The effectiveness of adapted schema therapy for cluster C personality disorders in older adults – integrating positive schemas

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ABSTRACT

Introduction: Schema therapy (ST) is an efficacious psychotherapy for personality disorders (PDs) in adults. The first empirical support for the effectiveness of ST in older adults with cluster C PDs was provided recently. ST partly focusses on the positive, but there is an increasing awareness of imbalance in the ST community because of the emphasis on negative schemas versus attention to positive schemas. Positive schemas may be important vehicles of therapeutic change in psychotherapy with older people, as it may help strengthen the healthy adult mode, and it might also help change a negative life review. Suggestions were made to increase the efficacy and feasibility of ST in older adults, including adjusting the case conceptualisation, modifying the experiential techniques, making use of the patient's wisdom and reactivating positive schemas. The aim of the current study is to investigate the feasibility and effectiveness of adapted individual ST for older adults.
Methods/design: A multiple baseline design is used with positive and negative core beliefs as primary outcome measures. Ten older adults (age > 60 years) with cluster C PDs are treated with schema therapy, with weekly sessions during one year. This treatment phase is preceded by a baseline phase varying randomly from 4 to 8 weeks. After treatment, there is a 6-month follow-up phase with monthly booster sessions. Symptomatic distress, schema modes, early maladaptive schemas (EMS) and early adaptive schemas (EAS) are secondary outcome measures. PD will be diagnosed before baseline and after treatment phase. EAS are assessed with the Dutch version of the Young Positive Schema Questionnaire (YPSQ).
Discussion: To the best of our knowledge, this is the first empirical study in which positive schemas are integrated in ST treatment to examine the efficacy of an adapted form of ST for older adults. This is in line with wider developments supporting the integration of positive schema's into ST. It offers the possibility to improve the effectiveness of ST in older adults.
Trial registration: The Netherlands National Trial Register NL8346, registered 1 February 2020.

1. Introduction

Of the evidence-based, integrative psychotherapeutic treatments for personality disorders (PDs), schema therapy (ST) is the most well-established therapy for treating personality disorders (PDs) in older people [1–6]. It is an evidence-based treatment that draws on previous theory and techniques, integrating them into a systematic treatment model [7,8]. The ST model proposes that unmet needs in childhood and adolescence can develop into early maladaptive schemas (EMS) and un-

helpful schema coping modes. EMS, or negative schemas, are considered core elements of PDs [8]. EMS are broad pervasive themes of specific patterns of self-defeating emotions, cognitions and bodily sensations regarding oneself and one's relationship with others, established in childhood and repeated throughout life [8]. The treatment aims to decrease the impact of these EMS and to replace negative coping responses and schema modes with more healthy alternatives, so that patients succeed in getting their core emotional needs met [9]. Traditionally, the treatment process in ST focusses first on helping patients to

identify the EMS that underlie their long-term problems, and second, on supporting patients in challenging and overcoming both their negative schemas and the maladaptive ways in which they cope with them [8]. A part of ST is focused on the positive: it is aimed to enhance adaptive and positive schema modes such as the healthy adult mode and the happy child mode. Nowadays, there is an increasing awareness of imbalance in the ST community because of the emphasis on negative schemas versus attention to positive schemas [10–13].

