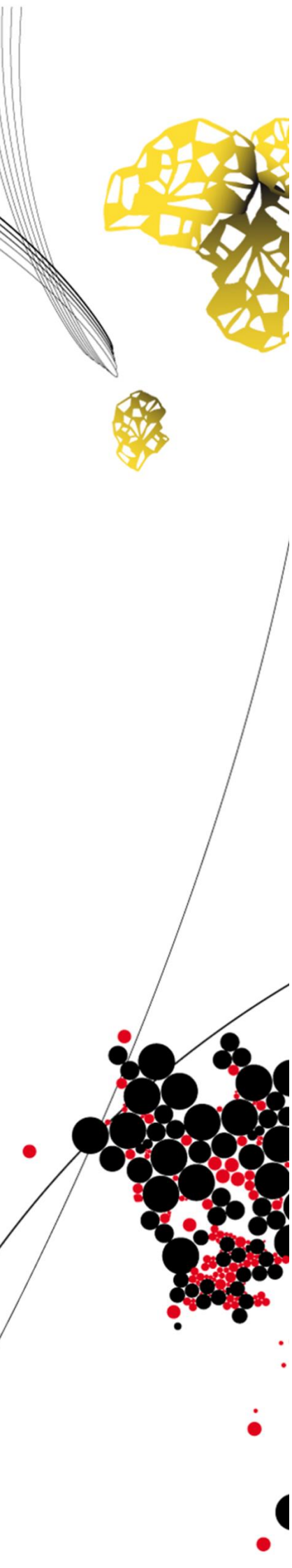

UNIVERSITY OF TWENTE

Faculty of Behavioural, Management & Social Science

The two-continua model of mental health in PTSD

A study about the application of the two-continua-model of mental health to general and specific psycho psychopathological symptoms of PTSD

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Foreword

This master thesis is written for my graduation of the clinical master 'Positive Psychology and Technology' at the University of Twente. The specialisation of positive psychology has its roots in the need for a better wellbeing. This thesis is attached to an internship where I learned that the focus on positive emotions can help patients to be happier and friendly towards themselves. To gain more insight into wellbeing and the effect of treatment on it, it is important to do research. At the 'Centrum for Psychotrauma' of Mediant, a mental health institution, I could make contributions to the issue whether treatment can heighten the wellbeing of the patients, as their psychopathological and PTSD symptoms decrease. I hope that my research shows that an element of positive emotions should be added to treatment, in the form of, for example wellbeing therapy, to increase the wellbeing of patients and, therefore, enrich mental health care.

At first I want to thank my three supervisors for their help: I want to thank Marloes Postel and Lieke Christenhusz for their valuable feedback, guidance and support that I received during my research. Due to their help, my thesis became what it is now. They helped me to think critically over issues that are connected to my research and write them down in an understandable way. Because of them, I think my thesis became valuable for research and health care. I also want to thank all of the involved people at the Centrum for Psychotrauma, and especially Laura Hüning for all of her input. I am very pleasant for all the times that we discussed the outcomes of our research, the critical thoughts and tips that I got. I learned a lot. Because of her, I learned to look at a single event from different perspectives.

I also want to thank my team at the Centrum for Psychotrauma. They made the time during my internship and research very comfortable and made me feel at home. I found another family from day one till the end. I also want to thank the clients for their participation and giving their information.

Furthermore, I want to thank Matthias for his efforts when I asked for help. His knowledge and expertise helped in so many times. In addition, my thanks go to Jan-Willem, Jeroen and Miriam who helped me with the smallest tips.

Last but not least, I am pleasant that I got a lot of mental and moral support from my family, Gijs and my girls during my master and internship. Thank you all for your support and our fellowship!

Lisa Stahlkopf

Abstract

Introduction: The two-continua model of mental health states that the absence of distress and the presence of wellbeing stand in relation to each other but form different components of mental health. The applicability of that model has been demonstrated for the general population. Evidence regarding psychopathological populations is scarce. Since wellbeing does not get much awareness despite its importance, the present study aims to close this gap of knowledge by examining the extent of applicability of the model within treatment of psychotrauma patients. By raising knowledge and awareness of the effect of traditional treatment on wellbeing concerning the specific symptoms, the study can possibly contribute to improved health care

Methods: Different repeated measure analyses were used to address correlations and effects of therapy regarding wellbeing, general psychopathological symptoms and PTSD specific symptoms of 139 trauma patients. It was also investigated if and which effect treatment has on patients with different levels of wellbeing (languishers, moderates and flourishers).

Results: A medium correlation of the PTSD specific symptoms and the (different levels of) wellbeing as well as that treatment positively decreases symptoms and increases wellbeing hints at the application of the two-continua model. Since there are different levels of wellbeing, it was investigated whether there were different outcomes between the three levels of wellbeing that had impact on the application of the two-model continua. Despite a statistically significant effect of treatment on the general psychopathological symptoms, there was no statistically significant difference in the effect of treatment on the three groups. Treatment against PTSD specific symptoms is statistically significantly more helpful for languishers than for moderates or flourishers. Still, the treatment seems to have a no influence on wellbeing on individual level.

Discussion: The present study gives an indication for implementation of the two-continua model within the clinical population of PTSD patients of Mediant and supports earlier studies about the two-continua model. There are two different dimensions (psychopathology and (psychological) wellbeing) that show a certain extent of interplay, but also behave independently. Since there were some limitations, further research should take a closer look to the kind and length of different kinds of treatment as usual, as well as a qualitative longitudinal study to gain more knowledge concerning the limitations of the present study.

Summary (Dutch)

Inleiding: Het twee-continua model van de geestelijke gezondheid stelt dat afwezigheid van klachten en de aanwezigheid van welbevinden gerelateerd zijn aan elkaar, en eigenstandige componenten zijn. De toepasbaarheid van het model is gedemonstreerd in de algemene bevolking, terwijl het bewijs van de bruikbaarheid van dit model in een psychopathologische populatie met psychologische klachten schaars is. Omdat welbevinden van belang is en nog steeds niet genoeg erkenning krijgt, is de huidige studie bedoeld om deze kloof van kennis te sluiten door de mate van toepasbaarheid van het model binnen de traditionele behandeling van psychotraumatische patiënten te onderzoeken. Door meer inzicht te verkrijgen in het effect van traditionele behandeling op het welbevinden, is het mogelijk om een bijdrage te levereen aan het verbeteren van de geestelijke gezondheidszorg

Methode: Verschillende herhaalde metingen werden gebruikt om correlaties en behandeleffecten te onderzoeken met betrekking tot welbevinden, algemene psychopathologische en PTSD specifieke symptomen van 139 traumapatiënten. Er is onderzoek gedaan naar het behandeleffect van patiënten met verschillende niveaus van welbevinden.

Resultaten: Er is een matige correlatie van de PTSS-symptomen en het welbevinden zoals dat behandeling specifieke en algemene symptomen verlaagt en het welbevinden verhoogt, verwijst naar de toepassing van het twee-continua model. Aangezien er verschillende niveaus van welbevinden zijn, werd onderzocht of verschillende uitkomsten invloed hebben op de toepassing van het twee-continua model. Behandeling verlaagt specifieke en algemene symptomen en verhoogt het welbevinden. Ondanks een statistisch significant effect van de behandeling op de algemene pathologische symptomen, was er geen statistisch significant verschil in het effect van de behandeling op de drie groepen. Behandeling van PTSS klachten is succesvoller voor languishers dan voor moderates of flourishers.

Discussie: De huidige studie geeft een indicatie voor de toepassing van het twee-continua model binnen de populatie van PTSS-patiënten van Mediant en ondersteunt eerdere studies over het twee-continua model. Er zijn twee verschillende dimensies (psychopathologie en (psychisch) welbevinden), die een zekere mate van interactie vertonen, maar zich ook onafhankelijk gedragen. Aangezien er een aantal beperkingen zijn, is het van belang om onderzoek te doen met betrekking tot de aard en lengte van verschillende behandelingen, evenals een kwalitatieve longitudinale studie om meer kennis over de beperkingen van deze studie krijgen.

Index

Introduction

An individual's overall health is comprised of physical and mental health, whereas the two-continua model states that mental health is not simply the absence of mental illnesses but also the presence of wellbeing of a person. The applicability of the two-continua model has been demonstrated for the general population so far. However, evidence is scarce regarding different psychopathological populations, such as pain patients and patients with post-traumatic stress disorder [PTSD]. The importance of the issue and the gap of knowledge necessitate more research. The present study aims to close this gap by examining to what extent the two-continua model applies to patients with general and specific symptoms of psychotrauma. Furthermore, the present study investigates whether traditional treatment decreases psychopathological symptoms and simultaneously increases the wellbeing, resulting in an improvement of positive mental health.

Positive mental Health

Positive mental health can be described via three distinct elements, namely (a) the subjective experience of well-being, which defines the degree of presence and absence of positive and negative feelings and satisfaction in life (emotional wellbeing), (b) effective individual functioning and self-realisation of the individual himself (psychological wellbeing), and (c) effective social functioning within the society (social wellbeing) (WHO, 2005, p.2; Bohlmeijer, Bolier, Westerhof & Walburg, 2015), where emotional wellbeing is studied as hedonic, and psychological and social wellbeing are counted to the eudaimonic wellbeing (Keyes et al. 2002; Ryan and Deci 2001; Waterman 1993). Emotional wellbeing is conceptualised as experiencing many positive emotions such as joy, hope, and happiness, and simultaneously not experiencing many negative emotions. High emotional wellbeing is positively associated with survival and recovery of physical injury (Bohlmeijer, Bolier, Westerhof, & Walburg, 2015). Psychological wellbeing consists of the individual's perception of purposefulness, personal growth, autonomy, environmental mastery, self-acceptation, and positive relations (Ryff, 1989; Ryff & Keyes, 1995). Psychological wellbeing is related to demographic variables and helps the individual to adopt better to environmental changes (Bohlmeijer, Bolier, Westerhof, & Walburg, 2015). Lastly, social wellbeing describes the effective functioning within the society by experienced social coherence, social acceptance, understanding of the society, social actualization, and social integration (Keyes, 1998). It is important for a better social feeling and adopting in a social situation (Bohlmeijer, Bolier, Westerhof, & Walburg, 2015). A combination of these three levels of wellbeing is considered to indicate positive mental health (Keyes, 2002). Wellbeing can change through life within a

person, but can also differ in its height from one human to another. Therefore, wellbeing can be subdivided into three levels: languishing, moderates, flourishing (Keyes, 2002, 2005, 2006, 2007). Languishers are people that show the lowest wellbeing, flourishers the highest.

The two-continua model of mental illness and health

By examining all the information about the definitions of mental health and wellbeing, it is suggested that mental health is more than the absence of distress. The general opinion in the history of psychology was that there is an interaction between distress and wellbeing that is manifested in a negative association: The decrease of distress leads to an increase of wellbeing and vice versa. Nowadays, it is known that, despite their relation to each other, the absence of distress and the presence of wellbeing are two different components of mental health (Keyes, 2005; Westerhof & Keyes, 2010; Lamers, Westerhof, Bohlmeijer, ten Klooster & Keyes, 2011; Bohlmeijer, Lamers, & Fledderus, 2014). Humans can be without psychopathological symptoms and, at the same time, experience less wellbeing through missing satisfactory personal relationships, self-determination in activities and choices, and feelings of self-regard (Kashdan, Uswatte, and Julioan, 2006; Westerhof & Bohlmeijer, 2010). In consequence of these findings, it is suggested that the focus of psychological treatment should not only be the counteraction of symptoms of distress but also the enhancement of the wellbeing, since treatment of psychological distress would only lead to a limited daily functioning but not to an improvement of the mental health.

The absence of distress and the presence of wellbeing were combined within the two-continua model of mental illness and health as two different components that are related in a distinct way. The two-continua model can be described in the following way (Keyes, 2010):

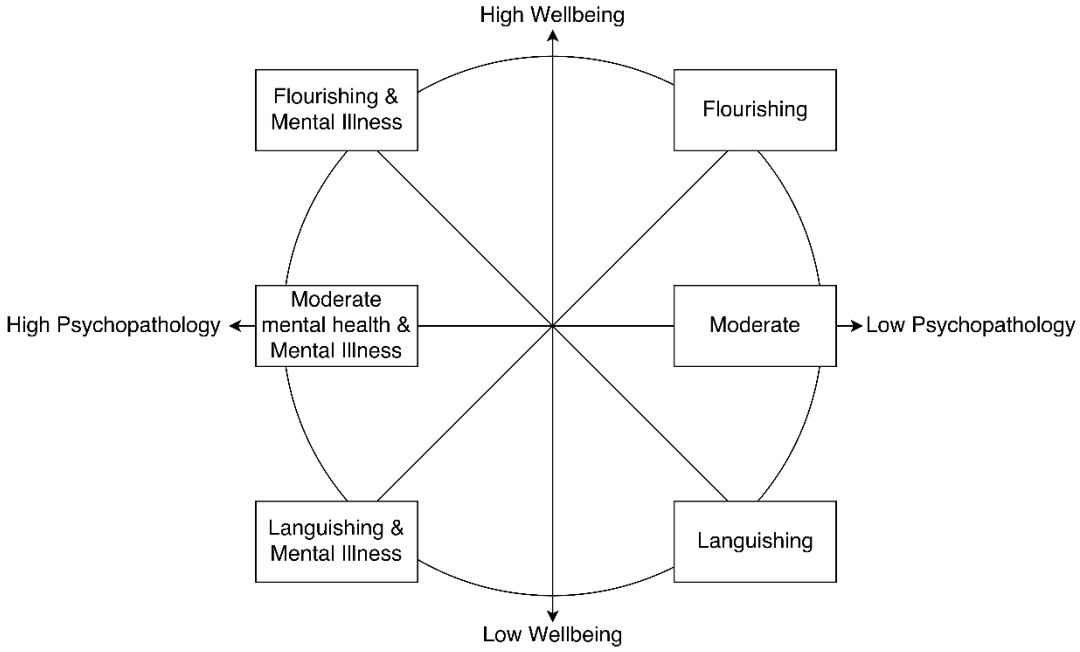


Figure 1. Two-continua model of Mental Health and Illness as adapted by Keyes (2010)

In earlier research, it has been found that the two components ((psychological) wellbeing and psychopathology) have a medium correlation (Keyes & Westerhof, 2010; Lamers, Cees, Westerhof & Bohlmeijer, 2011; Lamers, 2012). In other words, the decrease of psychopathological symptoms can lead to a medium increase of wellbeing; however, the illustration of the two-continue model so far (Figure 1) suggests that there is a direct and linear interplay of (psychological) wellbeing and psychopathology. An alternative illustration for the two-continua model is generated to illustrate the non-linear interplay:

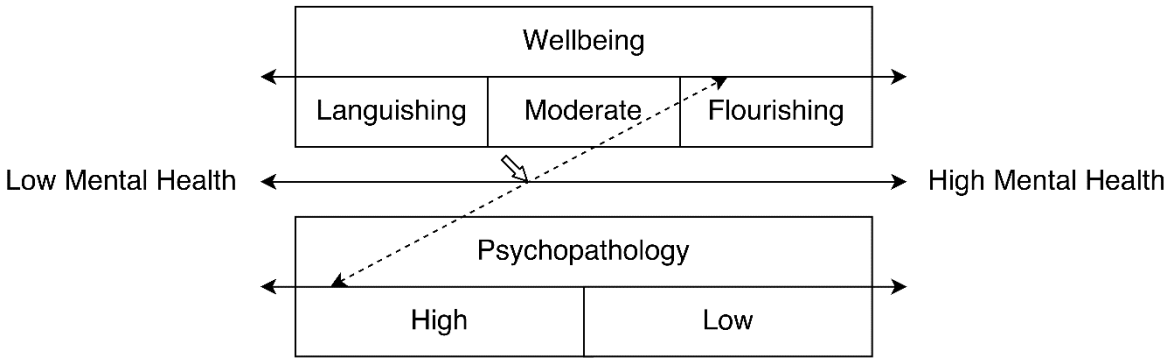


Figure 2. *Alternative illustration of the two-continua model depicting the interplay of wellbeing and psychopathology to form mental health*

In the alternative illustration of the two-continua model (Figure 2), the two components are independent from each other but with moderation relation to each other. The mental health line between the two components illustrates how the mental health of an individual can be derived from connecting the measures of the two components, (psychological) wellbeing and psychopathology. The dashed line exemplifies how an individual with high psychopathology and high psychological wellbeing could still count as having medium mental health. This

alternative illustration of the two-continua model would allow various adaptations, such as alternating the height of the line accounting for more weight of one component over the other, or the slope and curvature of the line accounting for differences in weight of the component. The two-continua model is supported by different studies within different groups of the general population and justifies the applicability of the two-continua model. Keyes (2005) performed a study within the general American population (Midlife Development in the United States study) where he examined the symptoms of generalised anxiety, panic, mood, and dependence on alcohol (Keyes, 2005; Keyes & Grzywacz, 2005). The outcome of the study shows that the absence of distress and the presence of wellbeing are indeed two different components of mental health that have a medium relationship to each other. This study was replicated in other populations: American adolescents from the age 12–18 (Keyes, 2006), American adults (Keyes & Grzywacz, 2005; Keyes, 2006; Keyes, 2007), Dutch adults (Westerhof & Keyes 2008), and South-African adults (Keyes, Wissing, Potgieter, Temane, Kruger, & van Rooy, 2008). The outcomes of those studies added more value and support for the two-continua model.

