General Discussion
The general aim of the current thesis was to gain insight in factors that predict depressive symptom change in mindfulness-based treatments (i.e., MBCT/MBSR) and Cognitive Behavioral Therapy (CBT) for improving affect. It was shown that MBCT and CBT for depression are based on similar cognitive theories explaining depression and that the treatments mainly consist of distinct treatment techniques. We argued that these techniques may set overlapping and distinct change mechanisms in motion.

Our empirical findings supported the assumption that mindfulness is a mechanism of change in mindfulness-based treatments as we showed that daily changes in mindfulness preceded daily changes in affect during mindfulness-based treatment. Yet, day-to-day changes in mindfulness and repetitive thinking did not precede changes in depressive symptoms in all individuals. In addition to that, daily changes in mindfulness, repetitive thinking, and depressive symptoms seemed to occur together.

In two other studies, we showed that patients’ perceptions of treatment predict treatment outcomes in CBT and MBCT for diabetic patients with depressive symptoms. Patients’ expectations of treatment outcomes predicted post-treatment depressive symptom change and treatment completion in both CBT and MBCT. Whereas patients’ outcome expectations seemed to be important in both CBT and MBCT, the predictive value of the therapeutic alliance seems to depend on the type of treatment. It was found that patients’ ratings of the therapeutic alliance were only predictive of outcomes in CBT, but not in MBCT.

The remaining part of this general discussion includes the clinical implications of the findings, methodological considerations concerning the studies included in the thesis, a discussion of the studies in a broader perspective, and suggestions for future research.

**Clinical implications**

For trainers of mindfulness-based treatments, it is relevant to know that emphasis on practicing mindfulness skills is not superfluous, as such skills indeed seem beneficial for one’s daily wellbeing. Mindfulness trainers commonly stress the importance of daily mindfulness practice. Our results strengthen this recommendation as we showed that performing at least one mindfulness exercise per day can result in daily increases in mindfulness. As has been observed in clinical practice, increasing one’s capacity for mindfulness benefits many individuals, yet, not everyone. This is evidenced by the found individual differences in the strength and presence of the lagged association between daily mindfulness and affect the day after. Future research should show whether mindfulness predicts mood...
of these individuals within the day or whether daily wellbeing of these individuals is more likely to be improved through enhancing other skills in different forms of treatment.

Besides training skills in treatment, it also seems important to take patients’ outcome expectations into consideration in both MBCT and CBT, as these beliefs are predictive of treatment outcomes. Before offering psychological treatment, therapists could gather information on patients’ expectations for improvement in response to treatment. For example, when both CBT and MBCT are available as treatments for depressive symptoms, the choice for either one of them may be partially based on patients’ expectations of the benefits of the treatments. As patients might benefit more from the treatment of which they expect the most positive outcomes, it also seems important for insurance companies to take this into account. Reimbursing only one type of evidence-based treatment for a specific disorder might not be the most cost-effective strategy since psychological treatments can be more effective if patients have a choice between types of treatment.

In addition to considering patients’ expectations when deciding on the type of treatment, therapists could focus on optimizing patients’ outcome expectations. It has been suggested that patients’ expectations can be improved by providing an insightful treatment rationale that helps matching patients’ expectations to the treatment goals (Shapiro et al., 1976). Others found that more positive outcome expectations and more beneficial outcomes were fostered when motivational interviewing was included as a prelude to CBT (Westra, Arkowitz, & Dozois, 2009). Yet, it should be noted that trying to modify patients’ outcomes expectations may not be useful in all cases. If patients’ expectations are a reflection of their personality, for example of their levels of optimism, then these beliefs might be difficult to change. Also if patients’ expectations are low because they did not respond to previous psychological treatment, optimizing patients’ outcome expectations might not result in better treatment outcomes, but rather lead to disappointment as patients’ low expectations may be realistic. Furthermore, optimizing patients’ expectations might not correspond with the principle of mindfulness-based treatments that one needs to learn by experiencing instead of understanding why treatment might be beneficial (Segal et al., 2002). It is therefore suggested to take the reasons for low outcome expectations and the type of treatment into account when aiming to improve patients’ outcome expectations.

In CBT, therapists could not only pay attention to patients’ expectations, but also to the extent to which patients agree on the tasks and goals
GENERAL DISCUSSION

of CBT as well as how they perceive the therapeutic bond. This seems relevant as we showed that these aspects of the therapeutic alliance are predictive of depressive symptom improvement in CBT. Shared decision making on the treatment tasks in CBT seems important so that patients do agree on the treatment tasks. Yet, future research is needed on which specific therapist behaviors enhance the different aspects of the therapeutic alliance in CBT. In MBCT, it seems less important to focus on the therapeutic bond and mutual agreement on the tasks as well as the goals of MBCT as we did not find an association between patients’ ratings of the therapeutic alliance and treatment outcomes.

Methodological considerations
Below, I will discuss several issues concerning the design and sample size of the studies included in the thesis. In chapter 4 and 5, we adopted a replicated-single subject design and an intensive longitudinal design including daily observations within individuals over the course of treatment. With these unique designs and accompanying analyses, we were able to study the temporal order of within-person change mechanisms during mindfulness-based treatment.

