How do personal and professional characteristics influence the development of psychotherapists in training: Results from a longitudinal study

Oliver Evers,[1,2] Paul Schröder-Pfeifer,[1] Heidi Möller,[3] Svenja Taubner[1]

[1]Institute for Psychosocial Prevention, Heidelberg University Hospital, Heidelberg; [2]Department of Psychology, Heidelberg University, Heidelberg; [3]Department of Psychology, University of Kassel, Kassel, Germany

Correspondence: Oliver Evers, Institute for Psychosocial Prevention, Heidelberg University Hospital, Bergheimer Str. 54, D-69115 Heidelberg, Germany.
Tel.: +49.6221 56 4771.
Fax: +49.6221 56 4702.
E-mail: oliver.evers@med.uni-heidelberg.de

Citation: Evers, O., Schröder-Pfeifer, P, Möller, H., & Taubner, S. (2019). How do personal and professional characteristics influence the development of psychotherapists in training? Results from a longitudinal study. *Research in Psychotherapy: Psychopathology, Process and Outcome, 22*(3), 389-401. doi:10.4081/ ripppo.2019.424.

Acknowledgements: This study was funded by the German Research Foundation (DFG). We would like to thank all cooperating training programs and trainees for devoting their time and effort to this study. We are grateful to the contributions of Christian Curth, Birgit Proll, Wiebke Hanke, Jennifer Klasen, Daniela Michaelis, Thomas Munder, and Silke Wolter on the research team and all student assistants for making this study possible.

Contributions: OE conceptualized the specific research question; he was the main author of the introduction and discussion section; he wrote major parts of the methods and minor parts of the results section and designed the tables and conducted parts of the statistical analyses. PSF conducted the central part of the statistical analyses and was the main author of the statistical analysis and results section. HM designed the overall study and provided input for the discussion and results section and conducted corrections on said sections. ST designed and coordinated the overall study. She wrote parts of the introduction, methods, and discussion section. She provided input on the specific research question and corrected the overall paper.

Conflict of interest: The authors declare no potential conflict of interest.

Funding: German Research Foundation (DFG); Grant numbers: MO 2008/2-1; MO 2008/2-2.

Received for publication: 12 August 2019.
Revision received: 8 November 2019.
Accepted for publication: 10 November 2019.

Licensee PAGEPress, Italy
Research in Psychotherapy:
Psychopathology, Process and Outcome 2019; 22:389-401
doi:10.4081/ripppo.2019.424

ABSTRACT

This study examined the professional development of psychotherapy trainees over three years of training. The first objective was to investigate the long-term change of work involvement (Healing and Stressful Involvement) during psychotherapy training. The second objective was to investigate possible predictors of professional development from the areas of training context as well as professional and personal attributes of trainees. A total of 184 psychotherapy trainees with psychodynamic, psychoanalytic and cognitive behavioral orientation participated in the study. The development of work involvement was assessed over three years of training using the Work Involvement Scales. The set of possible predictors for work involvement included training context variables (training orientation, supervision), professional attributes of trainees (theoretical breadth, work satisfaction), and personal attributes of trainees (introject affiliation, attachment strategies, personality traits). Hierarchical Linear Modeling was conducted to investigate the change over time and the individual predictors of work involvement. Over three years of training Healing Involvement improved whereas Stressful Involvement did not change over time. Healing Involvement was mostly predicted by training context variables and professional attributes (therapeutic orientation, job satisfaction) as well as extraversion. Stressful Involvement was only predicted by personal attributes of trainees (age, neuroticism, conscientiousness, introject affiliation). The results imply two distinct sets of predictors for Healing and Stressful Involvement that will be discussed with regard to their implications for psychotherapy training and trainee selection.

Key words: Professional development; psychotherapy training; work involvement; therapist characteristics; personality.

Introduction

In spite of a accumulating evidence on how psychotherapist competence relates to treatment process and outcome (Ackerman & Hilsenroth, 2001, 2003; Wampold, Baldwin, grosse Holtforth, & Imel, 2017), little is known about how these attributes develop in training (Hill & Knox, 2013; Willutzki, Fydrich, & Strauß, 2015). In research on psychotherapy training the majority of longitudinal studies has focused on the change of model-specific technical skills (*e.g.* Barnfield, Mathieson, & Beaumont, 2007; Bennett-Levy & Beedie, 2007; Hilsenroth, Defife, Blagys, & Ack-

erman, 2006). However, these technical skills are only weakly related to outcome, according to meta-analytic results (Collyer, Eisler, & Woolgar, 2019; Webb, DeRubeis, & Barber, 2010). More promising predictors of outcome include relational skills and indicators of global professional development (Bennett-Levy, 2019; Wampold et al., 2017). One indicator for professional development that combines several professional and relational aspects of working with clients is therapist *work involvement* (Orlinsky & Rønnestad, 2005). Work involvement is a multidimensional construct that covers different aspects of professional competence and professional development, which have been shown to relate to the therapeutic alliance and outcome (Heinonen, Knekt, Jääskeläinen, & Lindfors, 2014; Heinonen et al., 2013; Heinonen, Lindfors, Laaksonen, & Knekt, 2012; Nissen-Lie, Monsen, & Rønnestad, 2010; Nissen-Lie, Monsen, Ulleberg, & Rønnestad, 2013; Nissen-Lie et al., 2017).