PTSD and the current treatment

PTSD is categorised as an anxiety disorder in the DSM-IV, and as a trauma- and stress-related disorder in the DSM-V. PTSD is diagnosed when people experienced a traumatic event with threat by death, serious injury or affecting the physical integrity and continue to hold three types of complaints: (1) re-experiencing of the event, (2) avoidance to talk and think about the event or avoidance of people and places, and, (3) hyperarousal, like concentration and sleep problems or being easily irritated (American Psychiatric Association, 2001, 2014). PTSD is one of the most common disorders. Every human being experience one or more traumas in life, but only 10% of those develop PTSD (Trimbus instituut, 2008; Kessler et al., 2015). There are some risk-groups with a higher chance of developing PTSD; for example, refugees, veterans, policemen or care providers in disaster areas (Olff, 2002). There are two types of traumas: Type 1 trauma is defined as a single short-term trauma, and type 2 as repeated traumatization. The last one is also named complex trauma (Vandereycken, Hoogduin, Emmelkamp, 2008). Humans that develop PTSD enter a vicious circle, where they try to avoid places, people, thoughts, feelings and talking about the traumatic event. Avoiding trauma-related cues only helps for a short term, but on the long-term it leads to hyperarousal and re-experiencing (Olff, 2002; Knipscheer, Middendorp, Kleber, 2011). PTSD has a high comorbidity with other psychopathological disorders, such as depression since the symptoms do no disappear, substance dependency to avoid thinking about the traumatic event, or

somatic symptoms because the whole body is under constant tension (Olff, 2002).Current treatments (Stabilisation, prolonged exposure, NET, EMDR; see next chapter) against PTSD focus on the decrease of psychopathological symptoms and less on the wellbeing of patients (Keijsers, Van Minnen & Hoogduin, 2004; Luty, Carter, Kenzie, Rae, Frampton, Mulder & Joyce 2007; Hofmann & Smits, 2008; Macaskill, 2012;). Since complex trauma leads to a decreased wellbeing of trauma survivors, the chance of disconnecting from real life and feelings merge as well as it leads to an increase in the sensitivity for anxiety (Ehlers & Clark, 2000, Kashdan, Uswatte & Julian, 2006). The level of the sensitivity for anxiety can be used as predictor for post-traumatic stress disorder and for the treatment of anxiety symptoms (Lang, Kennedy & Stein, 2002; Marshall, Miles & Stewart, 2010; Benish, Imel & Wampold, 2008; Bradley, Greene, Russ, Dutra & Westen, 2005; Foa, Zoellner, Feeny, Hembree & Alvarez-Conrad, 2002).

The applicability of the two-continua model within PTSD

The link between wellbeing and traditional therapy is studied by Açikel (2014), Boumeester (2015) and Pool (2016) within two different populations: chronical pain, and PTSD. It was investigated to what extent the wellbeing of the different specific patient populations differs to the general population, as well as whether the general psychopathological symptoms support the two-continua model regarding the wellbeing within traditional treatment. There was a lower wellbeing before and in comparison to after treatment as usual, yet no correlation of the general psychopathology and wellbeing where found within both patient groups.

Relevance

Even though there are a lot of studies that support the two-continua model, they were mainly done within the general population. Bouwmeester (2015) found a medium correlation between the components of mental health when examining a population of patients with chronical pain. Others were done within a population of PTSD patients (Benites, Zlotnick, Stout, Lou, Dyck, Weisberg & Keller, 2012; Açikel, 2014; Pool, 2016). Since there is little awareness for wellbeing within the treatment as usual for PTSD, some patients experience an increase in symptoms (Foa, Zoellner, Feeny, Hembree & Alvarez-Conrad, 2002; Bradley, Greene, Russ, Dutra & Westen, 2005; Benish, Imel & Wampold, 2008). Since findings report no correlation of the general psychopathology and wellbeing and therefore no support for the two-continua model. Furthermore, there is no answer to the relationship of wellbeing regarding the specific symptoms of the patients, namely those that are treated through therapy, the present study focus on the specific symptoms of trauma patients next to the

psychopathological symptoms in the context of the applicability of the two-continua model. By raising knowledge and awareness of the effect of traditional treatment on wellbeing concerning the specific symptoms, the study can possibly contribute to improved health care.

Present study

In the present study, the question "to what extent is the two-continua model of mental health applicable to PTSD patients before and after treatment as usual?" is assessed. To answer the question of the present study, subquestions and hypothesis must be examined. The hypotheses are based on earlier research:

1. Is there a correlation between wellbeing and specific and general psychopathology (1) before treatment, and (2) after treatment for PTSD patients?
    - *There is a medium correlation between the wellbeing and the specific symptoms.*
    - *There is a medium correlation between the general psychopathology and wellbeing.*
    - *There is a medium correlation between general and specific symptoms.*

2. Is there an effect of treatment in general and regarding the three different levels of wellbeing?
    a. What are the effects of the treatment aimed at reduction of symptoms (including stabilisation of patients), regarding the psychopathological and specific symptoms of the patients (BSI, PTSD symptom scale) and their wellbeing (MHC-SF)?
        - *There is a statistically significant medium effect of treatment on the general psychopathological symptoms*
        - *There is a medium effect on the wellbeing*
        - *There is a statistically significant effect on the PTSD specific symptoms.*
    b. How do the descriptive frequencies of patients' levels of wellbeing (languishers, moderates, and flourishers) change from pre- to post-measure?
        - *Languishers change to a more positive level of wellbeing* (moderates or flourishers)
        - *Moderates change to a more positive level of wellbeing* (flourishers)
        - *Flourishers remain in their level of wellbeing* (flourishers).
    c. To what extend does the treatment have different effects on languishers, moderates, and flourishers regarding psychopathological and specific symptoms?
        - *The effect of treatment as usual is stronger for languishers and moderates than for flourishers regarding the PTSD symptoms*

- *The effect of treatment as usual is the same for languishers, moderates and flourishers regarding the general psychopathological symptoms.*

Methods

Design

The design of the present study was a pre-post design with no random selection. This study reports a secondary analysis of a pre-post study conducted in 2015-2016 (Pool, 2016). No difference was made within the treatment as usual. The participants received questionnaires at the beginning and end of their treatment for PTSD to create a dataset for the present manuscript (Figure 1).

Sample and recruitment

The data of the present research were patients of the Psychotrauma Centrum of Mediant. The research data was taken from the Routine Outcome Monitoring [ROM] database of the trauma patients Mediant (see Procedure). The data was collected from May 2013 until October 13, 2015. The participating patients (between the ages of 20 and 88) had completed one of the four different types of therapy: Eye Movement Desensitization and Reprocessing [EMDR], Exposure, Narrative Exposure Therapy [NET], or Stabilisation (demographics Table1.; intervention-section). The focus of those types of treatment was to alleviate the psychopathological symptoms and thus, creating limited functioning in daily life while resolving psychopathological symptoms (Keyes, 2007). Furthermore, the ROM-database consists of the data of 1048 respondents that started in the period from May 2013 on and externally finished on October 13, 2015. The sample of trauma patients for this study were 139 out of the 1014 (Figure 3). The 139 patients (52 men and 87 women) had an average of about 41 years old (SD = 11.66; Table 1).

Table 1.

Overview demographics with N = 139; Duration of treatment in month

		N	%	Mean	SD	Range
Gender	Women	87	62.6			
	Men	52	37.4			
Age				41.45	11.60	20-88
Sort of Treatment	Basic GGZ	41	29.5			
	Specialised GGZ	98	70.5			
Kind of Treatment	EMDR	73	52.5			
	Exposure	34	24.5			
	NET	24	17.3			
	Stabilisation	8	5.8			
Duration of treatment		139		10.04	5.54	3-52

Table 2.

Overview inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Diagnosed with PTSD before treatment	No diagnose for PTSD before treatment
Participating PTSD treatment	No pre- and post-measure of the treatment at all
Pre- and post-treatment measure of the BSI	Only a pre- measure of the treatment
Pre- and post-treatment measure of the MHC-SF	Only a post- measure of the treatment
Pre- and post-treatment measure of the PTSD symptoms scale	Patients that do have non or less than two contacts with the mental health caregiver
The participants had to be at least 18 years' old	

Sample Representativeness

Data of 1048 patients were collected for the present study. Due to missing pre-treatment or post-treatment data on one or more of the three questionnaires, the data was reduced to 139 trauma patients (78 men and 52 women) in the age of 20-88. Since 139 out of the 1048 data points could compromise the representativeness of the sample, eventual differences between the 139 data points used in the present study and the other excluded 909 data points were investigated. Due to practical limitations (missing demographics for the 909 patients), the representativeness was determined by the scores on the questionnaires. The sum scores of the main scales and subscales for the pre- and the post-measure were calculated and compared

between both samples. To accomplish this comparison independent samples t-tests were conducted to compare the pre-measures of both groups and then compare the post-measures of both groups. The comparison of psychopathology and wellbeing between the sample of the present study and the other trauma patients of Mediant showed only on statistically significant difference in the ratings of the general psychopathological symptoms as well as in the ratings of the wellbeing between those two groups. Only the paranoid symptoms in the pre-measure showed a statistically significant difference, $t_{(201)} = 2.06$, $p < .05$. The participants whose data was included in the present study (N = 139) scored higher on paranoid symptoms than the excluded participants (included: M = 10.28, SD = 4.91; excluded: M = 8.75, SD = 4.92). This indicates a medium to high representativeness of the sample with complete data to all the trauma patients of Mediant. This outcome supports the generalizability of the findings of the present study.

Procedure

Overall procedure. Patients of the Psychotrauma Centrum of Mediant had to fill in several questionnaires at the beginning and at the end of therapy monitoring the progress as eventual reduction of negative symptoms, as well as the improvement in wellbeing. Some patients were measured more than twice due to adaptations of the health care procedure. The most recent version of the health care procedure included the following questionnaires: The Mental Health Continuum-Short Form [MHC-SF], PTSD symptoms scale, The Brief Symptom Inventory [BSI]. This data was stored in the ROM.

Present study. The present study is part of a study about wellbeing-therapy of Laura Hüning. Data for the present study were received from the ROM database. Data regarding three questionnaires (MHC-SF, BSI, PTSD symptoms scale) were collected from before the treatment, and after (the last) treatment. In total data points of 139 out of 1048 screened participants were determined to be completed and therefore eligible for the present study (Figure 3). There was no distinction made between the different types of treatment as usual (NET, Exposure, EMDR) or stabilisation.

By starting a therapy patients have given passive consent to the scientific use of their anonymized data. Before receiving the data, the ‘Manager Bestuursbureau Mediant’ granted permission to use the anonymized data.

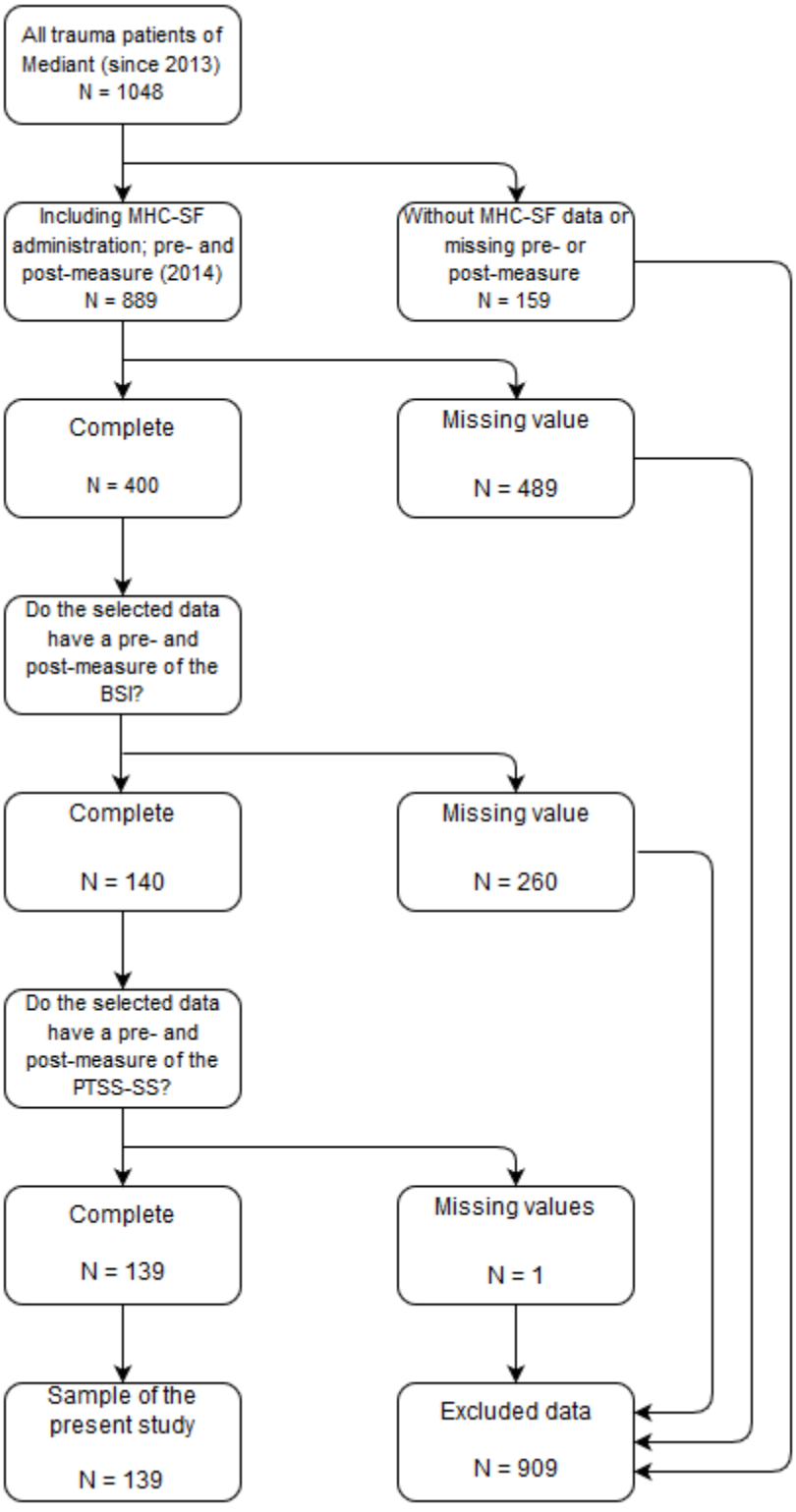


Figure 3. *Overview reducing-procedure of all trauma patients of Mediant to the present patient-population for the research*

Materials

Three questionnaires were used to determine the general psychopathology, the specific symptoms of posttraumatic stress disorder, and the levels of wellbeing: Brief Symptom Inventory, PTSD symptoms scale, and Mental Health Continuum-Short Form.

