

The effectiveness of schema therapy in offenders with intellectual disabilities: a case series design

Anke de Klerk, Marije Keulen-de Vos & Jill Lobbestael

To cite this article: Anke de Klerk, Marije Keulen-de Vos & Jill Lobbestael (2021): The effectiveness of schema therapy in offenders with intellectual disabilities: a case series design, Journal of Intellectual & Developmental Disability, DOI: [10.3109/13668250.2021.1978956](https://doi.org/10.3109/13668250.2021.1978956)

To link to this article: <https://doi.org/10.3109/13668250.2021.1978956>



Published online: 24 Oct 2021.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

ORIGINAL ARTICLE



The effectiveness of schema therapy in offenders with intellectual disabilities: a case series design

Anke de Klerk^a, Marije Keulen-de Vos ^{a,b} and Jill Lobbestael ^c

^aForensic Psychiatric Center de Rooyse Wissel, Venray, The Netherlands; ^bFaculty of Social Sciences, Radboud University, Nijmegen, The Netherlands; ^cFaculty of Psychology and Neuroscience, Maastricht University, Maastricht, The Netherlands

ABSTRACT

Background: In forensic settings, patients with intellectual disabilities are overrepresented. A relative novel treatment approach for this population is schema therapy. The goals of schema therapy for offenders with intellectual disabilities are to reduce maladaptive emotional states and to reinforce healthy emotional states and enhancing the patient's ability to ask for help. No studies are examining the effectiveness of this approach.

Method: We examined the effectiveness of Schema Therapy for offenders with intellectual disabilities (ST-ID) in terms of emotional states, psychological complaints, and violence risk in six participants.

Results: Reliable change analyses showed significant improvements in emotional states and certain psychological complaints.

Conclusions: While many questions remain about the effectiveness of ST-ID, our study shows that offenders with ID can benefit from this psychological treatment.

KEYWORDS

Schema therapy; offenders; intellectual disability; effectiveness; case series

An intellectual disability (ID) is defined by significant intellectual deficits and significant deficits in functional and adaptive skills – skills that involve the ability to carry out age-appropriate daily life activities. Two different systems for classifying intellectual disability (ID) are the *International Classification of Disease* (ICD-11, World Health Organization [WHO], 2018) and the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5, American Psychological Association [APA], 2013). An ID is associated with an IQ score of below 70 whereas somebody with borderline intellectual disability is predominantly characterised by a low, standardised IQ between 71 and 84. In the DSM-5, the terms “mild” (IQ range 50–69), “moderate” (IQ range 36–49), “severe” (IQ range 20–35), and “profound” (IQ <20) are used to describe the severity of the condition.

Persons with intellectual disabilities are vulnerable in social situations because their social and cognitive skills are hampered or impaired (Nader-Grosbois, 2014; Sigafoos et al., 2017). Also, the childhood of persons with intellectual disabilities is often characterised by family pathology and dysfunction. Moreover, they have often witnessed parental violence, or were exposed to abuse or neglected (Santoro et al., 2018). The prevalence of intellectual disabilities in the general population is

1–2% (Cuyppers et al., 2021). In forensic psychiatric settings, however, patients with intellectual disabilities are overrepresented with prevalence rates ranging up to 50% (Kaal et al., 2014). A study showed that 23% of the 180 included Dutch cases were classified with an intellectual disability (Van Nieuwenhuizen et al., 2011). Frequent comorbid disorders are autism spectrum disorders, substance use disorders, and personality disorders (PDs) (Lunsky et al., 2011), especially when admitted to high secure services (Thomas et al., 2019; Verheijen et al., 2021). For example, a study by Alexander et al. (2010) showed that approximately 50% of their sample of 138 offenders with intellectual disabilities had a personality disorder although controversy remains whether it is appropriate to classify a PD in a person with intellectual disabilities (Søndenaa et al., 2017). Relatedly, comorbid disorders, in general, tend to be difficult to diagnose in individuals with an intellectual disability. Their limited intellectual potential and communication difficulties may lead to diagnostic masking or overshadowing (Manohar et al., 2016; Wark & Kingstone, 2019). For example, it may be difficult to differentiate between intellectual disability and autism spectrum disorder.

Problematic behavior, such as aggression, is common in persons with intellectual disabilities. There are many

different expression forms of aggression, but the most common ones in individuals with intellectual disabilities are physical aggression, verbal aggression, tempter tantrums, sexual aggression, and self-injurious behaviour (Keulen-de Vos & Frijters, 2016; Van den Bogaard et al., 2018). Prevalence rates of aggressive behaviour in persons with intellectual disabilities vary up to 60% between studies (Bowring et al., 2019; Esteves et al., 2021; Luteijn et al., 2017). Some variation in studies can be explained by differences in study designs and methodologies. Moreover, persons with intellectual disabilities are responsible for a disproportionate amount of institutional transgressions (Keulen-de Vos & Frijters, 2016).