Apart from the strengths of these designs, the lack of a control condition in these studies precluded the investigation of the role of the mindfulness-based treatments in the studied change mechanisms. Although the absence of a control condition does not matter concerning the conclusions on the order of change, we are not sure whether the observed temporal associations are due to the mindfulness-based treatment or whether these also occur in daily life of individuals who do not receive treatment.

Another limitation of the design of the studies described in chapter 4 and 5 is that we did not study whether the within-person associations changed over time. For example, it could be that depressive feelings are followed by ruminative responses at the start of the mindfulness training, but that this association diminishes as participants learn to be more mindful at the end of the mindfulness-based treatment. The time-series of the participants did not include enough measurements to test this hypothesis. More observations (e.g., more within day assessments) would have allowed us to compare within-person associations early in treatment with within-person associations late in treatment or after treatment. Future studies might gain insight in if and how within-person associations change due to psychological treatment.

In chapter 6 and 7, we did not study within-subject variation but
variation between-subjects in their outcome expectations and evaluations of the therapeutic alliance in CBT and MBCT. A strength of these studies is that they were embedded in a randomized controlled trial (RCT) on the efficacy of CBT and MBCT. The randomization of patients to treatment condition allowed us to study differences between CBT and MBCT in predictors of treatment outcomes in an experimental way. Yet, a limitation of nesting the studies within an efficacy trial is that only the type of treatment and not the variables of interest were experimentally manipulated. Because of that, we do not know if patients’ expectations, the therapeutic alliance, and homework compliance are causally related to treatment outcomes. For example, to examine the effect of homework practice on treatment effectiveness, it would have been better to randomize patients into groups with varying amounts of homework. However, variables such as patients’ expectations and the therapeutic alliance are difficult to manipulate in any study design.

Apart from the study designs, it should also be noted that the studies described in chapter 6 and 7 were underpowered to find associations with a small to moderate effect size. Furthermore, the small sample size did not allow testing some of our hypotheses. For example, we aimed to examine whether treatment outcomes could be explained by an interaction between the therapeutic alliance and the extent to which therapists adhered to a treatment protocol. Also, we aimed to examine whether homework compliance mediates the association between patients’ expectations and treatment outcomes. Unfortunately, the small sample precluded the investigation of these research questions.

A broader perspective: the common factors versus specific techniques argument

The studies in the current thesis contribute to the long lasting debate in psychotherapy research on the role of specific treatment techniques versus common (or non-specific) factors in predicting therapeutic change (see. e.g., Barber, 2009; DeRubeis et al., 2005). According to proponents of common factors, treatment effects are caused by factors that are shared by all treatments, such as patients’ outcome expectations, the therapeutic relationship, or therapists’ warmth (DeRubeis et al., 2005). Below, I will argue that showing that common factors predict treatment outcomes does not imply that treatment techniques do not affect treatment outcomes.

The beliefs on the importance of common factors are mainly based on two main findings. The first finding is that distinct psychological treatments using different techniques do not show large differences in their
effectiveness (e.g., Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Ilardi & Craighead, 1994). Proponents of the common factor hypothesis assume that comparable treatment effects are due to the overlap between the treatments, i.e., the non-specific elements of the treatments. The second finding is that the therapeutic alliance has been consistently shown to predict treatment outcomes across a broad range of disorders and types of psychological treatments (Horvath et al., 2011; Martin et al., 2000). Based on this finding, some clinicians hold the belief that treatment techniques and treatment protocols are not very important and that clinicians should focus more on non-specific techniques, such as providing empathy and understanding, to establish a strong therapeutic alliance (noticed during work in the clinic).

These conclusions have been challenged by others (e.g., DeRubeis et al., 2005). First, comparable treatment efficacy can also be explained by different change mechanisms that are set in motion by distinct treatments. Borkovec and colleagues (2002) posed that psychological states consist of interacting cognitive, behavioral, affective, and physiological systems. They explained that if a treatment effectively changes one of these elements, this may lead to change in all of them. Consistent with this line of reasoning, we argued in Chapter 2 that the distinct treatment techniques of CBT and MBCT might, through different mechanisms, lead to depressive symptom change. For example, it has been shown that depressive feelings are enhanced by maladaptive thoughts about the self as well as ruminative patterns of thinking. As a result of change in either one of these factors, depressive feelings may diminish. We explained in Chapter 2 that the specific techniques of CBT may reduce maladaptive thoughts about the self, whereas MBCT might reduce ruminative patterns of thinking. Change in either rumination or maladaptive thoughts may lead to change in depressive symptoms. Thus, the use of different treatment techniques might cause, by different means, similar treatment effects.

Next, I argue that the presence of an alliance-outcome association does not necessarily mean that non-specific techniques are more important than specific treatment techniques in explaining treatment outcomes. Researchers and clinicians may assume that the therapeutic relationship is strengthened by the use of non-specific techniques such as warmth, empathy, and understanding (e.g., Arnow et al., 2013; Barber, Connolly, Crits-Christoph, Gladis, & Siqueland, 2000) and not by specific techniques. Based on this, they might conclude that common factors are more important than specific treatment techniques. This assumption seems plausible when thinking of the therapeutic relationship as the extent to which the
therapist provides empathic understanding and unconditional positive regard, based on the early conceptualizations of the therapeutic relationship by Rogers (Elvins & Green, 2008). Yet, most empirical studies have used Bordin’s conceptualization of the therapeutic alliance, including mainly the extent to which the patient and the therapist agree on the tasks as well as the goals of treatment, in addition to the bond between the patient and therapist (Bordin, 1979). Mutual agreement on tasks and goals reflect the collaborative working relationship between the patient and therapist and do not seem to reflect the use of non-specific therapist techniques. Few studies have investigated the association between non-specific therapist techniques and the different aspects of the alliance as conceptualized by Bordin (see Ackerman & Hilsenroth, 2003), with one study showing that therapists’ level of empathy was only associated with the patient-therapist bond, but not with agreement on tasks or agreement on goals of treatment (Horvath & Greenberg, 1989). Thus, the therapeutic alliance as conceptualized by Bordin (1979) might not necessarily be improved by employing non-specific techniques.

