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# A Systematic Review of the Evidence Base for Schema Therapy

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# **A Systematic Review of the Evidence Base for Schema Therapy**

## **Abstract**

*Aim:* Schema therapy is becoming an increasingly popular psychological model for working with individuals who have a variety of mental health and personality difficulties. The aim of this review is to look at the current evidence base for schema therapy and highlight directions for further research.

*Method:* A systematic search of the literature was conducted up until January 2011. All studies that had clinically tested the efficacy of schema therapy as described by Jeffrey Young (Young, 1994; Young *et al.*, 2003) to individuals with psychopathology were considered. These studies underwent detailed quality assessments based on Scottish Intercollegiate Guidelines Network (SIGN-50) culminating in ten studies being included in the review.

*Results:* Only one study was deemed high enough quality to base recommendations on. This lack of evidence demonstrates a gap between theory, practice and research. The culminative message (both from the popularity of this model and the small number of studies reviewed in this research) is of a theory which has the potential to demonstrate clinically effective outcomes. However, without high quality research in this field, as yet there is not enough evidence on which to make clinical recommendations.

*Recommendations:* It is imperative that psychological practice within the NHS be guided by high quality research that demonstrates efficacious, evidence based interventions. It is therefore recommended that researchers and clinicians working with schema therapy seek to demonstrate the clinical effectiveness of this model through ongoing research utilising high quality randomised controlled trials.

## **Introduction**

Within the NHS, health professionals are continually striving to provide the best interventions and treatments available. With new psychological theories constantly evolving it is essential to ensure that clinical practice keeps pace with research evidence. In such dynamic environments, systematic reviews are starting to play an increasingly important role in assessing the existing evidence for psychological interventions (SIGN, 2008).

The aim of this review is to collate the current evidence base for one of the more recent psychological interventions; schema therapy (Young, 1994, Young *et al.*, 2003). Over recent years this model has become increasingly popular with clinicians and academics who have started to test both the theoretical assumptions and clinical effectiveness of this model. However, due to the recency of both the model and research in this area, no other review has been conducted in this field to our knowledge.

### **What is Schema Therapy?**

Schema therapy was developed by Jeffery Young in the 1980's with the goal of improving interventions for individuals who had personality disorders and more complex, chronic, and characterological difficulties. Such individuals are often considered 'difficult to treat' using traditional cognitive therapy, and are frequently described as 'treatment failures' (Young *et al.*, 2003). From extensive clinical experience Young identified that such individuals appeared to benefit from some adaptations to traditional cognitive therapy. Overtime these adaptations evolved into schema therapy; a broad integrative model which overlaps with other models of psychopathology including cognitive behavioural therapy and psychodynamic models (Young *et al.*, 2003).

There are four main concepts that are central to schema therapy; these are *Early Maladaptive Schemas*, *Coping Styles*, *Schema Domains* and *Schema Modes* (Young *et al.*, 2003). Early Maladaptive Schemas (EMS) are at the heart of model. Currently there are 18 EMS's which are described as, '*extremely stable and enduring themes, comprised of memories, emotions, cognitions, and bodily sensations regarding oneself and one's relationship with others, that develop during childhood and are elaborated on throughout the individual's lifetime, and that are dysfunctional to a significant degree*' (Young *et al.* 2003, p.7). Young states that schemas are present in every human being, but that they are manifested in a more rigid and extreme way in cases of psychopathology.

Early Maladaptive Schemas commonly develop in children who live within an environment which fails to meet their core emotional needs, or where they experience repeated episodes of abuse, neglect, hostility and criticism (Young *et al.*, 2003). Depending on the child's early environment the development of schemas can be grouped into 5 domains: *disconnection and rejection*, *impaired autonomy and performance*, *impaired limits, other directness* and *over vigilance and inhibition*. Each domain represents an important component of a child's core needs, for example, schemas in the *disconnection and rejection* domain typically originate in detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive families (Young *et al.*, 2003).

Coping styles refer to the ways a child adapts to these environments and experiences.

There are three main coping strategies used; overcompensation (fighting the schema and acting as though the opposite were true), surrendering (or giving in to the schema) and avoidance (trying to avoid schema activation) (Young *et al.*, 2003). Although these coping styles initially develop to help a child survive toxic environments, over time and in different environments, such strategies can serve to maintain the dysfunctional schemas and cease to serve the individual (Young *et al.*, 2003).

