Taubner S, Zimmermann J, Kächele H, Möller H, Sell C (2013)

The relationship of self-directed behavior and personal therapy to trainee self-efficacy: A longitudinal study among psychotherapy trainees in Germany.

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Abstract

Aim: This study explored how introject affiliation and Trainee-Self-Efficacy (TSE) among psychotherapy trainees are related and change during training in cognitive-behavioral, psychodynamic and psychoanalytic therapy. The study was conducted in Germany, where psychotherapy training contains extensive personal therapy. Therefore, we could examine the impact of both personal therapy and introjects on changes in the trainees' self-perceived efficacy.

Methods: 171 participants filled out questionnaires concerning introjects (SASB-Intrex) and TSE (Healing Involvement subscale of the Work-Involvement-Scales) as well as additional questions concerning length of and satisfaction with personal therapy. 71 participants filled out the same questionnaires three years later.

Results: The degree of affiliation in the trainees' introjects was positively correlated with their self-efficacy. Furthermore, after three years of training, introjects changed towards more affiliation and TSE increased. Finally, the trainees' satisfaction with their personal therapy had a moderating effect on the relation between the change in their affiliative introjects and the change in their self-efficacy.

Conclusions: Introject affiliation of psychotherapy trainees are not invariant but change over the course of training, at least in trainings that include extensive personal therapy. Changes in affiliation were significantly related to positive changes in TSE – but only if the trainee's personal therapy was considered to be highly satisfactory.

Keywords: Trainee Self-Efficacy, Introject affiliation, Interpersonal Theory, Psychotherapy Training, Personal Therapy

Introduction

Therapists vary considerably in their therapeutic effectiveness, and this effect cannot be accounted for by their theoretical orientation (Baldwin, Wampold, & Imel, 2007; Blatt, Sanislow, Zuroff, & Pilkonis, 1996; Elkin, Falconnier, Martinovitch, & Mahoney, 2006; Luborsky, et al., 1986; Okiishi, Lambert, Eggett, Nielsen, & Dayton, 2006; Okiishi, Lambert, Nielson, & Ogles, 2003). Parallel research efforts demonstrated that the relationship between outcome and alliance is a robust finding in psychotherapy research with medium effect sizes that was also shown to be independent of treatment type or therapeutic school (Horvath, Del Re, Fluckiger, & Symonds, 2011; Norcross & Wampold, 2011). Thus, one line of research attributes differences in effectiveness to the therapists' (rather than their patients') varying ability to contribute to the therapeutic alliance (Baldwin, et al., 2007). This is because certain therapists' variables are known to be associated with a positive alliance and good outcomes, like e.g. warmth, congruence, empathy, well-being and affiliative interpersonal styles (Lambert & Barley, 2001; Wampold, 2001). In their meta-analysis on therapist factors, Beutler and his coauthors (Beutler, Machado, & Neufeldt, 1994; Beutler, et al., 2004) concluded that studies on therapists' interpersonal styles (e.g. the relation between affiliative or "friendly" therapist behavior and positive outcome) and therapists' well-being or confidence continued to be promising. Therefore, it would be of importance to understand how those factors emerge within a therapist, e.g. whether they evolve or can be changed during training. A recent study reported that high observer ratings of interpersonal competence during selection interviews before training predicted higher outcome rates and less patient drop-outs during therapies at a later stage of the training (Eversmann, Schöttke, Wiedl, & Rogner, 2011). However, the number of empirical studies focusing on how psychotherapists develop these interpersonal competencies is still very limited (Bruce, Manber, Shapiro, & Constantino, 2010). In the present study therapeutic confidence and "friendly" therapist behavior was considered as an important outcome variable of therapeutic training. The former was operationalized as perceived Trainee-Self-Efficacy, the latter as introject affiliation.

Trainee-Self-Efficacy

Therapists in positive cycles of professional development were thought to feel confident and self-efficacious (Orlinsky & Howard, 1986; Orlinsky & Ronnestad, 2005). Therefore, one way to empirically test training effects is Trainee-Self-Efficacy (TSE), understood as the trainees' confidence as therapists. In order to capture perceived TSE, Orlinsky and Ronnestad (2005) created the Work Involvement Scales (WIS). One of its two subscales, Healing Involvement, assesses therapists' self-evaluation of the extent to which they possess qualities that generally engage therapists in effective and constructive work patterns (i.e. kindness, warmth, and tolerance). In contrast, Stressful Involvement (Stress) refers to feelings related to anxiety, boredom, and conflict-avoidance strategies. Those psychotherapists who recently commenced training tended to have higher Stress scores but also moderate to high Healing scores (Orlinsky & Ronnestad, 2005, p. 64; Taubner, Kächele, Visbeck, Rapp, & Sandell, 2010).