Mental Health Continuum-Short Form. The Mental Health Continuum-Short Form [MHC-SF] is used to measure the patients' wellbeing through the three-factor structure of wellbeing: emotional, psychological, and social (Keyes, 2006; Keyes, Wissing, Potgieter, Temane, Kruger & van Rooy, 2008; Lamers et al., 2011). The MHC-SF consists of fourteen items that are allocated in three different subscales that are related to the three-factor structure. There are different versions of the MHC. The Dutch version that is used in the present study obtains good psychometric properties (Westerhof and Keyes 2008, Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011; Lamers, 2012; Lamers, Cees, Westerhof & Bohlmeijer, 2011). The internal consistency is rated with $\alpha = .91$. The internal consistency of the subscales is rated as good: 'emotional wellbeing' scale (3 items, $\alpha = .83$), psychological wellbeing (6 items, $\alpha = .83$), and the social wellbeing scale (5 items, $\alpha = .74$) (norm scores: see Appendix A; Lamers, Westerhof, Bohlmeijer, ten Klooster & Keyes, 2011). Later, the sample of trauma patients is divided by their scores on the MHC-SF into three subgroups by making a distinction in the levels of wellbeing: languishers, moderates, flourishers (Keyes, 2002, 2005, 2006, 2007). Languishers are individuals with a low level of subjective wellbeing combined with low levels of psychological and social wellbeing. Those who are not organized in one of the two groups are considered to have medium mental health. Languishers are defined by answering 1/3 of the items of the emotional wellbeing scale with "never" or "once or twice", and 6/11 of the items measuring psychological and social wellbeing are answered with "never" or "once or twice" in the past month. Similarly, people are called flourishers when a high level of subjective wellbeing is combined with an optimal level of psychological and social functioning. Flourishers are defined by the following scores: at least 1/3 of the items of the emotional wellbeing scale and at least 6/11 of the items measuring psychological and social wellbeing are answered with 'almost every day' or 'everyday' (Keyes 2005). People that cannot be defined as "languishers" nor "flourishers" are coded as moderates.

Brief Symptom Inventory. The Brief Symptom Inventory [BSI] (Dutch version: de Beurs & Zitman, 2006) is a self-report questionnaire exploring the psychological functioning of a person. The duration of the test administration is less than ten minutes (Derogatis & Melisaratos, 1983). In general, there are 49 items that can be organised into one of nine subscales, and additionally four that show characteristics of more than one of the nine scales.

The nine subscales measure occurring psychopathological symptoms such as: somatic problems, cognitive problems, interpersonal sensitivities, depression, anxiety, hostility, phobic anxiety, paranoid thoughts, and psychoticism. The 53 items (α = .97) are rated on a five-point scale: 0 = not at all, 1 = a little bit, 2 = sometimes, 3 = quite a lot, 4 = very often (Derogatis & Melisaratos, 1983). Beurs and Zitman (2006) examined the reliability and validity of the subscales. The somatic problems scale (7 items, α = .85) measure corporal problems as well as anxiety symptoms, like 'Do you experience hot flashes or chills'. The scale 'cognitive problems' (6 items, α = .84) measures obsessive-compulsive symptoms, and, attention and concentration problems, such as difficulties with recalling information. The scale 'interpersonal sensitivity' (4 items, α = .84) concentrates on social anxiety such as inferiority, failing, and social phobia. 'Depressive mood' (6 items, α = .88) addresses depressive feelings such as negative affect, suicidal tendencies and anhedonia, as well as dysthymia: The anxiety scale (6 items, α = .85) refers to symptoms of the generalized anxiety disorder [GAS] and panic disorder. The scale 'hostility' (5 items, α = .85) measures anger and aggression. 'Phobic anxiety' (5 items, α = .82) measures feelings and behaviour towards specific situations such as fear towards open places (agoraphobia). The scale 'paranoid thoughts' (5 items, α = .79) links to the issue of excessive suspicion, hostility, grandiosity, and personality disorder. The subscale 'psychoticism' (5 items, α = .71) is associated with withdrawn lifestyle, schizophrenia and delusional qualities

PTSD symptom scale. The PTSD symptoms scale measures the degree of symptoms of PTSD. This scale inheres seventeen items measuring the PTSD symptoms that are specified in the Diagnostic and Statistical Manual of Mental Disorders [DSM-IV-TR]. Those items inquire present symptoms and can be categorised in three subscales: Re-experiencing (5 items), for example 'how often there have been unpleasant dreams of nightmares about the traumatic event in the past week'. Avoidance (7 items), for example 'To what extent did you struggle by remembering important parts of what happened (during the traumatic event) during the past week?' Hyperarousal (5 items), for example 'To what extent did you suffer from being quickly irritated or from angry outburst the last week?' These items are substantively about the extent to which the PTSD specific symptoms were a burden for the patient regarding the last week. Items must be answered on a four-point Likert scale: never (0), once a week (1), two to four times a week (2), equal or higher than five times a week (3). The higher the final score, the more it is a burden for the patient (range 1-51). A cut-off-score of 15 indicates a small degree to no PTSD if the patients scores below the cut-off, and a presence of PTSD if the patient's scores show an amount higher than the cut-off (Wohlfarth,

van den Brink & Winkel, 2003). The PTSD symptom scale has been rated with a high internal reliability (α = .87) and a high external reliability. In comparison with other questionnaires, the PTSD symptoms scale show a statistically significantly higher correlation with PTSD related questionnaires than with other symptom scales (Ruggiero, Del Ben, Scorri & Rabalais, 2003). The scale is sensitive enough to detect small changes in short term effects (Van Minnen & Arntz, 2007).

Interventions

EMDR. This is a psychotherapy treatment that was originally designed to alleviate the distress associated with traumatic memories (Shapiro, 1989a, 1989b). During the session, the patients have to expose themselves to distressed traumatic events in small but sequential doses while being distracted by an external stimulus (Ten Broeke, Korrelboom & Verbraak, 2009). External stimuli are for example: focusing on the traumatic event while following a point of light or the therapist's finger that is horizontal, repetitively moved from the left to the right from the two utmost points of the field of vision. Another external stimulus is closing their eyes, thinking about the traumatic event, while listening to sound that is alternately heard in the left and right ear (audio stimulations). These moves are so called directed lateral eye movements. Another alternative for external stimulus is hand-tapping (Shapiro, 1991). EMDR can be explained by different theories including the adaptive information processing (AIP) model. The AIP model is based on the statement that there is an information processing system where new experiences are assimilated into the existing information (Shapiro, 2001, 2007). The bilateral stimulus (the external one) leads to deconditioning and to an enhancement of information processing. This information has influence on attitudes, behaviours and perceptions.

Prolonged Exposure. PTSD patients try not to think or talk about the experienced trauma. They avoid talking about what happened because it is connected to much distress that they do not want to be remembered. This strategy only helps for a short period. The symptoms of PTSD are maintained through avoidance and lead to hyperarousal and re-experiencing. To remedy the symptoms, exposure is used as a psychotherapeutic technique to treat PTSD symptoms with a long-term effect. The theory behind exposure is about extinction. That means that the therapist needs to maximize the anxiety for a period to enable extinction and therefore diminish the anxiety (McNally, 2007). It involves the patients having to do the opposite of avoidance: talking and thinking about the traumatic event(s) in a safety context to overcome their anxiety. There are two different forms of prolonged exposure: in vivo and imaginary. By exposure in vivo, the effects of anxiety are addressed. For example, if a patient

does not dare running stairs anymore because of a traumatic accident, he or she needs to practice using the stairs. By practicing using the stairs in the presence of the therapist, the harm-expectancy can be challenged and eventually overwritten. The symptoms will reduce. The other exposure form is the imaginary exposure. The patients are asked to talk about their trauma while the speech is recorded. The patients are instructed to keep eyes closed to decrease the amount of distracting stimuli and to support the acuity of remembrance. The therapist listens and asks questions such as 'What do you think/feel/see/smell/hear', in order to increase the vivid imaginary. The audio recordings need to be listened to repeatedly, which is beneficial to habituation and processing the emotions regarding the trauma. Therefore, the tension and anxiety have to rise, and, through repetition and listening, decline again.

NET. This treatment is a modified form of exposure. Within this treatment, the therapist and patient organise the most important (traumatic) events in chronological order. In addition to the negative events in life, the most important positive events are reviewed. These events are conceptualised by putting a rope on the floor that illustrates the life of a person from birth until the present. The important negative and positive events are marked by stones and flowers. The stones show the negative events, the flowers the positive events in life. In the next session, the different important events are reviewed chronologically and in detail. It is important to pay attention to thoughts and feelings as well as physical sensations. As a result of NET, traumatic events are processed and all important events are placed in the context of your entire life. This mechanism is 're-scripting'. The meaning of the emotional (traumatic) events or memories change through devaluation of the unconditioned stimulus after reactivation of this stimulus. There is a reduction of the negative valence of the traumatic event (Arntz, 2012). During this treatment, reports are made after every session and then formed to a document of the life stories of patients. NET gradually reduces the resulting pain associated with traumatic memories.

Stabilisation. Stabilisation is the first of three steps of a PTSD phases. Stabilisation is not a treatment in itself because there is no reduction of the symptoms. Since eight patients showed an improvement after stabilisation without the need of treatment, they were included in the sample of the 139 patients. Therefore, stabilisation is included within the present study with the label 'treatment (as usual)'. Patients, for example refugees, that cannot start with one of the three above mentioned treatments because of special circumstances first start with stabilisation. Within stabilisation, supportive, structured contact is very important. Often, elements of NET are used, as well as group-training, for example mindfulness-training, or within Mediant 'Vroeger en verder'.

Analysis

All analyses are conducted with the Statistical Package for the Social Sciences (SPSS) version 23. For all analyses a uniform threshold is used ($\alpha = .05$). Skewness and Kurtosis were used to check for normal distributions of the relevant variables (i.e. more than one SE outside of a range of -1 up to +1). No variables displayed a relevant deviation from a normal distribution ($skewness_{MHC\text{-}SF} = 0.48$; $SE_{MHC\text{-}SF} = 0.21$; $kurtosis_{MHC\text{-}SF} = -0.60$; $SE_{MHC\text{-}SF} = 0.41$; $skewness_{BSI} = -0.01$; $SE_{BSI} = 0.21$; $kurtosis_{BSI} = -1.12$; $SE_{BSI} = 0.41$; $skewness_{PTSD} = 0.03$; $SE_{PTSD} = 0.21$; $kurtosis_{PTSD} = -1.05$; $SE_{PTSD} = 0.41$), therefore granting the use of parametric statistical procedures.

Correlation of wellbeing and psychopathology before and after treatment. The sub-question was tackled with bivariate correlations, i.e. Pearson's r. Bivariate correlations are calculated between the pre- and post-measures of the general psychopathological symptoms, the specific PTSD symptoms, and the wellbeing of the patients.

Effects of the treatment as usual and differences in levels of wellbeing. The second sub-question is about whether there is an effect of treatment in general and regarding the three different grades of wellbeing. It was split into three parts.

Effects of the treatment regarding pathological symptoms and wellbeing. The first part of the second sub-question was analysed via several General Linear Model Repeated Measures analyses [GLM RM]. The GLM RM is repeated for all the main- and subscales of the three questionnaires. Mauchly's Test was used to check whether corrections of the degrees of freedom for the within-subject effects have to be taken into account.

Change in levels of wellbeing from before to after treatment. The second part of the second sub-question determines whether the is change in the descriptive frequencies of patients' levels of wellbeing (languishers, moderates, and flourishers) from pre- to post-measure, in general and per person. Crosstabs were made to determine the link of MHC-SF category before and after treatment.

Effect in treatment regarding languishers, moderates, flourishers. The third part of the second sub-question investigates the effects of treatment as usual based on the different groups depending on the different levels of wellbeing (languishers, moderates, flourishers). Via GLM RM it was investigated to whether and to what extend the levels of wellbeing has influence on the reduction of the psychopathological symptoms and the specific PTSD related symptoms. Therefore, PTSD symptom scale and BSI both were used as independent variables.

Results

Correlation of wellbeing and psychopathology before and after treatment

In pre- and post-measures, comparable correlations were found. Within the MHC-SF, the main- and subscales correlated with each other moderately (0.3 to 0.5) or strongly positive (0.5 to 1.0). There were no correlations found between the BSI score and any MHC-SF measures, neither on the pre-test nor on the post-test (Table 3). Thus, the hypothesis that there was no correlation found between the general psychopathology and wellbeing is accepted.

Furthermore, the hypothesis that there is a correlation between general and specific symptoms was rejected. There were no correlations found between psychopathological symptoms (BSI) and PTSD specific symptoms (PTSD-SS), neither on the pre-test nor the post-test (Table 3). This outcome suggested that there were also differences within the different psychopathological symptoms (specific PTSD and general symptoms) in pre- and post-measure. The two-continua model could then be used for more than the model of mental health, but regarding to the different psychopathological symptoms.

However, all correlations between the PTSD-SS and the MHC-SF main- and subscales displayed statistically significant correlations in pre- and post-measure. These correlations were medium and strong (Table 3). That means that the hypothesis that there is a correlation between the wellbeing and the specific symptoms was also found to be true.

Table 3.

Means, SDs, and Pearson's correlations of pre- and post-measure of the main-scale and the subscale psychological wellbeing of the MHC-SF, and the main-scales of the BSI and PTSD-SS.

Pre			M	SD	1	2	3	4	5	6	7	8	9	10	11
	1	MHC-SF main-scale	1.78	1.08											
	2	MHC-SF emotional subscale	1.99	1.38	.76**										
	3	MHC-SF social subscale	1.46	1.16	.88**	.52**									
	4	MHC-SF psychological subscale	1.95	1.23	.93**	.59**	.73**								
	5	BSI main-scale	1.90	0.80	-.15	-.06	-.15	-.17							
	6	PTSD-SS main-scale	3.20	0.98	-.44**	-.41**	-.41**	-.36**	*.07*						
Post	7	MHC-SF main-scale	1.95	1.28	.63**	.50**	.55**	.57**	-.14	-.25**					
	8	MHC-SF emotional subscale	2.19	1.47	.48**	.53**	.32**	.44**	-.10	-.22*	.87**				
	9	MHC-SF social subscale	1.57	1.30	.56**	.39**	.58**	.48**	-.12	-.28**	.90**	.66**			
	10	MHC-SF psychological subscale	2.15	1.43	.64**	.47**	.56**	.61**	-.14	-.21*	.96**	.80**	.79**		
	11	BSI main-scale	1.64	0.95	-.09	-.08	-.03	-.12	.61**	.03	-.09	-.11	-.06	-.09	
	12	PTSD-SS main-scale	2.39	1.48	-.44**	-.43**	-.38**	-.35**	*.10*	.42**	-.66**	-.69**	-.58**	-.59**	*.13*

Note.* $p < .05$, $p < .01$. 'Italics' show the unexpected non-existence of a correlation between of the main-scales of PTSD-SS and BSI**

Effects of treatment as usual and differences in levels of wellbeing

A: Effects of the treatment regarding psychopathological symptoms and wellbeing. To investigate the effects of the treatment GLM RMs are conducted (Table 4). Regarding the positive mental health measured via MHC-SF, the subscale psychological wellbeing showed a statistically significant difference between pre- and post-measure ($\alpha = .05$). The subscale emotional wellbeing and the main-scale for positive mental health showed a trend towards statistical significance ($\alpha = .10$), while the subscale social wellbeing was statistically not significant. All measures, whether statistically significant or just a trend, showed a positive development, in other words an improvement of wellbeing. Therefore, the hypothesis that there is a medium effect of treatment on wellbeing can be partially supported.

