0.015	.001	-0.080	-0.020
Non-stationarity of variances					
TAI_{t-1} → $WAI\text{-}SR_t$	range:	range:	all	range:	range:
Reverse causation and	-0.199,	0.088,	<.050	-0.374,	-0.024,
non-stationarity of covariances	-0.229	0.090		-0.405	-0.054

Note. ML-SEM = Maximum Likelihood-Structural Equations Model; CI = confidence interval; LL = lower limit; UL = upper limit; TAI = Therapeutic Agency Inventory; WAI-SR = Working Alliance Inventory-Short Form Revised; SCL-K11 = Symptom Checklist Short Form.

Figures

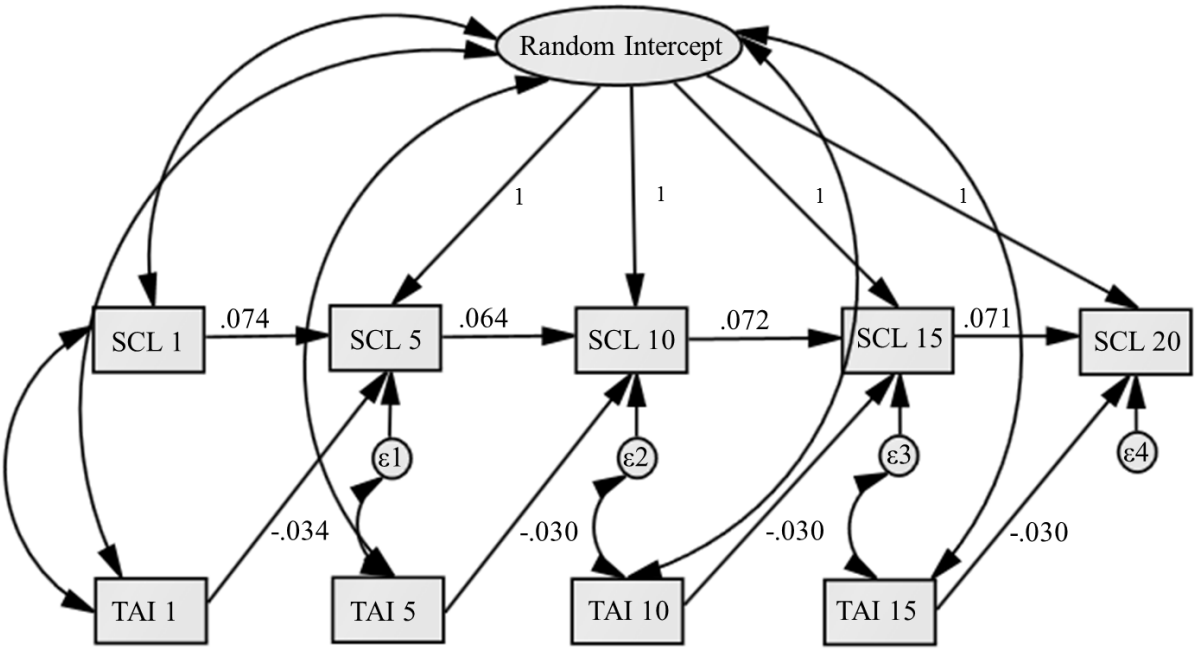

Figure 1. Dynamic model predicting change in symptoms (SCL; Symptom Checklist-Short Form) from change in agency (TAI; Therapeutic Agency Inventory) with standardized coefficients for the parameter estimates.