Past research has used correlational or experimental methods to examine antecedents of TSE (e.g. supervisory feedback) (Lent, et al., 2006). Cross-sectional studies showed an increase of TSE with training experience (Tang, et al., 2004; Taubner, et al., 2010). Larson (1998) suggested that TSE is dependent on trainees' clinical functioning, that is, how they experienced their interaction with their clients. A recent study with 98 master-level trainees conducted semi-qualitative data about TSE-changes with real patients within 5 sessions (Lent, et al., 2009). Results from this study clearly demonstrated that TSE changes can be seen as normal experiences during training since more than two thirds of this sample experienced

(mainly positive) changes. Trainees attributed TSE changes to their successful or unsuccessful behaviors (86%), their own affective states (26%), feedback from the client (25%), observation from the therapeutic relationship (3%) and session process (17%) and only 10% to supervisory feedback (Lent, et al., 2009). The authors concluded that trainees relied mainly on relational contextual information, reflecting the inherent interpersonal nature of psychotherapy in comparison to other domains of TSE research (e.g. among mathematicians). Longitudinal data on the development of TSE during longer periods of therapeutic training has not been collected so far.

Introject Affiliation

Given these two possible cycles of trainee development, it seems crucial to understand the circumstances which might contribute to a trainee's positive development. Orlinsky and Ronnestad (2005) suggested several factors which facilitated positive professional cycles: Good basic relational skills, broad theoretical orientation, a sense of satisfaction with one's own work as well as with one's work environment, breadth and depth of case experiences, and resources like supervision and personal therapy are factors, whereas a lack of most or all of them defines the negative cycle. To supplement these findings, we hypothesized in this study that besides these rather external conditions, internal factors like the affiliativeness of introjects play an important role to reach or remain high levels of therapeutic self-efficacy. In past research efforts the Structural Analysis of Social Behavior (SASB) (Benjamin, 1974) was one way of operationalizing therapists' varying ability to create successful therapeutic alliances. Successful therapists are described as more likely to engage in affiliative behavior than in hostile behavior; the latter of which could be linked with poor therapeutic outcome (Henry, Schacht, & Strupp, 1986). Therapists' behavior has especially been linked to the therapists' introject, that is, how they treat themselves. The introject and its effect on the therapeutic process were assumed to be influenced by the therapist's own interpersonal history. In fact, Hillard and colleagues (2000) demonstrated by means of empirical data from 14 therapists and 64 psychodynamic therapies that therapists' early parental relations had a direct effect on the therapy process and outcome. This result was replicated by a different research group in a sample of 20 therapists (Lawson & Brossart, 2003). In terms of direct effects of the therapists' own introject on the therapeutic relationship, Strupp showed that hostile introjects among therapists were related to specific problematic entanglement with their patients (Strupp, 1993). This is in line with the results of an empirical process study by Henry, Schacht and Strupp (1990) who reported that therapists with disaffiliative introjects were more prone to problematic interpersonal processes such as statements that are subtly hostile and controlling.

The present study raised the question whether the degree of introject affiliation is related to TSE and can be improved during therapy training. Research so far reported the level of affiliation in introjects as a stable trait which is unlikely to be altered by means of psychotherapy training. For example, Hillard et al. (2000) showed that extensive psychodynamic training did not correct the impact of therapists' interpersonal history on their therapeutic work. This result was in line with the Vanderbilt research project that demonstrated that manual-guided training in time-limited dynamic psychotherapy did not improve the interpersonal competence of the participating therapists. Notably, therapists with hostile introjects showed an increase in negative interactions with their patients after manual-guided training (Henry, Schacht, Strupp, Butler, & Binder, 1993). Henry and colleagues concluded that psychotherapists do not sufficiently perceive their problematic interpersonal processes related to their introjects, and that this deficit is not changed by traditional training methods (Henry, 1996). At the same time, interpersonal theory conceptualizes the change of the patient's introject as the mechanism of therapeutic change (Henry, 1996). Thus, extensive personal therapy could lead to changes in the degree of introject affiliation as well. However,

the empirical basis of changes in introject affiliation during training is sparse, and to date no study has focused on training programs with extensive personal therapy.