Regarding psychopathological symptoms measured via BSI, all subscales and the main-scale showed a statistically significant difference between pre- and post-measure ($\alpha = .05$). All but one measure, showed a positive development, in other words a decrease of psychopathological symptoms. Only cognitive problems seemed to have increased from pre- to post-measure. Therefore, the hypothesis that there is a medium effect of treatment on psychopathological symptoms can be supported.

Regarding the PTSD specific symptoms measured via PTSD-SS, all subscales and the main-scale showed a statistically significant difference between pre- and post-measure ($\alpha = .05$). All measures, showed a positive development, in other words a decrease of PTSD specific symptoms. Therefore, the hypothesis that there is a medium effect of treatment on psychopathological symptoms can be supported.

Overall, the hypothesis of a medium effect of treatment on the general psychopathological symptoms as well as on the PTSD specific symptoms can be supported, with the notice of a negative change in cognitive problems. Despite the missing medium effect on the different wellbeing scales, there is a medium effect on the psychological wellbeing and therefore, supports the two-continua model.

Table 4.
Effects of treatment on the main-scale and subscales of the MHC-SF, BSI, PTSD symptom scale, whereby T0 = pre-measure, and T1 = post-measure of the treatment

		Pre M(SD)	Post M(SD)	F	df	p
MHC-SF	Main-scale	1.78 (1.08)	1.95 (1.28)	2.88	1;138	.06
	emotional subscale	1.99 (1.38)	2.19 (1.47)	2.88	1;138	.09
	social subscale	1.46 (1.16)	1.56 (1.30)	1.23	1;138	.27
	psychological subscale	1.95 (1.23)	2.15 (1.43)	4.00*	1;138	.05
BSI	Main-scale	1.90 (0.80)	1.64 (0.95)	15.06**	1;138	.00
	somatic symptoms	1.70 (0.94)	1.43 (1.90)	10.94**	1;138	.00
	cognition problems+	1.70 (0.94)	2.02 (1.11)	8.10**	1;138	.01
	interpersonal sensitivity	1.88 (1.07)	1.61 (1.09)	9.28**	1;138	.00
	depression symptoms	2.06 (0.99)	1.76 (1.10)	12.63**	1;138	.00
	anxiety symptoms	2.14 (0.94)	1.78 (1.13)	17.41**	1;138	.00
	hostility symptoms	1.55 (1.03)	1.34 (1.04)	5.91*	1;138	.02
	phobic symptoms	1.64 (1.06)	1.43 (1.05)	7.40**	1;138	.00
	paranoid thoughts	2.06 (0.98)	1.81 (1.11)	11.48**	1;138	.00
	psychoticism symptoms	1.64 (0.91	1.45 (0.95)	6.67**	1;138	.00
PTSD-SS	Main-scale	3.20 (0.98)	2.39 (1.48)	46.57**	1;138	.00
	re-experiencing symptoms	1.78 (0.68)	1.30 (0.91)	16.34**	1;138	.00
	avoidance symptoms	1.62 (0.75)	1.25 (0.79)	33.36**	1;138	.00
	hyperarousal symptoms	7.00 (2.24)	5.24 (3.28)	45.35**	1;138	.00

Note.* $p < .05$, $p < .01$, + only scale displaying an increase, instead of a decrease, from pre to post-measure.**

B: Change in level of wellbeing from before to after treatment. At first, the sample of the present study of the PTSD patients of Mediant (N = 139) was divided into three groups regarding the levels of wellbeing. The three groups were studied by comparison of the pre- and post-measure of the treatment. The change of the amount of the three groups from pre- to post-measure of the treatment can be seen in Figure 4. The difference between the pre- and post-measure of the treatment regarding the three groups is statistically significant, $x^2_{(4,139)} = 37.21$, $p < .05$. It was shown that the amount of the moderates got smaller from pre- to post-measure (Figure 4). Of the 57 people that were languishing at the pre-measure, 39 remained to languish after treatment. 19 languishers from the pre-treatment improved to a wellbeing, and two to flourishers. In the premeasure, 69 patients showed a medium wellbeing. After treatment, the moderates changed in their level of wellbeing: The wellbeing of 22 people

decreased, 34 did not show a difference in wellbeing, but 13 people improved in their wellbeing. There was also change within the flourisher of the pre-measure. Eight patients remained in a flourishing state, while five people had a decreased wellbeing (all of them moderate). Therefore, the hypotheses that the wellbeing of languishers and moderates should increase through treatment seemed to be true by looking at the total scores. However, investigating the change in MHC-SF level turned out slightly different results (Figure 4, Appendix B).

It was hypothesised that there was an increase of wellbeing through treatment within the languishers. With 21 improvements (of which 2 reached the level of flourisher), the hypothesis can be supported. It was hypothesised that there was an increase of wellbeing through treatment within the moderates. With 13 improvements and 22 declines, the hypothesis is only partially supported. Further, it was hypothesised that there was no decrease of wellbeing through treatment within the flourishers. 5 of the 13 flourishers dropped one level to moderates from pre- to post-measure. This does not support the hypothesis.

In general, no definite higher amount of improvements over declines in level of MHC was detected. A one-proportion z-test was used to investigate whether the changes are statistically significant. Following formula was used:

$$Z = \frac{\hat{p} - p_0}{\sqrt{\left(\frac{p_0\,(1 - p_0)}{n}\right)}}$$

In the formula, $\hat{p}$ is the sample proportion (34/61 = .5574), p_0 is the hypothesize population proportion (34 improvements of a total changes in MHC-SF level), and n is the total changes in MHC-SF level. No statistically significant difference is found of the proportion of improvements versus a 50/50 chance (z = 0.90, n = 61, p = .18).

The outcome showed neither a general increase nor a general decrease of the different levels of wellbeing from pre- to post-measure (total scores). The hypothesis that languishers and moderates have statistically significant positive change in level of wellbeing is found to be untrue. The hypothesis that flourishers remain their level of wellbeing, had to be rejected too.

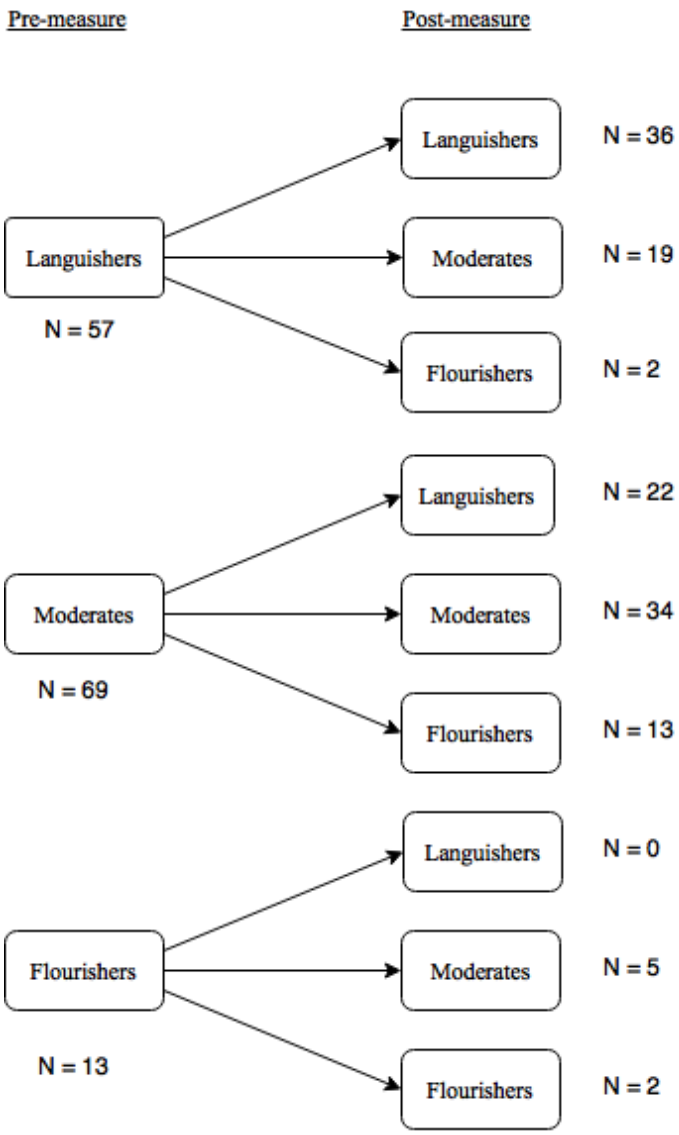


Figure 4. *Overview change in levels of wellbeing from pre-treatment to post-treatment.*

C: Effect in treatment regarding languishers, moderates, and flourishers. The effects of the main- and subscales of the BSI and the PTSD symptoms scale were studied with the inclusion of the different levels of wellbeing (languishers, moderates, flourishers) and the change from pre-to post-measure. It was shown that there is a main effect of pre-to-post measure of the general psychopathological symptoms that is statistically significant for almost all subdomains (i.e. anxiety symptoms, cognition problems, somatic symptoms), only phobic symptoms and psychoticism symptoms did not display a statistically significant change from pre- to post-test (Table 5). All those measures with statistically significant difference between pre- and post-measure were found to be positive. The different levels of wellbeing display statistically significant differences regarding the general psychopathological symptoms. There was no interaction effect determined between pre-post-measure and the different levels of wellbeing. Languishers, moderates and flourishers did not profit differently from the intervention (Table 5).

Another notable effect of treatment was seen in the reduction of pre- and post-measure of the different levels of wellbeing. The languishers showed more general symptoms (especially somatic, anxiety and phobic symptoms, as well as paranoid thoughts and psychoticism) in the post-measure, than flourishers had in the pre-measure (e.g. somatic symptoms of languishers in post-measurement: M = 1.61, SD = 1.02; somatic symptoms of flourishers in pre-measurement: M = 1.36, SD = 0.92). For the pathological symptoms in general (main-scale), as well as for somatic and anxiety symptoms it was shown that there was a statistically significant difference, while phobic symptoms, paranoid thoughts and psychoticism, $t(86) = 2.33$, $p < .05$; $t(85) = 2.31$, $p < .05$; $t(85) = 2.78$, $p < .05$; $t(84) = 1.55$, $p = .11$; $t(85) = 1.98$, $p < .05$; $t(84) = 1.01$, $p = .17$. In other words, even though the psychopathological symptoms of languishers decreased, they still experience more symptoms than the flourishers had at the start of the treatment. It must be noted that the t-Test assumption of equal amounts of data points in both groups was not met by the present study, as the amount of post-measure languishers (N = 57) was higher than the amount of pre-measure flourishers (N = 23). Disregarding this slight breach of assumption, the statistically significant differences confirmed the two-continua model as every group showed improvement. This noticeable difference could have an impact on the two-continua model for mental health care, concerning the possibilities of improvement of different people (main-scales BSI and PTSD-SS: Figure 5 and 6; subscales PTSD-SS and BSI: Appendix F).

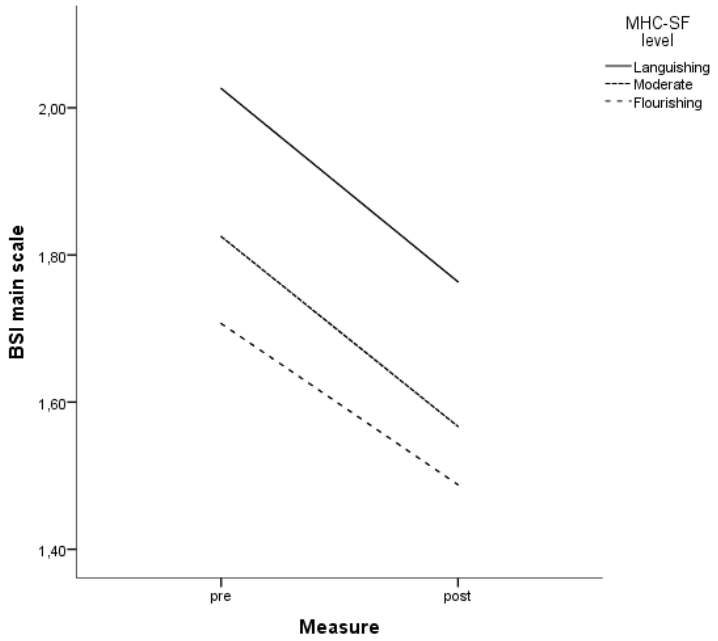


***Figure 5*. Overview change in level of wellbeing from pre-treatment to post-treatment with regard to the main-scale of the BSI.**

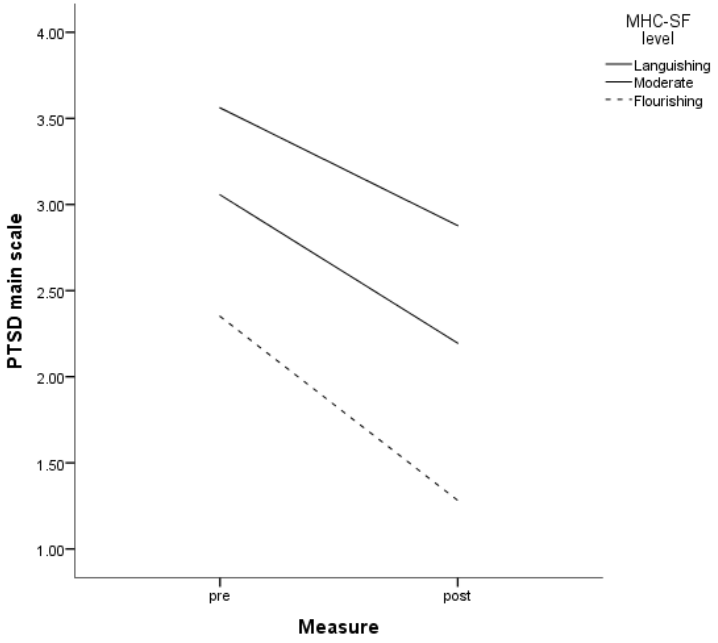


***Figure 6*. Overview change in level of wellbeing from pre-treatment to post-treatment regard to the main-scale of the PTSD symptom scale.**

Table 5.
Effect on main-scale and subscales of the BSI scale regarding the treatment and the languishers, moderates, and flourishers

scales	L		M		F		pre-post			mhc-sf			pre-post*mhc-sf		
	Pre	post	pre	post	pre	post	F	df	p	F	df	p	F	df	p
main-scale	2.03 (0.78)	1.76 (0.97)*	1.83 (0.81)	1.57 (0.97)	1.71 (0.78)*	1.49 (0.74)	8.17	1;136	.01	403.67	1;136	.00	0.02	2;136	.98
somatic symptoms	1.80 (0.88)	1.61 (1.02)*	1.6 (0.99)	1.34 (1.01)	1.36 (0.92)*	1.06 (0.72)	7.33	1;136	.01	231.92	1;136	.00	0.17	2;136	.85
cognition problems	2.38 (0.99)	2.14 (1.11)	2.18 (0.93)	1.97 (1.15)	2.21 (0.95)	1.79 (1.00)	6.77	1;136	.01	441.99	1;136	.00	0.23	2;136	.80
interpersonal sensitivity	2.38 (0.99)	2.14 (1.11)	2.18 (0.93)	1.97 (1.15)	2.21 (0.95)	1.79 (1.00)	5.28	1;136	.02	264.19	1;136	.00	0.18	2;136	.84
depression symptoms	2.20 (0.99)	1.94 (1.13)	1.97 (0.96)	1.60 (1.07)	1.94 (1.09)	1.85 (1.08)	4.85	1;136	.03	57.21	1;136	.00	0.43	2;136	.65
anxiety symptoms	2.33 (0.92)	1.93 (1.11)*	2.00 (0.93)	1.70 (1.18)	2.01 (0.99)*	1.53 (0.86)	12.44	1;136	.00	375.40	1;136	.00	2.26	2;136	.77
hostility symptoms	1.49 (1.07)	1.35 (1.00)	1.60 (1.01)	1.35 (1.08)	1.51 (0.99)	1.23 (1.15)	3.96	1;136	.05	202.79	1;136	.00	0.21	2;136	.82
phobic symptoms	1.77 (1.05)	1.54 (1.07)*	1.59 (1.11)	1.38 (1.07)	1.31 (0.85)*	1.28 (0.79)	2.64	1;136	.11	196.97	1;136	.00	2.28	2;136	.76
paranoid thoughts	2.24 (0.95)	1.94 (1.17)*	1.95 (0.98)	1.72 (1.09)	1.82 (1.08)*	1.71 (0.94)	4.97	1;136	.03	329.66	1;136	.00	0.28	2;136	.76
psychoticism	1.71 (0.92)	1.57 (1.00)*	1.63 (0.88)	1.36 (0.94)	1.38 (0.98)*	1.40 (0.77)	1.99	1;136	.17	289.81	1;136	.00	0.74	2;136	.48

Note.* Languishers scored higher in symptoms at the post-measure than the flourishers in the pre-measure.

