A longitudinal research aimed at investigating the role of coping styles in the process of change in schema modes

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Abstract

Objective: Literature shows that dysfunctional modes decrease over the course of Schema therapy (ST) (Timmerman, 2014). To our best knowledge no research has been conducted to investigate the role of maladaptive coping styles in the process of change in schema modes. This study makes an attempt to investigate whether modifications in maladaptive coping styles are related to modifications in (dys) functional schema modes in clients with personality disorders (PD) over the course of Schema therapy.

Method: The participants are clients who were treated for their PDs at the clinical facility "de Wieke" in Hengelo, the Netherlands. The Young Schema Mode Inventory (SMI), the Young-Rygh Avoidance Inventory (YRAI) and the Young Compensation Inventory (YCI) were administered to measure the prevalence of (dys) functional schema modes and dysfunctional coping styles. Participants were asked to fill in the SMI, YCI and YRAI at four points in time: pre-, mid-, post-treatment and at the follow up-period six months after the treatment. Univariate analyses of variance, correlational analyses and a logistic regression analysis were carried out in order to explore the data of participants who filled in all four measurements.

Results: The dysfunctional coping styles as well as dysfunctional schema modes showed significant differences at the second half of the treatment, from pre-treatment to post-treatment and pre-treatment to follow-up. Findings also showed that avoidance strategies have a predictive value on the positive modification of functional modes.

Discussion/Conclusion: ST in a clinical group setting shows promising results regarding the decrease of dysfunctional coping styles and dysfunctional schema modes as well as the increase of functional modes. The decrease of dysfunctional coping styles, especially avoidance styles, seems to be related to decreases in dysfunctional schema modes as well as increases in functional schema modes. This indicates that interventions aimed at containing or preventing avoidance strategies requires more attention in ST.

Samenvatting

Doel: Uit de literatuur blijkt dat dysfunctionele modi tijdens een schematherapie behandeling significant dalen (Timmerman, 2014). Tot op heden is er geen onderzoek verricht naar de rol van copingstijlen in het veranderingsproces van (dys)functionele schema modi. Deze studie poogt te onderzoeken of veranderingen in disfunctionele copingstijlen gerelateerd zijn aan veranderingen in (dis) functionele schema modi.

Methode: De participanten zijn cliënten die in behandeling zijn voor een persoonlijkhiedsstoornis bij "de Wieke" te Hengelo, Nederland. De Young Schema Mode Inventory (SMI), de Young Compensation Inventory (YCI) en de Young-Rygh Avoidance Inventory (YRAI) zijn afgenomen om (dis)functionele schema modi en disfunctionele copingstijlen in kaart te brengen. Er werd aan de deelnemers gevraagd om de SMI, YCI en YRAI op vier meetmomenten in te vullen: voor, tijdens, na de behandeling en zes maanden later bij de follow-up. Er is gebruik gemaakt van variantie-analyses, correlatieanalyses en logistische regressie om de data van de cliënten die alle vier metingen hebben ingevuld te analyseren.

Resultaten: Er is een significante afname van zowel disfunctionele modi als ook disfunctionele copingstijlen gevonden op de tweede helft van de schematherapie behandeling. Uit de resultaten blijkt verder dat de vermijdingsstrategieën een voorspellende waarde hebben voor de toename van functionele modi op het eind van de behandeling.

Discussie/Conclusie: Schematherapie in een klinische groeps-setting laat belovende resultaten zien met betrekking tot de afname van disfunctionele schema modi, toename van functionele modi en afname van disfunctionele copingstijlen. De afname van de dysfunctionele copingstijlen, vooral vermijdende coping stijlen, blijkt gerelateerd te zijn met een toename van functionele modi. Dit wijst erop om gerichtere aandacht te richten op interventies die vermijdingsstrategieën voorkomen of verminderen.

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Introduction

For a long period insight-oriented psychodynamic treatment was the only acknowledged psychological method to treat people with characterological problems, but failed and even had damaging results (Arntz, 2006). Because clients with PDs did not benefit sufficiently from traditional cognitive therapy, a more intensive treatment approach had to be developed. In response to the challenges posed in treating personality disorders, Jeffrey Young developed Schema therapy (ST) in the 1980´s (Young et al., 2003). Skewes, Samson, Simpson and Vreeswijk (2015) investigated the effectiveness of ST in a sample of eight participants with mixed personality disorders and high levels of comorbidity. Skewes et al. (2015) found changes with large effect sizes in avoidant personality disorder symptom severity, depression and anxiety levels between pre-therapy and follow-up. Four participants achieved a loss of personality disorder diagnosis at the end of therapy. By follow-up, five participants had achieved a loss of diagnosis and six participants no longer met the criteria for depression at the end of treatment. These results were maintained at follow-up (Skewes et a., 2015). However, the fact that only scarce research is done on the interaction of the different components in ST, the aim of this research project is to investigate the role of dysfunctional coping styles in the process of change in schema modes. When light can be shed on the question whether the (dysfunctional) coping styles have an impact on the modification of the (dys) functional modes, the treatment can be adjusted in that sense. With this research investigation insight shall be gathered in the role of dysfunctional coping styles in the modification of (dys) functional modes.

In the following section an introduction will be given about personality, the development of personality disorders and its implications for treatment.

Personality psychology and personality disorders

Personality is defined as 'the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to the environment' (Allport, 1937, p.48). Personality seems to be composed of structural units called traits. Allport introduced one of the most modern trait theories (Allport in McAdams, 1990). Personality traits refer to individual differences between people in characteristic thoughts, feelings and behaviors associated with social interaction and the socio-emotional aspects of life (McCrae&Costa in McAdams, 1990). Assessed typically by self-report questionnaires personality traits provide a dispositional sketch of psychological individuality within a broad range of expected emotional, cognitive and behavioral responses. Problematic expression of those cognitive, emotional and behavioral responses that falls beyond the range of a culture´s broad expectations and comprising a person´s adjustment to the surrounding indicate personality disorders (McAdams, 1990).

The American Psychiatric Association (APA) (1994) defines a personality disorder (PD) as 'an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is

stable over time and leads to distress or impairment' (APA, 1994, pp. 629). This pattern is manifested in at least two of the following domains: cognition (perception of others/self), affectivity (emotional response) and/or interpersonal functioning and impulse control. This pattern should not be caused by a substance (medication, drugs etc.) or medical condition, and should not be explained better by another mental disorder (APA, 1994). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) differentiates three different clusters of PDs. The first cluster, cluster A lists the paranoid, schizoid and schizotypical PDs. People with cluster A disorders are mainly perceived as eccentric. The second cluster, cluster B contains the antisocial, borderline and narcissistic PDs. People who are diagnosed with cluster B disorders are often impulsive, dramatic and very emotional. The third cluster, cluster C describes the avoidant, dependent and obsessive-compulsive PDs. People with cluster C disorders are characterized mainly by a fearful attitude. The American Psychiatric Association also describes a condition in which a person meets the criteria for different clusters ("mixed") and is named "personality disorder not otherwise specified (PD NOS)" (APA, 1994).

Having a PD is related to several negative consequences concerning someone's interpersonal relations. People suffering from PDs are more likely to be separated, divorced or single (Soeteman et al., 2002). Besides, personality pathology is associated with reduced productivity, unemployment and difficulties in adequate functioning in daily life (Skodol et al., 2005). Chronic PDs are also related to suicidal tendencies (Renner et al., 2013) and reduced quality of life, such as subjective well-being, self-realization, friendships, social support, commitment and negative experiences (Torgersen, Kringle & Cramer, 2001). Because PDs originate from the childhood or early adolescence, a deficit in emotion-regulation, impulse control, conscience and identity development is expected. Deficits such as these can have a major negative impact on the adaptation and interpersonal expectations of the adolescent (Skodol, 2007). Therefore, continual investigations of the effects of psychological treatments are undertaken for clients with PDs. An example of an integrative treatment approach to chronic axis-I and axis-II disorders is the schema therapy (ST) (Young, Klosko, & Weishaar, 2003).

Schema Therapy

Schema Therapy (ST) is developed by Jeffrey Young in the 1980s. ST is a broad model that integrates aspects of the Cognitive Behavioral Therapy, psychodynamic models and models of psychopathology (Young et al., 2003). ST entails early maladaptive schemas (EMS), schema modes and coping styles. EMS are extremely stable and enduring patterns which are composed of memories, emotions, cognitions and bodily sensations of oneself and are dysfunctional to a significant degree (Young et al., 2003, p. 7). According to Young et al. (2003), the child's temperament plays a major role in the development of schemas. An extreme temperament makes it more likely that the child is exposed to aversive parental rearing and vice versa. ST serves as an antidote to the early damaging experiences that led to the formation of EMS and schema modes. The ultimate goal of schema therapy is to develop the healthy adult mode so that the patient is able to (1) react adequately to strong emotional

states which reflect unmet child hood needs, (2) reassure and replace maladaptive coping modes, (3) express needs in an assertive adult manner, (4) dismiss internalized critic and (5) explore the environment and learn about sources of joy and playfulness (Farrell, Reiss & Shaw, 2014).

The therapeutic relationship is seen as the foundation for these changes to occur. The therapist offers a direct corrective relational experience (limited reparenting), validates coping modes, welcomes dysfunctional child modes, confronts dysfunctional parent modes and enhances healthy modes (Arntz & Jacob, 2013). The goal of limited reparenting is to establish an active, supportive and genuine relationship with the patient that provides a safe environment for the patient to be vulnerable and to express emotions and needs (Farrell, Shaw & Webber, 2009). In order to accomplish schema change a variety of techniques, including empathic confrontation and experiential, cognitive and behavioral strategies, are used. Four core mechanisms of schema change are (1) limited reparenting, (2) experiential imagery and dialogue work, (3) cognitive restructuring and education and (4) behavioral pattern breaking. These interventions are implemented during three phases of treatment: (1) bonding and emotional regulation, (2) schema mode change and (3) development of autonomy. The therapeutic relationship in ST is directive. The therapist offers safe attachment, praises the patient, sets limit and stimulates playfulness within healthy therapy boundaries. The therapist is internalized as the healthy adult. Dysfunctional parenting and traumas in childhood are viewed as origins of dysfunctional schemas/modes. Main mechanisms of change are corrective emotional experiences, cognitive change and change in behaviors. Main techniques are experiential, cognitive and behavioral techniques geared to specific modes (Farrell, Reiss & Shaw, 2014). Bamelis, Everes, Spinhpoven & Arntz (2014) compared the effectiveness of ST and clarification-oriented psychotherapy with treatment as usual for cluster C, paranoid, histrionic, and narcissistic personality disorders. The primary analysis revealed consistently that ST was superior to treatment-as-usual (TAU) on greater recovery from personality disorder. The lower dropout rate in ST suggests higher acceptability by patients.

ST is a new and promising approach for the treatment of people suffering from complex PDs as BPD. The rapidity of emotional change was one of the major obstacles in treatment. Young et al. (2003) found five central modes in the borderline constellation: (1) the abandoned and abused child, (2) the angry and impulsive child, (3) the detached protector, (4) the punitive parent, and (5) the healthy adult modes (Young et al., 2003). BPD patients miss the healthy adult mode which serves as an executive function to other modes (Young et al., 2003, p. 278). Masley, Gillanders, Simpson & Taylor (2012) conducted a quality assessment culminating 12 studies showing overall medium to large effect sizes for ST. Furthermore, Farrell et al. (2009) found that 94% of patients attending ST in addition to TAU met no longer the criteria for Borderline personality disorder (BPD) at the end of treatment. Gude & Hoffart (2008) compared ST with patients undergoing treatment as usual and found that patients in ST showed greater improvement in interpersonal functioning than patients in TAU.

In the following section the three components of ST will be described.

Early maladaptive schemas

According to Young (2003), an early maladaptive schema (EMS) is a broad, pervasive pattern which is composed of memories, emotions, cognitions and bodily sensations regarding oneself and one's relationships with others. They are developed during childhood or adolescence and are elaborated throughout one´s lifetime and are dysfunctional to a significant degree) (Young, pp. 7). EMS play a major role in how patients think, feel, act and relate to others. EMS are dimensional, meaning they have different levels of severity and pervasiveness. The more severe the schema, the greater the number of situations that activate it. Schemas result from unmet core emotional needs in childhood. Young, Klosko & Weishaar (2003, pp.10) postulated five core emotional needs for human beings: (1) secure attachments to others, (2) autonomy, competence and sense of identity, (3) freedom to express valid needs and emotions, (4) spontaneity and play and (5) realistic limits and self-control. Depending on the child's early environment, the development of schemas can be grouped into five domains: (1) disconnection and rejection, (2) impaired autonomy and performance, (3) impaired limits, (4) other directedness and (5) over vigilance and inhibition.