The situation in Germany – where the present study has been conducted – is unique because under the current legislation every psychotherapy training program includes extensive personal therapy. To become a licensed psychotherapist at least 120 hours of personal therapy are obligatory during training, but individual programs differ considerably in the additional amount of personal therapy trainees are asked to undergo. According to the German training and examination regulations for psychotherapists the purpose of personal therapy is a reflection or modification of individual conditions for therapeutic experience and behavior with respect to the trainee's own interpersonal history and individual changes during training. One way to interpret this is to say that extensive personal therapy directly aims to alter trainees' introjects to become more affiliative. The majority of psychotherapists in Germany considered personal therapy as central to gaining therapeutic competence (Laireiter, 2003; Strauß, et al., 2009). But the effects of personal therapy on therapeutic outcome are yet to be confirmed by a systematic study (Macran & Shapiro, 1998) and some researchers go as far as doubting the effect of personal therapy on therapeutic competence (Beutler, et al., 2004). To our knowledge, there is no prospective research to date investigating the impact and role of extensive personal therapy on TSE and introject affiliation.

Research Hypotheses

The present study focused on TSE as an operationalization of the status of therapeutic development, and how it evolved during training. We investigated how the development of TSE is related with the changes in trainee's introject affiliation and how this relationship was in turn influenced by personal therapy. More specifically, we stated the following hypotheses:
Hypothesis 1: Psychotherapy research has demonstrated that therapists with affiliative introjects have a higher probability to engage in successful therapeutic interactions than therapists with hostile introjects. Furthermore, successful therapeutic performances have been related to an increase in perceived self-efficacy. Therefore, we predicted that affiliative introjects and TSE are positively correlated, that is the more affiliative a trainee's introject is the more TSE will be perceived.
Hypothesis 2: Cross-sectional research had reported that therapeutic self-efficacy increases with experience. To date there is no longitudinal data on that question. We expected an increase of the mean-scores in TSE after three years of psychotherapy training from time-point one (T1) to time-point two (T2).
Hypothesis 3: Traditional psychotherapy training or manual-guided training which did not systematically include personal therapy have not changed the level of introject affiliation of participating therapists. Because of the integration of extensive personal therapy in the German training system we predicted an increase in mean-scores for introject affiliation from T1 to T2.
Hypothesis 4: Finally, in a more exploratory vein, we also examined possible predictors of the changes in TSE. We proposed two competing models for the relation between personal therapy and other key variables: The first model assumed personal therapy (operationalized either by its length or the trainees' satisfaction with it) to be itself a significant predictor of changes in TSE (direct-effect model). The competing model assumed that the trainees' personal therapy is not by itself a significant predictor of changes in TSE but moderates the effect of changes in affiliative introject on changes in TSE (interaction model). In the direct-effect model, personal therapy was considered to be an active agent of changes in TSE. If this model was supported, it would be plausible to assume some aspect of the work done in the trainee's personal therapy (an aspect which is in turn correlated with the length of that therapy or the trainee's satisfaction with it) to lead to an increase in TSE. The interaction model by

contrast predicts that whether trainees who change towards a more affiliative introject also improve in TSE depends on whether they receive a high dose of personal therapy during training, or whether they are highly satisfied with their personal therapy. Empirical support for this model would suggest that the trainees' personal therapy can strengthen the impact of changes in introject on changes in TSE. In other words, it could be that personal therapy is necessary or at least beneficial for allowing trainees' improvement in affiliativeness to enhance therapeutic self-efficacy.