For the PTSD symptoms scale (Table 6 and 7), it was shown that the main effect of the pre-to-post measure was statistically significant for all measures from the main- and subscales. All those measures with statistically significant difference between pre- and post-measure were found to be positive because magnitude and symptoms decline from pre- to post-measure. There was a statistically significant difference displayed for the different levels of wellbeing on all outcome measures of the PTSD. Languishers, moderates and flourishers did profit differently from the intervention (Table 6, Table 7, Figure 6). Within all scales, the treatment was statistically significantly more successful for languishers than for the moderates and flourishers, and more successful for moderates than for flourishers. Only regarding the subscale re-experiencing there was no difference from the moderates to the languishers and the flourishers. Nevertheless, there was also a statistically significant difference: the wellbeing of languishers is more influenced by the treatment than the wellbeing of the flourishers. The hypothesis that there is an effect of the different levels of wellbeing regarding the PTSD specific symptoms was accepted too. Despite the effect, it should be in mind, that flourishers had fewer PTSD specific symptoms at the pre-measure of the treatment than the languishers at the post-measure.

Table 6.

Descriptives of pre- and post-measure regarding different levels of wellbeing

	Pre-measure				Post-measure			
	Languishers M (Sd)	Moderates M (Sd)	Flourishers M (Sd)	Total M (Sd)	Languishers M (Sd)	Moderates M (Sd)	Flourishers M (Sd)	Total M (Sd)
Main-scale	3.56 (0.93)	3.06 (0.87)	2.35 (1.12)	3.20 (0.98)	2.88 (1.50)	2.19 (1.42)	1.28 (0.87)	2.88 (1.50)
Re-experiencing	1.91 (0.66)	1.72 (0.69)	1.48 (0.67)	1.78 (0.68)	1.55 (0.93)	1.19 (0.88)	0.70 (0.58)	1.30 (0.91)
Avoidance	1.85 (0.56)	1.55 (0.47)	1.04 (0.59)	1.62 (0.57)	1.51 (0.80)	1.14 (0.74)	0.64 (0.52)	1.24 (0.79)
Hyperarousal	7.82 (2.10)	6.68 (2.00)	5.11 (2.60)	7.00 (2.24)	6.33 (3.31)	4.80 (3.31)	2.80 (2.00)	5.24 (3.28)

Table 7.

Main-scale and subscales of the PTSD symptom scale regarding the languishers, moderates, and flourishers

scales	L		M		F		pre-post			mhc-sf			pre-post*mhc-sf		
	Pre M(Sd)	Post M(Sd)	Pre M(Sd)	Post M(Sd)	Pre M(Sd)	Post M(Sd)	F	df	p	F	df	p	F	df	p
main-scale	3.56 (0.93)	2.88 (1.50)*	3.06 (0.87)	2.19 (1.42)	2.35 (1.12)*	1.28 (0.87)	31.94	1;136	.00	577.95	1;136	.00	0.50	2;136	.61
Re-experiencing	1.92 (0.66)	1.55 (0.93)*	1.72 (0.69)	1.19 (0.88)	1.48 (0.67)*	0.71 (0.58)	31.24	1;136	.00	409.56	1;136	.00	1.20	2;136	.31
Avoidance	1.85 (0.56)	1.51 (0.80)*	1.55 (0.47)	1.14 (0.74)	1.04 (0.59)*	0.64 (0.52)	20.15	1;136	.00	517.33	1;136	.00	0.11	2;136	.89
Hyperarousal	7.82 (2.10)	6.33 (3.31)*	6.68 (2.00)	4.80 (3.13)	5.11 (2.59)*	2.80 (2.00)	30.89	1;136	.00	550.04	1;136	.00	0.47	2;136	.62

Note.* Languishers scored higher in symptoms at the post-measure than the flourishers in the pre-measure.

Discussion

The present study investigated to what extend the two-continua model of mental health is applicable to PTSD patients of Mediant. A medium correlation of the PTSD specific symptoms and the (different levels of) wellbeing was found which supports the applicability of the two-continua model within the trauma-patient population (subquestion 1). Furthermore, there is an effect from pre-to post-measure of the treatment. The treatment has a positive influence on the psychopathological symptoms in general and PTSD specific symptoms as well as on wellbeing, which means that the symptoms decreased and the wellbeing increased (subquestion 2a). The sample of the present study (N = 139) was divided into three groups depending on their level of wellbeing (languishers, moderates, flourishers). Despite a statistically significant effect of treatment on the psychopathological symptoms in general, there was no statistically significant difference in the effect of treatment on the three levels of wellbeing (subquestion 2b). Regarding the PTSD specific symptoms, it is shown that the treatment is statistically significantly more helpful for languishers than for moderates or flourishers. Still, the treatment showed no detectable difference in effectiveness for the three levels of wellbeing (subquestion 2c).

The outcomes of the present study support earlier studies. There are two different dimensions (psychopathology and (psychological) wellbeing) that show a certain extend of interplay, but also behave independently. The two-continua model is applicable within the population of trauma patients of Mediant.

Within the present study, it was shown that there was no correlation between the PTSD specific symptoms and psychopathological symptoms. Since patients with PTSD sometimes develop additional other psychopathological symptoms next to the PTSD specific ones, it is surprising that no link was found between the two. A reduction of PTSD symptoms is associated with a reduction in depression and anxiety symptoms that developed due to the PTSD (Foa, Rothbaum, Riggs, & Murdock, 1991; Foa et al., 1999). The question remains whether psychopathology such as depression of anxiety symptoms that developed as a consequence of PTSD, vanish directly or with a delay after a reduction of PTSD symptoms. If there is a delay in reduction of the developed additional psychopathological symptoms, it would why no correlation was found between PTSD specific and general psychopathological symptoms. A delay in reduction of additionally developed psychopathological symptoms could be due to cognitive patterns. The delay constitutes that first the PTSD specific symptoms are processed before other psychopathological symptoms. Even if the additional psychopathological symptoms developed due to a PTSD, the absence of PTSD would not

magically diminish the other symptoms, just as the traumatic experience which the PTSD developed on also is not present anymore. Another explanation about the absence of correlation between PTSD specific and general psychopathological links could be due to comorbidity within trauma patients. A lot of trauma patients have other psychopathological problems such as personality disorders or problems in their personality structure. Personality disorders have influence on developing PTSD as well as cause other psychopathological symptoms. High comorbidity of borderline symptomatology and PTSD leads to an impediment on the progress within PTSD treatment (Clarke, Rizvi, & Resick, 2008). It was found that patients with a borderline personality disorder [BPD] show higher rates of anger or depression than trauma patients without BPD (Cloitre and Koenen, 2001). That explains the absence of a correlation before treatment. If BPD does not stand in the way of PTSD treatment, it does not mean that BPD symptoms, for example hostility, decrease by PTSD treatment. That would explain the absent correlation between PTSD specific symptoms and psychopathological symptoms after treatment.

Further, within the present study there was no correlation found between BSI & MHC-SF. This finding supports earlier findings (Pool, 2016). The missing correlation between general psychopathological symptoms and wellbeing could be due to the difference in the questionnaires. The questions in the MHC-SF are about the frequency of feelings and emotions within the last month, while the BSI assesses the frequency of feelings and emotions within the last week. This difference in scope could have had an influence on the correlation since fluctuations of emotions from one week to another, can be very intense. If the fluctuation regarding the intensity of emotions would be less, the psychopathological symptoms and the wellbeing were identical (De Beurs, 2006; Westerhof & Bohlmeijer, 2010).

Also, the present study found a positive effect on psychological wellbeing through treatment as usual. This finding supports the two-continua model within the clinical population of trauma patients. Despite the support of the two-continua model, it is noticeable that there is a statistical trend for emotional wellbeing as well as no statistically significance for the social wellbeing. The absence of a statistically significant effect of treatment on social wellbeing could be explained by the kind of PTSD treatment. Within the team of Mediant, there is less awareness on system-focussed therapy within PTSD treatment. That explains the absence of a statistically significant effect of treatment. Since psychological, emotional and social wellbeing show a correlation with each other, the observed trend of therapy on the emotional wellbeing is partially explained by its dependence on the other two components of wellbeing.

Furthermore, it was found that 'hostility' only shows a positive trend in effect on the reduction of PTSD specific symptoms as well as on the general psychopathological symptoms. That there is a trend in reduction of hostility symptoms can be explained due to the high comorbidity of BPD and PTSD (Cloitre and Koenen, 2001).

It was compelling that the treatment[1] was effective in reducing all symptoms (specific and general), but the cognitive problems. It seems to be that after treatment, the cognitive problems improve. Within trauma therapy, it is important to process the negative emotions that emerge by thinking about the traumatic event. This leads to rationalisation of negative emotions and examination of the expectation that something will happen. Since the brain has to process everything, the increased amount of cognitive problems could be explained by the trauma-specialised therapy. The increased cognitive problems after therapy can also be influenced by a delay in improvement of psychopathological symptoms. By testing the amount of general psychopathological symptoms directly after treatment, it is possible that there is another outcome one or two weeks after finishing the treatment.

Within the present study, the total changes from pre- to- post-measure of treatment as usual suggested an increase of the amount of flourishers and languishers, and decrease in the amount of moderates. Despite more positive changes than negative changes in the level of wellbeing, it was found that those changes are not statistically significant. This change is also not statistically significant by zooming in on the change within the levels of wellbeing. These findings can be explained by the reduction of data acuity. The reduction of quantitative variables (analysing more data and details) leads to a more accurate is the outcome.

Another finding of the present study is noticeable by examine the interaction effect of the different levels of wellbeing regarding the general psychopathological symptoms as well as the PTSD specific symptoms. The treatment has more effect on languishers than moderates and flourishers concerning the general as well as the PTSD specific symptoms. Despite this difference, positive change of wellbeing, and the outcome that treatment has the highest effect on languishers, it should be in mind, that flourishers had fewer PTSD specific symptoms as well as some of the psychopathological symptoms at the pre-measure of the treatment than the languishers at the post-measure. Languishers score lower after treatment than the flourishers before treatment. This does not however mitigate the effectiveness of the treatment. A possible explanation for the different scores is the different group size. There were more languishers than flourishers within the present study.

[1] Stabilisation was included as a treatment although it does not reduce symptoms and cannot be seen as treatment as usual. Further explanation can be seen in the limitation of the study.

Since there is a medium effect on the different levels of wellbeing next to medium effect between psychopathology and wellbeing, the present study supports the two-continua model. These outcomes support earlier research. In the general Dutch population, a medium difference was found (Lamers et. al, 2001; Westerhof & Keyes, 2008), as well as within clinical populations with chronic pain symptoms and PTSD (Açikel, 2014; Boumeester, 2015; Pool, 2016). Even though the present study supports the two-continua model, it is important to name the finding that languishers show more psychopathological symptoms in general (especially somatic, anxiety and phobic symptoms, as well as paranoid thoughts and psychoticism) in the post-measure, than flourishers had in the pre-measure. This is an important finding since the flourishers start and remain with less symptoms than the languishers. Therefore, it is important that therapy offers more support for languishers, for example in the form of the wellbeing therapy.

Limitations

There are some limitations within the present study. The first limitation is about the number of participants. Because of the inclusion criteria only a few patients of the trauma population of Mediant could participate (139 of 1048 patients). The participating population was necessarily reduced because there were three different questionnaires that all needed to be filled in before and after treatment. Findings of the present study show that the sample of trauma-patients (N = 139) were dominated by languishers and less by flourishers (Languishers in pre-measure = 57 and in post-measure = 58; Flourishers in pre-measure = 13 and in post-measure = 23). Since the present study investigated the differences between the three groups based on the levels of wellbeing, the results could have been different if the sample contained the same amount of members.

Within the present study, there was less awareness for the demographic variables. By examining the demographics, it would have been possible to gain more insight into the possibilities of the patient with different level of wellbeing. By looking at eventual influence of demographics, effectiveness of treatment could be assessed with more accuracy and treatments could possibly be better tailored towards the specific needs of the patients. Since within the three groups regarding different level of wellbeing did no show.

Another limitation within this study is concerning the effect of the different types of treatment as usual: EMDR, Exposure, NET, Stabilisation. Within the present research did not include the effects of the different kinds of treatment as usual although it is possible that they could have had an effect. NET for example is a treatment with the underlying method of re-scripting the story of life. Some patients that suffer from PTSD only see the negative events in

life. Some patients that suffer from PTSD do not see the positive sides in life. Positive events in life can be suppressed that leads to inability to see that there were positive events in life. Some patients do not suppress positive events, but measure their success and other positive experiences through their present self. Positive things in life are external factors, while failure and negative events are seen as an internal error (see Temporal Self-Appraisal Theroy; Ross & Wilson, 2002). By using NET, the autobiographical memory as well as cognitive functions are influenced. A new story of life is reconstructed. There is a reduction of the negative valence of the traumatic event (Arntz, 2012). Since NET reconstruct the view on one's own life from a negative one to an understandable or positive one, it seems that NET has more potential of improving wellbeing than other types of therapy does.