Schema modes

In contrast to EMS which are stable trait constructs, schema modes are broader and alter depending on the emotional state of a patient in a particular situation. The schema mode concept emerged because the EMS concept did not account sufficiently for the rapid change in behavior and feelings of patients (Arntz, Lobbestael, Vreeswijk, 2007). Maladaptive schema modes can reflect a sort of regression into intense emotional states experienced as a child, causing patients to appear childish, while other schema modes can be reflective of an overdeveloped coping method, or the copying of behavior displayed towards them by their parent that has eventually been internalized (Young et al., 2003). Schema modes are the state like manifestation of EMS that appear when EMS are triggered or activated.

Young combined different EMS and coping strategies as schema modes since it appeared that certain EMS and coping responses were triggered together (Bamber, 2004; Young et al., 2003). Currently 22 schema modes can be grouped into four main categories. Schema modes are not separate entities and thus do not operate without awareness of each other (Lobbestal, Vreeswijk & Arntz, 2007). Everyone holds certain schema modes, whereas in severe pathology the balance between those modes is lost making the schema focused therapy less stigmatized. As the severity of pathology increases in patients, so do their dissociations between schema modes making them lose their feeling of a unified sense (Lobbestael, van Vreeswijk & Arntz, 2007). Clients can remain in a certain schema mode for a shorter or longer period and is visible in contact. Dysfunctional schema modes are activated when specific dysfunctional coping reactions give rise to frightened emotions, avoidant or automutilative behavior. The schema modes are grouped into three categories of dysfunctional modes and one category of functional modes (see Table 1). The first category is the dysfunctional child mode. The dysfunctional child modes are the vulnerable child mode, the angry child mode, the enraged child

mode, the impulsive child mode and the undisciplined child mode. The second category is the dysfunctional coping mode which is composed of the compliant surrender mode, detached protector mode, the detached self-soother mode, the self-aggrandizer mode and the bully and attack mode. When the client is situated in the coping mode he is trying to protect himself from pain and corresponds with the alternative coping styles as fight, flight, and freeze. The third category is the dysfunctional parent mode which consists of the punitive parent mode and the demanding parent mode. The fourth category is the functional mode which contains the happy child mode and the healthy adult mode (Young et al., 2003). The healthy adult mode serves three basic functions: (1) it nurtures, affirms and protects the vulnerable child; (2) it sets limits for the angry child and the impulsive-undisciplined child and (3) moderates the maladaptive coping and dysfunctional parent modes (Young et al., 2003, p. 278). The figure below shows a graphic depiction of the schema-mode model (figure 1).

Table 1.
Overview of Young´s schema modes

Schema mode category	Schema modes
Dysfunctional child mode	Vulnerable child Angry child Enraged child Impulsive child Undisciplined child
Dysfunctional coping mode	Compliant surrender Detached protector Detached self-soother Self-aggrandizer Bully and Attack
Dysfunctional parent mode	Punitive parent Demanding parent
Functional mode	Happy child Healthy adult

Schema mode work is seen as an advanced component of ST, which is particularly beneficial when working with individuals who suffer from BPD or other complex presentations (Masley et al., 2012). Mode work involves maintaining a relationship with the abandoned/abused child while working to reorganize the inner mode constellation of the patient. Bamelis et al. (2014) hypothesize that ST may be highly effective because multiple channels are addressed to achieve structural personality change by using experiential, behavioral, cognitive and interpersonal techniques. Working with the mode model was highly appreciated by patients and therapists, since it guided therapists in choosing adequate techniques and helped patients to better understand their own behaviors and feelings

(Bamelis et al. (2014)**.** The extensive use of emotion-focused techniques in ST is one of its defining qualities. The three central experiential techniques used in ST are imagery work, dialogues, and letter writing (Kellog & Young, 2006). Therapists and patients can for example have dialogues in imagery, in which patients create visual representations of the different modes or through Gestalt chair work. Using the two chair-techniques, patients and therapists can have dialogues among various modes. Using role play, modeling, and coaching, therapists can help patients to develop and strengthen their healthy adult mode. In ST psycho-education also has an important role. Patients are taught about normal needs and normal emotions, being safe, love and nurture and being treated empathically (Kellogg & Young, 2006). The schema mode work enables the therapists to understand and work with complex dysfunctional beliefs displayed by patients (Arntz, Lobbestael & Vreeswijk, 2007).
The following section addresses the third component of ST, the schema coping.

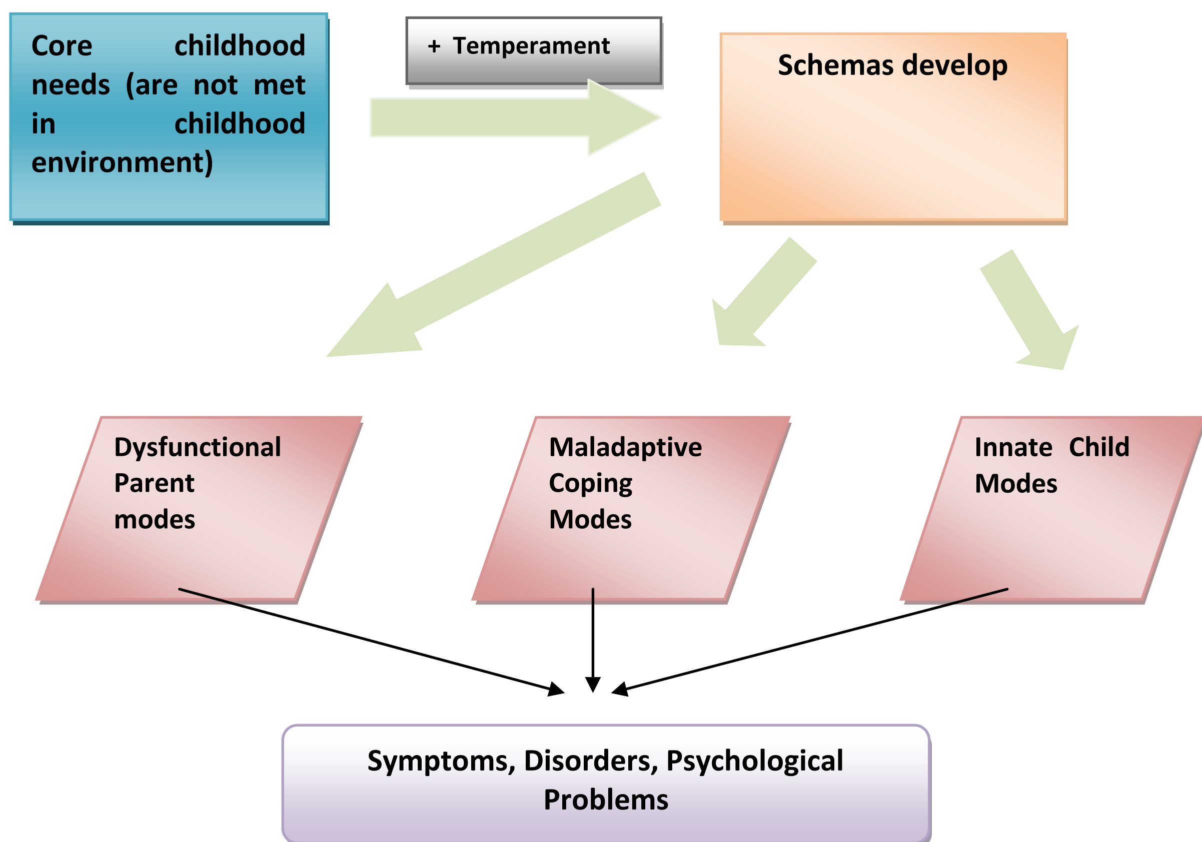

*Figure 1.*Schematic depiction of the schema-mode model

Notes: Retrieved from: Farrell, J.M., Reiss, N., & Shaw, I. A. (2014). The schema therapy clinician's guide: A complete resource for building and delivering individual, group and integrated schema mode treatment programs

Schema coping

Coping responses are defined as the cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding one´s resources (Lazarus &

Folkman, 1984). How a person adjusts to life stress is a major component of his ability to regulate well-being and to maintain mental health. The link between coping and DSM Axis I disorders (Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association, 1987, 1995) has been studied extensively (e.g. Vitaliano et al., 1990). Recognized authorities in the domain of PDs (e.g. Millon, 1981; Vaillant, 1994) emphasize that coping can be both cause and consequence of personality dysfunctioning. The coping skills and the adaptive flexibility of a person determine whether or not he/she is able to master the demands of the environment, i.e. whether or not his/her personality pattern is dysfunctional.

Young et al. (2003, pp.35) hypothesize that temperament is one of the main factors in determining why individuals develop certain coping styles rather than others. According to Young, patients develop maladaptive coping styles and responses early in life in order to adapt to EMS, so that they do not have to experience the intense, overwhelming emotions that EMS usually engender. The coping styles for a given EMS do not necessarily remain stable. Different patients use widely varying behaviors to cope with EMS. These coping styles are usually adaptive in childhood and can be viewed as healthy survival mechanisms. But they become maladaptive as the child grows older because the coping styles continue to perpetuate the schema, even when conditions change (Young et al., 2003, pp.35). These strategies which are called maladaptive coping styles can hinder the functioning of the individual and maintain the occurrence of that EMS (Young, 1999; Young, et al., 2003). There are three main coping strategies that these children adopt: (1) overcompensation (fighting the schema and acting as though the opposite were true), (2) surrendering (or giving in to the schema) and (3) avoidance (trying to avoid schema activation) (Young et al., 2003). The alternative response in the face of threat, “fight”, is associated with the ST concept of schema over-compensation (Young, et al., 2003). Over-compensation is a more active strategy to avoid the pain evoked through certain EMS. Considering the flight response as a reaction to a situation, “schema svoidance” is proposed. Avoidance as a coping strategy is also considered to be one of the more active strategies to avoid pain provided by EMS. Avoidance can be in the sense of behaviorally, cognitively and/or emotionally avoiding. Considering the freezing response, “schema surrender” is proposed. When an individual surrenders a schema, he or she is supposed to comply with that schema (Young, et al., 2003). Schema coping styles are suggested to be relatively temporary meaning that individuals engage in different intertwining coping styles to manage the EMS (Ball & Young, 2000).

In order to enable individuals to adaptively meet their own core needs through self-care and close adaptive relationships with others identification and reduction of maladaptive coping behaviors is required (Young, et al., 2003). Arntz & Renner (2013) found that dysfunctional coping responses decreased significantly and with large effect sizes from pre-treatment to post-treatment (d=.98) whereas the increase in adaptive schema modes was small (d=.40). They also found that maladaptive schema modes did not change significantly from pre-treatment to mid-treatment, but did change from mid-treatment to post-treatment (d=.56). Based on theory, schema modes might even increase during

the initial phases of ST because the patient might activate modes that protect (e.g., detached protector mode) the inner vulnerable side of the self (Renner et al., 2013).

Recent research findings and focus of the study

Farrell et al. (2009) found a decrease in maladaptive schema modes in the second half of treatment. At post-test, the reduction in maladaptive modes showed a moderate effect, d=.56. Adaptive schema modes increased from pre-treatment to post-treatment although the effect size was rather small (d= 0.40). Timmerman (2014) found that the dysfunctional modes decreased significantly, whereas the functional modes increased significantly over the course of ST at the second half of the treatment, thus in the period between mid- and post-treatment. Furthermore, Skewes, Samson, Simpson & Vreeswijk (2015) found that 40% of participants showed clinically significant change in adaptive modes at follow-up after following a short-term group schema therapy. More specifically, the increase of adaptive modes was the highest in the post-treatment period and the follow-up period. Furthermore, it is remarkable that the maladaptive modes showed a significant effect from pre-to follow-up period (p=.02). The largest change from pre-to post period could be detected in the detached protector mode. Skewes et al. (2015) hypothesized that as patients show an increase in emotional awareness, they initially fall back on old familiar coping modes. Skewes et al. (2015) also mentioned that clinical observations show that participants' scores on the vulnerable child mode increase across the first half of therapy as awareness is gained of maladaptive schema modes.

