

Psychotherapy for depression works! But how? : Investigating the effects and mechanisms of cognitive therapy vs. interpersonal psychotherapy for major depressive disorder

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Valorization Addendum



The present dissertation describes the results of a large randomized controlled trial (RCT) that was conducted to gain more insight into the clinical effects and underlying mechanisms of Cognitive Therapy (CT) versus Interpersonal Psychotherapy (IPT) for Major Depressive Disorder (MDD). This Valorization Addendum reviews the societal, economic and scientific relevance of our trial, and gives an overview of the target groups for whom our research findings might be important. Furthermore, innovative aspects of our trial and possible activities and/or products resulting from the research that was presented in this dissertation will be discussed. To conclude, examples of how knowledge valorization has been achieved so far and ideas for further dissemination of knowledge in the field will be provided.

Relevance of our trial

With lifetime prevalence estimates ranging from 15 to 20%, MDD is one of the most common psychiatric disorders worldwide. According to the World Health Organization (WHO), globally more than 350 million people of all ages suffer from depression (WHO, 2012). Depression carries a tremendous burden for the patient as it has an enormous impact on physical, social and emotional functioning and well-being. In addition, the economic burden that depression imposes on society is very high. A cross-national epidemiological study comparing MDD lifetime prevalence rates worldwide showed that the highest rates were found in high-income countries including France, the USA and the Netherlands (Bromet et al., 2011). The latest screening of the Dutch population showed that over 800.000 adults (5.2% of the total Dutch population) suffer from MDD every year (de Graaf, ten Have, & van Dorsselaer, 2010). Recent estimations by the Dutch National Institute for Public Health and the Environment (RIVM) indicate that depression annually costs 168,000 Disability Adjusted Life Years (DALYs). This indicates that the negative effects of depression on health in the Netherlands are even larger than those of e.g. dementia, diabetes or lung cancer (RIVM, 2013). The total annual costs of depression in the Netherlands (direct and indirect) are estimated at almost three billion euro (de Graaf, Tuithof, van Dorsselaer, & ten Have, 2011; Slobbe, Smit, Groen, Poos, & Kommer, 2011).

Considering the individual, societal and economic impact of MDD, it is important that patients suffering from depression are adequately treated. The Dutch multidisciplinary guideline for the treatment of depression currently recommends CT and IPT as the psychological treatments of choice in the acute phase of treatment of depression. Even though CT and IPT have repeatedly shown to be well-standardized and efficacious interventions for the acute treatment of MDD, there is room for improvement. Approximately 40% of depressed patients do not (or insufficiently) respond to initial treatment, and even when treated effectively in the acute phase chances of relapse and recurrence are high (Keller & Boland, 1998; Paykel, 2008). The challenge in contemporary depression research is therefore to improve treatments to increase initial response rates and prevent relapse and recurrence in the long term.

Many researchers agree that treatment improvement starts with a full understanding of the effects and mechanisms of interventions. By knowing why and how treatment works, specific components of interventions can be added, strengthened or removed to make the interventions more efficient and (cost-)effective. Furthermore, information on how treatments compare – and whether this differs for certain subgroups of patients – can be used to select the best available treatment for (individual) patients, hereby also increasing therapy effects. Although our knowledge about psychotherapy for depression has increased tremendously over the past few decades, psychological treatments – including CT and IPT – are not yet fully understood. There are several unresolved issues that need further examination. For instance, it is not clear yet whether one therapy outperforms the other with regard to severity and course of the disorder, especially on the long-term. In addition, it is still largely unknown how CT and IPT work and – more specifically – whether they work for reasons hypothesized in their respective theoretical backgrounds. These questions were the leading ground for conducting the large randomized controlled trial that is described in this dissertation. It goes without saying that focusing on the two most commonly-practiced psychological treatments for MDD in the Netherlands is not only important from a patient's point of view, but might also lead to a significant reduction in societal costs because CT and IPT are implemented on such a large scale.