Schema modes are the most recent addition to schema therapy. Modes reflect the moment-to-moment emotional and behavioural state of a person at a given time. Modes comprise of clusters of schemas, for example, *defectiveness* and *emotional deprivation* are both part of the *lonely child mode*. Schema therapy and schema mode therapy do not reflect two separate entities, rather schema mode work is seen as an advanced component of schema therapy which is particularly beneficial when working with individuals who have borderline personality disorder or other complex needs. Such individuals often present with a number of schemas being simultaneously activated, which can make individual schema work more complex (Young *et al.*, 2003). By allowing therapists to work with groups of schemas simultaneously, schema mode therapy can simplify therapeutic interventions for some individuals.

### **The Goal of Schema Therapy**

Young *et al.*, (2003) explain that a healthy person can adaptively meet their own core needs. The goal of schema therapy is to help those unable to do this. This may involve reducing forms of schema perpetuation which are behaviours that will reduce the likelihood of schema change, identifying maladaptive coping styles, healing unhelpful schemas and modes whilst developing healthier, more adaptive alternatives. This can be a long process which requires the individual to confront and modify or fight schemas that may have previously served a protective and adaptive function.

In schema therapy the therapeutic relationship is seen as the foundation for these changes to occur. As early maladaptive schemas and modes arise when core needs are not met, schema therapists aim to identify and meet these previously unmet needs within the therapy relationship. This may then progress to mobilising other supportive relationships. By helping the individual identify missed experiences or unmet needs in

early childhood and providing opportunities to address these within a therapeutic relationship, schema therapy serves as an antidote to the early damaging experiences that led to the formation of maladaptive schemas and modes. In schema therapy this is referred to as 'limited reparenting' (Young *et al.*, 2003).

### **Why conduct this review?**

Over the last 20 years, schema therapy has evolved into a model which is both simple to understand whilst also deep and complex in nature. The combination of these factors has resulted in it being a popular model with clinicians and researchers. The aim of this systematic review is to identify and consolidate the current clinical evidence base for schema therapy and suggest areas in need of future development.



## **Study Protocol**

### **Review objective**

To review the treatment evidence for schema therapy as described by Jeffrey Young (Young, 1994; Young *et al.*, 2003).

### **Participants**

Young suggests that schema therapy is not appropriate for all individuals. Indications that schema therapy may not be appropriate are...

1. Current major crises
2. Psychosis
3. Acute, untreated Axis I disorder
4. Current chronic substance misuse
5. When the presenting problem is situational and not related to a schema or life pattern.
6. When the individual is under the age of 18 as personality variables in younger people may still be forming.

All study participants will be considered in relation to these recommendations. The only fixed exclusion criteria will be age. No study with participants under the age of 18 will be included in this review.

## **Psychopathology**

Although schema therapy was originally developed to improve treatment outcomes for individuals with personality disorders and chronic characterological difficulties it is not restricted to this group. Schema therapy is recommended to be used with a variety of psychopathology. When individuals present with co-morbid Axis I and Axis II disorders, it is recommended that Axis I disorders are prioritised before addressing Axis II psychopathology. To ensure this review represents a broad range of individuals, all forms of intervention (for example, group and individual formats) and psychopathology will be considered. Due to the high prevalence of co-morbidity of mental health conditions it was considered clinically useful to include studies with participants who may have more than one mental health difficulty. It is anticipated that there will be a greater prevalence of interventions targeted at treating personality disorders.

## **Setting**

The aim of this review is to evaluate schema therapy in a broad range of mental health settings to optimise its clinical utility, therefore both inpatient and out patient settings will be considered.

## **Interventions**

Due to the limited number of outcome studies in this area all studies that applied schema therapy to individuals with a mental health condition will be considered. Although it is anticipated that number of sessions will vary, only studies that evaluated the efficacy of a schema therapy intervention and exceeded ten sessions will be included in the review.

## **Outcomes**

As schema therapy may have a variety of different outcomes depending on the individuals unique needs all outcomes will be considered.

## **Language**

Only English language studies will be included.