Another limitation within the present study is concerning the used treatment. As mentioned above, stabilisation is categorised in the present study as treatment, even though it does not focus on reduction of symptoms. Stabilisation is used when patients are too fragile and cannot cope with their emotions. At this point, there is a discussion about whether stabilisation is valuable in therapy[2]. Within the present study, eight patients of the sample had stabilisation. Excluding those eight patients in the present study could have influence on the results. For example, that there were no differences between the sample group and the other trauma patients. Those eight persons got no treatment for reducing their psychopathological and PSTD specific symptoms, but got support with their emotions. That has a positive influence on wellbeing and could therefore had influence on the medium correlation between wellbeing and psychopathology and therefore over the application of the two-continua model. Since stabilisation focus on the stabilisation of emotions, the scores on emotional wellbeing in the post-measure could seem more positive than by excluding them. Stabilisation leads to an improvement in health and less chance of relapse (Cloitre et al., 2010). Since the decisive

[2] The International Society for Traumatic Stress Studies (ISTSS), sees the valuable and declare stabilisation as important before starting with Exposure of another form of treatment as usual (Cloitre, Courtois, Ford, Green, Alexander, Briere & Van der Hart, 2012). Their advice is based on nine treatment-effect-studies in form of randomized control trials [RCT]s (Zlotnick, Shea, Rosen, Simpson, Mulrenin, Begin & Pearlstein, 1997; Bradley & Follingstad, 2003; Chard, 2005; Cloitre, Stovall-McClough, Nooner, Zorbas, Cherry, Jackson, ... & Petkova ,2010; Steil, Jung & Stangier, 2011; Dorrepaal e.a., 2010, 2014; Classen, Palesh, Cavanaugh, Koopman, Kaupp, Kraemer, ... & Spiegel, 2011) and another questionnaire about the effect and improvement of treatment within PTSD patients with complex PTSD. In the present study, it is included because stabilisation is very important for patients with complex PTSD (Dorrepaal et al., 2014). Stabilisation leads to an improvement in health and less chance of relapse (Cloitre et al. (2010) also found that eight sessions of stabilisation were as effective as eight sessions of exposure. Some patients do not need more treatment after getting stabilisation. Dorrepaal et al., (2013) and Bicanic, De Jongh & Ten Broeke (2015) show a lot of critic about the implementations of the nine studies and therefore discuss that the effect of stabilisations is questionable as well as the general effect of it. Even though there are arguments against the effect of stabilisation and against stabilisation as a treatment, stabilisation is included in the study and is used as a self-contained intervention as in literature suggested (Zlotnick et al., 1997; Dorrepaal et al.,2006; Dorrepaal et. al., 2015).

factors within the treatment for PTSD are unclear, including those eight patients could also do have no effect on the results.

Another limitation concerning the different treatments for PTSD is about working with electronical patient dossiers [EPDs]. As already mentioned, the present study did not focus on the effects of the different kinds of PTSD treatment (form, length of treatment, individual factors). One of the reasons is that the data are gathered within the EPDs. When patients finish their treatment, their EPDs are saved in an archive. Only few people have access to it. Those EPDs contain many data, such as the kind of treatment the patients got. Although the EPDs contain the name of treatment, does not mean that the treatment was strictly used by protocol and that mental care givers could have deviate from protocol. For example, if the EPDs show the use of prolonged exposure, it does not exclude the use of EMDR in a session, or elements of NET or stabilisation. To gain insight into the implementation of therapy, it would have been necessary to speak to the mental care giver as well as looking through the notes per therapy-session. Within the present study, there was no possibility to do so.

Strengths

Next to the limitations of the study, there are also strengths. Although the design of the present study shows some weakness regarding the internal validity, the present study compared the sample with the other patients at Mediant. Thus, the weakness of the internal validity was positively improved. By proving that the sample of PTSD-patient within the present study is representative for all trauma patients of Mediant, the internal validity was reinforced.

Another strength of the present study is that there was attention to the within-group scores of wellbeing next to the total group scores of the sample. This way more insight was gained in mechanisms of the treatment regarding wellbeing and the effect of change in the level of wellbeing from before to after the treatment as usual. Since the present study supports the two-continua model and has shown that treatment as usual is not enough to improve the wellbeing of the patients, a supplementary treatment within for example the rehabilitation phase could process traditional into a stronger, more patient addressed therapy. This matters, because the findings can lead to an improved treatment for patients and thereby could help to lower the general costs of (mental) health care. To improve treatment, it is possible to use elements and exercises from the positive psychology to heighten the wellbeing. Exercises such as the three-good-things exercise could be used during therapy in every second contact or for homework for the patient to heighten the positive emotions and raise motivation to become better.

The study of Pool (2016) was about the correlation of the general psychopathological symptoms and wellbeing. Within her study, she found that those psychopathological symptoms did not show a relationship to the wellbeing within the treatment as usual of PTSD patients. There was no attention to the specific symptoms of PTSD that are actually dealt with within treatment as usual for trauma (stabilisation, EMDR, NET, and exposure). Hence, the present study focused not only on the general psychopathological symptoms, but the PTSD specific symptoms were included in the measure.

Additionally, it was supported that the psychological wellbeing improves moderately and statistically significant which supports the two-continua-model (improvement of psychological wellbeing regarding the deterioration of psychopathological symptoms). It is also shown that there should be a supplementary element or treatment to improve not only the psychological wellbeing, but also the emotional and social wellbeing to treatment since outcomes of the present study show that no influence of treatment on those two components of wellbeing. By heightening the, it is possible that patients change significant in their level of wellbeing.

Recommendations

The first recommendation concerns the different amount of patients with a low versus a high level of wellbeing (languishers versus flourishers). Future studies should include the comparison the effect of different levels of wellbeing with groups that have the same amount of patients, for example 50 languishers, 50 moderates, and 50 flourishers. It is important to replicate the present study with these recommendations because a statistically significance could appear regarding the effect of different levels of wellbeing and the reduction of general and PSTD specific symptoms. The outcome that languishers improved much more could be due to the fact of the different size of groups.

For further research, it would be important to have a look at the length and different kinds of treatment and their influence concerning wellbeing. As mentioned above, NET could have a more positive influence on wellbeing than other treatments. The present study suggests that there is a need in mental health care to improve the wellbeing of patients. Because of different factors (individual differences, length of the treatment, and form of treatment), the supplementary treatment has to be individual. By investigating the effect of the different kinds of treatment, it can be recommended whether a standardized supplementary treatment or element should be added in the mental health care, or whether there should be an individual based supplementary treatment or element.

Another limitation concerns the inclusion criteria, namely, including patients that got stabilisation. Since the present study did include them, a future study should look at the effect of stabilisation on the application of the two-continua model by performing a replication study that exclude stabilisation.

Concerning the limitations with the EPDs in the present study, the effect of the different treatments could be investigated with a qualitative, longitudinal study, where protocol versus not standardized treatment could be compared. Mental care givers and patients could contribute to the knowledge about the influencing factors behind wellbeing and its changes through treatment.

There are some recommendations concerning the findings of the study. The first one is about the increased cognitive problems. It seems to be that the treatment for PTSD reduces the symptoms in the experience and feelings of the patients, but does not consider whether there are more cognitive symptoms. For further research, a qualitative study would give insight into the negative change of the cognitive problems. By examine the influencing factors it is possible to improve treatment by reducing the cognitive problems. Knowledge over the kind of cognitive problems could lead to the opportunity to improve treatment as usual. For example, if the increased amount of cognitive problems is due concentration problems, the rehabilitation phase of PTSD treatment gets more important and should be include the specific cognitive problems.

The other recommendation regarding the findings of the study is about the finding that flourishers show less problems and more wellbeing in the pre-measure of the treatment than languishers in the post-measure of the treatment regardless of the reduction of symptoms through treatment. It raises the question whether it is important to offer more support to languishers in therapy than to flourishers though implementing supplementary treatments such as the wellbeing-therapy. Since languishers seem to be more prone to develop depression (Haidt, 2003), it is suggested to support languishers more than the other levels of wellbeing. Still, the question would remain whether it is possible for languishers to heighten their wellbeing to a flourishing status. The present data suggest that it is very difficult for languishers to improve their level of wellbeing within the treatment as usual; only two out of 139 people. Treatment that is aimed at the strength of patients, such as the wellbeing-therapy would be an option in supporting languishers. Languishers should then get an advanced therapy, while moderators of flourisher could get a shortened version independent from their post-measure scores.

The outcome of the study as well as some recommendations evoke the question to what extend wellbeing is important within the regular (mental) healthcare. In my opinion, it is important to include wellbeing-therapy in the regular (mental)healthcare since it decreases costs since the chance of having a relapse in PTDS has been reduced. It can focus differently on the different levels of wellbeing if it is possible to standardized it. It also decreases the chance of other psychopathological symptoms, and enriches the life of the patients. Although patients possibly are not aware of the wellbeing as a self-contained component in life, including wellbeing in therapy before starting the treatment of after finishing treatment adds value for the future. Still, patients should have the possibility to choose for getting support in increasing their wellbeing. Therefore, caregivers in mental health should raise awareness for wellbeing at the beginning of end of the therapy. At this point, opportunities to raise awareness for wellbeing are developed in the field of positive psychology and research in the practice. One possible opportunity is the Wellbeing-therapy.

Conclusion

The present study gives an indication for adaption of the two-continua model within the clinical population of PTSD patients of Mediant. The present study supports earlier studies about the two-continua model (Keyes, 2005; 2007; Westerhof & Keyes, 2008; Lamers et.al, 2011; Westerhof & Keyes, 2008; Boumeester, 2015; Açikel, 2014). Since the present study show a lot of noticeable outcomes regarding the wellbeing, more research is necessary. There is also the question whether it is possible to conduct another therapy that increases wellbeing or use another treatment within the rehabilitation-phase if patients see the benefit of more support than just limited functioning.

References

Açikel, Y. (2014). Een studie naar het welbevinden van cliënten met posttraumatische stressstoornis voor en na behandeling.

Albrecht, S. L., Bahr, H. M., & Goodman, K. L. (1983). *Divorce and remarriage: Problems, adaptations, and adjustments* (No. 42). Greenwood Pub Group.

American Psychiatric Association. (2001). Beknopte handleiding bij de diagnostische criteria van de DSM-IV-TR. *Lisse: Nederlandse Vereniging voor Psychiatrie-Swets & Zeitlinger Publishers*.

American Psychiatric Association. (2014). Handboek voor de classificatie van psychische stoornissen DSM-5. *Nederlandse vertaling van Diagnostic and Statistical Manual of Mental Disorders, 5th ed. Amsterdam: Uitgeverij Boom*.

Arntz, A. (2012). Imagery rescripting as a therapeutic technique: review of clinical trials, basic studies, and research agenda. *Journal of Experimental Psychopathology*, *3*(2), 189-208.

Barlow, D. H., Bullis, J. R., Comer, J. S., & Ametaj, A. A. (2013). Evidence-based psychological treatments: an update and a way forward. *Annual Review of Clinical Psychology*, *9*, 1-27.

Benish, S. G., Imel, Z. E., & Wampold, B. E. (2008). The relative efficacy of bona fide psychotherapies for treating post-traumatic stress disorder: A meta-analysis of direct comparisons. *Clinical psychology review*, *28*(5), 746-758.

Beurs, E. de. (2006). Brief Symptom Inventory: Handleiding. Leiden: pits

Beurs, E., & Zitman, F. (2006). De Brief Symptom Inventory (BSI): De betrouwbaarheid en validiteit van een handzaam alternatief voor de SCL-90 [The Brief Symptom Inventory (BSI): The reliability and validity of a practical alternative to the SCL 90]. *Maandblad Geestelijke Volksgezondheid*, *61*, 120-141.

Bohlmeijer, E. T., Lamers, S. M., & Fledderus, M. (2015). Flourishing in people with depressive symptomatology increases with acceptance and commitment therapy. Post- hoc analyses of a randomized controlled trial. *Behaviour research and therapy*, *65*, 101-106.

Bohlmeijer, E., Bolier, L., Westerhof, G., & Walburg, J. A. (2015). Handboek positieve psychologie. Theorie* Onderzoek* Toepassingen. Tijdschrift voor Psychiatrie, 57(3), 226-227.

Boumeester, M. (2015). Welbevinden en psychopathologie bij chronische pijn: Het twee- continua model.

Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162(2)*, 214-227.

Cantril, H. (1965). The pattern of human concerns. New Brunswick, NJ: Rutgers University Press.

Clarke, S. B., Rizvi, S. L., & Resick, P. A. (2008). Borderline personality characteristics and treatment outcome in cognitive-behavioral treatments for PTSD in female rape victims. *Behavior Therapy*, *39*(1), 72-78.

Cloitre, M., & Koenen, K. C. (2001). The impact of borderline personality disorder on process group outcome among women with posttraumatic stress disorder related to childhood abuse. International Journal of Group Psychotherapy, 51, 379–398.

Cohen, J. (1969). Statistical power analysis for the behavioural sciences. New York: Academic Press

Dakin, J., & Wampler, R. (2008). Money doesn't buy happiness, but it helps: Marital satisfaction, psychological distress, and demographic differences between low-and middle-income clinic couples.*The American Journal of Family Therapy*, *36*(4), 300-311.

Delleman, B. (2014). The effect of anxiety on memory accuracy, response time, and confidence.

Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: an introductory report. *Psychological medicine*, *13*(03), 595-605.

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour research and therapy*, *38*(4), 319-345.

Foa, E. B., Dancu, C. V., Hembree, E. A., Jaycox, L. H., Meadows, E. A., & Street, G. P. (1999). A comparison of exposure therapy, stress inoculation training, and their combination for reducing posttraumatic stress disorder in female assault victims. Journal of Consulting and Clinical Psychology, 67, 194 –200.

Foa, E. B., Rothbaum, B. O., Riggs, D., & Murdock, T. (1991). Treatment of post-traumatic stress disorder in rape victims: A comparison between cognitive– behavioral procedures and counseling. Journal of Consulting and Clinical Psychology, 59, 715–723.

Foa, E. B., Zoellner, L. A., Feeny, N. C., Hembree, E. A., & Alvarez-Conrad, J. (2002). Does imaginal exposure exacerbate PTSD symptoms? Journal of Consulting and Clinical Psychology, 70(4), 1022-1028.

Haidt, J. (2003). Elevation and the positive psychology of morality. *Flourishing: Positive psychology and the life well-lived*, *275*, 289.

Hammack, S. E., Cooper, M. A., & Lezak, K. R. (2012). Overlapping neurobiology of learned helplessness and conditioned defeat: implications for PTSD and mood disorders. *Neuropharmacology*, *62*(2), 565-575.

Hofmann, S., G. & Smits, J., A., J. (2008). Cognitive-behavioral therapy for adult anxiety disorders: a meta-analysis of randomized placebo-controlled trials. *The Journal of 69 clinical psychiatry, (4)*, 621–632.

Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic wellbeing in Vietnam war veterans. Behaviour Research and Therapy, 44(2), 177-199.

Keijsers, G. P. J., Van Minnen, A., & Hoogduin, C. A. L. (2004). Protocollaire behandelingen in de ambulante GGZ. In *Protocollaire behandelingen in de ambulante geestelijke gezondheidszorg I* (pp. 1-31). Bohn Stafleu Van Loghum.

Kessler, R.C., Andrews, G., Mroczek, D., Ustun, D., & Wittchen, H. (1998). The World Organization Composite International Diagnostic Interview-Short Form (CIDI-SF). *International Journal of Methods in Psychiatric Research, 7(4),* 171-185

Keyes, C. L. M. (1998). Social wellbeing. Social Psychology Quarterly, 61, 121–140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43(2),* 207-222.

Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing wellbeing: the empirical encounter of two traditions. Journal of personality and social psychology, 82(6), 1007.

Keyes, C.L.M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73,* 539-548, 539.