Method

Procedure

32 private and university-affiliated training institutes, selected randomly from an exhaustive list of institutes for psychoanalytic therapy (PA), cognitive-behavioral therapy (CBT) and psychodynamic therapy (PT) were asked to participate. Only PT and CBT institutes declined to cooperate due to their current involvement in other research projects. A total of 25 state-certified institutes agreed to participate. For T1, we sent out a total of 700 questionnaire sets to these institutes based on the enrollment data we obtained from them. The institutes used different ways of distributing the questionnaires to their trainees; some simply handed them out during seminars, whereas others mailed them to their trainees. Participation was voluntary and anonymity was offered to every participant. The participants were asked to state contact information for the purpose of a follow-up assessment (T2). Respondents returned their questionnaires to the first author individually by pre-addressed stamped envelopes. Three reminders were distributed via the institutes. Three years after the first assessment, those in agreement were contacted by mail and asked to fill out the same questionnaires. Again three reminders were sent via email.

Participants

171 completed questionnaire sets were obtained for T1; the total response rate was 24% (23% from PA institutes, 27% from PT institutes; 22% from CBT institutes, see Table 1). All participants were in part-time training with duration of at least 5 years. Real training duration varied considerably, 24 participants had been in training longer than 5 years at T1. The distribution of 22% male and 78% female participants is in accordance with the psychotherapy trainee population in Germany.

There was no information available about reasons for non-response, except for complaints from some institutes about already existing workloads during training. As a consequence of the distribution and return procedures a proper analysis of non-responders was not possible. However, the response rate is typical for German surveys on psychotherapists today (Stehle, 2004), and the distributions of the responders in terms of sex and age are in agreement with a recent representative survey (Strauss et al., 2009).

65% (n = 111) of the trainees from T1 agreed to participate in the longitudinal study. However, only 71 of these trainees actually responded at T2 (80% female, 47% PA, 37% PT and, 16% CBT). Therefore, the response rate at T2 is 64%, which is 42% of the original sample from T1. Again we obtained no information about drop-outs except for 8 persons who were no longer contactable at the given address.

A total of 15 participants from T1 and one participant from T2 were excluded from the analysis as they did not complete substantial portions of the questionnaire (> 20%) or omitted entire subscales. Thus, the sample size of the final data set was N_{t1} = 158 and N_{t2} = 64.

[Insert Table 1 about here]

Measures

Trainee-Self-Efficacy. TSE was assessed with the Healing Involvement subscale of the Work-Involvement-Scales (WIS; Orlinsky & Ronnestad, 2005). The WIS is a short self-report form based on the findings from the Common Core Questionnaire (Orlinsky, et al., 1999). Items are

either rated from 0 (never) to 5 (very often) or from 0 (not at all) to 3 (very much). Following Orlinsky and Ronnestad, the items are aggregated to two subscales, Healing Involvement (Healing) with 25 items and Stressful Involvement (Stress) with 22 items. To enhance measurement precision, we imputed missing item values using the expectation–maximization (EM) algorithm (< 1% for T1 and <5% for T2). Since the study design requires the WIS solely for the purpose of operationalizing TSE, only the Healing Involvement scale was used here.[1] The theoretical range of this subscale is 0 to 15. Internal consistency was found to be acceptable to good with Cronbach's alpha being .74 for T1 and .81 for T2.

Introject Affiliation. Introjects were assessed by means of the introject surface of the Intrex short form (Benjamin, 1983). The Intrex short form is a self-report measure based on the SASB cluster model (Benjamin, Rothweiler, & Critchfield, 2006). The introject surface of the SASB cluster model combines the dimensions of affiliation (active self love vs. self attack) and interdependence (self-emancipate vs. self-control) into eight clusters. In the questionnaire participants are asked to rate themselves with regard to their self-directed behavior at their best and at their worst. Each of the eight SASB clusters is measured with a single item for best and worst respectively. In contrast to the original Intrex ranging from 0 to 100, we modified scoring in this study from 0 (not at all true of myself) to 6 (completely true of myself). Again, missing item values were imputed using the EM algorithm (< 1% for T1, and < 2% for T2). For introject at best and introject at worst respectively, the clusters were aggregated into vector scores following the recommendations by Pincus, Newes, Dickinson and Ruiz (1998).[2] In the present study, the interdependence dimension was omitted from analysis due to lack of hypotheses and internal consistency being problematically low (Cronbach's alphas < .50)[3]. For the affiliation dimension, internal consistency was found to be good with Cronbach's alphas being .77 (.79 for T2) for introject affiliation at best and .80 (.83 for T2) for introject affiliation at worst. The theoretical range for each of the two variables is -100.8 to +100.8.