## **Study Design**

Ideally, systematic reviews only consider evidence from high quality randomised controlled trials. However, it is anticipated that there will be very few studies that will meet this criteria. Therefore, this review will include randomised controlled trials (RCT's), controlled trials (CT) and uncontrolled trials (UT). Single case studies or studies with less than 5 participants will be excluded from the review owing to the higher potential for bias in these study designs. Finally, economic evaluations and studies using duplicate data will not be included.

## **Method**

The following search terms were used in this study; 'schema therapy' or 'schema focused therapy'. However, for the purposes of this study, it will be referred to as 'schema therapy' (ST) which is now the most commonly used description.

## **Search strategy**

The following electronic databases were searched until the 10th January 2011.

- MEDLINE (from 1950);
- EMBASE (from 1980);
- CINAHL (from 1982);
- the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2009, issue 3);
- PsycINFO (from 1872);

## **Searching other resources**

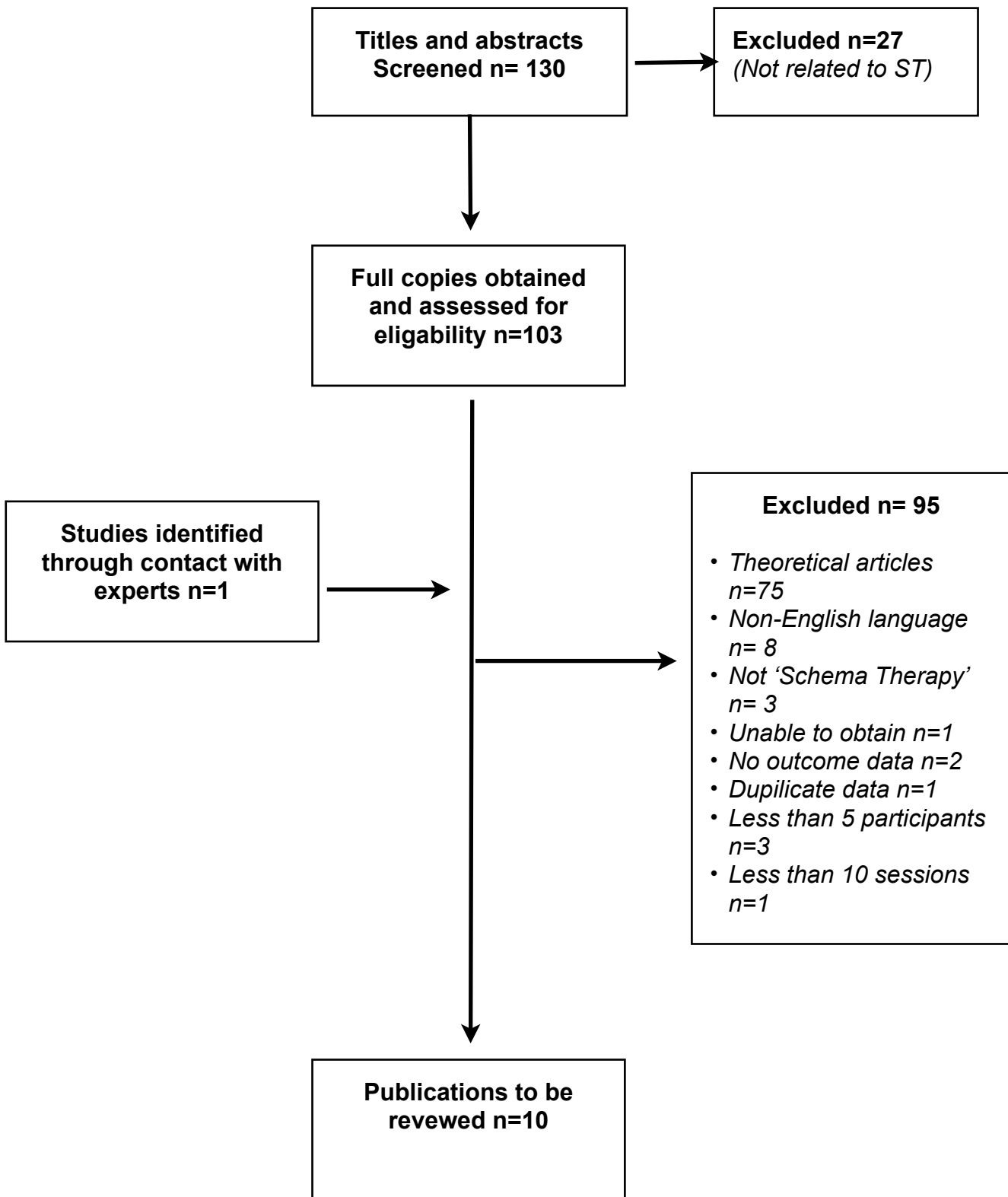
The reference lists of included and excluded studies were searched for additional studies and prominent researchers were contacted to enquire about other sources of information including ongoing research or unpublished data. Finally, two prominent schema therapy websites (the International Society for Schema Therapy, <http://www.isst-online.com/> and Schema Therapy website, <http://www.schematherapy.com>) were also searched.