Integrating positive schemas in ST is consistent with broader developments in the field of clinical psychology towards positive psychology. It has been argued that including the positive alongside the negative is important, because interventions that focus on increasing the positive can be as successful at reducing psychopathology as those that focus on decreasing the negative [14,15]. Lockwood and Perris [12] stated the original idea of an Early Adaptive Schema (EAS) or positive schema: the positive counterpart of a negative schema or EMS. They argued that EAS, as EMS, are also specific patterns that consist of emotions, cognitions, bodily sensations, and neurobiological reactions in relation to the self and others. These schemas are hypothesized to develop when individuals grow up and develop in environments where their core emotional needs are sufficiently met by primary caregivers [8,13]. People experience EAS and EMS simultaneously. Both the presence and strength of an EMS may negatively predict the strength of the corresponding EAS, but a decrease of intensity of an EMS will not necessarily cause a corresponding increase of intensity of an EAS. Each EAS represents more than the polar opposite of its corresponding EMS. This conceptualisation of EMS and EAS as distinct dimensions was supported by the empirical work of Louis and colleagues [10]. They developed the Young Positive Schema Questionnaire (YPSQ) to measure EAS. Complementary to the original 18 EMS, Louis and colleagues identified a 56-item, 14-factor EAS solution, which was supported by a multigroup confirmatory factor analysis (see Table 1 for the 14 EAS). As the EAS showed incremental validity over and above the EMS, EAS and EMS can be conceived of as separate constructs, and not just opposite ends of continua (e.g., mistrust versus trust; failure versus success). Another view may be that EMS and EAS can both be conceived of as continua, which start to blend with each other in the middle [11]. People are inclined to hold multiple contradictory beliefs about themselves and the world [15]. Their behavior depends on which particular schema is activated at some point in time.

Studies have shown that although ST is effective in treating PDs in older adults, the effects are smaller than in two studies in adults with a lower average age [5,16,17]. This can possibly be explained because the ST protocol is developed for younger adults and needs adjustments to better meet the psychotherapy needs when treating PDs in older adults. It has been proposed that older adults in particular can benefit from integrating EAS in ST, in addition to ST as usual [11]. Often, older people with PDs have functioned better earlier in life, because their positive schemas were confirmed by their social roles. With the evapo-

ration of these roles, this confirmation also dissolves, leading to activation of negative schemas [5,11]. This corresponds to a case study, which was designed to generate hypotheses on how to adjust ST for older adults [4], see Table 2. It was suggested that older adults are able to use their 'wisdom'; to help them see their problems in a life span perspective. There is a parallel with life review, an effective treatment for depression in older adults [18]. Another suggestion is that negative core beliefs about aging, psychiatry and psychotherapy can enhance negative schemas. In addition to the suggestions mentioned above, it is proposed to adjust a number of specific ST interventions by using a succinct model of the case conceptualisation, using the patient's spontaneous language instead of specific ST language, modifications to the imagery rescripting technique and simplifying of the chair technique [4].

Using the life experience and wisdom of older adults can help them remember and reactivate the pre-existing EAS that have faded. Helping them to take a lifespan perspective can help strengthen the EAS and reduce psychopathology. We propose an adapted form of individual ST for older adults, which includes and operationalises most of the earlier mentioned adaptations Videler and colleagues [4] suggested by using a compact version of a schema technique named case conceptualisation, that integrates positive schemas and uses the patients spontaneous language. Also, we suggest adding a specific intervention to ST which contextualizes positive schemas to lifespan to re-actualize the EAS and promotes conducting experiential techniques.

We will conduct this study in patients with cluster C PDs because (1) the first empirical evidence for ST in older adults was found for cluster C PDs [6]; and (2) the course of cluster C PDs is much more stable throughout the life span than that of cluster B, which would complicate the diagnosis of cluster B PDs in older adults according to the current dichotomous DSM-5 criteria [19,20].

1.1. Aim of the current study

The aim of this study is to investigate the feasibility and effectiveness of adapted ST for older adults as a treatment for cluster C PDs in older adults (aged 60 and older). More specifically, we will examine whether older patients with cluster C PDs benefit from adapted ST by using a compact version of the case conceptualisation that integrates positive schemas. A second adaptation is adding a specific intervention to ST, which selects positive schemas in the patient's lifespan to re-actualize the EAS. The primary objective of the study is to examine the effect of adapted ST on the strength of both positive and negative core beliefs; a representation of schemas, which are considered core elements of PDs [8]. It is hypothesized that adapted ST reduces the

Table 1

Early adaptive schemas (EAS) (Louis, Wood, Lockwood, Ho, & Ferguson, 2018).