There are several psychologically-based treatments for challenging behaviour in individuals with an intellectual disability, such as cognitive-behavioural treatment (CBT), anger management approaches, skills training, and educational treatment, with central focus on cognitive restructuring, the modification of a patients' ways of thinking, and to improve competencies and skills while decreasing undesirable behavior. These therapies are delivered either in a group or individual format. There is evidence that psychological treatment is effective in individuals with intellectual disabilities (e.g., Didden et al., 2019; Nicoll et al., 2013). However, relatively few studies have been conducted in offenders¹ with intellectual disabilities. The study by Travis and Sturmey (2013) is one of the few studies on skills training, showing a decline in aggressive responses and an increase in social desirable behavior in offenders who participated in behavioural skills training. A relative novel approach in individuals with intellectual disabilities and challenging behaviour is schema therapy.

Schema therapy focuses on unmet basic emotional needs in childhood (e.g., the need for safety and stability), which has led to the development of schema modes or emotional states that dictate behaviour (Young et al., 2003). According to schema therapy theory, criminal or challenging behaviour originates from a series of maladaptive schema modes. Typically, schema modes are thematically organised into one of four domains. Innate child modes refer to feeling, thinking, and acting as an "as if" child. The name of the domain refers to childhood basic emotional needs that have been neglected, overindulged, or frustrated (Young et al., 2003). Dysfunctional parent modes refer to internal critical messages that reflect negative internalised parent behaviour and emotional stance. Maladaptive coping modes refer to the actions taken in an effort not to feel the emotions of the child modes. Two types of coping modes can be distinguished. Avoidant coping modes involve attempts to protect oneself from pain

using avoiding, whereas overcompensatory modes refer to extreme attempts to overcompensate painful feelings. Healthy modes refer to the expression of healthy relationships, taking on responsibilities and participating in enjoyable and playful activities. See Bernstein et al. (2019) for a detailed description of schema therapy concepts and therapeutic techniques in forensic patients. Regular forensic schema therapy is not suitable for offenders with intellectual disabilities although they show similar (histories of) challenging behaviour and have a similar medium to high risk of recidivism. Regular schema therapy calls for an intact meta-cognitive ability, or the ability to reflect upon your thinking, feeling, and behaviour. In people with intellectual disabilities, this ability is often hampered (Nader-Grosbois, 2014). Recently, schema therapy has been adapted for patients with intellectual disabilities (Keulen-de Vos et al., 2016). Differences between regular schema therapy and schema therapy for ID are the use of more structure and visualisation (i.e., schema mode images), and the slower pace in which schema therapy for ID takes place. Also, there is a stronger emphasis on psychoeducation. The primary aims of schema therapy for ID are the reduction of maladaptive schema modes and enhancing patients' healthy modes and the ability to ask for help. A small-scale feasibility study ($n = 4$) showed that schema therapy for ID could be carried out in offenders with intellectual disabilities. Moreover, participants were enthusiastic about the treatment program and therapists reported an increase in patient's insight (Keulen-de Vos et al., 2016). Thus far, no research has been conducted to examine the effectiveness of schema therapy for ID.

The current pilot study focused on the effectiveness of schema therapy for ID in reducing maladaptive schema modes (i.e., coping modes) and enhancing healthy schema modes in a sample of persons with an intellectual disability or moderate borderline functioning who receives mandated care because of histories of criminal behavior. Secondary aims were to examine the effects of reducing psychological symptoms. We hypothesised that schema therapy for ID would lead to a decrease in coping modes, an increase in healthy modes, and a decrease in symptoms.

Method

Design and participants

This case series is conducted in Forensic Psychiatric Centres "de Rooyse Wissel" and "Trajectum", both in The Netherlands. De Rooyse Wissel is a maximum secure hospital that provides treatment for mentally

disordered offenders who are sentenced under the punitive measure “Ter Beschikking Stelling”, which can be translated as treatment on behalf of the state. Under Dutch criminal law, offenders can be sentenced to involuntary treatment if their accountability for their crimes is judged to be diminished because of a mental disorder (Van Marle, 2002). Trajectum also offers treatment for patients with intellectual disabilities and behavioural problems and/or criminal behavior but not exclusively to patients who are sentenced under the punitive measure TBS.

Forensic patients with (a) an full-scale IQ ranging between 60 and 80; (b) (a history of) problem behaviour such as aggression and criminal behaviour; and (c) a medium to high risk of reoffending were included in this study. We included a broad IQ range as we wanted to examine the effects of schema therapy in persons with either an intellectual disability or borderline intellectual functioning as both groups are highly prevalent in forensic settings in the Netherlands (Van den Bogaard et al., 2018). Exclusion criteria were comorbid brain damage or neurological impairments (e.g., dementia), and acute disorders such as anorexia, psychotic disorders, and current dependency on/relapse in substances. The sample consisted of 5 male and 1 female offenders. The mean age of the sample was 36 years ($SD = 7.82$, range 26–50). The average length of stay in the institutions at the time of the study was 19.2 months ($SD = 11.4$; range 7–34). Patients’ mean full-scale IQ (WAIS-IV; Wechsler, 2012) was 76.7 ($SD = 3.6$, range 72–80). Three patients were prescribed psychiatric medication. The average psychopathy checklist score (PCL-R; Hare, 2003) in this sample was 14.8 ($SD = 8.8$, range 11–24).