Furthermore, I pose that specific treatment techniques might affect patients’ ratings of the therapeutic alliance. It has been recognized that patients may report a stronger therapeutic alliance if the specific techniques of a treatment fit the needs of a patient and when therapy goes well (Barber, 2009). In this way, specific treatment techniques might affect patients’ evaluations of the therapeutic alliance. In addition to that, the benefits of a strong therapeutic alliance may depend on the extent to which the alliance and the components of the alliance are central to a specific treatment. As explained in chapter 7, CBT focuses on mutually setting concrete goals and tasks. Patients’ evaluations of agreement on goals and tasks may therefore be more predictive of outcomes in CBT than in a treatment that does not emphasize mutual agreement on goals and tasks, such as MBCT. This hypothesis is strengthened by our finding that the therapeutic alliance is predictive of subsequent depressive symptom change in CBT but not in MBCT. These examples show that finding a positive alliance-outcome association does not necessarily imply that treatment techniques are not important as they might interact with patients’ ratings of the therapeutic alliance.

In conclusion, it seems untenable to conclude that treatment techniques are not important for treatment outcomes based on the previously mentioned research findings. If clinicians would act upon the belief that specific treatment techniques are not that important, this might hamper the efficacy of psychological treatments because most of the evidence-
based psychological treatments are manualized treatments containing mainly specific treatment techniques. This does not mean that treatment techniques operate in isolation. It has since long been recognized that therapeutic techniques have no meaning apart from their interpersonal context (Butler & Strupp, 1986). It seems more plausible that the combination of and interaction between characteristics of the patient, the patient-therapist interrelationship, and specific treatment techniques influence treatment outcomes.

**The need for within-subject designs in the study of mechanisms of change**

As discussed in chapter 3 and 4, within-subject designs are in particular suitable for studying change processes during psychological treatments. In this part of the discussion, I elaborate on a more general argument, provided by others, on the need for within-subject designs when studying psychological processes. In addition to that, I discuss a few ideas for future research on therapeutic change mechanisms using within-subject designs.

Early researchers of psychological processes such as Skinner and Pavlov performed experiments on individual subjects (or pigeons or dogs). If the outcomes of an experiment could be replicated within that individual and within several other individuals, the findings were considered to be consistent (see Barlow & Nock, 2009). Nowadays, limited generalizability is an important point of critique concerning single-subject approaches. For example, in the review process of our replicated single-subject time-series study, most reviewers commented on the small sample which would preclude the possibility of generalizing to the population. At this moment in time, it seems almost ‘not done’ to perform single-subject studies because psychological science now focuses on finding general laws that can be generalized to the population and the field has therefore moved from person-specific research to group-level research.

More recently, researchers have started to acknowledge that group-level research may be limited when one aims to study psychological processes (e.g., Hamaker, 2012; Rosmalen et al., 2012). Group-level research may be problematic because the accompanying standard statistical methods focus on analyzing variation between individuals. The results of these analyses give insight in averages across individuals, such as a correlation between two variables. Yet, such an average correlation might not be observed within each individual subject in the population and thus might not give insight in general laws that apply to all individuals with a similar nature (see Hamaker, 2012). Also, such analyses do not necessarily give insight in within-subject processes, e.g., when a person shows
behavior X, the consequence will be Z (see Hamaker, 2012). Moreover, a between-person correlation (e.g., individuals who eat cake more often than others are on average not happier than individuals who eat cake less often) might be different from a within-person correlation (e.g., when I eat cake, I feel happier).

Molenaar (2004) pointed out that the analysis of variation at the group level will only be similar to intra-individual variation if two conditions are met. The first condition is that the studied characteristic is stable over time, thus that there is no change from one moment in time to another moment in time. The second condition is that individuals from the population obey the same natural rules, e.g., that individuals show the same (lagged) covariance between two variables (Hamaker et al., 2005).

In fact, these conditions are almost never met in research on psychological processes (Molenaar & Campbell, 2009). The first assumption does not hold when a study examines psychological states, including behavior, cognitions, or emotion, which inherently show variation over time (Molenaar & Campbell, 2009). Furthermore, the second assumption does not necessarily hold as psychological processes might differ across individuals (Molenaar, 2004). This is evidenced by our findings described in Chapter 3 and 4; increases in mindfulness were followed by improvements in depressive mood, but not in all individuals.

The arguments of Molenaar (2004;2009) and Hamaker (2005;2012) show that between-subject approaches are mostly not suitable for studying mechanisms of change as they cannot capture change processes that take place within-persons and because they are based on the assumption that the same rules apply to all individuals. Therefore, the field would benefit from using alternative research methods that do allow making inferences on individual change processes (Hamaker, 2012).