Renner et al. (2014) state that modes are probably the most stable manifestation of personality problems. Since research on schema modes shows promising results in recovery, it is in this paper chosen to focus deeper on schema modes and its change over the course of ST. Earlier in this paper it was said that dysfunctional modes are activated when a schema is triggered and dysfunctional coping reactions give rise to dysfunctional behavior. However, to our best knowledge no research has been done on the maladaptive coping styles overcompensation and avoidance. Therefore in this research the point of interest is the link between schema modes and dysfunctional coping styles. More specifically, the aim of this research project is to investigate the role of dysfunctional coping styles in the process of change in schema modes. When light can be shed on the question whether the dysfunctional coping styles have an impact on the modification of the (dys) functional modes, the treatment can be adjusted in that sense.

The research question posed in this paper is formulated as followed:

What role do dysfunctional coping styles play in the process of change in schema modes in people with personality disorders before, during and after ST?

In order to answer the research questions several objectives were formulated: (a) Which dysfunctional modes and dysfunctional coping styles are present in clients with personality disorders?, (b) Does a decrease in dysfunctional coping styles and dysfunctional modes take place during and after the

treatment in comparison with the baseline measurement?, (c) Does an increase of functional modes take place during and after the treatment?, (d) How are modifications in dysfunctional coping styles related to modifications in (dys) functional modes over the course of treatment with ST?, (e) Does a certain coping style predict an increase in dysfunctional schema modes? It is hypothesized that (b) the degree of maladaptive coping styles and dysfunctional modes is decreased by the end of treatment in comparison to the beginning, (c) that the functional schema modes are increased at the end of the treatment and maintained until 6 months later and (d) that changes in maladaptive coping styles from pre- to mid-treatment and mid- to post-treatment are positively related to modifications in dysfunctional schema modes.

Method

Design

This study is designed in the context and part of a bigger research project. It is an effect study in the clinical setting “de Wieke”. The data collection has been done by several students from the University of Twente, two psychologists form the clinic ‘de Wieke’ and the author of this paper. The current study consists of a within-subject pre-post measurement including four measurements at pre- (M1), mid- (M2), post-treatment (M3) and a follow-up (M4) measurement. In this research no control group is included due to circumstances of the research setting. The aim of this study is to investigate whether dysfunctional coping styles play a role in the process of change in (dys) functional schema modes over the course of ST. The original dataset comprises n=148 respondents, of these 98 are excluded. Participants have been excluded if (1) treatment duration was shorter than 6 months, (2) if a clinical treatment was not indicated; (3) consent was not signed by the patient, (4) if the patient was not proficient in the Dutch language and if (5) the questionnaires were filled in incompletely. This research is part of a bigger research and data collection started in 2011 till present. Between each measurement a minimum of three months, optimally six months, are required not to be considered a dropout. Patients who end their treatment against the advice of their therapist are regarded drop-outs and are not included in this research. Patients who stop their treatment prematurely, as agreed with the therapist in charge, are included in this research if they globally achieved their goals.

Participants

This research is conducted with clients of the “Wieke”, a clinic for personality disorders, which forms a unit of the Mediant Mental Health Services. Clients commence a voluntary clinical treatment for a treatment period of approximately 12 months. The participants were clients who have been treated with ST within “de Wieke”. The clients who dropped out of treatment early (< 6 months) were not included in the analysis. Inclusion criteria are: (1) a minimum age of 18, (2) a treatment at the clinical setting, the Wieke, (3) consent signed by the patient and (4) to be proficient in the Dutch language (see figure 2).

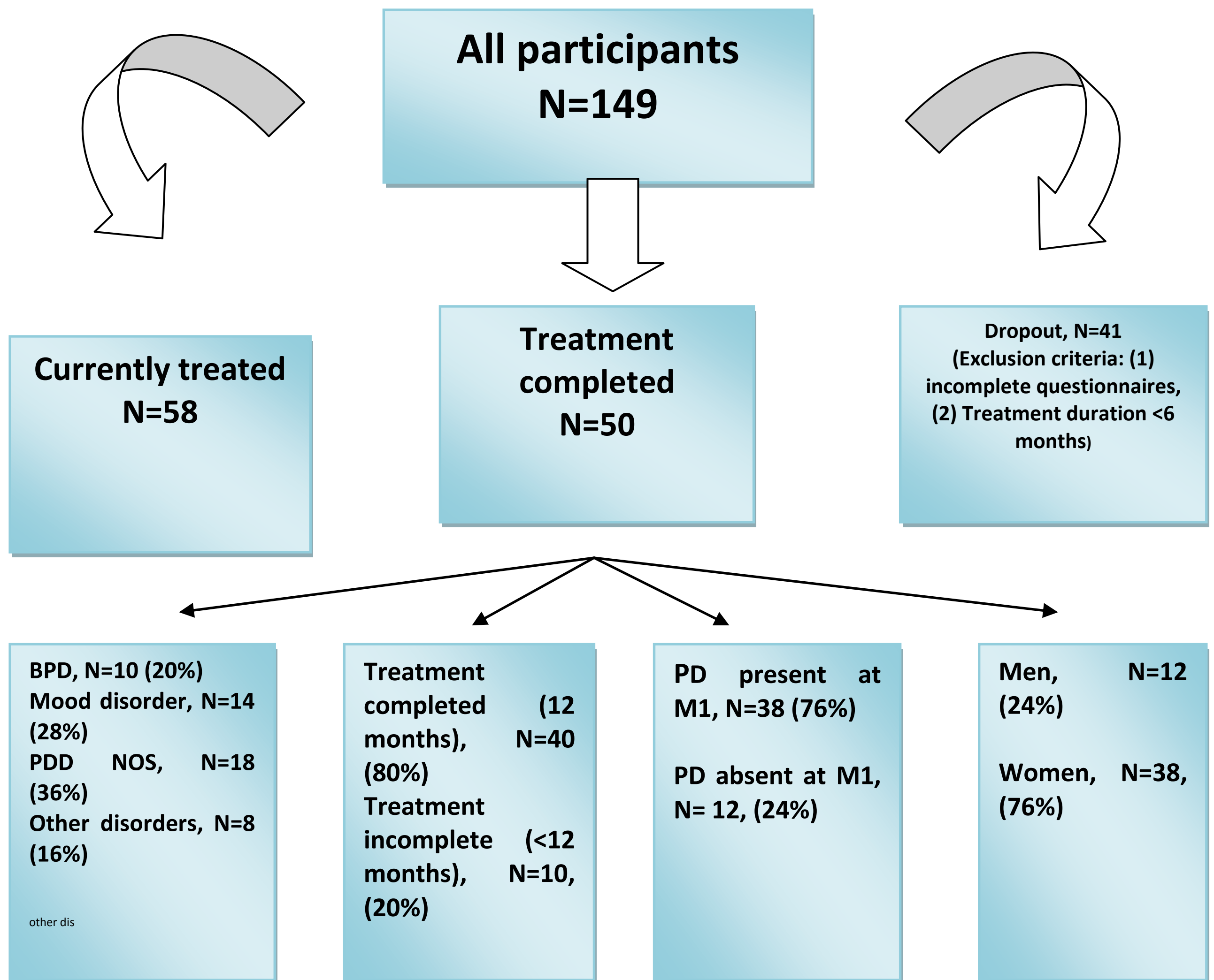

Figure 2. Flow chart of the participants, characteristics of participants following the treatment and dropouts

Procedure

All patients who commence a treatment are asked for consent to participate in the study (see Appendix B). Before giving consent, information on the broader research project is given, where it is stated that participation is voluntary, all data will be handled anonymously (see Appendix A). In the intake the first measurement takes place (M1). Participation in the research can be stopped at all times. Data collection takes place under the supervision of the psychologists in charge of the research. The instruments used throughout the treatment are listed in the table below (Table 2).

Table 2

Overview of instruments used at M1-M4

Measurement point	MMPI	HTP	YSL	SMI	YCI	YRAI	YPI	MHC-SF	BSI
M1	x	x	x	x	x	x	x	x	x
M2			x	x	x	x	x	x	x
M3			x	x	x	x	x	x	x
M4			x	x	x	x	x	x	x

Instruments

The Schema Mode Inventory

In order to determine the (dysfunctional and functional) schema modes the short form of the Schema Mode Inventory is used. The Schema Mode Inventory, short SMI, measures 14 possible schema modes (SMI; Young, Arntz, Atkinson, Lobbestael, Weishaar, van Vreeswijk & Klokman, 2008). The SMI is a 124-item self-report questionnaire that assesses 14 possible schema modes. Items are answered on a 6-point- Likert scale ranging from minimum score 1 ("not at all true") to maximum score 6 ("completely true") (see Appendix E). Results showed that the SMI has adequate psychometric properties (Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010). Lobbestael et. Al (2010) conclude that the SMI is a valid instrument in the diagnosis of schema therapy. The internal consistencies of the subscales of the short SMI were all good (ranging from $\alpha = .79$ to $\alpha = .96$), as was their mean ($\alpha = .87$). All maladaptive modes correlated positively with each other, as did the two adaptive modes. Adaptive modes correlated negatively with all maladaptive modes. Mean inter-correlation of all positive values was .59, and mean inter-correlation of all negative values was –.54. Test-retest reliability of the separate modes ranged from .65 to .92, p's<.001, with a mean of .84. These results indicate adequate test-retest reliabilities for all schema modes of the short SMI (Lobbestael et al., 2010). In the current study modes are categorized into two categories: functional schema modes (healthy adult and happy child) and dysfunctional schema modes (all other modes). The cutoff scores for the presence of (dys) functional modes are 50%. Participants who score above 50% for a schema mode are said to have the schema mode at that measurement point.

The Young Compensation Inventory

In order to determine the coping styles of patients two self-report questionnaires are used which are described in the following section. The Young Compensation Inventory (YCI) (Young, 1998) contains 48 items assessing various strategies used for schema compensation. Each item is rated on a 6-point Likert scale from 1 ("completely untrue of me") to 6 ("describes me perfectly") with higher scores suggesting greater use of compensation strategies (see Appendix C). Three subscales have arisen in previous studies (individuality with 10 items, social control with 19 items and personal control with 4 items). Each factor has good psychometric properties (Luck et al., 2005 in Mairet, Boag &Warburton, 2014). Previous research has found acceptable levels of internal consistency on each of the scales with coefficient alphas. Three subscales have arisen in previous studies (individuality with 10 items, social control with 19 items and personal control with 4 items). Each factor has good psychometric properties within eating disordered and non-eating disordered individuals (Luck et al., 2005 in Mairet, Boag & Warburton, 2014). Previous research has found acceptable levels of internal consistency on each of the scales with coefficient alphas ranging above .70 in a non-clinical sample (Sheffield et al., 2009 in Mairet, Boag & Warburton, 2014). The YCI displayed adequate to good reliability in the present study, with a coefficient alpha of $\alpha = .62$ for personal control, $\alpha = .78$ for individuality and $\alpha =$

.90 for social control (Mairet, Boag & Warburton, 2014). The cutoff score for the presence of overcompensation strategies is 50%. Participants who score above 50% for a schema mode are said to use overcompensation at that measurement point.

The Young-Rygh Avoidance Inventory

The Young-Rygh Avoidance Inventory (YRAI) (Young & Rygh, 1994) is a 40-item self-report questionnaire that assesses schema avoidance. Each item is rated on a 6-point Likert scale ranging from 1 ("completely untrue of me") to 6 ("describes me perfectly") with higher scores indicating greater avoidance (see Appendix D). Previous research has found that the internal consistency for these scales is acceptable and that the questionnaire displays adequate reliability (Mairet, Boag & Warburton, 2014). Previous research has found that the internal consistency for these scales is acceptable within eating disordered samples (total scale alpha= .79, BS= .65 and CE=.78; Spranger et al., 2001 in Mairet, Boag & Warburton, 2014) and moderate within non-clinical samples (0.52-0.67; Sheffield et al., 2009 in Mairet, Boag & Warburton, 2014). The YRAI displayed adequate reliability in the present study, with a coefficient alpha of .76 for the CE subscale and .74 for the BS subscale Mairet, Boag & Warburton, 2014). The cutoff scores for the presence of avoidance coping strategies is 50%. Participants who score above 50% for a schema mode are said to use avoidance at that measurement point.