## **Study selection**

All titles and abstracts were initially screened and irrelevant studies or purely theoretical studies were excluded. The full text of all remaining studies were obtained and read.

Studies utilising data previously reported were removed to prevent duplication. A flowchart of the selection process can be seen in Figure 1.

Figure 1. Flow chart of study selection process



## Included studies

Following this selection procedure ten studies met all the study requirements. These can be found in Table 1. In total three of the studies were considered to be assessing the effectiveness of ST in the treatment of BPD (Farrell *et al.*, 2009; Giesen-Bloo *et al.*, 2006; Nadort *et al.*, 2009), two were targeting substance misuse and concurrent personality disorders (Ball, 2007; Ball *et al.*, 2005), one looked at ST for PTSD (Cockram, Drummond & Lee (2010), one evaluated group schema therapy in an eating disorder population (Simpson *et al.*, 2010), and three focused on individuals with agoraphobia and cluster C personality disorders (Gude & Hoffart, 2008; Gude, Monsen & Hoffart, 2001; Hoffart & Sexton, 2002).

Table 1. Summary of included studies.

Study Reference	Aim	Design	Intervention	Outcome Measures	Conclusions
<b>Ball, S. A. (2007).</b> Comparing individual therapies for personality disordered opioid dependent patients.	To compare Dual Focus Schema Therapy (DFST) to a 12 Step Facilitation Therapy (12FT) in 30 participants (15 male and 15 female) with a diagnosed personality disorder and concurrent substance misuse	RCT	Six months of either DFST or 12FT.	Substance use time line calendar; Addiction Severity Index; Brief Symptom Index; Multiple Affect Adjective Checklist-Revised; Working Alliance Index.	Both groups demonstrated a reduction in substance misuse, this was more rapid in the DFST condition. Participants reported a stronger therapeutic alliance in the DFST condition. Reduction in dysphoric affect did not occur in the DFST but did in the 12FT group
<b>Ball et al., (2005).</b> Substance abuse and personality disorders in homeless drop-in center clients: Symptom severity and psychotherapy retention in a randomized clinical trial.	To compare Dual Focus Schema Therapy (DFST) to standard group substance abuse counselling (SAC) in 52 male homeless clients with a diagnosed personality disorder and concurrent substance misuse.	RCT	24 weeks of either DFST or SAC.	Due to low retention of participants so was only able to provide outcome data on utilisation of therapy.	Greater utilisation of DFST overall however, individuals with more severe personality disorders utilised SAC more than DFST.
<b>Cockram, Drummond &amp; Lee (2010).</b> Role and treatment of early maladaptive schemas in Vietnam veterans with PTSD. (Study Two)	To compare SchemaTherpy (ST) with traditional CBT (TCBT) for the treatment of PTSD in war veterans. TCBT was delivered to 127 individuals between 1996 and 2002. ST was delivered to 54 veterans between 2007 and 2008.	CT	190hrs of either ST or TCBT.	PTSD Checklist Military; Young Schema Questionnaire-L3; Hospital Anxiety and Deperession Scale	PTSD symptoms, anxiety, depression and EMS decreased significantly following ST. When compared to TCBT, the ST group showed significantly greater reductions in PTSD and anxiety symptoms.
<b>Farrell, Shaw Webber, (2009).</b> A schema-focused approach to group psychotherapy for outpatients with borderline personality disorder: a randomised controlled trial.	This study tests the effectiveness of adding an eight month, thirty session schema focused therapy (ST) group to treatment as usual (TAU) for 32 women with a diagnosis of borderline personality disorder (BPD).	RCT	Either eight months (30 sessions) of group ST and TAU or just TAU.	Borderline Syndrome Index; SCL-90R, Diagnostic Interview for Borderline Personality Disorders -Revised; Global Assessment of Functioning Scale. These were administered pre-treatment, post-treatment, and 6-month follow up.	At the end of the treatment 94% of ST + TAU group no longer met the criterion for BPD, whilst only 16% of TAU no longer met the criterion. Significantly lower scores on BSI, DIB-R and SCL-90R and higher scores on the GAF. These effects were maintained at six-month follow up.
<b>Giesen-Bloo et al, (2006)</b> Outpatient Psychotherapy for Borderline Personality Disorder,	To compare the effectiveness of schema therapy (ST) and transference focused therapy (TFT) in 88 patients with a diagnosed borderline personality disorder (BPD) index score above 20.	RCT	Two sessions per week for three years of either ST or TFT.	Borderline Personality Disorder Severity Index score (4th version); Quality of life; general psychopathological dysfunction; and measures of schema therapy/transference focused psychotherapy personality concepts.	Three years of schema therapy or transference focused psychotherapy reduced BPD specific (and general) psychopathologic dysfunction; improved quality of life, increased model specific concepts.  The BPDSI-IV demonstrated ST to be more effective than TFT on the following sub scales; abandonment fears (p=.04), relationships (p=.03); identity disturbance (p=.02), impulsivity (p=.03, para-suicidal behaviour (p=.04) and dissociative and paranoid ideation (p=.02). No significant differences were found on the other sub scales.