Personal Therapy. The Therapeutic Attitudes Trainee Version (ThAt-TV) (Sandell, Taubner, Rapp, Visbeck, & Kächele, 2008) includes questions on personal background such as age, gender, previous training, professional experience, and personal therapy. Results on therapeutic attitudes from T1 have been reported elsewhere (Taubner, et al., 2010). To assess the perceived quality of the trainee's personal therapy, participants rated on a five-point scale how satisfied they were with the personal therapy as part of their training (satisfaction). Since only a total of ten participants judged their personal therapy to be "somewhat satisfactory" or worse, the variable was re-coded into a three-point variable with the categories being: "very satisfied", "fairly satisfied" and "somewhat satisfied or less". As a second measure, participants were asked how many hours of personal therapy they had had to date. Since some trainees underwent therapy prior to their training, these participants already had a considerable number of hours of personal therapy at T1 (range from 30 hours to 1210 hours).

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[1] Following the suggestion of an anonymous reviewer, we nonetheless examined the Stressful Involvement Subscale; no significant correlations with any of the study's key variables were found.

[2] Active Self-Love * 7.8 ("I tenderly, lovingly cherish myself") + Self-Protect * 4.5 ("I put energy into providing for, looking after, developing myself") + Self-Affirm * 4.5 ("Aware of my personal shortcomings as well as my good points, I comfortably let myself be 'as is'") –Self-Attack * 7.8 ("Without considering what might happen, I hatefully reject and destroy myself") –Self-Blame * 4.5 ("I punish myself by blaming myself and putting myself down") - Self-Neglect * 4.5 ("I am recklessly neglectful of myself, sometimes completely 'spacing out'").

[3] Although test-retest reliability for the dimensional ratings ranged from .66 up to .93 in past research (Benjamin, 1974, 1995; Hillard, et al., 2000), very low Cronbach's alpha values, particularly for interdependence clusters, were reported from a validation study of the Norwegian translation of the SASB (Monsen, von der Lippe, Havik, Halvorsen, & Eilertsen, 2007). The internal consistency of the eight cluster scores has also been addressed by Lorr and Strack (1999) who found low to medium alpha coefficients (.50 - .76) in non-clinical samples with lowest values for the interdependence clusters.

For T2, only the hours between T1 and T2 (range from 0 hours to 1000 hours) were considered for analyses.

Neither SASB-Intrex data nor longitudinal data of this sample has been published before. Results on the WIS and the ThAt-AV of this sample have been reported from T1 (Taubner, et al., 2010). In this paper, it could be demonstrated that school-specific attitudes correlate with TSE in terms of more Healing and less Stress. Furthermore, trainees longer in training showed more TSE than beginners. From this point of view it was not possible to attribute changes of TSE to the trainees' professional development. The unique contribution of the present paper is to present longitudinal data on TSE development during training and its relation to introject changes and personal therapy.

Data Analysis

Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 19.0. The data was analyzed in the following three steps: First, the hypothesis of a positive relation between Healing Involvement and the trainee's introject affiliation (hypothesis 1) was tested. Partial correlations were computed between introject variables and Healing Involvement. Second, changes over time within Healing Involvement (hypothesis 2) as well as within introjects affiliation (hypothesis 3) were examined using dependent-measures t-tests. Finally, changes in Healing Involvement were predicted from changes in the introject affiliation and as well as from personal therapy (hypothesis 4). For this purpose, four hierarchical regression analyses were conducted. Each analysis predicts Healing Involvement at T2 from Healing Involvement at T1 (i.e. predicting change in Healing Involvement) together with a set of other predictors. The covariates (age, gender, therapeutic school, hours of personal therapy at T1) and Healing Involvement at T1 were entered in the first step, and the main predictors (i.e. either change in introject affiliation at best or at worst times as well as either length of or satisfaction with personal therapy) in the second step, respectively. We preferred computing separate regressions for each main predictor to avoid multicollinearity and conceptual ambiguity.[4] In order to gain the new variables for change in introject affiliation, regression residuals were computed from the respective T1- and T2-variables. All continuous predictors were centered to their mean prior to regression analyses (Cohen, Cohen, West, & Aiken, 2003) and therapeutic school was dummy-coded (with psychoanalytic therapy as the reference group). Finally, we tested four moderation models using change in introject affiliation (either at best or at worst) as the independent variable, personal therapy (either satisfaction with or length of) as the moderation variable, and Healing Involvement (at T2) as the dependent variable. To that end, we generated another new variable by multiplying the respective (centered) introject affiliation and personal therapy scores, and added this variable into the aforementioned hierarchical regression analyses in the third step. To obtain the standardized regression coefficients for these equations, the cross-product of the z-scores for the relevant predictors was used (Cohen, et al., 2003).