Data Analysis

The data is analyzed with the statistical Program for Social Sciences (SPSS) version 23.0. The data analysis consists of a dataset containing the scores of participants who filled in the SMI, the YRAI and the YCI in 4 terms. For the investigation of the schema modes present at each time the mean values for each subscale are analyzed. The analysis of the schema modes is based on the total scores and mean values for each subscale. The dropouts are not included in the analysis. The data of clients who completed their treatment successfully in at least 6 months (N=50) are analyzed (see table 3). The missing data and huge data loss can be explained by postponed or forgotten measurements and refusal to participate. In order to answer the first question a descriptive analysis of the SMI scores, YCI scores and YRAI scores is done, to investigate which dysfunctional modes and dysfunctional coping styles are present throughout the four measurements.

The second step is to verify whether the degree of dysfunctional coping styles is decreased during and after the treatment. Thus, a decrease in dysfunctional coping modes from M1 to M2, from M2 to M3 are tested and whether the changes found by the end of the treatment are maintained after a follow up period of 6 months (M4). In order to answer this question an analysis of variance (ANOVA) is conducted.

The third step is to investigate if an increase of functional modes can be detected during (M2) and after the treatment (M3) in comparison to the pre-treatment period (M1). In order to answer this

question again an analysis of variance (ANOVA) is conducted.

The fourth step is to investigate how modifications in dysfunctional coping styles were related to changes in (dys) functional schema modes over the course of treatment with ST. In order to answer this question a correlation analysis is conducted to see if the modifications in dysfunctional coping styles are related to changes in schema modes. The Pearson correlation coefficient (r) is used to test whether the different coping styles are positively or negatively correlated with the change of (dys) functional schema modes. The values of r for the strength of association are .1 to .3 (small), .3 to .5 (medium) and .5 to 1.0 (large) (Moore & McCabe, 2011). Only variables with a value above the $r > .20$ are included in the logistic regression model.

The fifth step is to investigate whether a certain coping style can predict an increase in functional modes. In order to answer this question a logistic regression analysis is conducted. From the regression analysis two pieces of information can be gained: firstly, if there is a link between the coping styles and modes and secondly, insight can be gained over the potential predictive value of the coping styles in the change of schema modes. To check whether the logistic regression analysis is a good match with the data the Hosmer & Lemeshow test is done in advance. For all analyses the significance level $p < 0.05$ (one sided) is used.
The consequences of the exclusion of dropouts are discussed in later sections.

Results

In order to answer the research question, the first step is to investigate the present coping styles and schema modes of the clients (N=50) at the beginning of the treatment. These outcomes are based on the cut-off point of 50% of the SMI scores, YCI scores and YRAI scores.

The presence of dysfunctional modes and dysfunctional coping styles

The examination of the first question in this paper addresses the presence of schema modes and coping styles at the baseline measurement. To get an overview of the proportions of the scores the scores present at the baseline measurement are compared to the maximum scores in each mode. The cut off score for the presence of a schema mode is 50%, so every score above 3 on the Likert-scale. The dysfunctional child mode has 45 items on which the total score is 270. The cut off score for the dysfunctional child mode is thus 135. In table 4 the baseline measurement for the dysfunctional child mode shows a score of 130.73, which means that the dysfunctional child mode is regarded as not present at the baseline. The dysfunctional coping mode is composed of 39 items which makes a total score of 234. The cut off score for the dysfunctional coping mode is thus 118. In the table it can be seen that the dysfunctional coping mode shows a baseline score of 113.80, meaning that the dysfunctional coping mode is not present at the baseline measurement. The dysfunctional parent mode comprises 20 items, making a total score of 120 with a cutoff point of 60. The table provides a score of 70.76, stating that the dysfunctional parent mode is present in clients at the baseline. The functional

modes comprise 20 items making a total score of 120 with a cutoff point at 60. In the table it can be detected that the average baseline score for the functional modes is 58.06. So the functional modes are regarded as not present at the beginning of the treatment. The Young compensation inventory contains 48 items scoring on the coping style overcompensation, making a total of 288. Thus the cutoff point of 50% is 144. The overcompensation score at the baseline measurement is 148.64, stating that overcompensation is present in clients when they start the treatment. The Young-Rygh Avoidance inventory contains 40 items, making a total score of 240 with a cutoff point of 120. The table provides a baseline score of 132.42, stating that avoidance as a coping style is inherent in clients starting the treatment. It is notable that the score for the dysfunctional child mode, the dysfunctional coping mode and the functional modes are just below the cutoff point (see table 4).

Table 3.
Count of participants at all four measurement points (N)

Schema Modes	M1	M2	M3	M4
Dysfunctional child mode	50	50	49	49
Dysfunctional coping mode	49	49	50	50
Dysfunctional parent mode	50	50	50	50
Functional mode	50	50	49	50
Coping styles				
Overcompensation	47	48	50	47
Avoidance	48	44	50	46

Table 4.
Presence of schema modes, overcompensation strategies and avoiding strategies from pre- (M1) to the follow-up period (M4) from participants who completed their treatment

	M1				M2			
(Dys)functional modes	*M*	*Sd*	*Min*	*Max*	*M*	*Sd*	*Min*	*Max*
Dysfunctional Child Mode	130.73	26.16	86.00	193.00	124.63	33.72	78.00	234.00
Dysfunctional Coping Mode	113.80	17.02	85.00	160.00	107.92	23.66	78.00	171.00
Dysfunctional Parent Mode	70.76	16.47	37.00	107.00	96.54	17.35	35.00	107.00
Functional Modes	58.06	9.58	39.00	80.00	64.08	13.83	30.00	95.00
Coping styles								
Overcompensation	148.64	28.03	91.00	215.00	144.90	30.33	90.00	207.00
Avoiding	132.42	21.70	101.00	238.00	123.34	17.14	83.00	154.00
	M3				M4			
(Dys)functional modes	*M*	*Sd*	*Min*	*Max*	*M*	*Sd*	*Min*	*Max*
Dysfunctional Child Mode	102.26	29.93	51.00	175.00	102.86	28.03	50.00	180.00
Dysfunctional Coping Mode	90.12	24.50	50.00	150.00	87.31	23.78	50.00	136.00
Dysfunctional Parent Mode	54.86	17.82	28.00	102.00	55.64	16.62	27.00	98.00
Functional Modes	76.32	15.97	45.00	107.00	73.37	17.24	39.00	110.00
Coping styles								
Overcompensation	128.10	30.17	68.00	200.00	123.43	28.07	75.00	182.00
Avoiding	107.98	21.88	63.00	155.00	111.13	20.52	69.00	162.00

Decrease of dysfunctional modes vs. Dysfunctional coping styles

The second sub question addresses the changes in dysfunctional coping styles and dysfunctional modes during (M2) and after the treatment (M3+M4) in respect of M1. In table 4 the process of change in dysfunctional modes and dysfunctional coping styles can be detected. To see if there are differences in groups and if those differences are significant an ANOVA is conducted. The ANOVA analysis shows a significant level for the between groups analysis (p=.00), thus there is a difference between groups. Considering the fact that there is a significant difference between measurements a closer look was taken on changes throughout the treatment. For this analysis difference scores of baseline treatment and M2, M3 and M4 are compared (M1-M2), (M1-M3), (M1-M4). The decrease of the dysfunctional child mode (N=197) from baseline measurement and mid-treatment (M1-M2) is not significant, p=.737. The dysfunctional child mode shows a significant decrease from the baseline measurement and the end of treatment (M1-M3) p=.00 and also between the baseline measurement and the follow-up measurement point (M1-M4) p=.00. Regarding the process of change of the dysfunctional coping mode (N=197) the same pattern can be detected. The decrease from M1 to M2 is not significant, p=.557, whereas the baseline measurement and post-treatment and follow up, thus (M1-M3) and (M1-M4) are significant p=.00. Also the dysfunctional parent mode (N=199) shows this pattern. The baseline measurement compared to the mid-treatment measurement point (M1-M2) is not significant p=.984, whereas M1-M3 and M1-M4 are significant P=.00. In sum, the decrease from baseline measurement and mid-treatment period is not significant for dysfunctional schema modes, whereas the decrease from baseline measurement and post-treatment and follow-up period are significant for the dysfunctional child mode, the dysfunctional coping mode and dysfunctional parent mode (see figure 3).

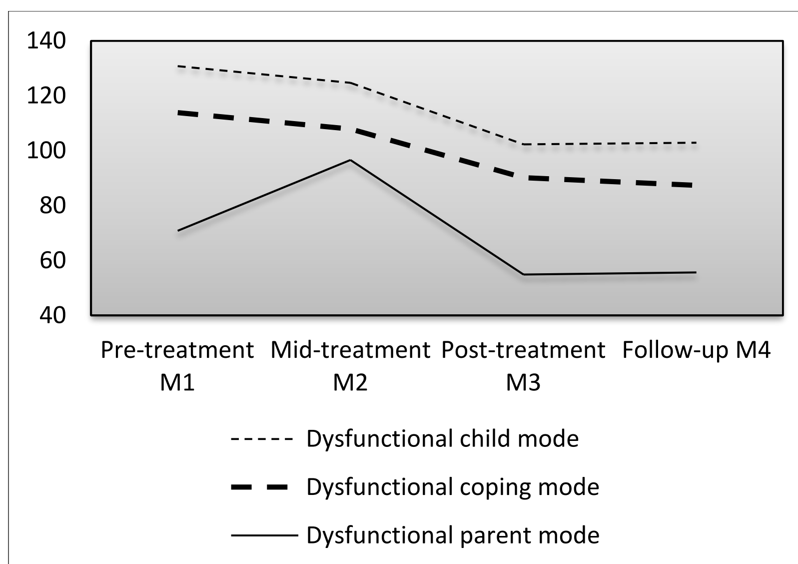

Figure 3. Modification of dysfunctional schema modes over the course of ST (M1-M4)

Regarding the change of the coping styles throughout the treatment a significant level of change can be detected (p=.00). To investigate in which period the changes occur the difference scores

of M1-M2, M1-M3 and M1-M4 are compared are analyzed. The avoidant coping style does not show a significant degree of change from baseline measurement to mid-treatment period p=.15. In contrast, the baseline measurement shows a significant degree regarding the post-treatment and follow-up measurement p=.00. The same pattern can be detected for the overcompensation coping style. The baseline measurement does not show a significant level of decrease till the mid-treatment, but for the post-treatment and follow-up period p=.00. In sum, the decrease from baseline measurement and mid-treatment period is not significant for both coping styles, whereas the decrease from baseline measurement and post-treatment and follow-up period are significant. The significance of F=75.82 is 0.00, assuming that there is a decrease detectable in coping styles throughout the second half of the treatment. In the two graphics below (see figure 4 and 5) the process of change in (dys) functional modes and coping styles are depicted.