Despite the impact of work involvement on psychotherapeutic process and outcome, we know too little about how it changes during psychotherapy training, and what factors may contribute to its increase or decrease. Previous studies on work involvement have mainly focused on its cross-sectional development (Orlinsky & Rønnestad, 2005), included only short observation periods (Dennhag & Ybrandt, 2013) or focused on some subcomponents only (*e.g.* Dennhag & Ybrandt, 2013; Taubner, Zimmermann, Kächele, Möller, & Sell, 2013). Similarly, several studies have investigated predictors that influence the development of work involvement (Fincke, Möller, & Taubner, 2015; Messina et al., 2018; Orlinsky & Rønnestad, 2005), but they have used either cross-sectional designs or included limited sets of predictors, selectively covering either the personal or professional attributes of trainees.

The current study addresses this gap in research by investigating the development of work involvement during three years of psychotherapy training. This study also aims to investigate variables that predict trainees' professional development. Among such variables we present evidence regarding a number of variables, spanning from trainees' training context to their professional and personal attributes.

The construct of work involvement

Conceptually and operationally, work involvement can be divided into the dimensions of *Healing Involvement* (*i.e.* basic relational skills, experience of agency, affirmative relational style, constructive coping) and *Stressful Involvement* (*i.e.* frequent difficulties in practice, feelings of anxiety or boredom in working with clients, avoidant coping); these two dimensions seem to have independent associations with distinct aspects of psychotherapy practice. Healing Involvement is conceptually related to elements of the therapeutic relationship (Elliott, Bohart, Watson, & Murphy, 2018; Farber, Suzuki, & Lynch, 2018; Kolden, Wang, Austin, Chang, & Klein, 2018) and relational competence (Anderson & Hill, 2017) which contribute significantly to psychotherapy outcome (Norcross & Lambert, 2018). A subcomponent of Healing Involvement, "Basic relational skills", has also been shown to predict the working alliance in psychodynamic therapies (Heinonen et al., 2013).

The subcomponents of Stressful Involvement (*i.e.* negative personal reactions to clients and professional self-doubt) show more complex associations with psychotherapy process and outcome. In a naturalistic longitudinal study of outpatient psychotherapy, the psychotherapists' negative personal reaction to clients had a negative impact on the working alliance with their clients (Nissen-Lie et al., 2010). At the same time, professional self-doubt predicted better working alliances (Nissen-Lie et al., 2010) and superior outcomes with respect to clients' interpersonal problems (Nissen-Lie et al., 2013). The positive effect of professional self-doubt seemed to be due to an interaction with therapists' introject affiliation, given that positive outcomes were achieved by therapists with high introject affiliation and comparatively high levels of professional self-doubt (Nissen-Lie et al., 2017). These results highlight the interaction between personal characteristics (*i.e.* introject affiliation) and professional characteristics (*i.e.* professional self-doubt) in psychotherapeutic processes which have yet to be investigated in relation to psychotherapy training.

The development of work involvement

Previous studies on how therapist work involvement changes over time suggest that its two main components may develop following different trajectories. On one hand, Healing Involvement seems to increase during training. Taubner and colleagues (2013) reported an increase of this variable in 171 trainees with a medium effect size over three years of training. Dennhag and Ybrandt (2013) found a small to large increase on the different subscales of Healing Involvement in 76 trainees over half a year of training. On the other hand, Stressful Involvement does not seem to change during training. The same study by Dennhag and Ybrandt (2013) found a small decline or no change in the subscales of Stressful Involvement during training. A large cross-sectional study by Orlinsky and Rønnestad (2005) also seems to support this conclusion. In this study, more experienced therapists were found to have a higher degree of Healing Involvement while the variance in Stressful Involvement was not explained by therapists' experience.

Qualitative and quantitative empirical results point to a large variation in trainees' professional development. In their short longitudinal study on the change of work involvement, Dennhag and Ybrandt (2013) also examined if each trainee changed reliably or not. Using the Reliable Change Index (RCI; Jacobson & Truax, 1991), the authors found that the majority of trainees (65-91%) showed no

reliable change in work involvement, whereas 5-11% improved and 1-8% deteriorated (Dennhag & Ybrandt, 2013), which points to variations in trainees' development that go beyond the average effect. Likewise, qualitative studies reported that psychotherapy trainees show varying patterns of indicators of Healing Involvement (*i.e.* high levels of commitment, positive expectations) and Stressful Involvement (*i.e.* feelings of insufficiency, anxiety) in the early stages of their career development (Hill, Sullivan, Knox, & Schlosser, 2007; Kannan & Levitt, 2017; Rønnestad & Skovholt, 2013). These variations of Healing and Stressful Involvement could be part of larger positive or negative developmental cycles (Orlinsky & Rønnestad, 2005; Rønnestad, Orlinsky, Schröder, Skovholt, & Willutzki, 2019). The varying rates of development might be explained by trainee and training attributes, which we explore in the next section.

Predictors of work involvement

In previous studies, the most important predictors of work involvement were *professional attributes* and other aspects of the *training context* (Orlinsky & Rønnestad, 2005). Professional attributes were investigated in the previously cited study by Orlinsky and Rønnestad (2005). In this study, Healing Involvement was predicted by theoretical breadth (*i.e.* integrating different theoretical approaches in therapeutic practice), work satisfaction, and experience in different treatment modalities. Stressful Involvement correlated negatively with work satisfaction and work setting in independent practice. Training variables were investigated in a cross-sectional study among 90 psychotherapy trainees (Messina et al., 2018). The authors found that Healing involvement was positively correlated with the satisfaction with personal therapy (ibid.). They did not find any training variables that predicted Stressful Involvement. Even though these professional and training variables were the most important predictors, most variance in work involvement remained unexplained, which suggests that there are other important predictors of professional development.