Keyes, C. L., & Grzywacz, J. G. (2005). Health as a complete state: The added value in work performance and healthcare costs. *Journal of Occupational and Environmental Medicine, 47*(5), 523-532.

Keyes, C. L. M. (2006). Mental health in adolescence: Is America's youth flourishing American Journal of Orthopsychiatry, 76,395–402.

Keyes, C. L. (2007). Promoting and protecting mental health as flourishing: a complementary strategy for improving national mental health. American psychologist, 62(2), 95.

Keyes, C.L.M., & Westerhof, G.J. (2010). Mental Illness and Mental Health: The Two Continua Model Across the Lifespan. Journal of Adult Development, 17, 110-119.

Keyes, C. L., Wissing, M., Potgieter, J. P., Temane, M., Kruger, A., & van Rooy, S. (2008). Evaluation of the mental health continuum-short form (MHC-SF) in Setswana-speaking South Africans. *Clinical psychology and psychotherapy*, *15*(3), 181.

Keyes, C. L., Eisenberg, D., Perry, G. S., Dube, S. R., Kroenke, K., & Dhingra, S. S. (2012). The relationship of level of positive mental health with current mental disorders in predicting suicidal behavior and academic impairment in college students. *Journal of American College Health, 60*(2), 126-133.

Knipscheer, J., van Middendorp, H., & Kleber, R. (2011). De rol van cultuur in het omgaan met psychotrauma. *Psychologie & gezondheid*, *39*(3), 125-131.

Lamers, S. M. A., Cees, A. W., Westerhof, G. J. & Bohlmeijer, E. T. (2011a). Longitudinal Evaluation of the Mental Health Continuum- Short Form (MHC-SF). Measure Invariance Across Demographics, Physical Illness, and Mental Illness. *European Journal of Psychological Assessment, 28,* 290-296.

Lamers, S.M.A., Westerhof, G.J., Bohlmeijer, E.T., Klooster, P.M. ten, & Keyes, C.L.M. (2011b). Evaluating the Psychometric Properties of the Mental Health Continuum- Short Form (MHC-SF) in the Dutch Population. *Journal of Clinical Psychology, 67,* 99- 110.

Lamers, S.M.A., Westerhof, G.J., Bohlmeijer, E.T., ten Klooster, P.M., & Keyes, C.L.M. (2011). Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC- SF). *Journal of Clinical Psychology, 67*(1), 99-110.

Lamers, S.M.A. (2012) Reciprocal impact of positive mental health and psychopathology. *In Lamers,S.M.A. Positive mental health: Measure, relevance and implications (pp 139- 162).* Enschede, the Netherlands: University of Twente.

Lang, A. J., Kennedy, C. M., & Stein, M. B. (2002). Anxiety sensitivity and PTSD among female victims of intimate partner violence. Depression and anxiety, 16(2), 77-83.

Lanius, R. A., Bluhm, R., Lanius, U., & Pain, C. (2006). A review of neuroimaging studies in PTSD: heterogeneity of response to symptom provocation. *Journal of psychiatric research*, *40*(8), 709-729.

Luty, S., E., Carter, J., D., Mc. Kenzie, J., Rae, A., M., Frampton, C., M., A., Mulder, R., T., Joyce, P., R. (2007). Randomised controlled trial of interpersonal psychotherapy and cognitive-behavioural therapy for depression. The British Journal of Psychiatry, 190 (6), 496-502.

Marshall, G., N., Miles, J., V. & Stewart, S., H. (2010). Anxiety sensitivity and PTSD symptom severity are reciprocally related: evidence from a longitudinal study of physical trauma survivors. *Journal of Abnormal Psychology, 119.*

Minnen, van, A., & Arntz, A. (2007). *Cognitieve gedragstherapie. Behandelprotocol PTSS. Werkboek.* Derde druk. Amsterdam: Boom.

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. Journal of Personality and Social Psychology, 75, 1333–1349.

McNally, R. J. (2007). Mechanisms of exposure therapy: How neuroscience can improve psychological treatments for anxiety disorders. *Clinical psychology review*, *27*(6), 750-759.

Olff, M. (2002). De posttraumatische stressstoornis en onbegrepen lichamelijke klachten. *Tijdschrift veiligh veiligheidszorg. 2*. 14-24. Geraadpleegd van http://www.empty-memories.nl/science/PTSS_Olff.pdf

Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective wellbeing. Journal of personality, 67(1), 157-184.

Pool, S. D. (2016). Een onderzoek naar de toepassing van het twee continuamodel bij cliënten met een posttraumatische stressstoornis (PTSS) voor en na behandeling.

Robinson, E. A., & Doueck, H. J. (1994). Implications of the pre/post/then design for evaluating social group work. *Research on social work practice*, *4*(2), 224-239.

Ross, M., & Wilson, A. E. (2002). It feels like yesterday: self-esteem, valence of personal past experiences, and judgments of subjective distance. *Journal of personality and social psychology*, *82*(5), 792.

Ruggiero, K.J., Del Ben, K., Scotti, J.R., & Rabalais, A.E. (2003). Psychometric Properties of the PTSD Checklist – Civilian Version. *Journal of Traumatic Stress, Vol. 16 (5),* p. 495-502.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic wellbeing. Annual review of psychology, 52(1), 141-166.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. Journal of personality and social psychology, 57(6), 1069.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological wellbeing revisited. Journal of Personality and Social Psychology, 69, 719–727.

Shapiro, F. (1989a). Eye movement desensitization: A new treatment for post-traumatic stress disorder. *Journal of behavior therapy and experimental psychiatry*, *20*(3), 211-217.

Shapiro, F. (1989b). Efficacy of the eye movement desensitization procedure in the treatment of traumatic memories. *Journal of traumatic stress*, *2*(2), 199-223.

Shapiro, F. (1991). Eye movement desensitization and reprocessing procedure: From EMD to EMDR: A new treatment model for anxiety and related traumata. *Behavior Therapist*, *14*(5), 133-135.

Shapiro, F., & Forrest, M. S. (2001). EMDR: Eye movement desensitization and reprocessing. *New York: Guilford*.

Shapiro, F. (2007). EMDR, adaptive information processing, and case conceptualization. *Journal of EMDR Practice and Research*, *1*(2), 68-87.

Suldo, S. M., & Shaffer, E. J. (2008). Looking beyond psychopathology: The dual-factor model of mental health in youth. School Psychology Review, 37(1), 52.

Ten Broeke, E., Korrelboom, C. W., & Verbraak, M. J. P. M. (2009). Praktijkboek geïntegreerde cognitieve gedragstherapie; protocollaire behandelingen op maat. Bussum: Uitgeverij Coutinho

Vandereycken, W. (2008). 1 Psychopathologie: van diagnostiek tot therapie. In *Handboek psychopathologie deel 1* (pp. 5-59). Bohn Stafleu van Loghum.

Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. Journal of personality and social psychology, 64(4), 678.

Westerhof, G. J., & Keyes, C. L. M. (2008). Geestelijke gezondheid is meer dan de afwezigheid van geestelijke ziekte [Mental health is more than the absence of mental illness]. Maandblad Geestelijke Volksgezondheid, 63, 808–820.

Westerhof, G. J., & Bohlmeijer, E. T. (2010). *Psychologie van de levenskunst*. Amsterdam: Boom.

Whealin, J. M., & Slone, L. (2007). Complex PTSD. *National Center for PTSD, Professional Section*.

Wohlfarth, van den Brink & Winkel, 2003). Screening for posttraumatic stress disorder: an evaluation of two self-report scales among crime victims. Psychological Assessment, 15, p. 101-119.

World Health Organization. (2005). Promoting mental health: Concepts, emerging evidence, practice. Geneva: WHO.

Appendix

A. Norm-table MHC-SF

		Positieve geestelijke gezondheid		Emotioneel welbevinden		Sociaal welbevinden		Psychologisch welbevinden	
	n	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Algemeen	1662	2.98	(0.85)	3.67	(0.94)	2.33	(1.01)	3.18	(0.99)
Mannen	828	2.96	(0.85)	3.64	(0.96)	2.33	(0.99)	3.15	(1.00)
Vrouwen	834	3.00	(0.84)	3.70	(0.92)	2.32	(1.03)	3.22	(0.98)
Leeftijd 18-29	381	3.05	(0.78)	3.64	(0.88)	2.32	(0.97)	3.37	(0.90)
Leeftijd 30-49	472	2.97	(0.87)	3.57	(0.99)	2.31	(0.99)	3.23	(1.01)
Leeftijd 50-64	440	3.01	(0.88)	3.71	(0.95)	2.40	(1.04)	3.17	(1.02)
Leeftijd 65+	369	2.89	(0.83)	3.78	(0.92)	2.26	(1.01)	2.95	(0.98)

NOTE. Gegevens zijn op basis van een schaal van 0 tot 5.

B. Questionnaire MHC-SF

Table 6. MHC-SF group membership per individual and their development.

#	Pre	Post	Δ	#	Pre	Post	Δ	#	Pre	Post	Δ	#	Pre	Post	Δ	#	Pre	Post	Δ
1	L	L	=	29	L	L	=	57	L	F	++	85	M	M	=	113	M	M	=
2	L	L	=	30	L	L	=	58	M	L	-	86	M	M	=	114	M	F	+
3	L	L	=	31	L	L	=	59	M	L	-	87	M	M	=	115	M	F	+
4	L	L	=	32	L	L	=	60	M	L	-	88	M	M	=	116	M	F	+
5	L	L	=	33	L	L	=	61	M	L	-	89	M	M	=	117	M	F	+
6	L	L	=	34	L	L	=	62	M	L	-	90	M	M	=	118	M	F	+
7	L	L	=	35	L	L	=	63	M	L	-	91	M	M	=	119	M	F	+
8	L	L	=	36	L	L	=	64	M	L	-	92	M	M	=	120	M	F	+
9	L	L	=	37	L	M	+	65	M	L	-	93	M	M	=	121	M	F	+
10	L	L	=	38	L	M	+	66	M	L	-	94	M	M	=	122	M	F	+
11	L	L	=	39	L	M	+	67	M	L	-	95	M	M	=	123	M	F	+
12	L	L	=	40	L	M	+	68	M	L	-	96	M	M	=	124	M	F	+
13	L	L	=	41	L	M	+	69	M	L	-	97	M	M	=	125	M	F	+
14	L	L	=	42	L	M	+	70	M	L	-	98	M	M	=	126	M	F	+
15	L	L	=	43	L	M	+	71	M	L	-	99	M	M	=	127	F	M	-
16	L	L	=	44	L	M	+	72	M	L	-	100	M	M	=	128	F	M	-
17	L	L	=	45	L	M	+	73	M	L	-	101	M	M	=	129	F	M	-
18	L	L	=	46	L	M	+	74	M	L	-	102	M	M	=	130	F	M	-
19	L	L	=	47	L	M	+	75	M	L	-	103	M	M	=	131	F	M	-
20	L	L	=	48	L	M	+	76	M	L	-	104	M	M	=	132	F	F	=
21	L	L	=	49	L	M	+	77	M	L	-	105	M	M	=	133	F	F	=
22	L	L	=	50	L	M	+	78	M	L	-	106	M	M	=	134	F	F	=
23	L	L	=	51	L	M	+	79	M	L	-	107	M	M	=	135	F	F	=
24	L	L	=	52	L	M	+	80	M	M	=	108	M	M	=	136	F	F	=
25	L	L	=	53	L	M	+	81	M	M	=	109	M	M	=	137	F	F	=
26	L	L	=	54	L	M	+	82	M	M	=	110	M	M	=	138	F	F	=
27	L	L	=	55	L	M	+	83	M	M	=	111	M	M	=	139	F	F	=
28	L	L	=	56	L	F	++	84	M	M	=	112	M	M	=				

C. Questionnaire MHC-SF

De volgende vragen beschrijven gevoelens die mensen kunnen hebben. Lees iedere uitspraak zorgvuldig door en omcirkel het cijfer dat het best weergeeft hoe vaak u dat gevoel had **gedurende afgelopen maand.**

In de afgelopen maand, hoe vaak had u het gevoel…	**Nooit**	**Eén of twee keer**	**Onge-veer 1 keer per week**	**2 of 3 keer per week**	**Bijna elke dag**	**Elke dag**
…dat u gelukkig was?	0	1	2	3	4	5
…dat u geïnteresseerd was in het leven?	0	1	2	3	4	5
...dat u tevreden was?	0	1	2	3	4	5
...dat u iets belangrijks hebt bijgedragen aan de samenleving?	0	1	2	3	4	5
...dat u deel uitmaakte van een gemeenschap (zoals een sociale groep, uw buurt, uw stad)?	0	1	2	3	4	5
...dat onze samenleving beter wordt voor mensen?	0	1	2	3	4	5
...dat mensen in principe goed zijn?	0	1	2	3	4	5
...dat u begrijpt hoe onze maatschappij werkt?	0	1	2	3	4	5
…dat u de meeste aspecten van uw persoonlijkheid graag mocht?	0	1	2	3	4	5
…dat u goed kon omgaan met uw alledaagse verantwoordelijkheden?	0	1	2	3	4	5
...dat u warme en vertrouwde relaties met anderen had?	0	1	2	3	4	5
...dat u werd uitgedaagd om te groeien of een beter mens te worden?	0	1	2	3	4	5
…dat u zelfverzekerd uw eigen ideeën en meningen gedacht en geuit hebt?	0	1	2	3	4	5
…dat uw leven een richting of zin heeft?	0	1	2	3	4	5

D. Questionnaire BSI

Naam: Datum: User:

Instructies: Hieronder is een lijst met problemen die mensen kunnen hebben. Lees ieder probleem zorgvuldig door en omcirkel het rondje dat het beste weergeeft IN HOEVERRE U LAST HAD VAN DAT PROBLEEM GEDURENDE DE AFGELOPEN WEEK INCLUSIEF VANDAAG.

1. Zenuwachtigheid of beverigheid*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

2. Duizeligheid of moeite je evenwicht te bewaren*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

3. Het idee dat een ander je gedachten kan beïnvloeden*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

4. Het gevoel dat de meeste van je problemen aan anderen te wijten zijn*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

5. Moeite iets te onthouden*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel
   - o

6. Je snel aan iets ergeren*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

7. Pijn op de borst of het hart*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

8. Angstig zijn op open pleinen of grote ruimten*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

9. Gedachten aan zelfmoord*
   - o Helemaal geen
   - o Een beetje
   - o Nogal
   - o Tamelijk veel
   - o Heel veel

10. Het gevoel dat de meeste mensen niet te vertrouwen zijn*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

11. Weinig eetlust*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

12. Zomaar plotseling bang worden*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

13. Woede-uitbarstingen die je niet kan beheersen*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

14. Je eenzaam voelen, zelfs als je in gezelschap bent*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

15. Je geblokkeerd voelen in het afkrijgen van dingen*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

16. Je eenzaam voelen*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

17. Je somber voelen*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

18. Geen interesse kunnen opbrengen voor dingen*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

19. Bang zijn*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

20. Gauw gekwetst of geraakt zijn*
    - o Helemaal geen
    - o Een beetje
    - o Nogal
    - o Tamelijk veel
    - o Heel veel

21. Het gevoel dat mensen onvriendelijk zijn en je niet mogen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

22. Je tegenover anderen de mindere voelen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

23. Misselijk of je maag van streek*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

24. Het gevoel dat je in de gaten gehouden wordt/ over je gepraat wordt achter je rug*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

25. Moeite met in slaap vallen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

26. Alles wat je doet steeds maar moeten controleren*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

27. Moeite met beslissingen nemen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

28. Bang zijn om te reizen met bus, trein of tram*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

29. Benauwd, moeite met ademhalen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

30. Opvliegers of koude rillingen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

31. Bepaalde dingen, plaatsen of activiteiten vermijden omdat je er angstig van wordt*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

32. Helemaal van je a propos zijn (de draad van je gedachten kwijt raken)*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

33. Gevoelloosheid of tintelingen in bepaalde lichaamsdelen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

34. Het idee dat je zondig bent en gestraft moet worden*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

35. Je hopeloos voelen over de toekomst*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

36. Concentratie problemen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

37. Je slap of zwak voelen ergens in je lichaam*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

38. Je gespannen en opgefokt voelen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

39. Gedachten aan sterven of aan de dood*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

40. De aandrang hebben iemand te slaan, te verwonden of pijn te doen*
- Helemaal geen
- Een beetje
- Nogal
- Tamelijk veel
- Heel veel

41. De aandrang hebben om met dingen te gooien of ze stuk te slaan*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

42. Je erg verlegen voelen in gezelschap*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

43. Je niet op je gemak voelen in menigten*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

44. Je met niemand nauw verbonden voelen*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

45. Aanvallen van angst of paniek*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

46. Snel ruzie krijgen*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

47. Je nerveus voelen als je alleen en verlaten bent*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

48. Het gevoel dat anderen je prestaties niet voldoende onderkennen*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

49. Je zo rusteloos voelen dat je niet stil kan blijven zitten*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

50. Het gevoel dat je niets waard bent*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

51. Het gevoel dat anderen misbruik van je maken als je niet oppast*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

52. Je schuldig voelen*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

53. De gedachte dat je psychisch wat mankeert*
- o Helemaal geen
- o Een beetje
- o Nogal
- o Tamelijk veel
- o Heel veel

E. Questionnaire PTSS symptoms scale

Datum:……Sessie:……Patiënt:……User …….