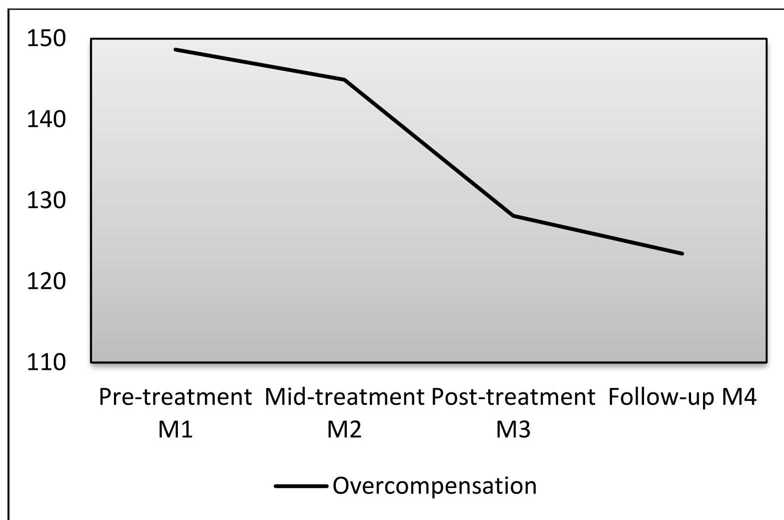

Figure 4. Modification of the dysfunctional coping styles over the course of ST (M1-M4)

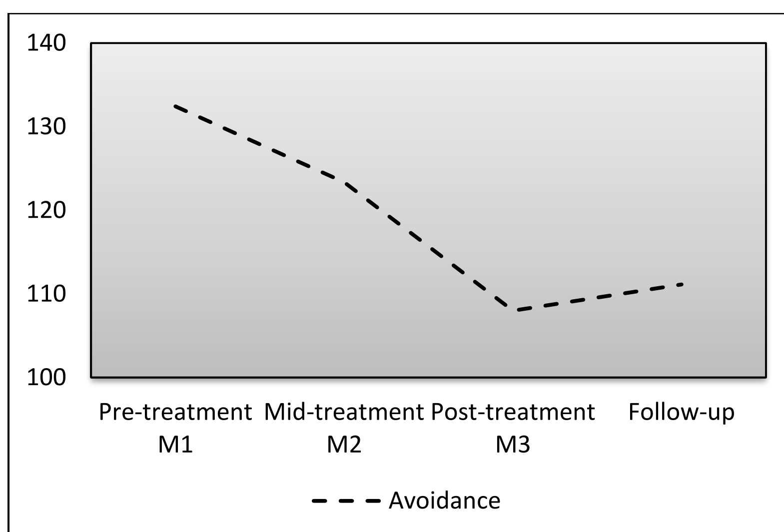

Figure 5. Modification of the dysfunctional coping style avoidance over the course of ST (M1-M4)

Increase in functional modes

The third sub question addresses the increase of functional modes during (M2) and after the treatment (M3). The ANOVA shows a significant difference between groups in the process of change in functional modes throughout the ST treatment. To investigate in which period the significant changes occur the difference scores of M1-M2, M1-M3 and M1-M4 are analyzed. The functional mode (N=198) does not show a significant degree of change from baseline measurement to mid-treatment p=.162. However, the functional modes do show a significant level of change between M1-M3 and M1-M4, p=.00. The results indicate a significant increase in functional modes F (1,195) =196.91, p=.00 (see figure 6).

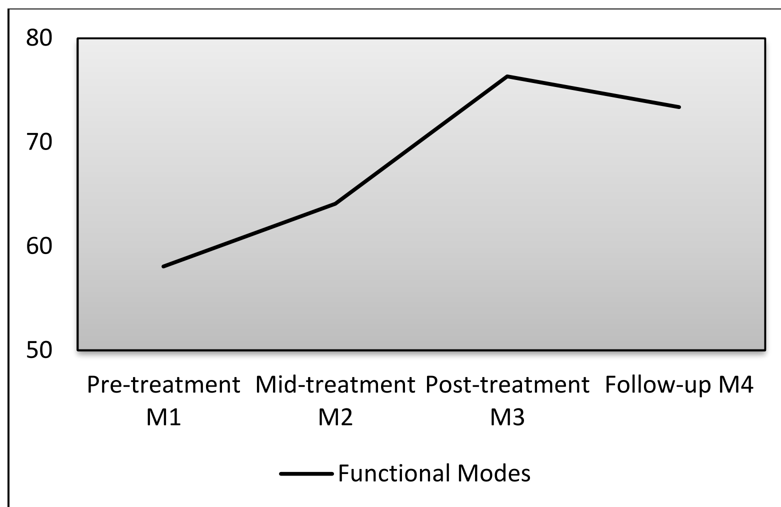

Figure 6. Modification of functional schema modes over the course of ST (M1-M4)

The relationship between avoiding and overcompensation and (dys) functional modes

After investigating the modifications of the schema modes and maladaptive coping styles, the next step was the investigation of the relationship between avoiding and overcompensation and the schema modes. The Pearson's r for the correlation between the functional modes and overcompensation strategies in our example is of medium size (r= -0,447). There was also a large negative correlation between the functional modes and avoidance strategies, r=-0,665. The Pearson´s r for the correlation between the dysfunctional child modes and overcompensation strategies is strong, r=0,739. The Pearson´s r for the correlation between dysfunctional modes and avoidance strategies is also large, r= 0,614. The Pearson´s r for the correlation between dysfunctional coping modes and overcompensation strategies is 0,774. The Pearson´s r correlation between the dysfunctional coping modes and avoidance strategies is 0,684. The Pearson´s r correlation between the dysfunctional parent modes and the overcompensation strategies is 0,456. The Pearson's r correlation between the dysfunctional parent modes and avoidance strategies is 0,527 (see Table 5).

Table 5
Correlation coefficients between the difference scores of (dys) functional schema modes and coping styles from pre- (M1) to follow-up period (M4) from clients in ST (n=191)

	FM	DFCM	DFCOM	DFPM	YCI	YRAI
FM	1	-.730**	-.738**	-.609**	-.447**	-.665**
DFCM	-.730**	1	.852**	.520**	.739**	.614**
DFCOM	-.738**	.852**	1	.612**	.774**	.684**
DFPM	-.609**	.520**	.612**	1	.456**	.527**
YCI	-.447**	.739**	.774**	.456**	1	.515**
YRAI	-.665**	.614**	.684**	.527**	.515**	1

Notes: FM=functional modes, DFCM=dysfunctional child mode, DFCOM=dysfunctional coping mode, DFPM=dysfunctional parent mode, YCI= overcompensation, YRAI=avoidance; **p<0.01 (2-tailed).

The predictive value of schema coping in the modification of functional modes

In order to investigate the role of maladaptive coping styles on the modification of functional modes a regression analysis was conducted. To test whether the model fits the data used the Hosmer & Lemeshow test has been conducted. The Hosmer & Lemeshow test shows a significance degree of .936 indicating that the differences in group sizes are not significant and in turn stating that the model fits well with the data. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between presence and absence of functional schema modes at the follow-up measurement (chi square = 81,461, $p < .001$. with df= 7). Nagelkerke´s *R2* of .498 indicated a moderately strong relationship between presence and absence. The prediction success overall was 64, 6%. The Wald criterion demonstrated that the measurement point, presence of a PD, completion of treatment and avoidance made a significant contribution to prediction ($p <.005$) (see table 6). The use of overcompensation as coping style, age and gender were not significant predictors of developing functional modes over the course of ST.

A second regression analysis was conducted dropping the independents which did not contribute a significant effect on the presence of the functional modes at the follow-up period. A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between presence and absence of functional schema modes at the follow-up measurement (chi square= 84,840, $p < .001$ with df = 4). Nagelkerke´s *R2 of* .638 indicated a predictive value of the presence or absence of functional modes. The prediction success overall was 63.8%. The Wald criterion demonstrated that the measurement point, completion of treatment, presence of a personality disorder and avoidance made a significant contribution to prediction ($p <.005$) (see table 7).

Table 6
Logistic regression analysis of presence/absence

Independent variable	b	se	z ratio	Prob.	Odds
Measurement point	.453	.195	5.381	.020	1.572
Personality disorder	-1.337	.572	5.460	.019	.263
Age	.011	.034	0.111	.739	1.011
Gender	.780	.475	2.696	.101	2.182
Treatment completed	1.713	.518	10.951	.001	5.545
Overcompensation	-.002	.007	.046	.829	.998
Avoidance	-.072	.015	23.929	.000	.931

Model $X^2 = 81.461$, $p < .001$.
Pseudo $R2 = .498$
N= 181

Table 7
Logistic regression analysis of presence/absence after deleting non-significant predictors

Independent variable	b	se	z ratio	Prob.	Odds
Measurement point	.490	.187	6.898	.009	1.633
Personality disorder	-.919	.467	3.876	.049	.399
Treatment completed	1.770	.492	12.920	.000	5.868
Avoidance	-.070	.013	28.426	.000	.932

Model $X^2 = 84.840$, $p < .001$.
Pseudo $R2 = .638$
N= 188

Conclusion and discussion

The current research aimed to investigate the role of dysfunctional coping styles in the process of change in schema modes. With this research insight shall be gathered in the role of dysfunctional coping styles in the modification of (dys) functional modes. The examination of the first question in this paper addressed the presence of schema modes and coping styles at the baseline measurement. The dysfunctional child mode, the dysfunctional coping mode and the functional modes were just below the cutoff point and considered not present at pre-treatment. Only the dysfunctional parent mode was scored above the cutoff point on average. Both overcompensation and avoidance were present in clients at the pre-treatment measurement point. Young et al. (2003) argued that dysfunctional coping styles can hinder the functioning of the individual and maintain the occurrence of early maladaptive schemas which in turn evokes maladaptive schema modes. The SMI is a self-report questionnaire and reflects a snapshot of clients´ emotions and cognitions which can be clouded by their mood. Therefore the strict cutoff point of 50% might not reflect the actual present schema modes of clients in pre-treatment.

After determining the schema modes and coping styles at pre-treatment, the next step was to

investigate the changes in dysfunctional coping styles and dysfunctional modes during (M2) and after the treatment (M3+M4). It was hypothesized that the dysfunctional coping styles and dysfunctional schema modes shall decrease over the course of ST. The findings confirm the stated hypothesis. The decrease from baseline measurement and mid-treatment period was not significant for dysfunctional schema modes as well as dysfunctional coping styles, whereas the decrease from baseline measurement and post-treatment and follow-up period were significant. In contrast to Renner et al. (2013) who argued that schema modes might increase in the initial phases of schema therapy because of the activation of coping modes to protect the vulnerable child modes. In this study, a different trend could be detected. To sum up, the dysfunctional modes as well as the dysfunctional coping styles showed no significant decrease from pre-treatment to mid-treatment, whereas the decrease from pre-treatment and post-treatment and follow-up period was indeed significant. These findings show that patients in schema therapy benefit particularly from schema therapy in the second half of the treatment. In schema therapy, the therapeutic relationship is seen as the foundation for mode change to occur. In order to enable mode change the therapist has to establish a foundation of trust, offer corrective relational experience, validate coping modes and confront dysfunctional parent modes (Farrell, Shaw & Webber, 2009). The development of trust and a safe environment might cost the first half of the treatment, enabling the client in the second half of the treatment to enhance the healthy adult mode and use less maladaptive coping styles. It is remarkable that the dysfunctional parent mode increases from pre-treatment to mid-treatment, probably encouraging maladaptive behavior which leads to a relapse in dysfunctional coping styles at the first half of the treatment.

After the inventory of the change of dysfunctional schema modes and dysfunctional coping styles, the third sub question addressed the modification of functional modes over the course of ST. it was hypothesized that the functional modes shall increase gradually over the course of ST. The findings were partly in line with the expectations. In the period from pre-treatment (M1) to post-treatment (M3) and from pre-treatment (M1) to the follow-up period (M4) the functional modes showed a significant level of change. The same pattern of change is found as in the investigation of change in the dysfunctional schema modes. It seems that the dysfunctional schema modes, in particular the coping modes, are activated so strongly that the functional modes lose their function and seem to diminish from pre-treatment to mid-treatment. The more the patients advance in therapy the more insight they seem to gain in their mode constellation and their triggers creating more flexibility to experiment with more adaptive schema modes and coping styles. Skewes et al. (2015) found that the highest increase in adaptive modes was between post-treatment and follow-up. However, the current study shows that the adaptive modes slightly decrease from post-treatment to follow-up. Possibly, clients fall back on old familiar coping responses and maladaptive behavioral patterns as they finish treatment and lose the safe therapeutic environment.

After investigating the modifications of the schema modes and maladaptive coping styles, the next step was the investigation of the relationship between avoidance and overcompensation and the

schema modes. According to the expectations, the functional modes showed strong negative correlations with the dysfunctional schema modes and dysfunctional coping styles. The dysfunctional schema modes strongly correlated with each other as well as with the dysfunctional coping modes. In particular, the dysfunctional coping mode and the dysfunctional coping styles overcompensation and avoidance correlated strongly. The theoretical vagueness of the definition of the coping modes and coping styles might account for the strong correlation rather than an actual relation of those constructs. In fact, the theoretical conceptualization of the ST defines modes as coping responses to early maladaptive schemas that are activated. Next to schema modes as a form of coping, Young (2003) also describes three different coping styles that distinguish from schema coping modes. This contentual similarity of the two variables might account for the strong correlation aggravating the distinction of those concepts and in turn clouding possible explanations. In order to be able to raise the validity of the interpretations a factor analysis should be made to inventory if they indeed meet the same concept.