The single-subject time-series approach and the intensive longitudinal approach presented in Chapter 3 and 4 might enrich the available methodologies as they allow testing within-subject associations over time in a quantitative way. These designs are especially valuable for studying mechanisms of change in the context of psychological treatments. As we showed in Chapter 3 and 4, these designs enable to examine whether the factors that are assumed to cause symptom change indeed precede changes in symptoms, or whether it is the other way around. By studying more than one individual, one is able to show whether certain processes hold for all individuals or whether these processes differ between individuals. Related to that, these designs may be suitable for studying if psychological treatments lead to change in maladaptive processes that enhance
depressive symptoms. For example, it could be studied whether individuals respond less with rumination to momentary depressive feelings when they received a mindfulness-based treatment.

Furthermore, single-subject time-series designs might provide knowledge on events or behavior that account for increases in depressive symptoms in a specific individual. This information might be used as a diagnostic tool and form a basis for studying predictors and moderators of treatment efficacy. In Chapter 2, we explained that CBT and MBCT teach individuals different skills to cope with depressive thoughts and feelings. CBT and MBCT might be more beneficial for patients that are in need of these specific skills. Future studies could, for example, test whether MBCT is more beneficial for individuals who consistently show strong associations between rumination and depressive feelings and whether CBT is more beneficial for individuals who show a strong association between decreases in performing pleasurable activities and depressive feelings.

If studies show that individuals indeed respond better to treatment when there is intervened on the individual factors that elicit depressive feelings, then such approaches could guide treatment choice in clinical practice as well (based on presentations of Peter de Jonge). Gaining insight into which daily behaviors elicit depressive feelings or positive affect in a specific individual might be therapeutic in and of itself (see Kramer et al., 2014). Individuals might adapt their maladaptive behaviors if they know which of their behaviors are followed by positive affect (Kramer et al., 2014). In these ways, studying mechanisms of change using single-subject time-series designs might help to bridge the gap between science and practice.

Concluding remarks
In sum, the studies included in the thesis have provided insight in psychological change processes during mindfulness-based treatments and factors that predict the efficacy of CBT and MBCT for depressive symptoms in patients with diabetes. We showed that increases in mindfulness in mindfulness-based treatments and patients’ outcome expectations in CBT and MBCT predict depressive symptom change. These findings suggest that it is important to focus on training specific skills and to take patients’ perceptions of treatment into consideration when providing psychological treatments to patients with depressive symptoms.
Summary
Summary
Depressive symptoms may interfere with participating in normal daily life activities and are associated with a low quality of life. Symptoms of depression might even be more of a burden for individuals with a chronic somatic disease, such as diabetes, because depression may negatively affect the management of the disease. Although effective psychological treatments are available for depressive symptoms, not all individuals respond sufficiently to these treatments. An important next step is therefore to investigate which factors contribute to symptom change in psychological treatments.

The general aim of the present thesis is to gain insight in factors that predict depressive symptom change in Cognitive Behavioral Therapy (CBT) and mindfulness-based treatments (i.e., MBCT/MBSR). The thesis focuses on three research questions: (1) What are the assumed working mechanisms underlying CBT and Mindfulness-Based Cognitive Therapy (MBCT) for depression? (2) Do daily changes in the assumed mechanisms underlying mindfulness-based treatments indeed predict changes in daily assessed depressive mood? (3) What is the role of patients’ evaluations of the therapeutic alliance and patients’ outcome expectations in CBT and MBCT for depressive symptoms in diabetic patients?

It is important to gain more insight in treatment-specific and overlapping mechanisms of therapeutic action in CBT and MBCT in order to generate hypotheses on for whom these treatments may be most beneficial. The theoretical review in Chapter 2 reveals that both treatments are built on similar cognitive theories explaining depression. Based on these theories, it can be assumed that both CBT and MBCT achieve change by adjusting related cognitive processes such as decentering and automatic negative thinking. Yet, the review also shows that when you take the distinct treatment techniques of CBT and MBCT as a point of departure, a broader range of mechanisms may be at play. In CBT, increased feelings of mastery and pleasure resulting from behavioral activation might as well account for the effects of CBT on depression. In MBCT, increased awareness and non-judgmental attention trained in meditation and yoga exercises may also explain the benefits of MBCT for depression. Future studies on therapeutic change mechanisms could be strengthened by including both theory-driven and technique-driven factors.

As described in Chapter 2, it is assumed that increases in mindfulness and decreases in ruminative thinking contribute to improvements in depressive mood in mindfulness-based treatments. Yet, little is known
about the dynamic interplay between these variables taking place within individuals. To gain more insight in the causal chain of change, we examined whether day-to-day changes in mindfulness and repetitive thinking would precede, follow, or occur concurrent with daily changes in mood during mindfulness-based treatments in **Chapter 3 and 4**.

In **Chapter 3**, we adopted a replicated single-subject design to examine day-to-day associations between mindfulness, repetitive thinking, and depressive symptoms during a mindfulness-based treatment. Study participants were six women with depressive symptoms. The results showed that changes in mindfulness and repetitive thinking preceded changes in depressive symptoms in a few of the participants. We did not find evidence for reverse causality; changes in depressive symptoms did not predict later changes in mindfulness or repetitive thinking in any of the participants. Another finding was that day-to-day changes in mindfulness, repetitive thinking, and depressive symptoms occur together, as all participants showed moderate to strong within-day associations between the variables. The findings suggest that the studied change process may be operating fast as daily changes seemed to go together. Also, the results imply that temporal precedence of daily mindfulness and repetitive thinking may take place in some, but not all individuals. Furthermore, the findings do not undermine the assumed causal chain of change underlying mindfulness-based treatments as associations in the opposite direction were not observed.