Procedure

The study received ethical approval from the institutional human research ethics committee (HREC number EC0017-1). Before approaching participants, permission was asked from the treatment coordinator. The coordinators were asked which patients on their wards were eligible to participate based on the in- and exclusion criteria, and based on how were patients were doing (e.g., were they stable in terms of psychological functioning). Per site, Trajectum, and De Rooyse Wissel, one schema therapy group for ID, consisting of three to four patients, was scheduled. Six patients, whom all had no previous experience with schema therapy, were approached. All participants gave written informed consent in accordance with the Declaration of Helsinki. They received an information letter describing the design and rationale for the study, including the

burden (e.g., filling out questionnaires), potential benefits and disadvantages (e.g., becoming emotional, feelings stressed) of the study. Patients were given a 2-week decision window before signing the consent forms, one for participating in the study, and one for video recording.

The treatment module consists of two phases. The first phase is aimed at psycho-education and recognition of maladaptive schemas, basic emotional needs, coping styles, and schema modes (Keulen-de Vos et al., 2016). This phase consists of a 19-session group protocol, led by a schema therapists and an arts therapist (e.g., drama therapist, art therapist). The latter aids in visualising the therapy content and lead the experiential interventions. After explaining the ST concepts, patients work towards creating their schema mode model, which represents different emotional states or “sides” of the patient that can be triggered in different situations. This model is presented to group members, staff, and social support system. The second phase focuses on recognising and changing schema modes (Keulen-de Vos et al., 2016). This phase also takes place in a group format but is not delivered according to a specified protocol.

In our study, patients were assessed at pre-treatment (T1) and after the first phase of treatment (T2). Unfortunately, we were unable to collect data after the second phase because participants did not fill out the questionnaires. The Symptom Checklist-90-Revised (SCL-90-R; Arrindell & Ettema, 2005), Schema Mode Inventory-Forensic version (SMI-F; Lobbestael et al., 2016), and Mode Observation Scale (MOS; Bernstein et al., 2009) were administered or filled out by psychologists with extensive training in schema therapy. All participants were tested individually and the data were stored anonymously.

Materials

Detailed diagnoses (DSM-IV; APA, 2004), demographic and criminal information were extracted from patients’ file charts after the patients signed the consent form. Diagnoses in the patients’ file charts were based on clinical and/or semi-structured interview diagnoses made by certified psychiatrists and clinical psychologists. The full-scale IQ score was assessed through a standardised measure of intelligence. Existing scores on the Dynamic Risk Outcome Scale (DROS; Drieschner & Hesper, 2008) and Historical-Clinical-Risk management scheme (HCR-20V3; De Vogel et al., 2013) were used to assess problem areas and risk factors before the start of treatment; no data was available at the end of phase 1.

Psychological symptoms

We assessed psychological symptoms with the SCL-90-R. Nine psychopathology scores and a global severity index can be derived from 90 items that are rated on a 5-point scale (1 = not at all present; 5 = very present). The psychopathology scales are: somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The internal consistency for the SCL-90-R subscales in our study varied from $\alpha = .27$ to $.89$ at pre-treatment and $\alpha = .27$ to $.81$ at post treatment. Internal consistency for the hostility subscale could not be computed because the scale items had zero variance. The internal consistency for the total scale was $\alpha = .93$ at pre-treatment and $.81$ at post treatment.

Schema modes

We assessed schema modes with the SMI-F and the MOS. The SMI-F is a self-report questionnaire to assess the frequency of 19 different schema modes in offending populations (Lobbestael et al., 2016). It consists of 177 items that are rated on a 6-point scale (1 = hardly ever; 6 = almost always). The internal consistency of the SMI-F subscales in our study varied from $\alpha = .61$ to $.93$ at pre-treatment and from $\alpha = .36$ to $.85$ at post treatment. The internal consistency for the total scale was $\alpha = .96$ at pre-treatment and $.77$ at post treatment. The MOS is an observer report to assess the intensity of schema modes in clinical situations (Bernstein et al., 2009). It consists of 18 schema modes that are rated on a 5-point scale (1 = absent; 5 = extremely present). The MOS is rated by a schema therapist. The instrument has specifically been developed for offender samples. The internal consistency (Cronbach's alpha) for the MOS in our study varied at pre-treatment from $\alpha = .88$ for the child mode domain, $.87$ for the maladaptive coping mode domain, and $.93$ for the dysfunctional parent mode domain. The internal consistency for the healthy mode domain could not be calculated due to a negative average covariance among items. The post treatment internal consistency scores varied from $\alpha = .54$ for the child mode domain, $.61$ for the maladaptive coping mode domain, $.82$ for the dysfunctional parent mode domain, and $.79$ for the healthy mode domain. The internal consistency for the total scale was $\alpha = .91$ at pre-treatment and $\alpha = .77$ at post treatment.