The final question of this paper addressed the question whether dysfunctional coping styles had a predictive value regarding the increase of functional schema modes. The logistic regression analysis showed that overcompensation has no significant contribution to the prediction of functional modes in ST as in this clinical setting, whereas avoidance did show a significant contribution to prediction. These findings raise several questions: (1) Which role does overcompensation as a dysfunctional coping style have in the process of change in (dys) functional schema modes?, and (2) Are there possible techniques which can be employed in minimizing the use of avoidant coping strategies?; (3) Can the employment of more directive techniques against avoidance stimulate the decrease of dysfunctional coping modes at the first half of the treatment? Initially only dysfunctional coping styles were used in the regression analysis to investigate a potential predictive value. To explore possible other factors that might be of predictive value modification of functional modes, variables as gender, presence of PD, completion of treatment and age were included. Indeed, other factors than avoidance have been found in the regression analysis. Factors that contributed significantly to the prediction of functional schema modes in ST were the measurement point, the completion of the treatment and the presence of a PD at pre-treatment. The results correspond with results found in earlier research. The longer the clients undergo a clinical ST the higher the chance to develop and enlarge the functional modes (Farrell et al., 2009, Timmerman 2014). In particular the adherence to ST in its full length seems to deliver promising results for developing enlarging the functional modes enabling the client to deal with the dysfunctional modes. The findings found supportive evidence that ST is a promising therapy for patients suffering from PDs. Only half of the participants were clients suffering from PDs, the other half was composed of other disorders. In line with findings of Skewes et al. (2015), the current study confirms that clients suffering from disorders other than PDs also benefit from ST.

The huge amount of data loss and dropouts (n=58) accounts for one-third of missing participants and constrains the validity of the current study. The participants were not only clients

suffering from PDs, but also other disorders. Jensen, Mortenson & Lotz, 2014 plead for a more systematic selection of clients and suggest that the clients who drop out have a lower motivation to engage in treatment. Jensen et al. (2014) plead for combining qualitative and quantitative analyses to inventory possible contra-indications to engage a clinical treatment. Besides, the inclusion of dropouts might have provided more insight into the modification of dysfunctional coping styles and schema modes. In the current study, only participants were taken into account who filled in all questionnaires, thus were adherent to treatment. Furthermore, there is only little knowledge on schema coping constraining possible explanations for the role of maladaptive coping roles on the modification of schema modes. Also the earlier mentioned conceptual vagueness of the dysfunctional coping styles and dysfunctional coping modes constrain the validity of possible explanations.

Strengths and limitations

Since no research has been done on the role of schema coping responses on the modification of schema modes, this current study is quite innovative. In the following section the strength and limitations of the current study will be discussed.

The present study is conducted in a clinical setting and therefore embedded in a treatment in a natural environment in contrast to highly controlled experimental settings. Furthermore, the research design includes four measurements covering a baseline measurement, during the therapy, a post-treatment period and a follow-up measurement. Besides investigating the effects of on the modification of coping styles and Schema modes throughout the treatment, insight over possible long term effectiveness of Schema therapy has been gained. The decrease of avoidance was significant throughout the treatment and maintained during the follow-up period. This raises hope for the clients to regain trust in their ability to utilize healthier modes to deal with stressful events.

There are also some limitations to the present study. Possibly the most crucial limitation of the study is the huge loss of data due to missing measurements, dropouts and refusal to continue participation. These aspects resulted in small sample sizes for the analyzed data. There are different possible explanations to the huge refusal to fill in the follow-up questionnaire. One possible explanation is that clients who felt better after the end of their treatment distanced themselves emotionally from the painful confrontation with their dysfunctional schema modes and coping styles during the treatment. Another possible explanation is that clients experienced a relapse in dysfunctional behavior and coping styles and were less motivated to continue participation. A weak point of this study is the lack of a more controlled trial. Without a comparison to a non-treatment group it is unclear whether specific elements of ST led to the results at hand. This might account for an overestimation of the found effects. Factors such as the therapeutic relationship, inflows and outflows in groups could have influenced the results as well. Adhere to a confronting treatment and struggling with feelings of safety and trust might trigger dysfunctional schema modes as well as dysfunctional coping styles. Another weak point is huge number of clients who did not complete their treatment in at least six months and who stopped the treatment against advice (dropouts). By doing so,

only clients who completed their treatment successfully were included in the study, resulting in a smaller sample size. A fourth weak aspect of the current study is the likelihood that clients were aware of the items scoring on certain schema modes biasing their responses on the questionnaires and therefore sketching a skewed picture. The limitations discussed in this section have several implications for the results. The conclusions made in this research can only be generalized to the clinical population who finished the treatment successfully.

Implications of weak and strong points for following research

Based on observations in the research setting, the results and limitations, several implications for future research can be formulated. Regarding the huge amount of data loss a strict data collection schedule is recommended. The list needs to be updated continuously; clients who did not appear for the measurement should be reminded repeatedly. Concerning the missing follow-up measurements it is recommended to send reminders to clients to increase the chance of participation and prevent dropouts. Regarding the research design it is important to include a control group receiving no treatment or another treatment than ST. By ensuring a control group it can be verified whether the effects are indeed related to positive effects of ST. The advantage of comparing the ST treatment to another treatment approach is to gain insight to treatment techniques unique to ST. Future research should also be considerate of an equal gender distribution in the sample.

Regarding the results there are several points of interest for future research. In this study, relationships between the modifications of coping styles and related changes in (dys)functional modes have been found. Furthermore, it should be verified whether a replication of the current study yield similar results. The fact that no significant predictive value has been found of the overcompensation coping style on the schema modes raises questions. Firstly, overcompensation as one of the three main coping strategies that Young identified should be investigated. It is unclear what role overcompensation plays in the process of change of dysfunctional as well as functional modes. To our best knowledge, no research has been done on the schema coping strategies Young introduced, whereas the schema coping questionnaire is a common used instrument assessing schema coping. Questions concerning the function of overcompensation as a coping strategy are interesting to investigate.

Theoretical considerations regarding the conceptualization of coping modes and coping styles should be made. Dysfunctional coping modes and dysfunctional coping styles correlated very strongly indicating that they might measure the same contentual construct. The theoretical concept of coping modes and schema coping is intertwined and therefore hard to distinguish. Research is required investigating the constructual difference in coping modes and coping styles (van Vreeswijk & Broersen, 2006).

Another implication for further research could be the inclusion of the intention-to-treat analysis (Montori & Guyatt, 2001). The intention-to-treat principle states that all patients in a trial

should be analyzed together as representing the treatment, independent whether or not treatment has been completed (Newell, 1992). If randomized controlled trials (RCT) are used for unbiased assessments of treatment efficacy, the intention-to-treat principle should be applied.

According to Farrell et al. (2009) group therapy offers a unique opportunity for clients to practice new behavioral and coping skills in a “de-shaming environment” and corrective emotional learning experiences. Qualitative feedback also indicated that groups help normalize participant´s psychological experiences and difficulties and promote self-expression and self-disclosure, while reducing inhibition (Skewes, Samson, Simpson, Vreeswijk, 2015). Regarding the fact that the majority of studies investigating effects of ST are of quantitative nature, it is interesting to conduct a qualitative research including factors such as the therapeutic relationship or rotating schedules. A combination of qualitative and quantitative research has the potential to enrich existing knowledge on the effectiveness of ST in clinical group settings. The clinical improvements demonstrated in the study of Skewes et al. (2015) indicated that ST delivered in a group setting may hold promise for participants with different PDs and high levels of comorbidity.

The outcomes of the recent study are also of relevance for the use of ST in therapeutic settings. To conclude, in particular the coping style avoidance plays a great role in the decrease of dysfunctional modes and the increase of the functional modes. These findings are visible particularly from mid-treatment to follow-up period, thus the second half of the treatment. These findings implicate that avoidance as main coping strategy should gain more awareness in ST, requiring interventions directed at preventing or containing avoidance as coping strategy.

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Appendix

A

INFORMATIEFOLDER

Wetenschappelijk onderzoek

Evaluatieonderzoek bij schemagerichte klinische groepsbehandeling

Achtergrond van het onderzoek

Mediant is een middelgrote GGZ instelling in Twente, waar zich ongeveer 6000 cliënten per jaar melden met uiteenlopende psychische klachten. Een van de specialistische onderdelen van Mediant is het centrum voor klinische psychotherapie “De Wieke”. Bij de Wieke volgen (jong)volwassen cliënten een behandeltraject van 3 tot 12 maanden, welke zich richt op het verminderen van psychische klachten en het verbeteren van het sociaal functioneren. Er wordt gewerkt met schemagerichte therapie. De behandeling is intramuraal en heeft tot doel de gestagneerde persoonlijkheidsontwikkeling weer op gang te brengen, in een veilige omgeving. Er worden maximaal 27 cliënten in de leefgroep behandeld. Daarnaast participeert de cliënt in een therapiegroep, die uit maximaal 9 cliënten bestaat. Naast de groepsgerichte activiteiten is het ook mogelijk een individueel behandeltraject samen te stellen. De behandelduur varieert van 3 tot 12 maanden, waarbij de meeste cliënten de volledige 12 maanden opgenomen worden. Er kan aansluitend een nazorgtraject plaatsvinden.

Onduidelijk is in hoeverre deze klinische groepsbehandeling effect heeft op een verandering van onderliggende schema’s. De hypothese is dat klinische behandeling leidt tot afname van de door cliënten gerapporteerde schema’s/klachten. Dit onderzoek betreft een exploratief onderzoek naar effecten van dit klinische groepsbehandeltraject.

Wat is het doel van het onderzoek?

We willen met dit onderzoek inzicht krijgen in het effect van de klinische groepsbehandeling op schema’s. En de uitkomsten willen we gebruiken om de behandeling te verbeteren.

Wat betekent mijn deelname voor mij?

Bij de intake krijgt iedereen een psychologisch onderzoek met zelfrapportagevragenlijsten. Hierin worden onder andere psychische klachten en schema’s gemeten. Dat noemen we de beginmeting; zo kom je binnen bij de Wieke. Deelname aan dit onderzoek betekent dat je aan het eind van je behandeling deze vragenlijsten nogmaals invult. Dat noemen we de eindmeting; zo verlaat je de Wieke. Ook zal je een half jaar na beëindiging van behandeling worden benaderd (schriftelijk of per e-mail) om dezelfde vragenlijsten nogmaals in te vullen. Dat noemen we de follow up; we willen weten of de veranderingen in schema’s na een half jaar gelijk zijn gebleven.

Wat gebeurt er met mijn gegevens?

De gegevens van het onderzoek worden anoniem verwerkt en zullen op geen enkele manier tot jouw te herleiden zijn. Je scores worden zonder je naam ingevoerd in een statistiek programma waarna we gaan kijken of we op groepsniveau effecten zien. Mocht je zelf graag de uitslagen van de vragenlijsten willen, dan kan je dat aangeven. We zullen er voor zorgen dat je dan persoonlijk binnen vier weken bericht krijgt met de uitkomsten.

Wat als ik niet mee wil doen?

Deelname aan dit onderzoek is geheel vrijwillig. Als je niet mee wilt doen heeft dit geen enkele invloed op de behandeling die je krijgt aangeboden. Ook kan je altijd tussentijds besluiten dat je niet meer mee wilt doen, waarbij dat geen consequenties heeft voor je behandeltraject.

Ik heb nog andere vragen

Als je nog vragen hebt kun je altijd contact opnemen met de coördinator van het onderzoek: Ted Wolterink, t.wolterink@mediant.nl, 053 – 4755578.

Ook als je wilt meedoen aan het onderzoek, kan je met de onderzoekscoördinator contact op nemen. Je wordt dan uitgenodigd om een toestemmingsverklaring te tekenen en zal daarna vanzelf voor de verschillende metingen worden opgeroepen.

B

TOESTEMMINGSVERKLARING

deelname wetenschappelijk onderzoek:

Evaluatieonderzoek bij schemagerichte klinische groepsbehandeling

Hierbij verklaar ik dat ik bereid ben deel te nemen aan het onderzoek 'Evaluatieonderzoek bij schemagerichte klinische groepsbehandeling'.

Ik heb van de onderzoeker schriftelijke en mondelinge informatie gekregen over de inhoud, methode en doel van het onderzoek. Ik heb mijn vragen kunnen stellen en die zijn naar tevredenheid beantwoord. Ik begrijp waarover het onderzoek gaat.