Study Reference	Aim	Design	Intervention	Outcome Measures	Conclusions
<b>Gude &amp; Hoffart, (2008).</b>  Change in interpersonal problems after cognitive agoraphobia and schema-focused therapy versus psychodynamic treatment as usual of inpatients with agoraphobia and cluster C personality disorders.	Will ST increase interpersonal functioning more than TAU in patients with panic disorder, agoraphobia and co-occurring cluster C traits?	CT	12 weeks of either group TAU or group ST.	IIP, Symptom Check List -90; Mobility Index for Agoraphobia. These were administered at pre-treatment, discharge and follow-up.	Patients in the ST group showed greater improvement in interpersonal function than treatment as usual.
<b>Gude, T., Monsen, J. T., &amp; Hoffart, A. (2001)</b>  Schemas, affect consciousness, and Cluster C personality pathology: a prospective one-year follow-up study of patients in a schema-focused short-term treatment program.	To determine if a low level of affect consciousness will be related to a high level of cluster C pathology at pretreatment; if change in cluster C pathology is influenced by change in affect consciousness; affect consciousness will any change during schema focused phase.	One group (pre-post design)	11 week inpatient group; 5 weeks cognitive treatment of panic/agoraphobia and 6 weeks ST.	The Affect consciousness Interview; Mobility Inventory and the Structured Clinical Interview for DSM IV.	Pretreatment level of affect consciousness did not correlate with Cluster C personality indexes but the Avoidant index did at post-treatment. Affect consciousness changed during the ST phase but not the CT phase. These results indicate that ST may increase affect consciousness more than CT.
<b>Hoffart, Sexton, (2002)</b>  The role of optimism in the process of schema-focused cognitive therapy of personality problems.	To examine the role of optimism in the process of ST in 35 patients with panic disorder and or agoraphobia and DSM-IV Cluster C personality traits.	One group (pre-post design)	11 week inpatient group; 5 weeks cognitive treatment of panic/agoraphobia and 6 weeks ST.	The Affect consciousness Interview; Mobility Inventory, the Structured Clinical Interview for DSM IV, Panic Rating Scale, the State-Trait Anxiety Inventory, Schema Questionnaire and the Inventory of Interpersonal Problems.	Positive association between optimism and schema processes and between EMS and level of distress, empathy, insight and therapists optimism.
<b>Nadort et al., (2009)</b>  Implementation of outpatient schema therapy for borderline personality disorder with versus without crisis support by the therapist outside office hours: A randomised controlled trial.	Question 1. To evaluate the success of implementing outpatient schema focused therapy for 62 individuals with a diagnosis of BPD and to determine the added value of therapist telephone availability outside office hours in case of crisis.	RCT	two 45 min sessions per week for 18 months either with or without therapist crisis support	Borderline Personality Disorder Severity Index score(fourth version); EuroQol, WHOQol, BPD-47, SCL-90	No additional effect of extra crisis support with telephone availability were found.
	Question 2. A second aim was to compare the outcomes of this study with the previous RCT conducted by Giesen-Bloo et al, 2006 to determine if similar outcomes would be found in regular practice.	CT	<b>Nadort et al's study:</b> two 45 min sessions per week for 18 months <b>Giesen-Bloo et al's study:</b> Two sessions per week for three years of either ST or TFT.	As above.	ST can be successfully implemented in regular mental healthcare. Treatment results and drop out were comparable to a previous clinical trial.
<b>Simpson, Morrow, Van Vreeswijk, Reid, (2010)</b>  Group schema therapy for eating disorders: A pilot study.	To evaluate the effectiveness of group schema therapy for 8 individuals with a diagnosed eating disorder and co-morbid Axis I and II conditions.	Pre-post test case series design	20 group schema therapy sessions	EDE-Q, YSI-L2, HADS, EQ5-D and the Experience of shame scale.	Results indicated that 4 of the 6 had clinically sig improvement in eating. By follow up all completers had achieved over 60% improvement in schema severity.