Analyses

We analysed our data using a case series design. Descriptive analyses were conducted with SPSS version 20. Jacobson's Reliable Change Index (RCI; Jacobson & Truax, 1991) was used as a statistical measure of

improvement in schema modes and psychological symptoms. The RCI provides a z -score where higher scores correspond with improvement and the threshold, for significant improvement (at $p < .05$) lies at a z -score ≥ 1.96 . The RCI is calculated as $(X_2 - X_1) / \sqrt{2(SD\sqrt{1-\alpha})^2}$ where X_1 is a subject's pre-treatment score and X_2 the post treatment score (or reversed if lower scores mean better functioning). The Cronbach's alpha is used as a reliability coefficient for the measure or subscale.² Effect sizes (Cohen's d) were calculated as the difference between pre-treatment and post treatment means divided by the standard deviation at pre-treatment $d = (M_2 - M_1) / \sigma$. Effect sizes are classified as small above 0.2, medium above 0.5 and large above 0.8 (Cohen, 1988).

Results

Table 1 provides an overview of all results. A profile of the participants and their results follows below (pseudonyms used).

Participant 1

Thomas was a 34-year-old man with a substance use disorder and a cluster B PD. His full-scale IQ was 72. He was admitted to the Rooyse Wissel for (attempted) murder/manslaughter. During his stay, no institutional transgressions took place. Thomas did not show a reliable change in maladaptive nor healthy modes. His scores on the SCL-90-R indicated no significant change in symptoms.

Participant 2

David was a 37-year-old man with an autism spectrum disorder and a substance use disorder. Furthermore, he was diagnosed with a PD Not Otherwise Specified (PD-NOS). His full-scale IQ was 80. He was admitted to the Rooyse Wissel for a sexual offense. During his stay, no institutional transgressions took place.

David showed a significant increase in healthy modes, both measured on the SMI-F ($d = -1.05$) and MOS ($d = -1.83$). He did not show a reliable change in maladaptive modes. The scores on the SCL-90-R indicated a reliable change in interpersonal sensitivity ($d = 1.56$).

Participant 3

Andy was a 35-year-old man who was admitted to the Rooyse Wissel for (attempted) murder/manslaughter.

Table 1. Reliable change indices and effect sizes for two time points.

Scales	Thomas		David		Andy		John		Maria		Richard	
	RCI	ES	RCI	ES	RCI	ES	RCI	ES	RCI	ES	RCI	ES
SMI mode domains												
Child modes	−1.53	−0.43	1.00	0.28	0.59	0.17	4.07	1.15	2.24	0.63	8.22	2.7
Parent modes	−2.68	−0.73	−0.75	−0.42	1.18	−0.10	2.91	1.87	8.27	2.40	5.98	1.03
Coping modes: avoidant	1.22	0.60	1.22	0.60	1.91	0.93	5.92	2.90	5.58	2.73	8.71	4.27
Coping Modes: forensic	−0.26	−0.06	−0.43	−0.11	2.09	0.51	6.08	1.49	7.38	1.81	8.51	2.09
Healthy modes	−1.38	0.70	2.07	−1.05	1.38	−0.70	−1.55	0.79	−4.30	2.19	1.72	−0.88
MOS mode domains												
Child modes	0.06	0.05	0.72	0.69	−0.44	−0.43	1.44	1.38	1.55	1.38	1.77	1.50
Parent modes	−2.06	−1.23	0.51	0.31	−3.60	−2.16	3.09	1.85	4.12	1.85	4.12	1.85
Coping modes: avoidant	0.46	0.47	0.63	0.64	−0.70	−0.71	2.03	2.05	2.17	2.05	2.65	2.19
Coping modes: forensic	−0.62	−0.75	−0.31	−0.38	−0.78	−0.94	1.40	1.70	0.47	1.70	0.47	0.57
Healthy modes	−1.84	1.22	2.76	−1.83	5.52	−3.66	2.76	−1.83	2.76	−1.83	2.76	−1.83
SCL-90-R												
Phobic anxiety	0.00	0.00	0.00	0.00	0.71	0.50	0.00	0.00	3.59	2.54	1.46	1.04
General anxiety	0.00	0.00	0.00	0.00	−0.54	−0.29	1.08	0.57	3.24	1.71	−0.54	−0.29
Depression	1.56	0.83	−0.47	−0.25	−1.16	−0.62	1.82	0.96	1.16	0.62	4.36	1.27
Somatisation	−0.23	−0.14	0.23	0.14	0.46	0.28	1.21	0.72	2.41	1.45	0.72	0.43
Inadequacy of thought and action	0.00	0.00	−0.26	−0.18	−0.80	−0.55	0.55	0.38	3.20	2.22	0.79	0.55
Interpersonal sensitivity	−0.21	−0.14	2.35	1.56	−1.54	−1.02	0.77	0.51	2.17	1.44	0.42	0.28
Hostility	−1.47	−1.00	0.00	0.00	−2.86	−1.94	2.86	1.94	1.39	0.94	0.00	0.00
Sleeping problems	0.00	0.00	0.00	0.00	−0.58	−0.34	2.34	1.37	1.75	1.02	−0.59	−0.35
Other	0.00	0.00	0.00	0.00	−0.32	−0.22	1.62	1.10	1.65	1.12	1.00	0.68
Psychoneurotism	0.20	0.14	0.44	0.30	−0.80	−0.54	1.39	0.95	2.55	1.73	0.96	0.65

Note. Significant values in **bold**.