Some further predictors that might add to the understanding on how work involvement develops stem from the area of trainees' *personal attributes*. The only personal attribute that has been investigated as a predictor of work involvement is introject affiliation (Taubner et al., 2013). The concept of introject (Benjamin, 1974) describes how one treats oneself day by day on the dimensions of love-hate (affiliation) and emancipation-control (interdependence). In their study of 171 psychotherapy trainees, Taubner and colleagues (2013) found that introject affiliation correlated positively with Healing Involvement, which points to an important connection between personal attributes and professional development of trainees. However, other personal attributes of trainees that have been linked to the quality of the therapeutic process, like attachment and personality traits (Chapman, Talbot, Tatman, & Britton, 2009; de la Fuente Zepeda & Cruz del Castillo, 2017; Finlay, 2018; Navia & Arias, 2012; Peter, Böbel, Hagl, Richter, & Kazén, 2017; Schauenburg et al., 2010), have not been investigated as predictors and deserve further investigation.

An important limitation of previous studies in this field is that professional attributes and training contexts have been mostly investigated separately from personal attributes of trainees. Empirically, previous research points to a significant relationship between these three domains in studies of psychotherapy outcome (Nissen-Lie et al., 2017), training effects (Henry, Schacht, Strupp, Butler, & Binder, 1993) and trainee attitudes (Taubner, Munder, Möller, Hanke, & Klasen, 2014). One study that included predictors of Stressful Involvement from several different domains (*i.e.* psychotherapy process, therapist experience, work context) found that only therapist-related process variables and not length of work experience or context predicted Stressful Involvement (Zeeck et al., 2012). Even though this study did not include personal attributes *per se*, it shows that therapist variables might explain more variance in work involvement than professional context variables. Thus, it is important to include variables from the professional and training domain as well as personal attributes in one prediction model to evaluate their relative importance.

The current study aims to investigate the development of work involvement over three years of psychotherapy training. In contrast to previous research, this study includes a longitudinal data set and compares the effects of three relevant groups of predictors (*i.e.* training context, professional attributes and personal attributes of trainees). Since there is little knowledge on long-term changes during training or the relative importance of predictors of work involvement, the study addresses two exploratory questions: i) To what extend do Healing and Stressful Involvement change during three years of psychotherapy training? ii) Which aspects of the training context, professional attributes or personal attributes predict the levels of Healing and Stressful Involvement?

Materials and Methods

Setting

The study was conducted in a German training setting. German psychotherapy training is organized as post-graduate specialty training in state-licensed training programs. The entry level requirement for adult psychotherapy training is a 5-year academic degree in clinical psychology. The most common orientations in licensed training programs are psychodynamic, psychoanalytic and cognitive-behavioral. A limited number of institutes also offer training in humanistic or systemic therapy. Programs consist of 4200h of training over three to five years that include didactic instruction, personal therapy, clinical

internships, and outpatient treatments under supervision. More information on German training and practice can be found in Strauß (2009).

Procedure and recruitment

The current study followed a naturalistic longitudinal design. At the beginning of the study a selection of 29 training programs in adult psychotherapy training were contacted for recruitment, balanced by region and therapeutic orientation. A total of 17 training programs (59%) agreed to cooperate, including 2 cognitive-behavioral (CBT) programs, 2 psychoanalytic (PA) and 1 psychodynamic (PD) programs as well as 8 programs offering PA and PD training and 4 training centers that offered several programs in CBT or PD/PA. Trainees within the programs were recruited at different stages of their training in order to cover the whole duration of German psychotherapy training. The pre-post measurements were conducted at the beginning of the study (T1) and after three years (T2). The study was approved by the ethics committee of the University of Kassel, Germany.

Sample

The sample included 184 trainees at T1 and 130 Trainees at T2 (29.3% dropout). Table 1 shows the sample characteristics according to orientation. Trainees in CBT training make up 34.8% (n=64) of the sample, 47.3% (n=87) were in psychodynamic training, and 17.9% (n=33) of trainees were in psychoanalytic training. The trainees had completed an average of 2.3 semesters (SD=1.82; range=1-12). The mean age was 31.42 years (SD=6.67; range=24-55), 84.2% were female.

Trainees of different orientations differed significantly in age (F(2, 181)=5.07; P=.007) and semester (F(2, 181)=13.40; P<.001). CBT candidates were significantly younger than PA (Δ=4.10; P=.01) and PD trainees (Δ=2.60; P=.04). PA trainees in the sample were in a higher semester than CBT (Δ=1.71; P<.001) and PD trainees (Δ=1.69; P<.001). Study dropouts differed significantly by therapy orientation (χ^2 (2)=12.07; P=.002). CBT candidates were more likely to drop out (z=3.5), PD candidates dropped out less frequently (z=2.4). Additionally, dropouts differed in openness to experience (Δ=1.73; T(182)=1.98; P=.05), with dropouts being less open to experience. There was no difference on any other outcome or predictor variable.

Measures

Work Involvement Scales (WIS; Orlinsky & Rønnestad, 2005)

The professional development of trainees was assessed via the WIS. The WIS is a self-report questionnaire to assess professional development in psychotherapists. It contains 52 items that form a total of 10 subscales. These subscales reflect therapeutic skills, relational agency, relational manner, feelings in therapeutic sessions, difficulties in practice, and coping strategies. The scales form the two superordinate constructs "Healing Involvement" and "Stressful Involvement". In the current study, both higher-order scales had acceptable to good internal consistencies (α=.76 - .82).