Emotional Fulfilment
Success
Empathic Consideration
Basic Health and Safety/Optimism
Emotional Openness and Spontaneity
Self-Compassion
Healthy Boundaries/Developed Self
Social Belonging
Healthy Self-Control/Self-Discipline
Realistic Expectations
Self-Directedness
Healthy Self-Interest/Self-Care
Stable Attachment
Healthy Self-Reliance/Competence

Table 2

Suggested adaptions to enhance the effectiveness of ST.

Case conceptualisation	A concise model of the casus conceptualisation which gives short, concrete information of both schemas and modes.
Spontaneous language	Using the patients spontaneous language instead of the precise ST terminology helps to connect with their memories and therefor emotions and images. The emotional context is crucial to preserve in experiential techniques as the patient's language stems from at least six decades ago
Imagery rescripting	Modifications to the imagery rescripting technique because of the patient's relatively stronger healthy adult mode and life experience
Chair technique	Simplifying the chair technique by not using more than two chairs
Wisdom	Activating the healthy adult mode by using their 'wisdom'; helping them see the patient's problems in a lifespan perspective and next asking them how they have coped with problems successfully earlier in life.
Core beliefs	Negative core beliefs about aging, psychiatry and psychotherapy can enhance negative schemas
Positive schemas	Many older people with PD functioned better in life because their positive schemas were confirmed by their social roles. When these roles evaporate, this confirmation also disappears, and the negative schemas are activated

strength of negative core beliefs and increases the strength of positive core beliefs. Also, we hypothesize that dysfunctional schemas and modes will decrease as a result of adapted ST and that positive schemas and modes will increase. Based on earlier research [6] it is expected that over the last six months, patients will no longer meet the criteria of a PD after adapted ST treatment.

2. Methods

2.1. Design of the study

We will use a multiple-baseline case series design [21]. This design with within-subject aspects offers experimental control over time versus intervention effects, which is a major advantage over an open trial. As in a randomized controlled trial (RCT), a multiple-baseline design can demonstrate significant changes that result from the intervention and are not likely to be due to time [22]. Moreover, an important advantage of this design over an RCT is that this design requires fewer participants because participants act as their own controls, hereby increasing power. This design shows good scores on both the internal and external validity, assessed with the RoBiNT scale [23].

The design consists of three phases, starting with a baseline phase varying in length from four to eight weeks to which participants will be assigned randomly by an independent colleague using a lottery system. The lottery system consists of five different possible outcomes (4, 5, 6, 7, and 8 weeks). Each different outcome is represented two times, making a total of ten outcomes. There is no replacement after each draw, so different baseline lengths are evenly distributed among participants. The length of the baseline phase is randomized across participants to increase the internal validity. No therapeutic interventions will take place during this phase. The second phase is the treatment phase and consists of ST for PD according to the model of Young and colleagues [8], which is adapted for older adults and will take one year. The adaptions are based on the earlier mentioned suggested adaptations by Videler et al. [4]. It consists of (1) a compact version of the case conceptualisation which uses the patients spontaneous language instead of the precise ST terminology and includes positive schemas and (2) an intervention that aims to activate wisdom using principles of life review [18], to include positive schemas and use these EAS in imaginary rescripting. The third and final phase is a six months follow-up with monthly booster sessions (see Fig. 1).