In **Chapter 4**, we used an intensive longitudinal design to examine day-to-day associations between mindfulness, negative affect (NA), and positive affect (PA) during Mindfulness-Based Stress Reduction (MBSR). Study participants were 83 participants from the general population. The results showed that day-to-day changes in mindfulness predicted subsequent day-to-day changes in both NA and PA. Yet, there were individual differences in the strength and the presence of the effect of mindfulness on PA and NA. This indicates that being more mindful than usual may have a beneficial effect on mood the next day in many, but not in all individuals. The results showed that the relationship between mindfulness and affect is not reciprocal; daily changes in NA and PA did not predict increases in mindfulness the next day. Furthermore, mindfulness home practice during the day predicted subsequent increases in mindfulness. Thus, training mindfulness-skills seems a beneficial means to improve one’s daily mood.

The second part of the thesis (**Chapter 5, 6, and 7**) focuses on predictors of the efficacy of CBT and MBCT for depressive symptoms in
patients with diabetes. These studies were embedded in a randomized controlled trial (RCT). The design of this trial is described in Chapter 5. The trial aims included examining efficacy, moderators, mediators, common factors, and treatment integrity in CBT and MBCT. Diabetes patients with depressive symptoms (Beck Depression Inventory-II (BDI-II) score $\geq 14$) were randomized to direct CBT, direct MBCT, or a 3-months waiting list control condition after which patients were again randomized to CBT or MBCT. Both CBT and MBCT were individually delivered in 8 sessions of 45 to 60 minutes by trained therapists.

As described in Chapter 6, several previous studies indicated that patients’ expectations of treatment outcomes affect the efficacy of psychological treatments. Early expectancy theorists posed that patients’ expectations may have an immediate effect on patients’ mental state by creating hope. Others hypothesized that patients’ outcomes expectations affect the extent to which patients are engaged in psychological treatment. We tested these two hypotheses in Chapter 6 by examining whether patients’ outcome expectations are associated with depressive symptom change early in treatment (i.e., immediate effect) or late in treatment, and whether these beliefs predict dropout from treatment and homework compliance (i.e., patients’ engagement). A secondary aim of the study was to examine the association between homework compliance and depressive symptom improvement. The results showed that patients’ outcome expectations were predictive of post-treatment depressive symptoms in CBT and MBCT, but not of early and mid-treatment symptoms. Furthermore, patients were less likely to drop out of CBT and MBCT and performed more homework in MBCT when they reported higher outcome expectations. Finally, homework compliance was not associated with depressive symptom improvement, neither in CBT, nor in MBCT. The findings partially support the notion that patients are more involved in treatment when they expect to improve in response to treatment. The results undermine the hypothesis that patients’ expectations have an immediate effect on patients’ mental state. It seems more plausible that mediating processes are at play that take a longer time to affect depression.

Another important predictor of treatment outcomes is the therapeutic alliance as perceived by patients. The therapeutic alliance includes agreement between the patient and therapist on therapeutic goals, mutual agreement on tasks, and the bond between the patient and therapist. It may be that the importance of the therapeutic alliance differs between CBT and MBCT because MBCT does not focus on two
central aspects of the therapeutic alliance (i.e., agreement on tasks and agreement on goals) as much as CBT. In addition to that, several previous studies found that the alliance-outcome association disappeared when controlling for symptom change prior to the assessment of the alliance. Therefore, we compared the alliance-outcome association in CBT and MBCT, while controlling for prior depressive symptom change, in Chapter 7. The results showed that in CBT, subsequent depressive symptom change was predicted by agreement on tasks, the quality of the bond, and agreement on goals at borderline significance. In contrast, none of the components of the therapeutic alliance were associated with subsequent symptom change in MBCT. The finding that agreement on tasks and goals are more important in explaining outcomes of CBT than of MBCT might be explained by the fact that the exercises are more personalized in CBT than in MBCT. Also, individuals are asked to disclose more private information on their problems in CBT than in MBCT and it might therefore be more important for patients to feel liked and respected by their therapist in CBT. Thus, the alliance-outcome association may be affected by the type of psychological treatment.
Samenvatting
Samenvatting
Mensen met depressieve klachten hebben over het algemeen een lagere kwaliteit van leven en functioneren slechter in het dagelijks leven. Voor mensen met een chronische ziekte, zoals diabetes, kunnen depressieve klachten nog meer een belasting vormen omdat de klachten de regulering van de ziekte negatief kunnen beïnvloeden. Gelukkig zijn er psychologische behandelingen beschikbaar die depressieve klachten kunnen verminderen. Echter, niet alle mensen met depressieve klachten hebben baat bij een psychologische behandeling. Het is daarom belangrijk om te onderzoeken welke factoren bijdragen aan de effectiviteit van psychologische behandelingen.