Therapeutic Attitudes Scales (TASC-2) – trainee version (Sandell, Taubner, Rapp, Visbeck, & Kächele, 2008)

The TASC-2 was used to assess training context variables and professional attributes. It is a self-report instrument that assesses therapeutic attitudes such as basic assumptions and beliefs about psychotherapy (Sandell et al., 2004). The trainee version was adapted to assess variables relevant for the therapy training setting (Sandell et al., 2008). Among these variables, training context, theoretical breadth and satisfaction with supervision were assessed for this study. Trainees reported their satisfaction with each aspect of the training on a 5-point scale. Additionally, trainees were offered a list of 8 different approaches and used a 5-point scale to indicate the extent to which they integrated these approaches in their personal orientation. A sum score for theoretical breadth was formed by counting the number of orientations that were integrated to "some degree" or higher (scores 3-5).

Questions on Life Satisfaction (FLZM; Henrich & Herschbach, 2000)

The professional attribute work satisfaction was assessed with the FLZ^M questionnaire. The FLZ^M assesses the satisfaction with eight areas of life using two items

Table 1. Demographic data by therapy orientation.

	CBT (n=64)	PD (n=87)	PA (n=33)	Total (n=184)	Differences by orientation
Age, mean (SD)	29.49 (5.29)	31.83 (7.14)	33.79 (6.98)	31.42 (6.67)	F(2, 181)=5.07; P=.007
Gender (female), %	84.4	85.1	81.8	84.2	χ^2 (2)=.19; P=.91
Semester, mean (SD)	2.00 (1.71)	1.98 (1.35)	3.49 (2.32)	2.30 (1.82)	F(2, 181)=13.40; P<.001

CBT = cognitive behavioral therapy ; PD = psychodynamic therapy; PA = psychoanalytic therapy.

per area. One item is used to assess the subjective importance of each area on a 5-point scale, a second item is used to report the satisfaction with that area of life on a 4-point scale. Importance scores are used to create an index of "weighted satisfaction" for each area of life, ranging from -12 to +20. The internal consistency of the FLZ^{M} is high (α=.82 - .89; Henrich & Herschbach, 2000).

NEO Five Factor Inventory (NEO-FFI; Borkenau & Ostendorf, 1993; Costa & McCrae, 1992)

The NEO-FFI was used to assess personal attributes of trainees, namely personality traits. The instrument is a multidimensional personality inventory. It contains 60 items that are being rated on a 5-point scale. These items form 5 scales with 12 items each: "neuroticism", "extraversion", "openness to experience", "agreeableness", and "conscientiousness". The internal consistency of the German translation ranged from α=.63 for openness to α=.83 for neuroticism and the original factor structure could be replicated (Körner, Geyer, & Brähler, 2002).

Intrex Questionnaire short form (Benjamin, 1995)

The personal attribute introject affiliation was assessed with the short form of the Intrex questionnaire. It is a self-report measure based on the SASB cluster model (Benjamin, Rothweiler, & Critchfield, 2006) that proposes two cluster surfaces to classify interpersonal behavior and one introject surface that reflects internal actions directed towards oneself (introjection). Introjection is being classified on an "affiliation" axis (self-love *vs*. self-attack) and an "interdependence" axis (self-emancipation vs. self-control) which can be combined to form eight clusters. Participants are being asked to rate their self-directed behaviors during their best times and during their worst times (introject at best; introject at worst). Each cluster is represented by one item. The original item scaling (0-100) has been modified to range from 0-6 and the clusters were aggregated into vector scores, following the recommendations of Pincus, Newes, Dickinson, and Ruiz (1998). Cronbach's alphas in this study were acceptable for introject affiliation at best (α=.72) and introject affiliation at worst (α=.79).

Experiences in Close Relationships Revised (ECR-RD; Ehrenthal, Dinger, Lamla, Funken, & Schauenburg, 2009)

The ECR-RD was used to assess personal attributes of trainees. It is a self-report questionnaire on attachment strategies. It contains 36 items that are divided into the scales "attachment anxiety" and "attachment avoidance". It has shown a good construct validity and a very good internal consistency (α=.91 - .92; Ehrenthal et al., 2009).

Statistical analysis

Statistical analyses were conducted utilizing R (Version 3.6.1) and SPSS for Windows (Version 25). The data contained 4.27% missing values. Visual inspection of patternplots as well as sequential t-tests between the group of participants with missing values and without did not suggest systematic missing patterns. Accordingly, missing data was imputed assuming MAR using multiple imputation by chained equations, implemented in the MICE package.

Two multilevel models were computed predicting Healing Involvement and Stressful Involvement at T2. Time was added as a level 1 fixed effect while predictors of the training context (orientation, satisfaction with supervision), professional attributes (work satisfaction, theoretical breadth) and personal attributes of the participants (personality traits, introject affiliation at best and worst, attachment anxiety and avoidance) were added to the model at level 2. Additionally, sex, age, and training semester were controlled for as covariates. Restricted Maximum Likelihood was utilized as estimator in all models. Confidence intervals and significance was computed using Kenward-Roger approximation (Kenward & Roger, 1997). Visual inspection of QQ-plots and plots of the residuals vs. the fitted data did not hint at significant non-normality or heteroscedasticity. To examine reliable change in work involvement from T1 to T2, Reliable Change Indices (RCI; Jacobson & Truax, 1991) were computed.