2.2. Participants and screening procedure

Participants will be ten patients from the department of geriatric psychiatry of GGZ Oost Brabant, Mondriaan and PersonaCura of GGZ Breburg, three mental healthcare organisations in the Netherlands. Inclusion criteria are 1) age of 60 years and older, 2) willingness to participate in the study and 3) a primary diagnosis of an avoidant, dependent or obsessive-compulsive PD, or PD otherwise specified with cluster C traits, also known as cluster C PD. The participants will be interviewed using the Structured Clinical Interview for DSM-5 for Personality Disorders (SCID-5-PD) [24]. This is a generally accepted and widely used instrument for diagnosis of DSM-5-PDs. Also, the patient version of the Gerontological Personality disorders Scale (GPS; [25]) is used to assess

PDs. The GPS is developed specifically to detect PDs in older adults. Co-morbid mental disorders are assessed with the Dutch version of the screener the Mini-International Neuropsychiatric Interview (MINI) ([26], Dutch version [27]); positive responses to screening questions for a disorder are explored by further investigation whether criteria of a disorder are met according to DSM-5 [28]. The primary PD diagnosis will be based upon the test results and consensus in a multi-disciplinary team.

Exclusion criteria are a diagnosis of severe depression, bipolar disorder, psychotic disorder, IQ under 80, substance dependence, autism spectrum disorder or neurocognitive disorder (Mini Mental State Examination [29] defined as score under 25). Except for medication, no other psychiatric treatment can take place during the course of the study, and medication is preferably kept constant during the study. Patients who meet these criteria will be approached by the primary researcher to participate in the study.

2.3. Instruments and outcome measures

2.3.1. Primary outcome

As a primary outcome measure, the credibility of the core beliefs representing EMS and EAS are assessed. At the start of the baseline phase, participants will describe two to three core belief EMS and two to three core belief EAS in short statements following a semi structured procedure, in which these core beliefs are evoked using the downward arrow technique. The credibility of these statements are rated on a 100 point visual analogue scale (VAS), scoring from 0 to 100%. During baseline, therapy and follow-up phase, participants will fill out this ultra-short questionnaire weekly. This idiosyncratic measure represents the EMS, which are considered core elements of personality disorders according to the ST model [8]. The therapist will not be present when participants fill in the VAS to assure integrity. Completed forms will be given to the therapist in a closed envelope and passed on to the research team.

2.3.2. Secondary outcomes

Participants are diagnosed with cluster C PDs using the Dutch version of the Structured Clinical Interview for DSM-5 for personality disorders (SCID-5-PD, First et al., 2016). This is a generally accepted and widely used instrument for diagnosis of DSM-5-PDs. This semi structured interview consists of 134 open-questions rated from 1 'absent or false'; 2 'subthreshold'; 'threshold or true'; and '?' in case not enough information is available. The SCID-5-PD is similar to the Dutch version of the Structured Clinical Interview for DSM-IV Axis II disorders [30], of which inter-rater agreement appeared excellent in adults with an average age of 35.5 years (range 18–61), with a mean value of Cohen's kappa of .84 [31].

To measure symptomatic distress, a symptom checklist is used: the Dutch version of the Brief Symptom Inventory (BSI [32]; translated from [33]). The BSI is a shorter version of the Symptom Checklist-90 (SCL-90) [34] and consist of 51 items. This checklist is a self-report assessment instrument providing an overview of a patient's symptoms and its severity using nine symptom scales and three global indices. The re-
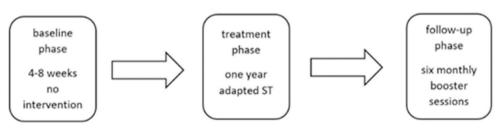

Fig. 1. Phases in therapy.

liability of the Dutch BSI scales is good and the convergent and divergent validity is satisfactory, also for older adults [32].

The most commonly used EMS measure is the Young Schema Questionnaire (YSQ [35], Dutch translation [36]). This questionnaire is a self-report assessment instrument of 205 items, to assess the 16 EMS as defined by Young and colleagues [8]. Research on the Dutch YSQ showed support for the psychometric properties and clinical relevance [37,38], and it appeared to be highly age neutral when applied to older adults [39].

The Young Positive Schema Questionnaire (YPSQ [10]) is a questionnaire used to assess positive schemas (EAS). It has 56 items divided in 14 scales. The factorial validity and cross-cultural stability is good, and the reliability is excellent in the English version. For this study, we translated the questionnaire into Dutch following the steps of the guidelines of Beaton, Bombardier, Guillemin and Ferraz [40].