Het doel van dit proefschrift is om meer inzicht te krijgen in factoren die afname in depressieve klachten voorspellen tijdens Cognitieve Gedragstherapie (CGT) en mindfulness training (MBCT/MBSR). In het proefschrift staan drie onderzoeksfragen centraal: (1) Wat zijn de veronderstelde veranderingsmechanismen die de effectiviteit van CGT en Mindfulness-Based Cognitieve Therapie (MBCT) kunnen verklaren? (2) Gaan veranderingen in veronderstelde mechanismen inderdaad vooraf aan veranderingen in stemming gedurende mindfulness training? (3) Zijn percepties van de patiënt over de effectiviteit van therapie en de therapeutische alliantie voorspellend voor het behandelproces en de effectiviteit van CGT en MBCT voor diabetes patiënten met depressieve klachten?

In Hoofdstuk 2 wordt uitgelegd dat CGT en MBCT ontwikkeld zijn op basis van vergelijkbare theorieën over cognitieve processen die depressieve klachten veroorzaken en versterken. Er wordt aangenomen dat zowel CGT als MBCT effectieve behandelingen zijn voor depressie omdat ze verandering teweeg brengen in cognitieve processen zoals negatief automatisch denken en het kunnen waarnemen van ervaringen vanaf enige afstand. Echter, beide behandelvormen maken gebruik van verschillende behandeltechnieken, waardoor je verwacht dat hierdoor ook andere veranderingsmechanismen in gang gezet worden. Zo is gedragsactivatie (het doen van activiteiten die plezier of voldoening teweeg brengen) een belangrijke behandeltechniek in CGT die niet wordt toegepast in MBCT. De effectiviteit van CGT kan wellicht verklaard worden doordat patiënten meer voldoening en plezier gaan ervaren door gedragsactivatie. MBCT bestaat daarentegen voornamelijk uit meditatie en yoga oefeningen die geen onderdeel zijn van CGT. MBCT zou ook effectief kunnen zijn voor depressieve klachten doordat patiënten leren in de meditatie en yoga oefeningen om hun aandacht te richten op
ervaringen in het hier en nu en deze niet te veroordelen of proberen te veranderen. De conclusie van Hoofdstuk 2 is dan ook dat het zinvol is om zowel op theorie gebaseerde veranderingsmechanismen als op techniek gebaseerde mechanismen mee te nemen in toekomstig onderzoek.

Een belangrijk verondersteld veranderingsmechanisme van MBCT, zoals beschreven staat in Hoofdstuk 2, is dat het verhogen mindfulness zorgt voor een afname van piekeren en voor verbeteringen in stemming. Er is echter nog maar weinig bekend over de wisselwerking tussen deze variabelen in het dagelijks leven. In Hoofdstuk 3 en 4 worden onderzoeken beschreven waarin we hebben onderzocht of veranderingen in mindfulness en piekeren van de ene op de andere dag inderdaad voorafgaan aan veranderingen in stemming van de ene op de andere dag, of juist andersom, bij mensen die een mindfulness training volgen.

In Hoofdstuk 3 hebben we de relaties tussen dagelijkse veranderingen in mindfulness, piekeren en depressieve klachten tijdens een mindfulness training onderzocht met individuele tijdreeksanalyses. Er namen zes vrouwen met depressieve klachten deel aan het onderzoek. Bij slechts een paar deelnemers gingen dagelijkse veranderingen in mindfulness of piekeren vooraf aan veranderingen in depressieve klachten. Verbeteringen in mindfulness en piekeren kunnen dus leiden tot verbeteringen in stemming, maar dit geldt niet voor iedereen. De resultaten toonden ook aan dat er geen omgekeerde of wederkerige effecten waren: veranderingen in depressieve klachten gingen bij geen van de deelnemers vooraf aan veranderingen in mindfulness of piekeren. Er was wel een matige tot sterke samenhang tussen de variabelen op dezelfde dag. Dit duidt er op dat dagelijkse veranderingen in mindfulness, piekeren en depressieve klachten samengaan. Mogelijke verklaringen voor deze bevindingen zijn dat de veranderingsprocessen zo snel gaan dat de effecten niet van de ene op de andere dag aanhouden of dat mindfulness, piekeren en depressieve klachten sterk samenhangen en gezamenlijk verklaard kunnen worden door een gedeelde onderliggende gemoedstoestand.

In Hoofdstuk 4 hebben we wederom de temporele relaties tussen mindfulness en stemming onderzocht, maar nu in een grotere groep van 83 deelnemers uit de algemene bevolking die deelnamen aan een Mindfulness-Based Stress Reductie programma (MBSR). Daarnaast maakten we gebruik van multilevel analyses in plaats van individuele tijdreeksanalyses. We onderzochten of dagelijkse veranderingen in mindfulness voorafgingen aan veranderingen in Negatief Affect (NA) en Positief Affect (PA), of andersom, tijdens MBSR. Uit de resultaten bleek...
dat dagelijkse veranderingen in mindfulness inderdaad vooraf gingen aan dagelijkse veranderingen in NA en PA, en niet andersom. Echter, deze effecten varieerden tussen deelnemers, wat er op duidt dat verbeteringen in mindfulness niet bij iedereen leiden tot verbeteringen in stemming. Daarnaast scoorden deelnemers hoger op mindfulness wanneer zij eerder op de dag tenminste één mindfulness oefening hadden gedaan. Het trainen van mindfulness in het dagelijks leven kan dus inderdaad bijdragen aan dagelijks welbevinden.