Results

Descriptive data

Descriptive data on predictor and criterion variables are listed in Tables 1 and 2. Table 3 shows the correlations between variables used in the models. Healing Involvement at T1 correlates positively with extraversion (r=.29; P<.001; two-tailed), conscientiousness (r=.20; P=.006), introject affiliation at best (r=.31; P<.001) and introject affiliation at worst (r=.31; P<.001) and negatively with neuroticism (r= -.26; P<.001), as well as attachment anxiety (r= -.20; P=.006). Healing Involvement at T2 only shows a small to moderate positive correlation with work satisfaction (r=.27; P<.001). Stressful Involvement at T1 is associated with neuroticism (r=.45; P<.001), agreeableness (r=.26; P<.001) and attachment anxiety (r=.23; P=.002) while it shows negative correlations with age (r= -.24; P=.001), conscientiousness (r= -.24; P=.001), introject affiliation at best (r= -.31; P<.001) and at worst (r= -.32; P<.001). Stressful Involvement at T2 relates to neuroticism (r=.25; P=.001), introject affiliation at best (r=.21; P=.004) and attachment anxiety (r=.24; P=.001) and correlates negatively with conscientiousness (r= -.25; P=.001). Correlations between pre and post measurements are small to moderate, being at r=.26 (P<.001) for Stressful Involvement and r=.29 for Healing Involvement. At single time points the two constructs of Healing and Stressful Involvement show a small (T2: r= -.23; P=.002) to moderate (T1: r= -.35; P<.001) negative correlation.

Change and predictors of work involvement

Table 4 shows parameter estimates for both models. Healing Involvement increases significantly over three years of training [β=1.09; 95%CI (0.76-1.42); P<.001; *d*=.56; Figure 1]. None of the covariates have a significant effect on Healing Involvement. Among the training context variables, there is a significant main effect of therapeutic orientation as well as an orientation by time interaction. PA orientation predicted Healing Involvement positively (β=0.49; 95% CI (0.00-0.98); P<.05). CBT trainees show a larger increase over time than PA (β= -0.67; 95% CI (-1.23 – -0.11); P=.021) and PD trainees (β= -0.44; 95% CI(-0.87 – -0.01); p=.047). Among professional attributes, work satisfaction has a positive effect on Healing Involvement (β=0.02; 95% CI(0.00-0.04); P=.020). Among personal attributes, extraversion is associated with higher levels of Healing Involvement (β=0.03; 95% CI(0.00-0.06); P=.040).

Stressful Involvement does not change significantly over time (β= -0.30; 95% CI(-0.78-0,18); P=.22; *d*=.04). With regard to the covariates, age has a significant effect with older participants scoring lower on Stressful Involvement (β= -0.04; 95% CI(-0.06 – -0.01); P=.008). None of the training variables or professional attributes has a significant effect on Stressful Involvement. Among personal attributes of the participants, neuroticism is associated with more Stressful Involvement (β=0.05; 95% CI(0.03-0.08); P<.001) while conscientiousness (β= -0.04; 95% CI(-0.07 – 0.00); P=.040) and introject affiliation at best (β= -0.01; 95% CI(-0.02-0.00); P=.022) are associated with lower levels of Stressful Involvement.

According to the Reliable Change Index, 25 participants (19.2%) showed reliable improvement in Healing Involvement while 105 (80.8%) participants showed no reliable change. Applying the cut-off value for Healing Involvement (Orlinsky & Rønnestad, 2005), 86 (66.2%) participants displayed a high Healing Involvement at T1. This increased to 113 participants (86.9%) at T2. The RCI for Stressful Involvement indicates a reliable improvement for 13 participants (10.0%), no reliable change for 100 (76.9%) participants and a reliable deterioration for 17 participants (13.1%). At T1, 51 participants (39.2%) were above the cut-off for heightened stressful involvement, which marginally increased to 54 participants (41.5%) at T2.

Discussion

This study found a positive development of Healing Involvement and a stagnation of Stressful Involvement over three years of psychotherapy training. While the overall sample increased in Healing Involvement with a medium effect size, only one fifths of trainees showed a reliable improvement and the rest of the sample did not improve reliably. After three years of training the majority of trainees were above the cutoff for high Healing Involvement. Stressful Involvement did not change in the overall sample. While the majority of trainees did not change reliably on Stressful Involvement, a small number of trainees showed a reliable improvement or a reliable deterioration. More than a third of trainees were above the cutoff for high Stressful Involvement after three years of training (41.5%).

Differences between trainees in the development of work involvement could be explained with predictors from three domains (training context, personal attributes,

Table 2. Descriptive data on predictor and criterion variables.

	M	*SD*	*Min*	*Max*
Training context				
Satisfaction with supervision (T2)	4.05	0.86	1	5
Professional attributes				
Theoretical breadth (T1)	4.75	1.49	0	8
Work satisfaction (T2)	7.04	6.54	-12.00	20.00
Personal attributes				
Neuroticism (T1)	20.52	7.59	3	41
Extraversion (T1)	30.61	5.31	17	44
Openness to experience (T1)	36.03	5.43	16	47
Agreeableness (T1)	35.37	5.07	19	48
Conscentiousness (T1)	31.55	5.64	16	43
Introject affiliation at best (T1)	71.08	20.00	-3.30	100.00
Introject affiliation at worst (T1)	23.22	39.26	-70.50	96.30
Attachment anxiety (T1)	2.51	1.02	1.00	5.11
Attachment avoidance (T1)	2.19	0.82	1.00	6.11
Work involvement				
Healing Involvement (T1)	10.34	1.16	7.08	12.88
Healing Involvement (T2)	11.08	1.04	7.44	13.96
Stressful Involvement (T1)	4.74	1.50	1.45	9.23
Stressful Involvement (T2)	4.82	1.55	0.95	10.77

Table 3. Correlations among predictor and criterion variables.