The Schema Mode Inventory (SMI) [41], Dutch translation [42]) is used to measure schema modes, an important construct in ST [8]. This questionnaire is a self-report assessment instrument of 118 items divided into 14 modes. The Dutch SMI has excellent test-retest reliability and the convergent ad divergent validity of the subscales are satisfactory [42].

The SCID-5-PD is administered at baseline and at the end of therapy. Patients will be asked to complete the YSQ, SMI, BSI and YPSQ at I) baseline, II) six months after the start of ST, III) after termination of therapy and IV) after six months follow-up.

2.3.3. Diagnostic instruments

The Gerontological Personality disorders Scale (GPS; [25]) is used as a screener. This screening questionnaire is developed specifically for older adults to assess PD, the patient version is used. It consists of 16 items which can be answered with "yes" or "no" and focuses on habitual behavior (HAB) and biographical information (BIO). The HAB subscale measures habitual behavior that is expected to be expressed in a number of PDs. Important and recurrent events or decisions in life linked to PDs are assessed with the BIO scale. For the patient version, reasonable scores for sensitivity and specificity (about 70%) were found in an older psychiatric outpatient population [25]. The internal consistency was ranged moderate to good.

The Mini-International Neuropsychiatric Interview (MINI [26], Dutch version [27]) is a short diagnostic structured interview that systematically examines Diagnostic and Statistical Manual (DSM-IV) mental disorders [43]. For each disorder, one or two screening questions rule out the diagnosis when answered negatively. Kappa coefficient, sensitivity and specificity were good or very good for all diagnoses with the exception of general anxiety disorder (GAD) (kappa = 0.36), agoraphobia (sensitivity = 0.59) and bulimia (kappa = 0.53). Inter-rater and test-retest reliability were good [44].

3. Ethics

The study protocol has been reviewed and approved by the local ethical committees of GGZ Oost Brabant, GGZ Breburg and GGZ Mondriaan and an independent ethical committee (METC Brabant).

Potential participants will be approached to participate in the study by the researcher. They receive an information letter in which it is stated that it is important to read the letter carefully and to talk about it with a relative or friend, the information is also given orally. A minimum of one week will be given to consider the decision to participate in the study. Both the participant and the researcher will sign the informed consent form, when a participant decides to participate in the study. It is stated clearly that the participant can withdraw from the study at any moment without suffering any consequences. They can be included only when informed consent is signed.

The treatment takes place in a therapists room in one of the mentioned mental health organization that is closest to the residence of the client.

No risks are expected for participants in this study. In this study we treat older adults with PDs with a treatment which is well-researched and the evidence for its efficacy is accumulating. Some adjustments, based on explorative studies for adjusting ST to optimize the efficacy in older adults, are made. ST is, among other treatment, recommended in multidisciplinary guidelines for the treatment of PDs [45,46].

The SCID-5-PD and GPS are used routinely in diagnosing PDs in older adults in all three participating departments, and are no extra burden for the patient. The screener MINI is applied only once and will take 45 minutes. The YSQ and SMI are standard in ST and therefore also no extra burden, the extra measurements at six months follow-up are estimated to take 1 h. BSI and YPSQ will be filled out 4 times, each with six months period in between. It is estimated that this will take maximum of 30 minutes for patients each time. Positive core beliefs and negative core beliefs will be filled out weekly on a 100-point VAS scale, and will take no more than 1 minute. The extra burden for participants is low in the context of the received treatment (12 months weekly ST of 45 minutes followed by 6 monthly booster sessions).