De onderzoeken in het tweede deel van het proefschrift (Hoofdstuk 5, 6 en 7) richtten zich op voorspellers van de effectiviteit van MBCT en CBT. Deze onderzoeken zijn een onderdeel van een gerandomiseerd gecontroleerd onderzoek (RCT). In Hoofdstuk 5 wordt de opzet van deze RCT beschreven. Het doel van de RCT was om de effectiviteit, voorspellers en mediatoren van effectiviteit in CBT en MBCT te onderzoeken. Diabetes patiënten met depressieve klachten (Beck Depression Inventory-II (BDI-II) score ≥ 14) werden gerandomiseerd en ingedeeld in CGT, MBCT, of een wachtlijst conditie. Na de wachtlijst van drie maanden werden patiënten wederom willekeurig ingedeeld in CGT of MBCT. Zowel CGT als MBCT bestonden uit 8 individuele sessies van 45 tot 60 minuten.

Een aantal eerdere onderzoeken toonde aan dat verwachtingen van patiënten over de effectiviteit van een behandeling voorspellen of patiënten baat hebben bij behandeling. Een al lang bestaande hypothese is dat positieve verwachtingen hoop creëren en daardoor een direct effect hebben op de stemming van patiënten. Anderen veronderstellen dat verwachtingen van patiënten invloed hebben op de mate waarin patiënten zich inzetten in therapie. In Hoofdstuk 6 testen we deze hypotheses door te onderzoeken of verwachtingen van patiënten een directe verbetering in depressieve klachten voorspellen aan het begin van CGT en MBCT of pas aan het eind van de behandeling. Ook onderzochten we of verwachtingen van patiënten hun inzet bepalen door verwachtingen te relateren aan vroegtijdige beëindiging van de behandeling en het maken van huiswerk. Daarnaast onderzochten we de relatie tussen het maken van huiswerk en verbeteringen in depressieve klachten. Uit het onderzoek bleek dat patiënten met positievere verwachtingen minder depressieve klachten hebben na CGT en MBCT dan patiënten met lagere verwachtingen. Verwachtingen waren niet gerelateerd aan depressieve klachten aan het begin of op de helft van de behandeling. Ook toonden we aan dat de kans kleiner is dat patiënten stoppen met CGT en MBCT en dat patiënten meer huiswerk
maken tijdens MBCT als ze hogere verwachtingen hebben van de effectiviteit van behandeling. Verder vonden we niet dat patiënten die meer huiswerk maken ook meer baat hebben bij CGT en MBCT in termen van klachtenreductie. De resultaten duiden er op dat verwachtingen geen direct effect hebben op de stemming van patiënten maar dat verwachtingen wellicht processen in gang zetten die pas later de stemming beïnvloeden. Het lijkt er op dat verwachtingen de inzet van patiënten beïnvloeden, aangezien ze gerelateerd zijn aan het stoppen met CGT en MBCT en het maken van huiswerk in MBCT.

Uit eerder onderzoek bleek dat de therapeutische alliantie ook behandeleffectiviteit voorspelt. Onder de therapeutische alliantie wordt het gezamenlijk overeenkomen van therapiedoelen en therapietaken en de band tussen de patiënt en de therapeut verstaan. Het zou kunnen dat de therapeutische alliantie niet zo belangrijk is in MBCT omdat twee aspecten van de therapeutische alliantie (het overeenkomen van therapiedoelen en therapietaken) niet zo centraal staan in MBCT als in CGT. Daarnaast toonden verscheidene onderzoeken aan dat er geen relatie tussen de therapeutische alliantie en effectiviteit meer was als er rekening gehouden werd met de afname in depressieve klachten vlak voor de therapeutische alliantie werd gemeten. In Hoofdstuk 7 hebben we daarom het verband tussen de therapeutische alliantie en klachtreductie vergeleken tussen CGT en MBCT, waarbij we controlleerden voor klachtreductie voorafgaand aan het vaststellen van de therapeutische alliantie. Uit het onderzoek bleek dat depressieve klachten meer afnamen in de CGT conditie wanneer patiënten meer achter de overeengekomen therapie taken stonden, een sterkere band tussen hen en de therapeut ervoeren, en meer achter de overeengekomen therapie doelen stonden (bijna significant). In MBCT waren geen van de aspecten van de therapeutische alliantie gerelateerd aan klachtreductie. Wellicht is het belangrijker dat patiënten achter de therapie taken en doelen staan in CGT staan omdat de oefeningen in CGT meer toegespitst zijn op de persoonlijke situatie dan in MBCT. Daarnaast is het ook zo dat patiënten meer informatie over hun problemen in het dagelijks leven moeten delen in CGT dan in MBCT en dat het daarom belangrijker kan zijn voor patiënten om een goede band met hun therapeut te ervaren in CGT dan in MBCT. Concluderend kan gesteld worden dat het afhangt van de therapietypologie hoe belangrijk de therapeutische alliantie is voor de effectiviteit.
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Dankwoord

Laat ik met de belangrijkste persoon tijdens mijn promotietraject beginnen: Annika. Wat ben ik blij dat jij degene was met wie ik vier jaar een onderzoeksproject heb uitgevoerd. Omdat jouw manier van werken aansloot bij de mijne en je gestructureerd, planmatig, precies en doelgericht werkt, is het project een succes geworden en kon ik blindelings op jou vertrouwen. Het was heel fijn dat ik alles met je kon bespreken en dat het vaak ook tot inzichten leidde, zowel op inhoudelijk als persoonlijk vlak. Ik heb altijd veel steun gehad van jou.