	Gender[1]	Age	Semester	CBT[1]	PD[1]	PA[1]	Satis. SV	Satis. Work	Th. Breadth	Neurotic.	Extravers.	Openness	Agree.	Conscien.	Introject best	Introject worst	Attach. anxiety	Attach. avoid.	Healing I. T1	Healing I. T2	Stressful I. T1	Stressful I. T2
Gender[1]	1																					
Age	***.27***	1																				
Semester	.08	**.20**	1																			
CBT[2]	.00	**-.22**	-.13	1																		
PD[2]	-.02	.09	*-.15*	-	1																	
PA[2]	.03	*.15*	***.36***	-	-	1																
Satis. SV	.04	.04	.09	-.01	.06	-.07	1															
Satis. Work	-.10	.00	-.05	-.01	.03	.14	.14	1														
Th. Breadth	.03	.09	.02	-.06	-.02	.11	.01	-.01	1													
Neurotic.	.07	-.14	-.03	-.08	.11	-.04	-.06	-.05	-.05	1												
Extravers.	**-.22**	*-.19*	.02	.10	-.10	.01	.08	.05	.07	***-.38***	1											
Openness	-.09	-.04	.05	*-.16*	.11	.05	.05	.06	.08	-.03	**.24**	1										
Agree.	*-.17*	-.01	-.01	-.02	.04	-.03	-.06	-.04	-.04	**-.21**	**.25**	.13	1									
Conscien.	**-.25**	-.01	.06	.08	*-.17*	.12	.05	*.15*	-.01	***-.28***	*.17*	.06	**.22**	1								
Introject best	*-.15*	.03	.12	.12	-.10	-.03	.04	*.17*	.02	***-.29***	**.23**	*.18*	.14	**.24**	1							
Introject worst	-.12	.13	.01	.04	-.10	.09	.01	.13	-.01	***-.56***	**.24**	.00	*.17*	**.29**	***.35***	1						
Attach. anxiety	.10	-.08	-.09	-.12	*.18*	-.09	-.13	-.01	.07	***.49***	*-.17*	-.01	*-.16*	**-.24**	***-.35***	***-.42***	1					
Attach. avoid.	.12	*.16*	-.01	*-.18*	.08	.12	*-.16*	-.04	.03	*.15*	***-.29***	-.10	*-.18*	**-.24**	***-.29***	**-.22**	***.46***	1				
Healing I. T1	-.13	*.18*	*.18*	*-.15*	.03	*.15*	-.09	.08	.11	***-.26***	***.29***	*.17*	.13	**.20**	***.31***	***.31***	**-.20**	*-.16*	1			
Healing I. T2	-.01	.04	.09	.06	-.07	.01	.12	**.27**	-.04	-.07	.08	-.02	-.05	.13	.13	.04	-.07	-.07	***.29***	1		
Stressful I. T1	-.01	**-.24**	-.06	-.02	.04	-.03	-.09	-.07	-.06	***.45***	-.11	-.08	***-.26***	**-.24**	***-.31***	***-.32***	**.23**	.11	***-.35***	-.12	1	
Stressful I. T2	.01	*-.16*	-.13	*-.16*	*.17*	-.02	-.13	-.14	-.01	**.25**	-.05	.07	-.06	**-.25**	**-.21**	*-.17*	**.24**	.12	-.13	**-.23**	***.26***	1

Italics= P<.05, two-tailed. **bold**=P<.01, two-tailed. ***bold & italics*** =P<.001, two-tailed. [1]female is reference category. [2]Orientation is dummy-coded CBT=Cognitive-behavioral, PD=psychodynamic, PA=psychoanalytic, Satis.=Satisfaction, SV=Supervision, Th.=Theoretical, Neurotic=Neuroticism, Extravers.=Extraversion, Agree.=Agreeableness, Conscien.=Conscientiousness, Attach.=Attachment, avoid.=avoidance, I.=Involvement

and professional attributes). This study found different sets of predictors for Healing and Stressful Involvement. Healing Involvement was largely predicted by training context and professional attributes (orientation, work satisfaction) and only one significant predictor from the domain of personal attributes (extraversion). Stressful Involvement, on the other hand, was exclusively predicted by personal attributes of trainees (neuroticism, conscientiousness, introject affiliation) and one sociodemographic characteristic (age). These results highlight that Healing and Stressful Involvement develop differently in psychotherapy training and that there might be distinct variables of influence involved in this development.

Our finding that Healing Involvement increased over three years of training is consistent with previous cross-sectional and short longitudinal studies (Dennhag & Ybrandt, 2013; Orlinsky & Rønnestad, 2005; Taubner et al., 2013); in addition to that no trainees deteriorated reliably on Healing Involvement (which partially differs from the findings by Dennhag & Ybrandt, 2013). This means that no trainee showed a relevant decrease in the amount of self-rated positive relational behaviors with clients and constructive coping strategies in the face of difficulties. This could be due to the longer observation period in the current study, as deteriorations over a short time span might represent developmental crises that get resolved during longer training processes (Rønnestad et al., 2019; Rønnestad & Skovholt, 2013). This positive development was not reduced by the high number of trainees who showed no reliable change because the majority of trainees with lower initial levels of Healing Involvement appeared to improve over training, while a large percentage of the other trainees was already above the cutoff for high Healing Involvement at the beginning of the study.