4. Data analysis

In this multiple baseline design, participants serve as their own control and the primary outcome is measured frequently. A simulation study was performed to estimate the power of our design [47]. Based on previous research [6], we expected a large to very large effect size for the VAS ranging from Cohen's d = 0.8 to d = 2.0. The number of participants varied from four to ten. We simulated the power for three scenario's in which the number of baseline observations could vary from 4 to 7 weeks (baseline range = 4); 4–8 weeks (baseline range = 4); 4–9 weeks (baseline range = 5); 4–10 weeks (baseline range = 6); and 4–11 weeks (baseline range = 7). The number of intervention observations is about 52. The autocorrelation between the observations is assumed to be 0.2. The alpha level is set to 0.05.

The effect-size, the number of participants and the variation in the number of baseline measurements all influence the power. In order to have power to find a significant effect for the lowest effect size we decided to include 10 participants. The best option for the baseline range is 7. However, due to ethics and practical restrictions due to the consequences of the corona virus we decided to choose for 5 weeks variation in baseline scores. Once the data has been collected, we will first perform a visual inspection. When possible, a randomization test will also be executed to analyze the results.

5. Discussion

To the best of our knowledge, this is the first empirical study in which positive schemas are integrated in ST treatment, to examine an adapted form of ST for older adults. This is in line with wider developments supporting the integration of positive schema work into ST. It offers the possibility to improve the effectiveness of ST in older adults. Main objective of this study is to test the hypothesis that positive schemas may be important vehicles of therapeutic change in schema therapy with older adults [11]. PD symptoms tend to have a waxing and waning course across the life span and the majority of older PD patients have gathered more 'wisdom of their years' and also have functioned better in middle adulthood [48–50]. This could be because of two different processes, in which EMS are less active, or in which EAS have been more active in middle adulthood. Typically, when circumstances change in later life, EMS can become more prominent, because EMS are triggered more likely because of age-related factors, like retiring, losing a spouse or somatic diseases [11]. In traditional ST, the focus is on diminishing EMS for therapeutic change to occur. As argued earlier, this

has also been shown possible in later life [5,6]. However, addressing EAS is hypothesized to be a complementary approach. Integrating EAS in ST may be an important avenue for re-awakening positive core beliefs of older patients, strengthening the therapeutic relationship, and also for facilitating the introduction of experiential schema therapy techniques [11].

Conducting this study in older adults is relevant, because our knowledge about treatment of PDs in this age group is still limited. Research on treatment for PDs has focused mainly on adults so far [45]. Yet, given the substantial increase in the numbers elderly people in western populations, including the group of older adults with PDs, more research is needed that covers the full age-span. As mentioned earlier, the ST protocol is developed for younger adults, so a protocol adapted to older adults can contribute to better psychotherapeutic treatment of PDs in this age group.

A possible limitation of this study is that the YPSQ in not yet validated in the Dutch population, the field of our current research. However, the questionnaire is validated in the English version, which showed that the factorial validity and cross-cultural stability is good, and the reliability is excellent [10].

Another limitation of the multiple baseline design is that this study does not allow for a comparison with the earlier study into the effectiveness of ST for older adults with cluster C PDs [6], as multiple baseline designs cannot be used for comparing effects between groups.

The last limitation is that the design does not allow to differentiate between the separate effects of adding positive schemas and the other adjustments to ST.

The current study serves as the first empirical test of an adapted ST protocol and as such, a first step is to examine its effects in a small sample of older adults. As for the last two limitations, if this adapted ST protocol appears feasible and effective, next steps would be qualitative research to examine the effect of addressing positive schemas, and to examine adapted ST's additional effects in a RCT. Possibly not only in cluster C PDs, but in cluster B PDs as well.

The results of this study will contribute to the understanding of the effectiveness of adding positive schemas to ST as usual, and to the benefits for the effectiveness of adapted ST for older adults as well.

Trial status

The trial started in January 2020 and data collection is expected to continue until July 2022. The trial is registered in The Netherlands National Trial Register NL8346, registered 1 February 2020.

Declaration of competing interest

The authors declare that they do not have competing interests. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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