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Schema therapy as treatment for adults with autism spectrum disorder and comorbid personality disorder: Protocol of a multiple-baseline case series study testing cognitive-behavioral and experiential interventions

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ABSTRACT

Background: To our knowledge treatment of personality disorder (PD) comorbidity in adults with ASD is understudied and is still in its infancy. This study investigates the effectiveness of schema therapy for PD-psychopathology in adult patients with both ASD and PD.

Methods/design: Twelve adult individuals (age > 18 years) with ASD and at least one PD are given a treatment protocol consisting of 30 weekly offered sessions. A concurrent multiple baseline design is used with baseline varying from 4 to 9 weeks, after which weekly supportive sessions varying from 1 to 6 weeks start with the study therapist. After baseline and 1 to 6 supportive sessions, a 5-week exploration phase follows with weekly sessions during which current and past functioning, psychological symptoms, and schema modes are explored, and information about the treatment is given. This is followed by 15 weekly sessions with cognitive-behavioral interventions and 15 weekly sessions with experiential interventions: patients are vice versa and randomly assigned to the interventions. Finally, there is a 10-month follow-up phase with monthly booster sessions. Participants are randomly assigned to baseline length, and report weekly during treatment and monthly at follow-up on Belief Strength of negative core beliefs, and fill out SMI, SCL-90 and SRS-A 7 times during screening procedure (i.e. before baseline), after supportive sessions, after exploration, after cognitive and behavioral interventions, after experiential interventions, and after 5- and 10- month follow-up. The SCID-II is administered during screening procedure, at 5- and at 10-month follow-up.

Trial registration: The Netherlands National Trial Register NTR5788. Registered 01 April 2016.

1. Introduction

Autism spectrum disorder (ASD) is a neurodevelopmental disorder with an early childhood onset and symptoms that persist throughout one's lifetime. In DSM-IV and in DSM-5, ASD is described on a behavioral level only. In DSM- IV [1], the core symptoms are qualitative impairments in social interaction, qualitative impairments in communication and restricted repetitive and stereotyped patterns of behavior. In DSM-5 [2], the core symptoms are persistent deficits in social communication and social interaction across multiple contexts and restricted, repetitive patterns of behavior, interests, or activities. The social disability is multifaceted with deficits in social-emotional reciprocity, in social non-verbal communication, and in developing, understanding and maintaining relationships.

Both clinical practice and epidemiological research show that more than 70% of individuals with ASD have concurrent and

Abbreviations: ABA, Applied Behavior Analysis; APA, American Psychiatric Association; ASD, autism spectrum disorder; AS, Asperger's disorder; CBT, Cognitive behavioral therapy; CET, Cognitive enhancement therapy; DSM, Diagnostic and Statistical Manual of mental disorders; IQ, Intelligence quotient; N.S., not significant; PDs, personality disorders; PD, personality disorder; RCT, randomized controlled trial; SCID-II, Structured Clinical Interview for Axis II Personality Disorders; SCL-90, Symptom Check List; SMI, Schema Mode Inventory; SRS-A, Social Responsiveness Scale – Adult version; VAS, visual analogue scales.

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impairing medical, developmental or psychiatric conditions (like anxiety disorders, mood disorders and personality disorders) [3–6]. As people with ASD become more aware of their limitations, the risk of developing these comorbidities increases. The prevalence of these disorders is significantly higher in high functioning people with ASD than in neurotypical adults [7–9]. In a study of Lugnegård, Hallerbäck, and Gillberg [10], approximately 50% of adults with ASD fulfilled criteria for a personality disorder. Four studies [11–14] found low scores on the character dimensions 'self-directedness' and 'cooperativeness', indicating personality pathology [15]. The high prevalence of psychiatric comorbidity and the negative impact of comorbidity on outcome and general functioning in society make treatment necessary [16].

The field of treatment research for adults with ASD is still in its infancy, and in the literature autism and psychotherapy are rarely combined, but it does not seem an impossible combination [17]. The focus of therapy must be the specific need of the patient with ASD whereby ASD can be seen as a basic persistent and pervasive disorder on which comorbid psychiatric disorders secondarily arise. Few treatment options are available so far and the effectiveness of existing treatment interventions for adults with ASD with and without comorbid disorders, such as cognitive-behavioral therapies (CBT) and pharmacological therapies, remains very limited and has yet to be demonstrated, with scant though promising results [18–26].