Outliers in the data set were identified and corrected for following the recommendations by Fidell and Tabachnick (2003). Three data points in the Intrex variables were found to have absolute z-values > 2.5. They were adjusted manually.

Results

Preliminary Analyses

Tables 2 und 3 provide descriptive statistics and intercorrelations for all relevant variables. The participants' age and gender correlated with one or more of the key variables. They were thus considered to be potential confounders and included in the analyses as covariates. A

[4] For example, assessing the effect of change in introject at best while controlling for change in introject at worst seemed puzzling.

series of one-way ANOVAs revealed that trainees affiliated with different therapeutic schools (PA, CBT or PT) did not differ significantly in their TSE, their introject affiliation, nor their satisfaction with personal therapy. Therapeutic school was nonetheless included as a covariate because different therapeutic schools were related with different overall length of personal therapy during training, $F(2, 58) = 8.95$, $p < .01$. Tukey post-hoc comparisons of the three groups indicated that trainees in psychoanalytic therapy ($M = 208.38$, 95% CI [135.67, 281.09]) had significantly more hours of personal therapy during training than trainees in psychodynamic therapy ($M = 65.00$, 95% CI [34.04, 95.96], $p < .01$) or CBT ($M = 40.20$, 95% CI [11.90, 68.50], $p < .01$). Comparisons between the trainees in psychodynamic therapy and CBT were not statistically significant. Finally, the number of hours of personal therapy at T1 (including therapy done before the beginning of training) was also included as a covariate because the trainees varied considerably in this regard.

[Insert Table 2 about here]

[Insert Table 3 about here]

The relationship between introject affiliation and Healing Involvement

As predicted, a positive partial correlation (controlling for age, gender and therapeutic school) with Healing Involvement was found to be significant for introject affiliation at best for T1, r_p=.21, $p < .01$, and marginally significant for T2, r_p=.24, $p = .08$. However, no relation was found between Healing Involvement and introject affiliation at worst for either time of measurement.

Change over time in Healing Involvement and introject affiliation

Dependent measures t-tests were used to compare means within the target variables between two times of measurement. Healing Involvement as well as the introject variables were found to be normally distributed (Kolmogorov-Smirnov Test). As predicted, Healing Involvement increased from T1 to T2, $t(64) = 2.78$, $p < .01$, Cohen's $d = .56$, as did introject affiliation at best, $t(64) = 2.37$, $p < .05$, Cohen's $d = .41$, and introject affiliation at worst, $t(64) = 3.20$, $p < .01$, Cohen's $d = .45$. Participants therefore felt more effective as therapists after three years of therapy training and they also reported more positive self-directed behavior at their best as well as at their worst times. To rule out the possibility of a ceiling effect for introject affiliation at best (i.e. the case that some of the trainees already start training with ideal levels of affiliativeness at best and that the mean-change over time in this introject-variable is only due to those trainees who started with lower levels) we used an independent-measures t-test to compare the mean regression residuals from T2 on T1 (as a measure of change) between those trainees whose affiliativeness scores at T1 were in the top 25% and those whose scores were below that. No significant differences were found; trainees who started training with high levels of affiliativeness changed as much as those who start with lower levels.

Predicting change in Healing Involvement

On bivariate level neither length of nor satisfaction with personal therapy were found to be related to Healing Involvement for either time of measurement (s. Tables 2 and 3). Tables 4 to 7 summarize the results of four hierarchical regression analyses, each predicting the changes in Healing Involvement from the changes in introject affiliation (either at best or at worst) and either length of the trainees' personal therapy or their satisfaction with it. Contrary to our predictions, none of the changes in introject variables were by themselves significant predictors of change in Healing Involvement when age, gender, therapeutic school and hours of personal therapy at T1 were controlled for.