He was diagnosed with an anxiety disorder, substance use disorder, and PD-NOS, and his full-scale IQ was 80. During his stay, no institutional transgressions took place. Andy showed a significant decrease in maladaptive modes ($d = .51$) on the SMI-F and a significant increase in healthy modes ($d = -3.66$) on the MOS. His scores on the SCL-90-R indicated a decrease in hostility symptoms ($d = -1.94$) but no other symptoms.

Participant 4

John was a 26-year-old man with an autism spectrum disorder and a paraphilic disorder, and a PD NOS. His full-scale IQ was 76. He received treatment at Trajectum for “other criminal behavior”, referring to theft, damages, or vandalism. During his stay, no institutional transgressions took place. Based on the Dynamic Risk Outcome Scale (DROS), the five highest problem areas were: insight into problems, expectations after treatment, sexual related cognitions and behaviour, impulsivity, and attitudes towards treatment.

John showed a significant decrease in both maladaptive (d ranged from 1.49 to 2.9) and an increase in healthy modes ($d = -1.83$). His scores on the SCL-90-R indicated change in psychological symptoms (i.e., hostility and sleeping problems).

Participant 5

Maria was a 34-year-old woman with an anxiety disorder, mood disorder, and substance use disorder who had a full-scale IQ of 73. She was treated at Trajectum for “other criminal behaviour”, referring to theft, damages, or vandalism. During her stay, no institutional transgressions took place. Based on the DROS, the single problem area was “social skills and behaviour”; no other problem areas were indicated.

Maria showed a significant decrease in maladaptive modes (d ranged from 1.41 to 2.05) and an increase in healthy modes on the MOS ($d = -1.83$) but a decrease in healthy modes on the SMI-F ($d = 2.19$). Her scores on the SCL-90R indicated change in almost all SCL-90-R subscales.

Participant 6

Richard was a 50-year-old man with a paraphilic disorder and a cluster C PD. His full-scale IQ was 73. He was admitted to Trajectum for (attempted) murder/manslaughter. During his stay, no institutional transgressions took place. Based on the Dynamic Risk Outcome Scale (DROS), the five highest problem areas were: insight into problems, expectations after

treatment, cooperation, coping, and social skills and behaviour.

Richard showed a significant decrease in maladaptive modes (d range from 2.09 to 4.27), whereas healthy modes increased ($d = -1.83$). His scores on the SCL-90R indicated a decrease in depressive symptoms ($d = 1.27$).

Discussion

The observed decrease in maladaptive modes and increase in healthy modes is in line with previous studies showing the effectiveness of schema therapy for offenders (Bernstein et al., 2021; Keulen-de Vos et al., 2016). In addition, studies on the effectiveness of schema therapy in young people have shown hopeful results for patients having personality problems, internalising problems (Roelofs et al., 2016), and externalising problems (Van Wijk-Herbrink et al., 2017). This is relevant as people with intellectual disabilities are characterised by significant limitation in cognitive abilities; they typically have cognitive abilities and a low level of social-emotional development similar to young people (<12 years) (Dösen, 2007; Loose et al., 2015). In a multiple case study by Van Wijk-Herbrink et al. (2017), three out of four patients showed a reduction of maladaptive modes and an increase in healthy modes. Similar findings were reported in the case study ($n = 4$) by Roelofs et al. (2016). Our study findings are in line with these findings.

In the last years, there is an increasing awareness that patients with intellectual disabilities can benefit from the usual treatment palette by adapting common treatments to the possibilities, limitations, and needs of these patients (De Wit et al., 2011). Persons with intellectual disabilities have limited abilities to interpret internal mood states and have difficulties with expressive and receptive language (Dösen, 2010). Moreover, they have a limited repertoire of coping strategies (Benson, 2004). A study by Dösen (2010) showed that patients with intellectual disabilities can improve their coping skills through skills training. This may explain why our study showed a reliable change in the improvement of maladaptive emotional states (Young et al., 2003). The first phase of schema therapy for ID consists of skills training in schema therapy concepts (i.e., what are schema modes, why are they important, how do they contribute to behavior). Another explanation for improvement in maladaptive schema modes is that schema therapy for ID is in line with Dutch guidelines of effective treatment interventions for (young) people with intellectual disabilities (De Wit et al., 2011). Schema therapy for ID consists of very concrete and

simple behavioural exercises to increase healthy coping skills and decrease malfunctioning coping modes. This could explain why we found significant improving effects on coping modes specifically and no treatments effect on psychological symptoms in general.