Omcirkel het antwoord dat weergeeft in hoeverre u de <u>afgelopen week</u> last heeft gehad van de genoemde klacht.

1. Hoe vaak heeft u de afgelopen week last gehad van pijnlijke gedachten of beelden over het trauma, terwijl u er niet aan wilde denken?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

2. Hoe vaak heeft u de afgelopen week onprettige dromen of nachtmerries over de traumatische gebeurtenis gehad?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

3. Hoe vaak heeft u de afgelopen week de ervaring gehad dat de traumatische gebeurtenis er weer was, of dat u handelde of zich voelde als toen?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

4. Hoe vaak heeft u de afgelopen week meegemaakt dat u emotioneel overstuur raakte wanneer u aan de traumatische gebeurtenis werd herinnerd?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

5. Hoe vaak heeft u de afgelopen week lichamelijke klachten gehad (bv. hartkloppingen of zweet uitbreken), wanneer u aan de traumatische gebeurtenis werd herinnerd?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

6. In hoeverre heeft u de afgelopen week geprobeerd om niet aan de traumatische gebeurtenis te denken of geprobeerd om niet de gevoelens te voelen die erbij horen?
   0 = nooit
   1 = 1x per week
   2 = 2 – 4x per week
   3 = 5x of vaker per week

7. Hoe vaak heeft u de afgelopen week geprobeerd om activiteiten, plaatsen of dingen te vermijden die u aan de traumatische gebeurtenis herinneren?
   0 = nooit
   1 = af en toe
   2 = vrij vaak
   3 = bijna altijd

8. In hoeverre heeft u de afgelopen week moeite gehad om belangrijke delen van wat er gebeurd is (tijdens de traumatische gebeurtenis) te herinneren?

   0 = helemaal geen moeite
   1 = beetje
   2 = nogal
   3 = erg veel moeite

9. Was u de afgelopen week minder geïnteresseerd in dingen die u gewoonlijk belangrijk of leuk vond (bv. hobbies, sociale activiteiten)?

0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

10. Voelde u zich de afgelopen week op een afstand of afgesneden van andere mensen?

0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

11. Voelde u zich de afgelopen week gevoelloos (bv. niet kunnen huilen, niet reageren, onmogelijk om gevoelens van liefde te voelen)?

0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

12. In hoeverre voelde u de afgelopen week dat uw toekomstplannen of verlangens de grond ingeboord zijn t.g.v. de traumatische gebeurtenis (bijvoorbeeld nooit kunnen werken of carrière maken, geen gelukkige relatie kunnen hebben, geen gelukkige kinderen kunne hebben, niet lang zullen leven)?

0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

13. Hoe vaak heeft u de afgelopen week probleem gehad met inslapen of doorslapen?

0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

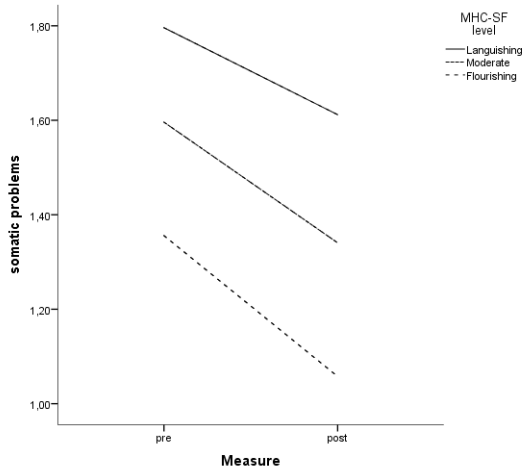
14. In hoeverre heeft u de afgelopen week last gehad van snel geïrriteerd zijn of van woede-uitbarstingen?
0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

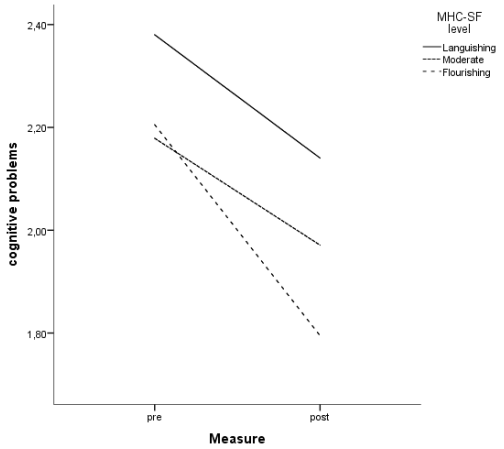
15. In hoeverre heeft u de afgelopen week moeite gehad met concentreren (bijvoorbeeld de draad kwijt raken tijdens een gesprek, de t.v. niet meer kunnen volgen, niet meer weten wat je zojuist gelezen hebt)?
0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

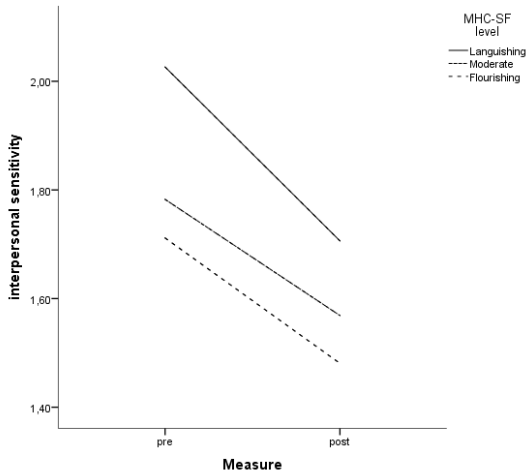
16. Was u de afgelopen week erg waakzaam, of op uw hoede (bijvoorbeeld controleren of er niemand in de buurt is, u ongemakkelijk voelen wanneer u geen overzicht heeft).
0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

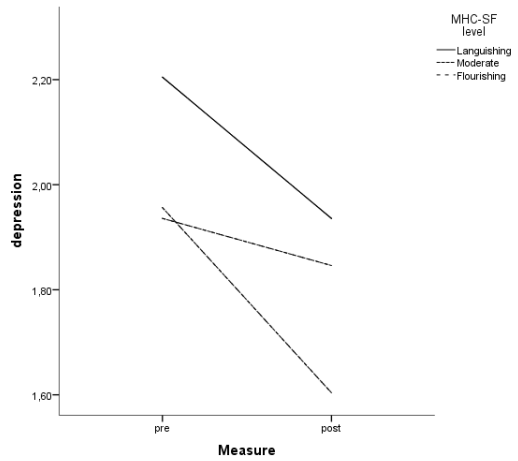
17. Was u de afgelopen week erg schrikachtig, snel geschrokken?
0 = nee, helemaal niet
1 = beetje
2 = nogal
3 = ja, heel sterk

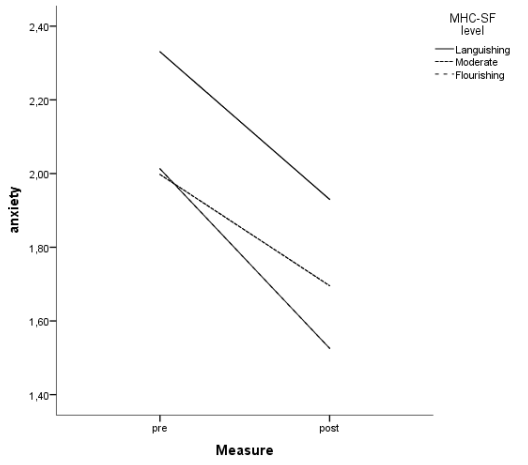
F. Overview changes of MHC-SF level from pre- to post-measure in all subscales

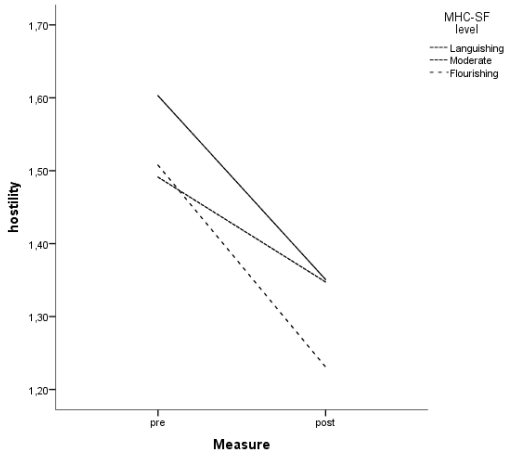


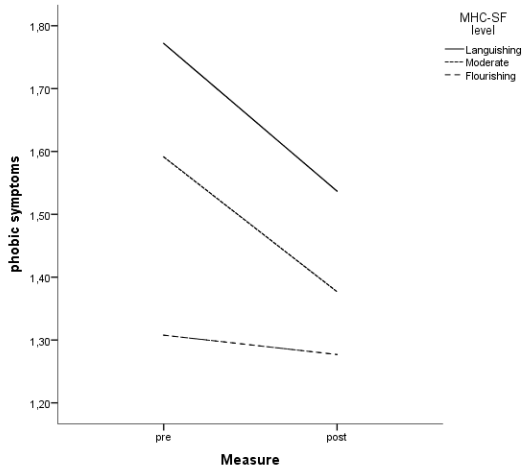


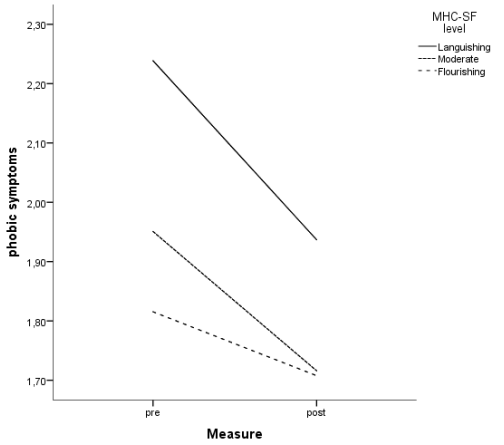


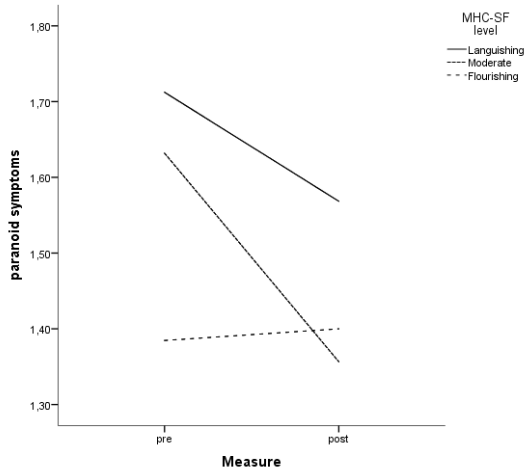


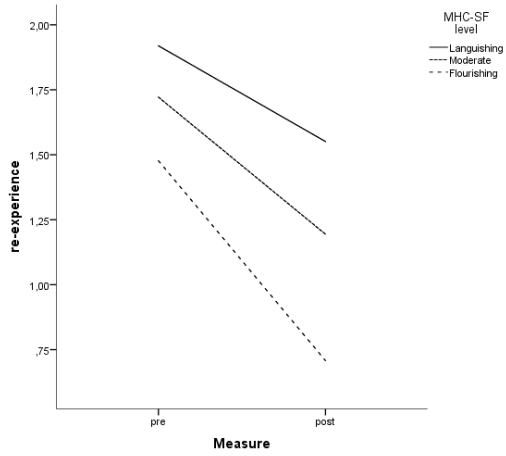


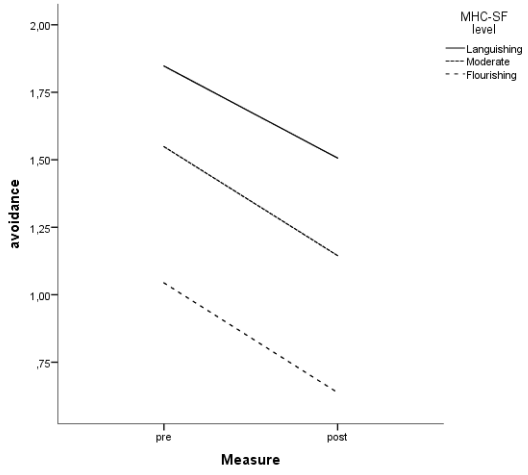


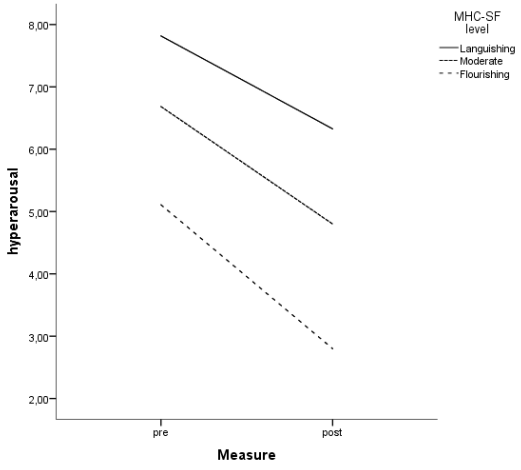

MHC-SF level
Languishing
Moderate
Flourishing
phobic symptoms
1,80
1,70
1,60
1,50
1,40
1,30
1,20
pre
post
Measure


MHC-SF level
Languishing
Moderate
Flourishing
phobic symptoms
2,30
2,20
2,10
2,00
1,90
1,80
1,70
pre
post
Measure


MHC-SF level
Languishing
Moderate
Flourishing
paranoid symptoms
1,80
1,70
1,60
1,50
1,40
1,30
pre
post
Measure


MHC-SF level
Languishing
Moderate
Flourishing
re-experience
2,00
1,75
1,50
1,25
1,00
,75
pre
post
Measure


MHC-SF level
Languishing
Moderate
Flourishing
avoidance
2,00
1,75
1,50
1,25
1,00
,75
pre
post
Measure


MHC-SF level
Languishing
Moderate
Flourishing
hyperarousal
8,00
7,00
6,00
5,00
4,00
3,00
2,00
pre
post
Measure