Our trial is one of the largest clinical trials in the field, and made a significant contribution to the current state of knowledge on the relative effectiveness of CT vs IPT by e.g. providing the final information necessary to support the conclusion that the effects of individual CT and IPT for adult depression in the acute phase do not seem to differ within a 4 BDI point limit. Furthermore, our trial provided useful information for the developing research field of mechanisms of change (more innovative aspects of our trial are described later in this addendum). However, even though our trial was fuelled by the ambition to decrease the burden of disease associated with MDD, the direct value of this dissertation might lie primarily in its scientific implications. Process research is complicated and requires specific features of study designs – including carefully spaced, repeated measurements of clinical outcomes and process measures over the course of treatment, sufficient statistical power, and an appropriate control group – and the use of state-of-the-art analytic techniques. Unfortunately, up until now, most studies do not meet the criteria for reputable process research, mainly because they cannot establish the temporal relation between changes in potential mechanisms of interest and symptom change. Therefore, renewed, well-designed research on the mechanisms of change in psychotherapy is much needed. Our trial addresses this need by empirically testing a set of assumptions about the effects and mechanisms of CT and IPT using a research design that is particularly suited to investigate mechanisms of change. For a more detailed description of the theoretical, practical and research implications of our trial and for an overview of directions for further research, I refer the interested reader to the general discussion (chapter 9) and to the discussion sections of the specific chapters throughout this dissertation.

Specific target groups for whom our findings might be relevant

Given the fact that our study was conducted from both a clinical as well as a societal perspective, trial findings are relevant to a variety of target groups. First of all, our findings might be of interest to researchers who strive for a better understanding of psychotherapy for depression. As mentioned above, knowledge about active ingredients of therapy can assist in the verification and refinement of theoretical models of the disorder, and allows enhancement of elements that are crucial for therapeutic change, while dismissing those found to be redundant. Furthermore, the design and methodology that was used in the current dissertation holds scientific value for researchers in this field. Second, our findings are relevant for mental health care professionals because they suggest areas for increased therapeutic focus within the existing protocols of CT and IPT. Third, this dissertation might be relevant for depressed patients and their families, since our studies contribute to the future provision of optimal, efficient, evidence-based treatments for depressed patients. Moreover, the finding that the current recommended care for depression in the Netherlands seems to be beneficial for a large part of depressed patients might be of interest for guideline- and policy makers and health insurance companies. To conclude, since the knowledge gained from this dissertation might eventually contribute to a reduction of the economic and societal burden caused by depression, the findings of this dissertation are relevant for society in general.

Activities and products

The findings of the studies presented in this dissertation point towards several possibilities for activities and/or products. A few possibilities are pointed out here. First of all, the fact that our findings add to the accumulating evidence that the recommended practice for the psychological treatment of depression in the Netherlands is effective across the full range of severity, and that these effects do not seem to differ for CT and IPT, can be used in decisions about which treatments to recommend in future issues of the multidisciplinary guideline for depression. Furthermore, the symptom centrality analysis in chapter 8 provided empirical evidence for the fact that several symptoms of depression are more influential in the treatment of depression than others. If future research is able to replicate these findings, it may help in determining treatment focus. Moreover, it would encourage efforts to develop tools for person-specific centrality analyses that can be used by therapists to indicate which symptoms should be specifically targeted in a particular patient. While it is too premature to draw firm conclusions about the theoretical models of psychotherapy and the underlying mechanisms that drive symptom change based on the findings in this dissertation, eventually the insights gained in the field of psychotherapy process research might be used to optimize treatments protocols and theoretical models of depression. To conclude, knowledge with regard to the methodology for examining processes of change, can serve as a starting point for the development of standard guidelines for mechanism research.