The findings of our study should be considered in light of several limitations. First, the sample size is small and there is a lack of a control group. Second, no inferences can be drawn in terms of the effectiveness of schema therapy for ID in female offenders; there was just one female patient included in this pilot. However, in our study were no notable differences between male patients and the female patient about change in maladaptive and healthy modes, suggesting that both genders can equally benefit from schema therapy for ID. However, the comparison between genders was not a statistical comparison. Third, we used a self-report to assess psychological symptoms in our sample. However, some people with intellectual disabilities may have difficulties with self-reporting due to problems of understanding and communication (Emerson et al., 2013). Fourth, ST-ID consists of two phases (i.e., psychoeducation and behavior modification) but we were only able to collect data pre and post the first phase. We expect the second phase of treatment to perpetuate the treatment effects of the first phase. Finally, no inferences can be made yet on the effectiveness of ST-ID on recidivism risk. Future research should focus on the long-term effects of ST for persons with intellectual disabilities to find out whether gained results maintain at follow-up. Long-term research is recommended to find out whether ST could be of predictive value concerning the risk of recidivism in people with intellectual disabilities.

This study was the first to examine the effects of ST for patients with intellectual disabilities who were convicted for a violent offence. Though many questions remain about the effectiveness of ST-ID, these findings have theoretical and clinical implications. From a theoretical perspective, the findings contribute to the empirical evidence for ST-ID in forensic settings. From a clinical perspective, the study shows that individuals with intellectual disabilities can benefit from psychological treatment.

Acknowledgements

We kindly thank all patients and therapists for their time and effort spent on this study and the directors of de Rooyse Wisel and Trajectum for their support and resources.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The author(s) reported there is no funding associated with the work featured in this article.

CRedit authorship contribution statement

Anke de Klerk: Conceptualisation, Methodology, Data curation, Formal analysis, Writing – original draft, Writing – review & editing.

Marije Keulen-de Vos: Conceptualisation, Methodology, Data curation, Formal analysis, Writing – original draft, Writing – review & editing.

Jill Lobbestael: Conceptualisation, Methodology, Writing – review & editing.

Notes

1. The authors are aware that the term “offenders” may have different meanings in different countries. For the purpose of this article, the term “offenders” refers to all types of patients who have histories of criminal behaviour and receive mandated care.
2. For the SMI-F and SCL-90-R, we used reliability coefficients obtained from a SMI-F validation study (Maassen, 2019) and a comparable SCL-90-R study (Kellett et al., 1999).

ORCID

Marije Keulen-de Vos  <http://orcid.org/0000-0003-4819-1152>

Jill Lobbestael  <http://orcid.org/0000-0001-9205-3115>

References

- Alexander, R. T., Green, F. N., O'Mahony, B., Gunaratna, I. J., Gangadharan, S. K., & Hoare, S. (2010). Personality disorders in offenders with intellectual disability: A comparison of clinical, forensic and outcome variables and implications for service provision. *Journal of Intellectual Disability Research*, 54(7), 650–658. <https://doi.org/10.1111/j.1365-2788.2010.01248.x>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890425596>
- American Psychiatric Association. (2004). *Diagnostic and statistical manual of mental disorders, text revision (DSM-IV-TR)*.
- Arrindell, W. A., & Ettema, J. H. M. (2005). *SCL-90. Handleiding bij een multidimensionale psychopathologie-indicator. [manual SCL-90]*. Harcourt Test Publishers.
- Benson, B. A. (2004). Psychological interventions for people with intellectual disability and mental health problems.