In terms of the role of personal therapy, some support was found for the *interaction model* rather than for the *direct-effect model*. Contrary to the predictions of the latter, satisfaction with and length of personal therapy were by themselves not significant predictors of change in Healing Involvement. However, the interaction term of change in introject affiliation at best and satisfaction with personal therapy (see Table 5) was significant in predicting change in

Healing, $F(1, 49) = 4.33$, $\Delta R^2 = .04$, $p = .04$, $\beta = .22$. The interaction terms of satisfaction with personal therapy with introject affiliation at worst as well as the interaction between either of the introject variables with length of personal therapy were not significant.[5] The interaction model has therefore been partially confirmed. Figure 1 visualizes the interaction by plotting simple regression lines for trainees who reported to be "very satisfied", "fairly satisfied" and "somewhat satisfied or less" with their personal therapies during training: the greater the trainees' satisfaction with their training therapy, the stronger the positive relationship between the change in their perceived Healing Involvement (their TSE) and the change in their introject affiliation. Since Figure 1 visually suggests that the amount of change in TSE might differ for different levels of satisfaction with personal therapy, a one-way ANOVA was used to examine this. No significant differences were found.

[Insert Table 4 about here]
[Insert Table 5 about here]
[Insert Table 6 about here]
[Insert Table 7 about here]
[Insert Figure 1 about here]

Discussion

First, our data confirmed the positive relation between introject affiliation and TSE that had been predicted for both times of measurement. This positive relationship persisted when therapeutic school, age, gender and hours of personal therapy at T1 were controlled for statistically. This was only true, however, when the trainees are at their best, i.e. during times in which their self-affiliation should be at its maximum. We may therefore say that the trainees' perceived clinical self-efficacy is related to the highest level of self-affiliation they are capable of but not related to their more hostile forms of self-directed behavior (as experienced during their worst times).

Secondly, after three years of training, TSE increased significantly. This result is well in line with previous cross-sectional findings on psychotherapy training (Taubner et al., 2010). However, it is also the case that introject affiliation at best and at worst changed in a more positive direction over the course of the training. These changes occur throughout the whole sample and do not depend on whether the trainee's initially had relatively high or low levels of affiliativeness. Such changes in introject during training have not been found in previous studies and we might therefore tentatively attribute this result to the specific conditions of psychotherapy training in Germany. Unfortunately, however, we cannot at this point directly identify those parts of the training which might have facilitated these changes – especially since length of and satisfaction with personal therapy were not found to be direct predictors of change in TSE in the present data set. We may nevertheless speculate that personal therapy contributed to them. As part of training programs, personal therapy aims at enhancing the trainees' therapeutic abilities by reflecting on the individual's past experiences and behavioral patterns including self-directed behavior, that is Introjects. Complementing previous results, we might therefore say that although short-term therapy programs seem to leave the therapist's introject affiliation unchanged (see Hillard et al., 2000; Henry, 1996), extensive personal therapy over the course of the entire training program might well have a positive effect on it.

Finally, the positive change in the trainee's TSE was predicted from a combination of variables involving the trainees' satisfaction with personal therapy as well as changes in their

[5] To further rule out potential confounders, interaction-terms of the introject-variables with therapeutic school were also computed and (together with the covariates and the key predictors) entered into a separate regression model as predictors of change in Healing Involvement. Interactions with therapeutic school were not found to predict a significant amount of variance.

introject affiliation. Our data suggested that introject affiliation during the trainees' worst times had no effect on the change in their experienced self-efficacy, whether it was combined with the length of or the satisfaction with the trainees' personal therapy. This was consistent with our cross-sectional results and suggests that TSE might generally not be related to hostile forms of self-directed behavior. However, there was a moderating effect of satisfaction with personal therapy on the relation between changes in introject affiliation at best and changes in TSE: When personal therapy is seen as satisfactory, changes of introject affiliation are related to a stronger increase in TSE. In other words, if trainees judged their personal therapy in the most positive terms, their improvements in introject affiliation allowed them to experience themselves as more effective therapists.