A finding that is somewhat worrying is that the high amount of Stressful Involvement in trainees did not decrease over three years of training. These results confirm trends shown in the literature (Dennhag & Ybrandt, 2013),

Table 4. Multilevel models predicting work involvement.

Predictor	Healing Involvement B	95% CI	P	Stressful Involvement B	95% CI	P
Intercept	8.22	6.14 – 10.31	<.001	7.69	5.04 – 10.33	<.001
Time	1.09	0.76 – 1.42	<.001	-0.30	-0.78 – 0.18	.22
Covariate						
Gender (Male)	-0.07	-0.45 – 0.30	.70	-0.08	-0.55 – 0.40	.76
Age	0.02	-0.00 – 0.04	.09	-0.04	-0.06 – -0.01	.008
Semester	0.06	-0.02 – 0.13	.14	-0.03	-0.13 – 0.06	.49
Training Context						
Orientation						
PD[1]	0.35	-0.02 – 0.72	.06	0.04	-0.45 – 0.53	.88
PA[1]	0.49	0.00 – 0.98	.05	0.09	-0.57 – 0.74	.80
Supervision (Satisfaction)	-0.06	-0.20 – 0.08	.39	-0.13	-0.30 – 0.04	.14
Professional attributes						
Work Satisfaction	0.02	0.00 – 0.04	.02	-0.01	-0.04 – 0.01	.29
Theoretical Breadth	0.01	-0.08 – 0.09	.90	-0.02	-0.13 – 0.09	.71
Personal attributes						
Personality traits						
Neuroticism	0.00	-0.02 – 0.02	.83	0.05	0.03 – 0.08	<.001
Extraversion	0.03	0.00 – 0.06	.04	0.02	-0.01 – 0.06	.20
Openness to experience	0.00	-0.02 – 0.03	.97	0.00	-0.03 – 0.04	.79
Agreeableness	-0.01	-0.04 – 0.02	.45	-0.03	-0.07 – 0.00	.07
Conscentiousness	0.02	-0.01 – 0.04	.26	-0.04	-0.07 – 0.00	.04
Introject affiliation						
At best	0.01	0.00 – 0.01	.08	-0.01	-0.02 – 0.00	.02
At worst	0.00	0.00 – 0.00	.62	0.00	0.00 – 0.01	.87
Attachment						
Anxiety	-0.01	-0.17 – 0.15	.89	-0.01	-0.21 – 0.19	.94
Avoidance	-0.06	-0.24 – 0.13	.51	0.03	-0.21 – 0.26	.84
Interactions						
Time x PD[1]	-0.44	-0.87 – -0.01	.05	0.52	0.11 – 1.15	.11
Time x PA[1]	-0.67	-1.32 – -0.11	.02	0.35	-0.47 – 1.17	.41
Explained Variance	$R^2 = 0.559$; $\Omega_0^2 = 0.518$			$R^2 = 0.383$; $\Omega_0^2 = 0.366$		

PD, psychodynamic; PA, psychoanalytic. [1]Reference category: Cognitive behavioral.

and further highlight that these negative trends persist over the whole course of psychotherapy training. This persistence in high Stressful Involvement could be explained by predominant feelings of anxiety, insufficiency, and self-criticism among psychotherapy trainees that have been shown in qualitative studies (Hill et al., 2007; Kannan & Levitt, 2017; Rønnestad & Skovholt, 2013) as well as financial pressures that have been reported in representative surveys of German trainees (Klein-Schmeink, 2017; Strauß et al., 2009). Taken together, these challenging aspects of training might carry a risk for continued negative developmental processes (Rønnestad et al., 2019) among a larger number of trainees than previously thought.

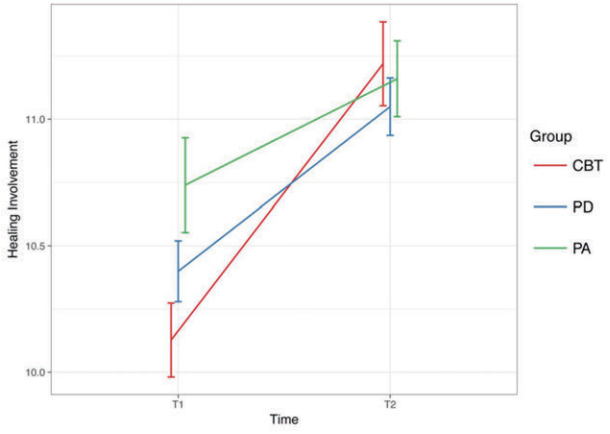
Among the predictors of work involvement, trainee personality played an unexpectedly large role, especially with regard to Stressful Involvement. This finding is noteworthy since trainee personality has received comparatively little attention in the research of therapist characteristics (cf. Hill & Castonguay, 2017). While there is no study on the direct effects of personality on work involvement, our finding that extraversion predicted Healing involvement while neuroticism predicted Stressful Involvement goes in line with studies in the general population. Extraversion encompasses attributes such as enthusiasm, optimism, and confidence (Goldberg, 1990) and predicted positive affect and subjective well-being in population studies (DeNeve & Cooper, 1998; Hayes & Joseph, 2003). Meanwhile, neuroticism is defined as a general disposition for more anxiousness and negativity (Goldberg, 1990) and is associated with a higher negative affect, lower life satisfaction, and less subjective well-being in the general population (DeNeve & Cooper, 1998; Hayes & Joseph, 2003). Thus, these personality attributes might be parts of larger cycles of professional growth and depletion by fostering positive or negative attitudes towards professional development (Orlinsky & Rønnestad, 2005). Lastly, in our study conscientiousness had a negative association with Stressful Involvement and can be seen as a protective factor because it might prevent avoidant coping strategies that are associated with Stressful Involvement such as passively waiting for improvement (ibid.).