- Current Opinion in Psychiatry*, 17(5), 353–357. <https://doi.org/10.1097/01.yco.0000139969.14695.dc>
- Bernstein, D. P., Clercx, M., & Keulen-de Vos, M. E. (2019). Schema therapy in offenders. In D. Polaschek, A. Day, & C. Hollin (Eds.), *The Wiley International Handbook of correctional psychology* (pp. 654–668). Wiley Blackwell.
- Bernstein, D. P., Vos, M. E. d., & Broek, E. P. A. v. d. (2009). Modus Observatie Schaal (MOS). Unpublished manuscript.
- Bernstein, D. P., Keulen-de Vos, M. E., Clercx, M., de Vogel, V., Kersten, G. C. M., Lancel, M., Bogaerts, S., Slaats, M., Broers, N. J., Deenen, T. A. M., & Arntz, A. (2021). Schema therapy for violence PD offenders: A randomized clinical trial. *Psychological Medicine*, 1–15. <https://doi.org/10.1017/S0033291721001161>
- Bowring, D. L., Painter, J., & Hastings, R. P. (2019). Prevalence of challenging behaviour in adults with intellectual disabilities, correlates, and association with mental health. *Current Developmental Disorders Reports*, 6(4), 173–181. <https://doi.org/10.1007/s40474-019-00175-9>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Routledge Academic.
- Cuyppers, M., Tobi, H., Naaldenberg, J., & Leusink, G. L. (2021). Linking national public services data to estimate the prevalence of intellectual disabilities in The Netherlands: Results from an explorative population-based study. *Public Health*, 195, 83–88. <https://doi.org/10.1016/j.puhe.2021.04.002>
- De Vogel, V., de Vries Robbé, M., Bouman, Y. H. A., Chakhssi, F., & de Ruiter, C. (2013). *Risicotaxatie van geweld. Historical clinical risk management-20 versie 3. [Dutch version of the HCR-20V3]*. Eburon Academic Publishers.
- De Wit, M., Moonen, X., & Douma, J. (2011). *Richtlijn effectieve interventies: Aanbevelingen voor het ontwikkelen, aanpassen en uitvoeren van gedrags-veranderende interventies voor jeugdigen met een licht verstandelijke beperking*. Landelijk Kenniscentrum LVB.
- Didden, R., Nijman, H., Delforterie, M., & Keulen-de Vos, M. E. (2019). Treatment of anger and violence in individuals with intellectual disability. In W. R. Lindsay, L. A. Craig, & D. M. Griffiths (Eds.), *The Wiley Handbook of what works for offenders with intellectual and developmental disabilities: An evidenced based approach to theory, assessment and treatment* (pp. 297–310). Wiley-Blackwell.
- Dösen, A. (2007). Integrative treatment in persons with intellectual disability and mental health problems. *Journal of Intellectual Disability Research*, 51(1), 66–74. <https://doi.org/10.1111/j.1365-2788.2006.00868.x>
- Drieschner, K., & Hesper, B. (2008). *Dynamic routine outcome scales*. Trajectum.
- Emerson, E., Felce, D., & Stancliffe, R. J. (2013). Issues concerning self-report data and population-based data sets involving people with intellectual disabilities. *Intellectual and Developmental Disabilities*, 51(5), 333–348. <https://doi.org/10.1352/1934-9556-51.5.333>
- Esteves, J., Perry, A., Spiegel, R., & Weiss, J. A. (2021). Occurrence and predictors of challenging behavior in youth with intellectual disability with or without autism. *Journal of Mental Health Research in Intellectual Disabilities*, 14(2), 189–201. <https://doi.org/10.1080/19315864.2021.1874577>
- Hare, R. D. (2003). *The Hare psychopathy checklist—Revised manual (2nd ed.)*. Multi Health Systems.
- Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 59(1), 12–19. <https://doi.org/10.1037/0022-006X.59.1.12>
- Kaal, H., Overvest, N., & Broertjes, M. (2014). *Beperkt in de keten: Mensen met een licht verstandelijke beperking in de strafrechtketen. [People with intellectual disabilities in the legal system]*. Boom Lemma uitgevers.
- Kellett, S. C., Beail, N., Newman, D. W., & Mosley, E. (1999). Indexing psychological distress in people with an intellectual disability: Use of the symptom checklist-90-R. *Journal of Applied Research in Intellectual Disabilities*, 12(4), 323–334. <https://doi.org/10.1111/j.1468-3148.1999.tb00088.x>
- Keulen-de Vos, M. E., Bernstein, D. P., Vanstipelen, S., Vogel, V., de Lucker, T. P., Slaats, M., Hartkoorn, M., & Arntz, A. (2016a). Emotional states in the criminal and violent behavior of forensic cluster B PD patients: A retrospective and prospective study. *Legal and Criminological Psychology*, 21(1), 56–76. <https://doi.org/10.1111/lcrp.12047>
- Keulen-de Vos, M. E., & Frijters, K. (2016). Aggressive behavior in offenders with intellectual disabilities: Theories and treatment. In M. J. Cima (Ed.), *Handbook of forensic psychology and treatment* (pp. 276–306). Routledge.
- Keulen-de Vos, M. E., Frijters, K., Haga, T., Lansink, L., Stribos, N., Vries, E. d., & Wilms, W. (2016b). *Helpers en Helden: Schemagerichte therapie voor forensische cliënten meteen licht verstandelijke beperking. [Schema therapy for offenders with intellectual disabilities]*. Kwaliteit Forensische Zorg.
- Lobbestael, J., Clercx, M., & Bernstein, D. (2016). *Schema Mode Inventory – Forensic version*. Unpublished manuscript. Maastricht University.
- Loose, C., Graaf, P., & Zarbock, G. (2015). *Schematherapie met kinderen en jongeren. [Schema therapy for children and adolescents]*. Nieuwezijds B.V.
- Lunsky, Y., Gracey, C., Koegl, C., Bradley, E., Durbin, J., & Raina, P. (2011). The clinical profile and service needs of psychiatric inpatients with intellectual disabilities and forensic involvement. *Psychology, Crime and Law*, 17(1), 9–23. <https://doi.org/10.1080/10683160903392277> doi:10.1080/10683160903392277
- Luteijn, I., Didden, R., & der Nagel, J. V. (2017). Individuals with mild intellectual disability or borderline intellectual functioning in a forensic addiction treatment center: Prevalence and clinical characteristics. *Advances in Neurodevelopmental Disorders*, 1(4), 240–251. <https://doi.org/10.1007/s41252-017-0031-7>
- Maassen, J. (2019). *Schema modes, aggression and coping: Evaluating the forensic version of the Schema Mode Inventory (SMI-F) (Unpublished master's thesis)*. Maastricht University.
- Manohar, H., Subramanian, K., Kandasamy, P., Penchilaiya, V., & Arun, A. (2016). Diagnostic masking and overshadowing in intellectual disability – How structured evaluation helps. *Journal of Child and Adolescent Psychiatric Nursing*, 29(4), 171–176. <https://doi.org/10.1111/jcap.12160>
- Nader-Grosbois, N. (2014). Self-perception, self-regulation and metacognition in adolescents with intellectual disability. *Research in Developmental Disabilities*, 35(6), 1334–1348. <https://doi.org/10.1016/j.ridd.2014.03.033>
- Nicoll, M., Beail, N., & Saxon, D. (2013). Cognitive behavioural treatment for anger in adults with intellectual