Ik stem vrijwillig in met deelname aan dit onderzoek. Ik heb voldoende tijd gehad om te beslissen of ik mee wil doen. Ik begrijp dat als ik niet meer mee wil doen, ik het onderzoek op ieder moment stop kan zetten.

Ik begrijp dat ik mijn vragen altijd kan stellen aan de onderzoekscoördinator: Ted Wolterink, t.wolterink@mediant.nl, 088 – 373 6700.

Naam :

Geboortedatum :

Datum :

Handtekening :

Ondergetekende, verantwoordelijke onderzoeker, verklaart dat de hierboven genoemde persoon zowel schriftelijk als mondeling over het bovenvermelde onderzoek is geïnformeerd. Hij/zij verklaart tevens dat een voortijdige beëindiging van de deelname door bovengenoemde persoon, van geen enkele invloed zal zijn op de zorg die hem of haar toekomt.

Naam :

Functie :

Datum :

Handtekening :

C

YCI

Naam:

Datum:

Hieronder staan uitspraken die je zou kunnen gebruiken om jezelf te beschrijven. Lees elke uitspraak en bepaal hoe goed deze jou beschrijft. Wanneer je dat wilt, kun je de uitspraken herformuleren zodat ze meer van toepassing zijn op jou.

Geef dan met een cijfer van 1 tot en met 6 aan hoe goede de uitspraak (inclusief eventuele herformuleringen) jou beschrijft en plaats het cijfer in de ruimte voor de uitspraak.

Scores:
1 = helemaal niet van toepassing op mij
2 = vrijwel niet van toepassing op mij
3 = enigszins meer wel dan niet van toepassing op mij
4 = matig goed van toepassing op mij
5 = goed van toepassing op mij
6 = perfect van toepassing op mij

	Nr.	Score	item
Voorbeeld	A	4	Ik maak me zorgen dat mensen die ik graag mag me niet zullen mogen.
	1		Ik reageer mijn frustraties af op mensen rond mij.
	2		Ik geef vaak anderen de schuld als dingen fout gaan.
	3		Ik maak me erg boos als anderen me teleurstellen of me verraden.
	4		Ik kan mijn woede niet van me af zetten zonder wraak te nemen.
	5		Ik word defensief als ik bekritiseerd word.
	6		Het is belangrijk dat anderen mijn bekwaamheden en prestaties bewonderen.
	7		Het uiterlijk vertoon van succes (dure auto, kledij, huis) is belangrijk voor mij.
	8		Ik werk hard om bij de besten en de meest succesvolle te zijn.
	9		Het is belangrijk voor mij om populair te zijn (deel uit te maken van de groep).
	10		Ik heb vaak fantasieën over succes, roem, rijkdom, macht of populariteit.
	11		Ik sta graag in het middelpunt van de aandacht.
	12		Ik koketteer meer en ben verleidelijker dan de meeste andere mensen.
	13		Ik leg veel nadruk op het aanbrengen van orde in mijn leven (bijv. organisatie, planning, routine).
	14		Ik doe veel moeite om te vermijden dat dingen fout zullen lopen.
	15		Ik breek me het hoofd over beslissingen zodat ik geen fouten zou maken.
	16		Ik ben nogal controlerend voor de mensen om me heen.

	Nr.	Score	item
	17		Ik hou van situaties waar ik controle of autoriteit heb over de mensen om me heen.
	18		Ik heb er een hekel aan dat andere mensen zich met mijn leven bemoeien.
	19		Ik heb het moeilijk met compromissen sluiten of toegeven.
	20		Ik houd er niet van afhankelijk te zijn van iemand.
	21		Het is zeer belangrijk voor mij dat ik mijn eigen beslissingen kan nemen en voor mezelf kan zorgen.
	22		Ik heb moeite om me te binden aan één persoon of om me te vestigen.
	23		Ik houd ervan mijn eigen baas te zijn, om de vrijheid te hebben te doen wat ik wil.
	24		Ik vind het moeilijk om mezelf tot één job of carrière te beperken; ik houd graag opties open.
	25		Ik stel gewoonlijk mijn behoeften boven die van anderen.
	26		Ik ben vaak veeleisend voor andere mensen. Ik wil dat alles perfect is.
	27		Ik moet eerst voor mijzelf zorgen, net zoals anderen dat doen.
	28		Het is zeer belangrijk voor mij dat mijn omgeving comfortabel is (temperatuur, licht, meubels, ..)
	29		Ik zie mezelf als een rebel. Ik ga vaak in tegen gevestigde autoriteit.
	30		Ik heb een hekel aan regels en kan er voldoening in scheppen ze te breken.
	31		Ik geniet ervan niet-conventioneel te zijn, zelfs als het niet populair is of ik er dan niet bij hoor.
	32		Ik probeer niet om succesvol te zijn volgens de normen van de maatschappij (rijkdom, prestatie, populariteit).
	33		Ik ben altijd tegendraads geweest.
	34		Ik ben een zeer gereserveerd persoon; ik heb niet graag dat mensen veel weten over mijn privé-leven of over mijn gevoelens.
	35		Ik probeer sterk over te komen naar andere mensen toe, zelfs als ik me kwetsbaar of onzeker voel.
	36		Ik kan zeer bezitterig of vastklampend zijn tegenover mensen die ik waardeer.
	37		Ik ben vaak manipulatief om mijn doelen te bereiken.
	38		Ik geef vaak de voorkeur aan indirecte middelen om mijn zin te krijgen in plaats van direct te vragen wat ik wil.

z.o.z.

	Nr.	Score	item
	39		Ik houd mensen op een afstand zodat ze alleen die delen van mijzelf zien waarvan ik wil dat zij ze zien.
	40		Ik ben een zeer kritisch persoon.
	41		Ik voel dat ik onder grote druk sta om te voldoen aan mijn eigen normen en verantwoordelijkheden.
	42		Ik druk mezelf vaak tactloos of ongevoelig uit.
	43		Ik probeer altijd optimistisch te zijn. Ik sta mezelf niet toe te focussen op het negatieve.
	44		Ik ben ervan overtuigd dat het belangrijk is om steeds een blij gezicht te zetten, hoe ik me van binnen ook voel.
	45		Ik voel me vaak jaloers of gefrustreerd wanneer anderen succesvoller zijn of meer aandacht krijgen dan ik.
	46		Ik zal redelijk ver gaan om er zeker van te zijn dat ik krijg wat me toekomt en dat ik niet bedrogen word.
	47		Ik zoek naar manieren om mensen te slim af te zijn zodat ze me niet kunnen bedriegen of kwetsen.
	48		Ik weet wat ik moet zeggen of doen om ervoor te zorgen dat mensen me mogen (zoals vleien, zeggen wat ze willen horen).

D

YRAI-1

Naam:

Datum:

Hieronder staan uitspraken die je zou kunnen gebruiken om jezelf te beschrijven. Lees elke uitspraak en bepaal hoe goed deze jou beschrijft. Wanneer je dat wilt, kun je de uitspraken herformuleren zodat ze meer van toepassing zijn op jou.

Geef dan met een cijfer van 1 tot en met 6 aan hoe goede de uitspraak (inclusief eventuele herformuleringen) jou beschrijft en plaats het cijfer in de ruimte voor de uitspraak.

Scores:
1 = helemaal niet van toepassing op mij
2 = vrijwel niet van toepassing op mij
3 = enigszins meer wel dan niet van toepassing op mij
4 = matig goed van toepassing op mij
5 = goed van toepassing op mij
6 = perfect van toepassing op mij

	Nr.	Score	item
Voorbeeld	A	4	Ik probeer niet te denken aan dingen die me storen.
	1		Ik probeer niet te denken aan dingen die me van streek maken.
	2		Ik drink alcohol om me te kalmeren.
	3		Ik ben meestal gelukkig.
	4		Ik voel me zelden triest of gedeprimeerd.
	5		Ik waardeer redelijkheid meer dan emotie.
	6		Ik vind dat ik niet boos moet worden, zelfs niet op mensen die ik niet graag mag.
	7		Ik gebruik drugs om me beter te voelen.
	8		Ik voel niet veel wanneer ik terugdenk aan mijn kindertijd.
	9		Ik rook wanneer ik van streek ben.
	10		Ik lijd aan gastro-intestinale problemen (zoals indigestie, maagzweer, darmklachten)
	11		Ik voel me verlamd.
	12		Ik heb vaak hoofdpijn.
	13		Ik trek me terug als ik boos ben.
	14		Ik heb minder energie dan de meeste mensen van mijn leeftijd.

	Nr.	Score	item
	15		Ik heb last van spierpijnen.
	16		Ik kijk veel tv als ik alleen ben.
	17		Ik vind dat men zijn verstand moet gebruiken om zijn emoties onder controle te houden.
	18		Ik kan geen intense hekel hebben aan iemand.
	19		Wanneer iets fout loopt is mijn filosofie: het zo snel mogelijk van me afzetten en verder gaan.
	20		Ik ga mensen uit de weg door wie ik me gekwetst voel.
	21		Ik herinner me niet veel van mijn kindertijd.
	22		Ik doe vak dutjes of slaap veel tijdens de dag.
	23		Ik ben het gelukkigst wanneer ik rondzwerf of rondreis.
			z.o.z.
	24		Door me toe te leggen op de zaken waar ik mee bezig ben, kan ik voorkomen dat ik overstuur raak.
	25		Ik breng veel tijd door met dagdromen.
	26		Wanneer ik overstuur ben, eet ik om me beter te voelen.
	27		Ik probeer niet aan pijnlijke herinneringen uit het verleden te denken.
	28		Ik voel me beter wanneer ik mezelf voortdurend bezig houd en niet veel tijd laat om na te denken.
	29		Ik had een zeer gelukkige kindertijd.
	30		Ik trek me terug wanneer ik me triest voel.
	31		Mensen zeggen dat ik als een struisvogel mijn hoofd in het zand steek (met andere woorden: ik heb de neiging onplezierige gedachten te negeren).
	32		Ik heb de neiging niet te denken aan verliezen en teleurstellingen.
	33		Vaak voel ik niets, zelfs niet wanneer de situatie sterke emoties lijkt te rechtvaardigen.
	34		Ik had het geluk zulke goede ouders te hebben.
	35		Ik probeer meestal emotioneel neutraal te blijven.
	36		Ik betrap mezelf erop dingen te kopen die ik niet nodig heb en dit om mijn stemming te verbeteren.
	37		Ik probeer mezelf niet in situaties te brengen die moeilijk zijn of mij me ongemakkelijk doen voelen.

	Nr.	Score	item
	38		Ik word lichamelijk ziek als de dingen niet goed gaan.
	39		Als mensen me verlieten of stierven, voelde ik me niet al te zeer overstuur.
	40		Wat anderen van mij denken, stoort me niet.

E

Schema Mode Inventory

Naam / ppnr: ....
Geboortedatum:.......................
Datum:....................................
Geslacht:.................................
Opleiding:...............................

SMI (versie 1)

INSTRUCTIE: In deze vragenlijst staan uitspraken die mensen kunnen gebruiken om zichzelf te beschrijven. We willen u vragen van deze uitspraken de FREQUENTIE te beoordelen; dus **hoe vaak** je **over het algemeen** van de uitspraak overtuigd bent of hoe vaak het zo voelde.

FREQUENTIE: Over het algemeen	
1= Nooit of bijna nooit	4= Regelmatig
2= Zelden	5= Meestal
3= Af en toe	6= Altijd

Frequentie	Over het algemeen...
	1. Door anderen te laten merken dat met jou niet te spotten valt, dwing je respect af.
	2. Ik voel me geliefd en geaccepteerd.
	3. Ik gun mezelf geen plezier omdat ik het niet verdien.
	4. Ik voel me inadequaat, gebrekkig of waardeloos.
	5. Ik heb de neiging om mezelf te straffen door mezelf pijn te doen (bijvoorbeeld mezelf snijden).
	6. Ik voel me verloren.
	7. Ik ben streng voor mezelf.
	8. Ik doe erg mijn best anderen te plezieren om conflicten, confrontatie of afwijzing te vermijden.
	9. Ik kan mezelf niet vergeven.
	10. Ik doe dingen om in het middelpunt van de belangstelling te staan.
	11. Ik raak geïrriteerd als mensen niet doen wat ik van hen vraag.
	12. Ik kan mijn impulsen slecht controleren.
	13. Als ik een doel niet kan bereiken, raak ik snel gefrustreerd en geef ik het op.
	14. Ik heb woedeaanvallen en driftbuien.
	15. Ik handel impulsief of ik uit emoties die me in de problemen brengen of die andere mensen kwetsen.