We have therefore developed a specific schema therapy program for adult patients with ASD and comorbid PD(s). We settled on schema therapy for several reasons. First, there is more and more evidence-based support for this therapy as a valuable treatment for PDs [27]. Second, the therapeutic relationship is active, consistent, supportive and directive with regard to both content and process, which we consider helpful for people with ASD who are characterized by low self-directedness [11–14,28]. Third, schema therapy is a structured and focused psychotherapy, which we consider to be suitable for people with ASD who benefit from structure and focus. The program consists of both cognitive-behavioral and experiential interventions. Cognitive-behavioral interventions are focused, structured, and goal-directed, and thus suitable with a view to the nature of the disorders in ASD and the associated need for clarity and structure. We apply the same approach to our experiential interventions: step by step, focused on a theme, structured by explanation and psycho-education, and goal-directed.

2. The present study

The aim of the study is to investigate whether schema therapy with cognitive-behavioral and experiential interventions will be effective for adult patients with ASD and at least one personality disorder (PD). The research question is: *'Can patients with comorbid ASD-PD benefit from schema therapy, more specifically its cognitive-behavioral and experiential interventions?*

The first objective is to study in detail the effects of the major technique groups of schema therapy – that is, the cognitive-behavioral techniques and experiential techniques – on belief strength of negative core beliefs in comorbid ASD-PD patients. We hypothesize that schema therapy leads to less belief strength of negative core beliefs. Furthermore, the short-term effects of both groups of techniques will be compared.

A secondary objective is to reduce the occurrence of dysfunctional schema modes (i.e. personality pathology in schema therapy terms). We hypothesize that schema therapy leads to a reduction in dysfunctional schema modes and an increase in functional modes.

A third objective is to reduce the occurrence of diagnostic criteria of personality disorders. We hypothesize that schema therapy leads to a reduced occurrence of personality disorder traits.

A fourth objective is a change in the severity of psychopathological symptoms, related to syndromic disorders like depression and anxiety disorders. We hypothesize that psychopathological symptoms will be diminished by the given treatment.

Lastly, we hypothesize that schema therapy will lead to an improvement in social interaction and communication. Our hypothesis is that more insight into one's own functioning through the given treatment will lead to an improvement in social interaction and communication.

3. Methods

3.1. Study design and procedure

This study is a concurrent multiple baseline design with a baseline varying in length from 4 to 9 weeks. In this study, there are two treatment conditions (cognitive-behavioral and experiential techniques) and two control conditions (baseline and exploration) in a within-subject design, without a control group. This treatment design precludes the randomization to groups and blinding of treatment. We randomize the baseline phase across participants to increase the internal validity of the case series design by varying the baseline duration from 4 to 9 weeks over participants. We also randomize the order of starting with either cognitive-behavioral or experiential interventions. The variation in baseline length and order makes it possible to differentiate between time effects and cognitive-behavioral and experiential intervention effects. During the baseline phase, the 'treatment as usual'(TAU) is continued until 6 supportive sessions start in week 5 for participants 1 and 2; 5 supportive sessions start in week 6 for participants 3 and 4; 4 supportive sessions start for participants 5 and 6 in week 7; 3 supportive sessions start for participants 7 and 8 in week 8; 2 supportive sessions start for participants 9 and 10 in week 9; and one supportive session is given in week 10 for participants 11 and 12. In this way we can check whether meeting the therapist and attending sessions have an influence. Table 1 shows the 10-week period with 4–9 weeks TAU-baseline and 6 to 1 weeks with weekly supportive sessions by study therapist.

After baseline and supportive sessions, which for each patient covers a 10 week period in total, a 5-week exploration phase follows with weekly sessions during which current and past functioning, psychological symptoms, and schema modes are explored, negative core beliefs are identified and explored, and information about the treatment is provided. The exploration phase is also used as a control for the effects of devoting attention to the participants' PD-related disabilities and problems. Then 15 weekly sessions with cognitive-behavioral interventions are given followed by 15 weekly sessions with experiential interventions (or vice versa). Finally, there will be a 10-monthly follow-up with monthly schema therapy booster sessions.

3.2. Ethical issues

The study procedure was reviewed and approved by the ethics committee of the University of Amsterdam (approved on 2 February 2016).

A brochure with information about the study has been prepared for the participants. Written consent will be requested from the participants.

The anonymity of the participants will be guaranteed by removing identity information when analyzing the data. After a period of 2 years all data with names and identity information will be destroyed.

As a treatment integrity check, all therapists in this study are