



## THE TRUE AND PERCEIVED COST OF PAIN

*Effectiveness and cost-effectiveness of primary care multidisciplinary treatment and patient perceptions in chronic pain*

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PUBLIC PHD DEFENCE FOR THE DEGREE OF  
**DOCTOR IN REHABILITATION SCIENCES AND PHYSIOTHERAPY**

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## ABSTRACT OF THE RESEARCH

The aim of the present thesis is to investigate the (cost-)effectiveness of a primary care multidisciplinary treatment for patients with chronic pain. In addition, we aim to investigate illness perceptions and perceived injustice among patients with chronic pain.

In the second chapter, a study design of an economic evaluation alongside a clinical study in order to investigate effectiveness and cost-effectiveness of a primary care multidisciplinary treatment compared to treatment as usual is described.

The third and fourth chapters focus on the results of this trial. While the results show statistically significant effects of the intervention on patients' illness perceptions, there is no evidence for the effectiveness of the intervention in improving pain-intensity, number of pain sites, and quality of life compared to treatment as usual. Likewise, the results show no evidence for the cost-effectiveness of the described treatment compared to treatment as usual. However, concluding that a primary care multidisciplinary treatment for chronic pain does not have value at all is considered unwarranted, as there are several study limitations one should take into account when drawing conclusions. These limitations are also extensively described in these chapters.

The fifth chapter of this thesis dives into patients' perceptions of injustice, and describes an investigation of the construct validity and test-retest reliability of the Dutch version of the Injustice Experience Questionnaire (IEQ). The data provides evidence that the Dutch IEQ is a valid and reliable instrument for measuring perceived injustice among patients with chronic pain. In addition, the results confirm previous findings that perceived injustice is related to psychological constructs such as depression and anxiety, and adds to existing literature that it is also associated with central sensitization.

Finally chapter 6, focuses on illness perceptions, and shows that patients with chronic pain most often attribute the cause of their pain to body changes (i.e. fibromyalgia, arthritis, herniated discs), accidents, and psychological causes (i.e. depression and anxiety). In addition, the results indicate that patients with chronic pain appear to have the most threatening perceptions about consequences, timeline, identity and emotional response. Lastly, we describe that patients with chronic pain perceive their situation as more unjust when they have more negative illness perceptions, and/or vice versa.

## CURRICULUM VITAE

Rinske Marije Bults was born on February 12<sup>th</sup> 1991 in Nijverdal, the Netherlands. She studied Psychology and Clinical Neuropsychology at the Rijksuniversiteit Groningen, the Netherlands from 2009-2014. She started working as a psychologist in 2015, and started her PhD-trajectory in 2017 when she was working at Transcare, a transdisciplinary pain management centre in Groningen, the Netherlands. She is a member of the Pain in Motion research group, taught various courses on pain education, and has co-authored several research papers and a book chapter on chronic pain. Since 2020 she has been employed as a psychologist in elderly care and elderly rehabilitation in the North-East of the province of Groningen.