In terms of the role played by personal therapy during training, our analysis has therefore revealed two results. First, with regard to changes in TSE, it is the trainees' satisfaction with their training therapy – not its length – which makes a difference. Secondly, the satisfaction with one's personal therapy was not in itself a direct agent of change in TSE (which was already suggested by our cross-sectional results above). Rather, a certain degree of satisfaction with one's personal therapy seems to be necessary for changes in a trainee's introject affiliation becoming relevant to that trainee's change in TSE. Any attempts to further account for this effect must remain speculative at this time. Specifically, we cannot be certain under what conditions a given trainee will judge his or her personal therapy as satisfactory. One possible angle would be to assume that trainees who are highly satisfied with their personal therapy feel that they have grown personally during these sessions, i.e. that they might have had experiences of positive psychic change. The literature on introjects and interpersonal theory suggests that if such positive change occur, it is often at least partly due to the trainees' internalization of their relation to their therapist (i.e. a change in the trainees' introjects on the basis of their therapists' introjects; Henry, 1996). If we tentatively follow this assumption, it would be the case that trainees who are highly satisfied with their personal therapy had the first-hand experience of their therapists' introject (the way their therapists treat themselves) facilitating therapeutic change. It would then make sense to think that those trainees will now begin to make changes in their own introject affiliation relevant for estimating their performance as a therapist. The implicit rationale might be something like this: 'If I manage to treat myself better, I shall also be more effective as a therapist. As I have experienced during personal therapy, the way therapists treat themselves is a crucial determinant of the therapeutic relationship, which is in turn the agent of therapeutic change in the client'. As mentioned above, however, further research possibly with more close-meshed designs is necessary to test assumptions of this kind.

In conclusion, our data has confirmed a positive relation between TSE and the trainee's introject affiliation. Contrary to previous findings, our data suggests that the level of introject affiliation is not invariant over time. Rather, there is a positive development among trainees who are involved in therapy training, including extensive personal therapy. Further, we showed that the effect of the trainees' introject affiliation on their perceived TSE is dependent on being highly satisfied with their personal therapy. We believe that these results are relevant for those actively involved in the training and supervision of psychotherapists. If the way trainees treat themselves has implications for their self-efficacy (which in turn seems to be an important predictor of therapeutic success), their introject affiliation needs to be on their trainers 'radar'. Furthermore, as our results suggest, satisfactory personal therapy could be a precondition for certain aspects of the trainees' personality (their introject affiliation) being relevant for their self-perception as a good therapist. This might warrant a plea for a continued emphasis on personal development during training rather than focusing solely on the teaching of effective techniques.

Limitations

There are several limitations of the present study that warrant attention. First, testing our hypotheses required 12 independent parameter tests, and of these only four tests yielded significant results (with $p < .05$). Although this is clearly more than one would expect by chance, we cannot rule out that a particular finding is a false positive. Thus, findings should be replicated before drawing definite conclusions. Second, since the study is strictly correlational the causal direction of the reported effects remains speculative. We highly recommended that further studies on trainee development make use of control-group designs in order to achieve a greater level of experimental control. In addition, the design would benefit greatly from the inclusion of observational measures – ideally patient outcome – in addition to self-report measures. Furthermore, future research might usefully implement additional variables assessing the trainees' personal therapy and its effects in order to gain a more detailed understanding of its role in the development of successful therapists. In general, studies of this type are also prone to problems due to a non-responder bias: we cannot rule out that trainees were more likely to participate in the study (or less likely to drop out) if they felt that they had developed positively during training. Thus, negative developments could be under-represented in the final sample. Finally, since the interdependence vector of the SASB-Intrex was dropped because of low internal consistency, our discussion of the trainees' introject was limited to its affiliative dimension. A more multifaceted measure of the introject would certainly be desirable.

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Table 1
Sample Summary

	Time 1	Time 2 (after three years)
Sample size	158	65
Age	37.2 (6.9)	39.9 (6.9)
Gender (female/male)	124 (78%) / 34 (22%)	51 (80%) / 13 (20%)
Therapeutic school (PA/PT/CBT/RO)	57 (36%) / 48 (30%) / 43 (27%) / 10 (6%)	30 (47%) / 24 (37%) / 10 (16%) / 0 (0%)
Amount of training semester	Range 1 - 30 *M* = 6.9 (*SD* = 4.4)	Range 6 - 20 *M* = 10.9 (*SD* = 3.89)

Note. PA = Psychoanalytic therapy; PT = Psychodynamic therapy; CBT = Cognitive behavioral therapy; RO = Rogerian.