In the realm of professional and training attributes that predict work involvement, trainee orientation had a substantial effect that has not previously been reported. At the beginning of training, CBT-trainees were lower in Healing Involvement than psychoanalytic and psychodynamic trainees. These differences were compensated during the training (Figure 1). This finding may be the result of differences in personal motives for choosing either type of training (Strauß & Kohl, 2009b). Previous studies comparing the two groups have found a stronger focus on the therapeutic relationship among psychodynamically oriented trainees (Nikendei et al., 2018) as well as a higher interest in the motives for interpersonal behavior (Taubner et al., 2014), which could be associated with interpersonal aspects of Healing Involvement.

A number of variables that were associated with work involvement in previous studies or could be expected to predict professional development had no significant effect in this investigation. Cross-sectional results that highlighted the importance of theoretical breadth (Orlinsky & Rønnestad, 2005) could not be replicated in our study, which might be due to the composition of the sample. While this study focused on trainees, Orlinsky and Rønnestad (2005) included therapists from all career stages. Thus, the positive effect of theoretical breadth might come into play during later stages of professional development. Furthermore, attachment strategies had no influence on work involvement. These results are contrary to studies of therapist characteristics that imply a significant role of therapist attachment in the therapy process (Strauß & Petrowski, 2017). Empirically, this might be explained by the significant correlation between personality traits and attachment strategies that has also been shown in other investigations (Noftle & Shaver, 2006). Among the two interrelated constructs, personality traits might have a more significant influence on work involvement than attachment, even though our results do not justify final conclusions about the shared variance of both constructs. Additionally, these results highlight that significant therapist characteristics for treatment process and outcome are not necessarily good predictors of professional development, and *vice-versa.*

Implications for training

Our findings show significant differences regarding the amount of change on Healing and Stressful Involvement in training that have implications for the design of training programs. The results that Healing Involvement improved in this study while Stressful Involvement did not change significantly, suggest that psychotherapy train-



CBT = cognitive behavioral; PD = psychodynamic; PA = psychoanalytic.

Figure 1. Pre and Post change of Healing Involvement according to therapeutic orientation.

ings similar to the ones investigated in this paper might be more effective in supporting the development of resources than in overcoming problems and challenges in the therapeutic process. Modularized psychotherapy training programs that have been investigated in this study might not be sufficient for addressing and reflecting on challenges in psychotherapeutic work that stretch over the whole duration of training (c.f. Rønnestad et al., 2019). Addressing these challenges would require organizing psychotherapy training by developmental tasks and not by content-based modules (Evers & Taubner, in press). This could include tailored and adaptive training, a stronger connection between didactic and practical elements of training (*e.g.* Safran & Muran, 2003) as well as mentoring structures that stretch across the whole training process (Bowers, Gauron, & Mines, 1984; Vakoch & Strupp, 2000) and use of methods like feedback and deliberate practice (Caspar, 2017; Evers & Taubner, 2018; Rousmaniere, 2017). Finally, the strong connection between personal attributes of trainees and Stressful Involvement, might necessitate training methods that build bridges between personal and professional development such as self-practice/self-reflection (Bennett-Levy, 2019).

The set of personal predictors for Healing and Stressful Involvement might contain indicators for trainee selection, especially with regard to personality traits. Previous researchers have pointed towards the need for evidence-based trainee selection (Hill & Knox, 2013). However, using the personality traits identified in this study for trainee selection would pose two major challenges. First, there is an ongoing debate about measuring invariance of personality assessment questionnaires in high stakes situations (Ion & Iliescu, 2017) and recommendations from organizational psychology caution against the use of public available personality scales in personnel selection (Morgeson et al., 2007). Second, the personality traits predicting professional development found in this study do not correspond to predictors of positive psychotherapy process and outcome (Chapman et al., 2009; de la Fuente Zepeda & Cruz del Castillo, 2017; Finlay, 2018; Peter et al., 2017), which could result in selection processes that promote professional development while having negative effects on psychotherapy outcome. Thus, our study points towards the usefulness of including personal attributes in future trainee selection processes, if measurement limitations can be overcome and if the selection criteria keep both the trainees' development and the treatment process in mind.

Limitations

Similar to most studies on psychotherapy training, this study was conducted in a naturalistic setting, which limits the extent to which we can draw firm conclusions on causal effects. Moreover, only self-report measures of professional were used. A further methodological limitation could be the dropout rate of about 30%. Yet, no substantial differences between dropouts and completers were found on the predictor and outcome variables and the final sample size and observation period are still significantly greater than in most training studies (Hill & Knox, 2013). Regarding generalizability of the findings, the German training setting in which this study was conducted shows a decent overlap with many European countries (Strauß & Kohl, 2009a) but differs significantly from graduate programs in university settings (see method section for details).

Conclusions

The current study showed a high level and an overall increase in Healing Involvement over three years of training, while Stressful Involvement stagnated at a high level. Furthermore, we found two sets of predictors for work involvement. Healing Involvement was mainly responsive to training variables and professional attributes, while Stressful Involvement was influenced by personal attributes only. These findings suggest that new training approaches should address more effectively trainees' professional challenges, perhaps by starting from the variables we found to predict work involvement in the aim of tailoring training programs and trainee selection.

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