Innovation

Our trial is innovative as it was not only able to replicate findings from previous randomized comparisons of individual CT and IPT for depression, but could also extend them by adding several unique methodological features to the study design. For example, our trial was the first RCT of individual CT vs. IPT to add a Waiting-List Control (WLC) condition to the comparison. The inclusion of an untreated control group diminished uncertainty about whether or not the observed effect was a result of the natural course of depression. Furthermore, our trial was the first that examined enduring effects after treatment termination for both interventions. In addition, it did not only evaluate treatment effects in terms of symptomatic improvement, but also assessed effectiveness in several other domains including quality of life, and impairment in social functioning. Moreover – although not addressed in the studies presented in this dissertation – our trial is the first that collected data on costs and utilities parallel to the clinical outcome measures and process measures. This allows for the unique opportunity to examine how CT and IPT compare in terms of cost-effectiveness from a societal perspective as well. Another innovative aspect of our trial is that it is one of the few studies in the field that included multiple measures of various process measures throughout treatment. The repeated measures design provided the opportunity to evaluate whether change in proposed process measures preceded, followed from, or went together with changes in depression. To conclude, by obtaining measures of depression severity from session to session, we were the first to examine sudden gains and the dynamic relations between individual items of the Beck Depression Inventory-II (BDI-II) in the context a randomized comparison of CT vs. IPT.

In addition, the analytic techniques that were used in the various studies of dissertation may be regarded as scientifically innovative. For example, the use of latent difference score (LDS) models in the empirical study on mechanisms that was presented in chapter 6 provided the opportunity to examine both temporal relations and mediation in one model. By combining intensive longitudinal data (i.e. session-to-session assessments of the BDI-II) with the newly developed vector autoregressive (VAR) multilevel method (chapter 8) we were the first to estimate the network of symptoms that characterizes the BDI-II. In addition, it enabled us to explore the centrality of symptoms and the community structure of the network. So even though the studies that were presented in this dissertation were not able to provide clear cut empirical evidence for the underlying mechanisms they could serve as a starting point for future studies. Not in the least because they provide guidance for future research questions and improvement of study designs.

Schedule and Implementation

Bringing our study to the attention of our target groups was an important goal throughout the study. In an early phase of the study we communicated the rationale for our trial and the study design to a broad audience by means of traditional and (social) media appearances. Patients were informed through various national online platforms for mental health and depression (e.g. psychischegezondheid.nl, depressie.startpagina.nl). The scientific community learned about our study by means of journal publications and conference presentations. Furthermore, our research group has developed strong relationships with various national (e.g. Groningen, Amsterdam, Leiden) and international (e.g. Philadelphia, Nashville, Trier) research groups that focus on psychotherapy process research, which contributed to further dissemination of knowledge. In order to reach clinicians, we published the rationale for research into mechanisms and design of our study in a Dutch clinical journal that specifically targets mental health care professionals who are not working in a research setting (*GZ-Psychologie*). In addition, we presented our study at several local and national meetings for CT and IPT therapists. Since many of the therapists that were involved in the study are teaching and supervising CT or IPT, our study was also brought into attention among mental health care students. Public engagement in the study was promoted by means of a study website and two articles in a local newspaper (*Dagblad de Limburger*, 03-02-2011 & 31-03-2011). In order to stimulate the exchange of knowledge between the various target groups, we organized a national symposium on psychotherapy research for depression (the Maastricht Symposium of Evidence based psychotherapy, September 2013). In this symposium more than 80 researchers, mental health care professionals, mental health students, patients and other people interested in psychotherapy research, spent the afternoon talking about the latest findings, insights and developments in this research field. The symposium was featured in an article in the University Newspaper (*Observant*, 12-09-2013).

For the later stages of the trial we are planning to use similar strategies for further valorization and dissemination of research findings. For example, we will translate the studies presented in chapters 3 and 7 into Dutch and publish them in clinical journals, and will communicate our findings to the general public by means of another newspaper interview. Some of the studies presented in this dissertation have already evoked interest outside the scientific community. For example, the study described in chapter 3 has been featured on doctors.net.uk, the largest and most active network of doctors in the UK reaching more than 45.000 people each day. The same study was featured in a blog on the psychotherapy practice research network (PPRnet), an online inter-disciplinary collaboration among clinicians, educators, researchers and knowledge users who engage in practice-based psychotherapy research. Other methods for further knowledge valorization – within and outside the scientific community – include e.g. journal publications, conference presentations, press releases and social media.

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