- disabilities: A systematic review and meta-analysis. *Journal of Applied Research in Intellectual Disabilities*, 26(1), 47–62. <https://doi.org/10.1111/jar.12013> doi:10.1111/jar.12013
- Roelofs, J., Muris, P., van Wesemael, D., Broers, N. J., Shaw, I., & Farrell, J. (2016). Group-schematherapy for adolescents: Results from a naturalistic multiple case study. *Journal of Child and Family Studies*, 25(7), 2246–2257. <https://doi.org/10.1007/s10826-016-0391-z>
- Santoro, A. F., Shear, S. M., & Haber, A. (2018). Childhood adversity, health and quality of life in adults with intellectual and developmental disabilities. *Journal of Intellectual Disability Research*, 62(10), 854–863. <https://doi.org/10.1111/jir.12540>
- Sigafoos, J., Lancioni, G. E., Singh, N. N., & O'Reilly, M. F. (2017). Intellectual disability and social skills. In J. Matson (Ed.), *Handbook of social behavior and skills in children. Autism and child psychopathology series* (pp. 249–271). Springer. https://doi.org/10.1007/978-3-319-64592-6_14
- Søndenaa, E., Nonstad, K., Dragsten, F., & Gravdal, G. B. (2017). Validation of a brief screening instrument for emotionally unstable and dissocial personality disorder characteristics in community service users with intellectual disabilities. *Open Journal of Social Sciences*, 05(12), 164–172. <https://doi.org/10.4236/jss.2017.512012>
- Thomas, S. D. M., Nixon, M., Ogloff, J. R. P., & Daffern, M. (2019). Crime and victimization among people with intellectual disability with and without comorbid mental illness. *Journal of Applied Research in Intellectual Disabilities*, 32(5), 1088–1095. <https://doi.org/10.1111/jar.12598>
- Travis, R. W., & Sturmey, P. (2013). Using behavioural skills training to treat aggression in adults with mild intellectual disability in a forensic setting. *Journal of Applied Research in Intellectual Disabilities*, 26(5), 481–488. <https://doi.org/10.1111/jar.12033>
- Van den Bogaard, K. J. H. M., Nijman, H. L. I., Palmstierna, T., & Embregts, P. J. C. M. (2018). Characteristics of aggressive behavior in people with mild to borderline intellectual disability and co-occurring psychopathology. *Journal of Mental Health Research in Intellectual Disabilities*, 11(2), 124–142. <https://doi.org/10.1080/19315864.2017.1408726>
- Van Marle, H. J. C. (2002). The Dutch entrustment Act (TBS): Its principles and innovations. *International Journal of Forensic Mental Health*, 1(1), 83–92. <https://doi.org/10.1080/14999013.2002.10471163>
- Van Nieuwenhuizen, C., Bogaerts, S., de Ruijter, E. A. W., Bongers, I. L., Coppens, M., & Meijers, E. A. A. C. (2011). *TBS-behandeling geprofileerd. Een gestructureerde casussenanalyse*. WODC, ministerie van Veiligheid en Justitie.
- Van Wijk-Herbrink, M. F., Broers, N. J., Roelofs, J., & Bernstein, D. P. (2017). Schema therapy in adolescents with disruptive behavior disorders. *International Journal of Forensic Mental Health*, 16(3), 261–279. <https://doi.org/10.1080/14999013.2017.1352053>
- Verheijen, V. B. M., Segeren, M. W., Fassaert, T., & Grimbergen, C. (2021). Intellectual disability among violent repeat offenders and its relation with psychopathology and self-sufficiency. *International Journal of Forensic Mental Health*. <https://doi.org/10.1080/14999013.2021.1928339>
- Wark, S., & Kingstone, M. (2019). The complexity of lifelong comorbidities with severe intellectual disability. *Journal of Intellectual & Developmental Disability*, 44(4), 431–438. <https://doi.org/10.3109/13668250.2018.1481735>
- Wechsler, D. (2012). *Wechsler adult intelligence scale – Fourth edition – nederlandse bewerking. Technische handleiding*. Pearson.
- World Health Organization. (2018). *International classification of diseases for mortality and morbidity statistics (11th revision)*. World Health Organisation in Geneva. <https://icd.who.int/browse11/l-m/en>
- Young, J. E., Klosko, J., & Weishaar, M. (2003). *Schema therapy: A practitioner's guide*. Guilford.