## Quality Assessment

In order to differentiate between strong and weak evidence, quality assessments were carried out on all studies. To assist with these assessments the Scottish Intercollegiate Guidelines Network were used (SIGN 50). These checklists provided a framework to rate the methodological quality of each study. Based on these ratings each study was given one of the following overall quality ratings;

- 'A' was awarded to high quality randomised controlled trials which met all or most of the quality criteria and when not fulfilled the conclusions in the study were deemed very unlikely to alter.
- 'B' was awarded to randomised controlled trials and controlled trials which met most of the quality criteria and when the conclusions in the study were deemed unlikely to alter.
- 'C' was awarded to randomised controlled trial or controlled trials when few or none of the quality criteria had been fulfilled and the conclusions of the study were deemed likely or very likely to alter.
- 'D' was awarded to single group designs and uncontrolled studies or studies which met few of the quality criteria.

To try and minimise bias in ratings two studies (20%) were rated again by an independent rater and compared to the existing assessment. No differences were found between the researcher's assessment and the independent researcher's assessment on either study. Table 2 summarises the quality criteria ratings for this study.

**(quality table to be inserted here)**

## Discussion of results

### Schema therapy for BPD

In total, three studies looked at the effectiveness of schema therapy (ST) in treating borderline personality disorder (BPD). Of these, one compared treatment as usual (TAU) to TAU with group ST (Farrell *et al.*, 2009), another compared schema therapy to transference focused therapy (TFT) (Giesen-Bloo *et al.*, 2006) and the other study compared ST with therapist telephone support to ST without therapist telephone support (Nadort *et al.*, 2009). Overall the outcomes of these studies suggest ST may be effective in decreasing BPD symptoms. However, there are some methodological issues that should be considered when interpreting these results. Although all had a control condition, in order to determine the effectiveness of ST it is important to compare it to other therapies that have demonstrated effectiveness in treating BPD. For example, Transference-focused therapy has demonstrated some efficacy in reducing BPD symptoms in a previously conducted randomised controlled trial (Clarkin *et al.*, 2007) and it also shares some characteristics with ST. For example, both aim to change personality structure, reduce self destructive behaviours and increase quality of life (Giesen-Bloo *et al.*, 2006). Additionally, both therapies can be offered in equal frequency and duration making TFT a good control condition. TFT was therefore a good choice as a control group for the Giesen-Bloo *et al.*'s (2006) study.