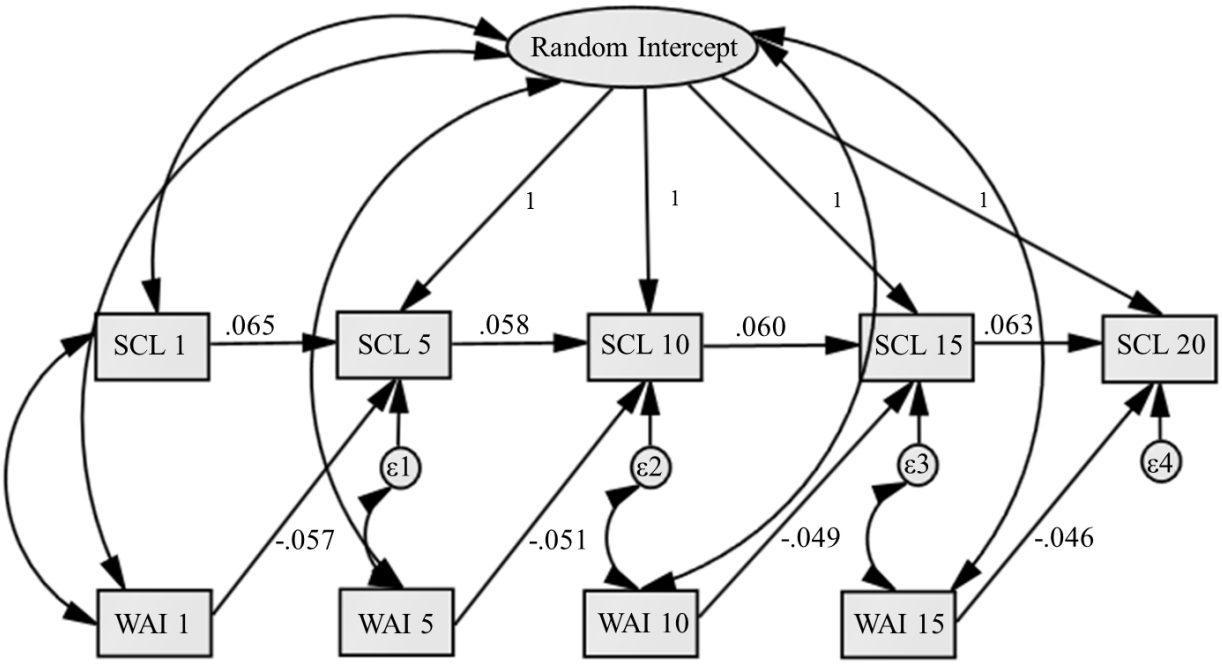

Figure 2. Dynamic model predicting change in symptoms (SCL; Symptom Checklist-Short Form) from change in alliance (WAI; Working Alliance Inventory-Short Form Revised) with standardized coefficients for the parameter estimates.

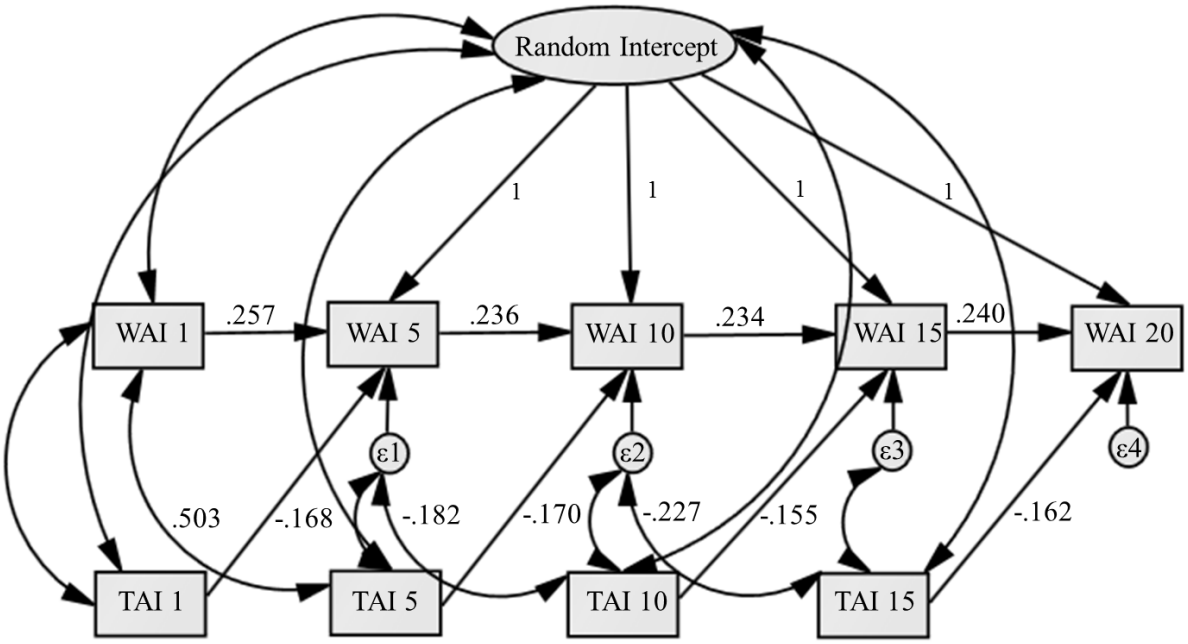

Figure 3. Dynamic model predicting change in alliance (WAI; Working Alliance Inventory-Short Form Revised) from change in agency (TAI; Therapeutic Agency Inventory) with standardized coefficients for the parameter estimates.