

Cost-effectiveness of psychotherapy for Borderline Personality Disorder

Citation for published version (APA):

Wetzelaer, P. (2018). *Cost-effectiveness of psychotherapy for Borderline Personality Disorder: advances in assessment analysis*. Maastricht University. <https://doi.org/10.26481/dis.20181213pw>

Document status and date:

Published: 01/01/2018

DOI:

[10.26481/dis.20181213pw](https://doi.org/10.26481/dis.20181213pw)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

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SUMMARY

Summary

This thesis presents a collection of studies that were performed to advance the assessment and analysis of the cost-effectiveness of psychotherapy for borderline personality disorder: a systematic literature review (Chapter 2), a model-based economic evaluation (Chapter 3), the study protocol (Chapter 4) and preliminary results (Chapter 5) of a trial-based economic evaluation, and a methodological study (Chapter 6).

Chapter 1 provides a general introduction to this thesis and explains the background of the studies. The nature and consequences of borderline personality disorder (BPD), the current optimal treatments for BPD, as well as the rationale and methodology of economic evaluation studies are addressed.

Chapter 2 presents a systematic review on economic evaluations of psychotherapy for personality disorders (Wetzelaer et al., 2016) that aims to provide an up-to-date overview of the studies that were previously performed in this field. The general characteristics of those studies as well as the specific characteristics of the economic evaluations, including an assessment of six important criteria regarding quality, are discussed. Most of the included studies indicate that psychotherapy for personality disorders is cost-effective. Yet, it is also noted that most studies did not include all (potentially) relevant societal costs, and that several studies did not use QALYs as an outcome measure. To make sure that future studies take all relevant costs and benefits into account, a (wider) societal perspective is advised. Furthermore, we recommend that future studies use QALYs as an (additional) outcome measure to facilitate the use of their results in reimbursement decisions.

Chapter 3 presents a model-based economic evaluation of the four specialized psychotherapies known to be effective for borderline personality disorder (BPD) specifically: dialectical behaviour therapy (DBT), schema therapy (ST), mentalization-based treatment (MBT), and transference-focused psychotherapy (TFP) (Wetzelaer et al., 2017). The starting point is a systematic literature review of studies that investigated one of these four psychotherapies. Included are studies that report information on the changes in health care costs or resource use, and/or quality of life (i.e., assessed directly using the Euroqol-5D or using the Beck Depression Inventory, of which the scores are mapped to the Euroqol-5D). This study aims to present a method for the synthesis of the evidence using simulated, patient-level data. The results suggest that specialized outpatient psychotherapy for BPD is cost-effective and that further extension of its supply in the Netherlands would require an investment of nearly € 2.4 million per 1,000 additional patients.

Chapter 4 presents the study protocol of an international multicenter randomized controlled trial (RCT) on group schema therapy (GST) for BPD, which includes an economic evaluation (Wetzelaer et al., 2014). The clinical effectiveness and cost-effectiveness

of two different formats of GST, one that consists of only group psychotherapy and one that consists of a combination of group and individual psychotherapy, and treatment as usual (TAU) are compared. In addition to the general background of the study, including the previous research that was performed in this specific field, information is given on the interventions being studied, the in- and exclusion criteria for participation, the outcome measures used for the assessment of clinical effectiveness of costs, and the scheduling of assessments. Furthermore, an outline is presented of the methodology behind the data analyses to be performed once data collection is completed. Finally, the strengths and limitations of the study design are discussed.

Chapter 5 presents the methods and preliminary results, obtained in the Netherlands, of the economic evaluation on GST for BPD. The relative cost-effectiveness and cost-utility of GST (both formats pooled) versus TAU is estimated, as well as that of GST-A (group schema therapy only) versus GST-B (group and individual schema therapy combined) versus TAU. The methods used for the assessment as well as the analyses of costs and effectiveness are addressed in detail. A simulation is performed to provide the estimates and figures regarding the relative cost-effectiveness and cost-utility of the interventions. These are displayed in cost-effectiveness planes and cost-effectiveness acceptability curves. Due to their preliminary nature, the results are blinded as to condition.

Chapter 6 presents a methodological study that aims to put forward how Bayesian multilevel models can be used as an extension of the net benefit regression framework. The approach provides an efficient way of handling longitudinal cost-effectiveness data that includes cases with missing values. A coherent set of models for the development of net benefit over time is described, as well as their application to an empirical example using the data from a previous RCT on schema therapy for personality disorders (Bamelis et al., 2015). The best fitting model is used to estimate the relative cost-effectiveness of schema therapy, clarification-oriented psychotherapy and TAU. The results are presented in cost-effectiveness acceptability curves that display the probability of relative cost-effectiveness for each intervention. Furthermore, the results are displayed using variants of the best fitting model that assume gamma or lognormal distributed data. In addition, a series of appendices is provided that explains the code and commands that are required to specify and run the models, as well as the statistical details behind the approach. It is concluded that Bayesian multilevel models provide an efficient and flexible method for the analysis of longitudinal cost-effectiveness data. Therefore, it is considered as a useful extension of the net benefit regression framework.

Chapter 7 provides a general discussion of the studies that were performed for this thesis. The studies and their findings are integrated to illustrate their overall sum of parts. Methodological considerations are provided that follow from a critical reflection on the methods used to perform the studies. Future prospects and recommendations for follow-

up investigation, and the implications for policy and practice are discussed. Lastly, a general conclusion of this thesis is provided.

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