FREQUENTIE: Over het algemeen

1= Nooit of bijna nooit	4= Regelmatig
2= Zelden	5= Meestal
3= Af en toe	6= Altijd

Frequentie	Over het algemeen...
	16. Het is mijn schuld wanneer er iets ergs gebeurt.
	17. Ik voel me tevreden en kalm.
	18. Ik verander mezelf afhankelijk van de mensen bij wie ik ben, zodat ze me aardig zullen vinden of me goedkeuren.
	19. Ik voel me verbonden met andere mensen.
	20. Als er problemen zijn, doe ik hard mijn best om ze zelf op te lossen.
	21. Ik dwing mezelf niet om routinematige of vervelende taken af te maken.
	22. Als ik niet vecht word ik misbruikt of verwaarloosd.
	23. Ik moet zorgen voor de mensen om mij heen.
	24. Wie zich laat pesten is een mislukkeling.
	25. Ik val mensen fysiek aan als ik boos op hen ben.
	26. Als ik me eenmaal boos begin te voelen, houd ik het vaak niet onder controle en verlies ik mijn beheersing.
	27. Het is voor mij belangrijk nummer één te zijn (bijvoorbeeld de meest populaire, meest succesvolle, meest rijke, meest machtige).
	28. Ik voel me onverschillig.
	29. Ik kan problemen rationeel oplossen zonder me door mijn emoties te laten overspoelen.
	30. Ik vind het onzin een plan te maken van hoe iets aan te pakken.
	31. Ik neem geen genoegen met het één na beste.
	32. Aanval is de beste verdediging.
	33. Ik voel me kil naar andere mensen toe.
	34. Ik voel me onthecht (geen contact met mezelf, mijn emoties en anderen).
	35. Ik volg blindelings mijn emoties.
	36. Ik voel me wanhopig.
	37. Ik sta het toe dat andere mensen mij bekritiseren of kleineren.
	38. In relaties laat ik de andere persoon de overhand hebben.
	39. Ik voel me afstandelijk tegenover andere mensen.
	40. Ik denk niet na over wat ik zeg en breng daarmee mezelf in de problemen of kwets anderen.
	41. Ik werk of sport intensief om niet te hoeven denken aan vervelende dingen.
	42. Ik ben boos omdat mensen proberen mijn vrijheid en onafhankelijkheid van me af te pakken.

FREQUENTIE: Over het algemeen

1= Nooit of bijna nooit	4= Regelmatig
2= Zelden	5= Meestal
3= Af en toe	6= Altijd

Frequentie	**Over het algemeen...**
	43. Ik voel niks.
	44. Ik doe wat ik wil, ongeacht de behoeften en gevoelens van andere mensen.
	45. Ik geef mezelf niet de kans om te ontspannen of plezier te hebben, voordat ik alles heb afgemaakt wat ik moest doen.
	46. Ik gooi en smijt met dingen als ik boos ben.
	47. Ik ben woedend op iemand.
	48. Ik voel dat ik bij andere mensen hoor.
	49. Ik heb veel opgekropte boosheid die eruit moet.
	50. Ik voel me eenzaam.
	51. Ik probeer mijn best te doen bij alles wat ik doe.
	52. Ik doe graag iets opwindends of troostends om mijn gevoelens te vermijden (bijvoorbeeld eten, seksuele activiteiten, uitgaan, gokken of shoppen).
	53. Gelijkwaardigheid bestaat niet, dus kan je maar het beste boven de ander staan.
	54. In mijn boosheid verlies ik de controle over mezelf en bedreig ik andere mensen.
	55. Ik laat andere mensen hun gang gaan, in plaats van mijn eigen behoeften te uiten.
	56. Wie niet voor me is, is tegen me.
	57. Om minder last te hebben van vervelende gedachten of gevoelens, zorg ik dat ik het altijd druk heb.
	58. Ik ben een slecht persoon als ik boos word op andere mensen.
	59. Ik wil niet betrokken raken bij andere mensen.
	60. Ik ben zo woedend geweest dat ik iemand (ernstig) verwond of vermoord heb.
	61. Ik voel dat ik genoeg stabiliteit en zekerheid in mijn leven heb.
	62. Ik weet wanneer mijn emoties te uiten en wanneer niet.
	63. Ik ben boos op iemand omdat hij/ zij er niet voor me was of mij verliet.
	64. Ik voel me niet verbonden met andere mensen.
	65. Ik kan me er niet toe zetten dingen te doen die ik vervelend vind, ook al weet ik dat het voor mijn eigen bestwil is.
	66. Ik overtreed regels en heb er later spijt van.
	67. Ik voel me vernederd.
	68. Ik vertrouw de meeste andere mensen.
	69. Ik doe, en denk daarna pas.
	70. Ik raak makkelijk verveeld en verlies snel interesse in dingen.

FREQUENTIE: Over het algemeen

1= Nooit of bijna nooit	4= Regelmatig
2= Zelden	5= Meestal
3= Af en toe	6= Altijd

Frequentie	**Over het algemeen...**
	71. Ook als ik mensen om me heen heb, voel ik me eenzaam.
	72. Omdat ik slecht ben sta ik het mezelf niet toe om plezierige dingen te doen die andere mensen wel doen.
	73. Ik kom op voor wat ik wil, zonder daarin te overdrijven.
	74. Ik vind mezelf speciaal en beter dan de meeste andere mensen.
	75. Ik geef nergens om; niets is belangrijk voor me.
	76. Het maakt me boos wanneer iemand me vertelt hoe ik me zou moeten voelen of gedragen.
	77. Als je anderen niet overheerst, word je overheerst.
	78. Ik zeg wat ik voel of doe dingen impulsief, zonder over de gevolgen na te denken.
	79. Ik zou mensen een standje willen geven voor de manier waarop ze mij behandeld hebben.
	80. Ik ben in staat om voor mezelf te zorgen.
	81. Ik ben tamelijk kritisch tegenover andere mensen.
	82. Ik sta onder een constante druk om te presteren en dingen te bereiken.
	83. Ik probeer geen fouten te maken, anders ga ik mezelf naar beneden halen.
	84. Ik verdien het om gestraft te worden.
	85. Ik kan leren, groeien en veranderen.
	86. Ik wil mezelf afleiden van gedachten en gevoelens die mij van streek maken.
	87. Ik ben boos op mezelf.
	88. Ik voel me vlak.
	89. Ik moet de beste zijn in wat ik doe.
	90. Ik offer plezier, gezondheid of geluk op om aan mijn eigen eisen te voldoen.
	91. Ik ben veeleisend tegenover andere mensen.
	92. Als ik boos ben, kan het zo uit de hand lopen dat er gewonden vallen.
	93. Ik ben onaantastbaar.
	94. Ik ben een slecht persoon.
	95. Ik voel me veilig.
	96. Ik voel me gehoord, begrepen en gesteund.
	97. Het is voor mij onmogelijk mijn impulsen te controleren.
	98. Ik maak dingen kapot als ik boos ben

FREQUENTIE: Over het algemeen

1= Nooit of bijna nooit	4= Regelmatig
2= Zelden	5= Meestal
3= Af en toe	6= Altijd

Frequentie	Over het algemeen...
	99. Door anderen te overheersen, kan je niets gebeuren.
	100. Ik gedraag me op een passieve manier, zelfs als ik het ergens niet mee eens ben.
	101. Mijn boosheid loopt uit de hand.
	102. Ik pest anderen.
	103. Ik zou iemand pijn willen doen voor wat hij/ zij me heeft aangedaan.
	104. Ik weet dat er een 'goede' en een ' slechte' manier is om dingen te doen; ik doe hard mijn best om dingen op een goede manier te doen, anders bekritiseer ik mezelf.
	105. Ik voel me vaak alleen op de wereld.
	106. Ik voel me zwak en hulpeloos.
	107. Ik ben lui.
	108. Het is verstandig om alles te accepteren van mensen die belangrijk voor me zijn.
	109. Ik ben bedrogen of oneerlijk behandeld.
	110. Als ik de neiging heb iets te doen, doe ik dat ook.
	111. Ik voel me buitengesloten.
	112. Ik kleineer anderen.
	113. Ik voel me optimistisch.
	114. Ik heb het gevoel dat ik mezelf niet aan dezelfde regels hoef te houden als andere mensen.
	115. Mijn huidige leven draait erom dingen voor elkaar te krijgen en ze goed te doen.
	116. Ik dwing mezelf om meer verantwoordelijk te zijn dan de meeste andere mensen.
	117. Ik kan voor mezelf opkomen wanneer ik vind dat ik oneerlijk bekritiseerd, uitgebuit of misbruikt word.
	118. Ik verdien geen medelijden wanneer mij iets ergs overkomt.
	119. Ik heb het gevoel dat niemand van me houdt.
	120. Ik voel dat ik van nature een goed persoon ben.
	121. Als het nodig is maak ik saaie en routinematige taken af zodat ik dingen kan bereiken die ik waardeer.
	122. Ik voel me spontaan en speels.
	123. Ik kan zo woedend zijn dat ik in staat ben iemand te vermoorden.
	124. Ik heb een goed beeld van wie ik ben en wat ik nodig heb om mezelf gelukkig te maken.

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SMI (versie 1): Items per modus (N = 124)

1. kwetsbare kind (n = 10): it 4, 6, 36, 50, 67, 71, 105, 106, 111, 119.
2. woedende kind (n = 10): it 22, 42, 47, 49, 56, 63, 76, 79, 103, 109.
3. razende kind (n = 10): it 14, 25, 26, 46, 54, 60, 92, 98, 101, 123.
4. impulsieve kind (n = 9): it 12, 15, 35, 40, 66, 69, 78, 97, 110.
5. ongedisciplineerde kind (n = 6): it 13, 21, 30, 65, 70, 107.
6. blije kind (n = 10): it 2, 17, 19, 48, 61, 68, 95, 96, 113, 122.
7. willoze inschikkelijke (n = 7): it 8, 18, 37, 38, 55, 100, 108.
8. onthechte beschermer (n = 9): it 28, 33, 34, 39, 43, 59, 64, 75, 88.
9. onthechte zelfsusser (n = 4): it 41, 52, 57, 86.
10. zelfverheerlijker (n = 10): it 10, 11, 27, 31, 44, 74, 81, 89, 91, 114.
11. pest- en aanval (n = 9): it 1, 24, 32, 53, 77, 93, 99, 102, 112.
12. Straffende ouder (n = 10): it 3, 5, 9, 16, 58, 72, 84, 87, 94, 118.
13. Veeleisende ouder (n =10): it 7, 23, 45, 51, 82, 83, 90, 104, 115, 116.
14. Gezonde volwassene (n = 10): it 20, 29, 62, 73, 80, 85, 117, 120, 121, 124.

Gemiddelden en standaard deviaties van de modi van de SMI in 3 subsamples

SMI subscales	Niet-patient controle		As I patiënten		As II patiënten	
	g	sd	g	sd	g	sd
Kwetsbare kind	1.47	.51	2.66	.94	3.36	1.11
Woedende Kind	1.81	.48	2.56	.90	3.09	.94
Razende Kind	1.20	.29	1.55	.67	2.05	.92
Impulsieve Kind	2.15	.53	2.46	.72	3.05	.97
Ongedisciplineerde Kind	2.27	.60	2.57	.85	2.95	.94
Blije Kind	4.52	.54	3.39	.87	2.88	.77
Willoze Inschikkelijke	2.51	.56	3.00	.88	3.32	.95
Onthechte Beschermer	1.59	.52	2.35	.94	2.95	.94
Onthechte Zelfzusser	1.93	.65	3.00	.91	3.32	.98
Zelfverheerlijker	2.31	.59	2.47	.76	2.63	.87
Pest- en aanval	1.72	.51	1.91	.68	2.21	.77
Straffende Ouder	1.47	.39	2.16	.90	2.75	.97
Veeleisende Ouder	3.06	.60	3.50	.85	3.71	.90
Gezonde Volwassene	4.60	.56	3.99	.80	3.60	.83

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