Joke en Maya, jullie hebben het onderzoeksproject met hart en ziel geleid. Ik heb jullie toewijding en betrokkenheid bij mij en het onderzoek zeer gewaardeerd. Zonder jullie was het onderzoeksproject niet zo geslaagd geweest en had ik niet de ontwikkeling kunnen doormaken die ik heb doorgemaakt. Joke, jouw efficiënte manier van werken was een voorbeeld voor mij en het was goed om soms terug te krijgen dat het ook minder ingewikkeld kon. Maya, door jouw kritische vragen kregen artikelen meer diepgang en leerde ik beter vragen te kiezen die meten wat je wilt weten. Daarnaast was het goed voor me dat jullie me beiden stimuleerden om goed voor mezelf te zorgen. Vooral ben ik erg dankbaar dat jullie zo open stonden voor mijn ideeën, plannen en manier van werken. Jullie stonden bijvoorbeeld meteen achter het idee om een extra onderzoek met Elske op te zetten. Doordat ik de vrijheid kreeg om mijn eigen weg te bewandelen, heb ik me kunnen ontwikkelen en heb ik kunnen ontdekken in welke onderzoeksrichting ik werkelijk geïnteresseerd ben.

Ook dank ik mijn promotoren, Robbert en Paul. Zonder jullie was dit project niet mogelijk geweest. Robbert, jouw optimisme en benaderbaarheid heb ik erg waardeerd. Paul, het was fascinerend om te zien hoe je in vijf minuten veel inhoudelijke, nuttige suggesties kon aandragen of zelfs een complete supervisie kon geven.

Daarnaast wil ik de co-auteurs van de artikelen danken voor hun belangrijke bijdrage, in het bijzonder Elske. Elske, je bent geweldig. Allereerst de tijd en moeite die je hebt genomen om mij VAR analyses te leren. De hoeveelheid vrijdagochtenden die je daar in hebt gestoken, zijn voor mij heel waardevol geweest. Naast analyses heb je me ook zoveel andere dingen meegedeeld; gestructureerd tekst en analyses opbouwen, hoe je iemand iets goed kan aanleren, ergens van overtuigd blijven als je er in gelooft, humor in wetenschap, eerlijkheid en de kracht
van positieve feedback. Voor mij ben jij het ultieme voorbeeld.

Ook wil ik Ivan bedanken. Je weet niet hoe blij en dankbaar ik was toen je ons aanbood om een artikel met je te schrijven over jouw gouden data set. Het was een fijne samenwerking op afstand omdat je mij en Elske vertrouwde en daarnaast zelf nauw betrokken bleef en meeschreef. Ook hebben je kritische met humor doorspekte vragen op congressen en symposia me vaak aan het denken gezet.


Zo is er ook een heel aantal mensen dat heeft meegewerkt aan het dagboekonderzoek dat is uitgevoerd bij het Centrum Integrale Psychiatrie (CIP). Allereerst wil ik de deelnemers aan het onderzoek bedanken voor het trouw invullen van de dagelijkse metingen en de positieve feedback. Daarnaast is het onderzoek heel goed gefaciliteerd door de medewerkers van het CIP: Anita La Crois-Blaauw, Rogier Hoenders, Erik van den Brink, Jolieka Regterschot en in het bijzonder Karen van der Ploeg; dank voor je
steun en hulp en dat je mij in contact hebt gebracht met het CIP. Tenslotte dank ik Jan Jacobs voor het meedenken met de analyses.

It was great to have such helpful colleagues whom I could ask anything and to have a good time with; Adelita, Adriana, Angélica, Ans, Corinne, Daphne, Fabiola, Franziska, Gemma, Grieteke, Jacques, Karin, Katerina, Lei, Marike, Marrit, Mariët, Martine, Meirav, Monica, Moniek, Nardi, Nynke, Somayeh, Vicky, Ying, and Yvette, thank you. Especially Eric, Truus, Renate, and Annemieke, thank you for all your advice and assistance. It was also supporting to be surrounded by a group of PhD-students who supported me when another paper was rejected and to share the valuable Thank-God-it’s-Friday-drinks with. And Annika, Moniek, and Lei, thank you for making exercise and conferences so enjoyable.

A separate word to my PhD friend, Giedre, my ‘secret’ third paranimf. It was so valuable to talk with you about little struggles in our PhD, ‘normal life’, the PhD ceremony and to put things into perspective. Thank you for telling me to have holidays, for having holidays with you in Copenhagen, and for making me feel welcome.

Lieve papa en Nanny, dank voor de diepgaande interesse in mijn onderzoek en het vele meedenken. Lieve Pascal, mama, Jaap, Loes en Laura dank voor jullie warme onvoorwaardelijke steun. Pascal, het was heerlijk om bij jou thuis te komen na een dag werken (en natuurlijk dat er dan vaak een hapje eten voor me klaar stond) en van gedachten te kunnen wisselen over het onderzoek, of juist niet. Tot slot, Pascal en Geert, dank jullie wel voor de prachtige omslag die jullie voor het proefschrift hebben gemaakt.
Curriculum Vitae

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List of publications
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