The study by Nadort *et al.*, (2009) was set up as an 'implementation study' to determine whether the results found in Giesen-Bloo *et al.*'s (2006) randomised controlled trial could be replicated in general practice. For this reason they did not use a different treatment control, rather it directly compared results with the earlier study. After the intervention

phase results and drop out rates were comparable between the two studies. This suggests that ST could be successfully implemented in regular practice. Although this type of study is important as it attempts to demonstrate efficacy in real health settings (rather than the controlled conditions found in a RCT) there are some methodological weaknesses which could be addressed. Firstly, when comparing the participant characteristics before intervention between these two studies, the participants in the 'implementation study' displayed lower BPSI scores, less medication use and higher reported quality of life (Nadort *et al.*, 2009). Therefore this group may have been somewhat less severe than those in the earlier clinical trial by Giesen-Bloo *et al* (2006). Nevertheless, all participants did meet full criteria for BPD in both studies. Secondly, participants received interventions in different settings and thirdly, the participants were recruited in different time frames. Although the setting is a key factor in being able to generalise the findings to general practice both these factors increase the differences between the 'implementation study' and the earlier RCT. Ideally, future research attempting to demonstrate efficacy in general practice should use a simultaneous active treatment control allowing randomisation to either ST or the control group. However, practically this design might be difficult to achieve outside in regular clinical practise. Under such circumstances a well conducted quasi experimental design controlling for baseline differences may be a more achievable design (Emmelkamp & Vedel, 2009).

However, despite these limitations, the study by Nadort *et al*, (2009) provides clinically useful information. One of the main aims of this research was to determine the added benefit of out of hours therapist telephone support to the treatment outcomes. Telephone support has been one of the more controversial aspects of schema therapy within an NHS setting and potentially may deter therapists from using this model. Interestingly, this study suggested that there was no added benefit of telephone support which may make this

therapy more accessible and less onerous for therapists working in settings not set up to support this aspect of schema therapy.

The final study looking at ST for the treatment of BPD was conducted by Farrell *et al.*, (2009). This study appears to show the largest benefits in reducing BPD symptoms suggesting that 94% of participants attending their ST group (in addition to treatment as usual (TAU)) no longer meeting the criteria for BPD. However, other factors could account for some of these benefits making it difficult to base clinical recommendations on this findings of this study alone. Firstly, the ST condition received greater frequency of therapeutic input having an additional 90 minutes structured clinical contact per week which was specifically targeted towards reducing BPD symptoms. It is possible that the structured group environment, targeted content and additional time may account for some of the perceived differences rather than the schema therapy component. As each treatment is likely to have its own structure it can be difficult to match one type of therapy with another. This is a more general difficulty when investigating psychological therapies. Ideally, In order to establish if ST is the primary change factor, future research should compare group ST a control treatment that is as equally structured, targeted and intense as possible. Additionally, the participant numbers in this study are very small making it difficult to generalise the findings.

Overall, of the three studies reviewed the most compelling evidence for the effectiveness of schema therapy in treating BPD comes from Giesen-Bloo *et al's.*, (2006) study. The rigorous assessment procedures, regular quality checks, standardised outcome measures and evidence-based treatment control are particular strengths in this research. However, further large scale research is needed to replicate these findings before robust recommendations can be made for clinical practice.

### *Possible challenges to research in this area*

Ideally, it is recommended that future research of similar quality to Giesen-Bloo *et al.*'s (2006) study comparing ST to a suitable control treatment (such as TFT or Dialectical Behaviour Therapy (DBT), Linehan *et al.*, 2006) is needed in order to determine the evidence base for ST in general clinical practice. However, realistically it is acknowledged that there may be some difficulties doing this type of research within healthcare organisations with resource pressures, such as the UK National Health Service (NHS). Firstly, working with individuals with personality disorders (for example BPD) is often associated with co-existing mood disorders, substance misuse, eating disorders and post traumatic stress disorder (Binks *et al.*, 2009). BPD in particular is also associated with other personality disorders, high rates of suicide when associated with mood disorders or alcoholism (Stone, 1990), and deliberate self-harm (Lineman, 1993). These issues make therapeutic work at times both demanding and challenging. Clinicians working in this field require high levels of skill as well as supervision and team support.

Secondly, clinicians working within healthcare organisations need to have managerial support for both their clinical time and resources. ST is still relatively new and un-researched. It is also longer in duration and therefore more expensive than other treatments. Within the current economic climate it may be challenging to get managerial support for ST research within healthcare departments that might be under pressure to provide time limited evidenced based treatments. It might be helpful for clinicians seeking funding for such research to read the economic evaluation by van Asselt *et al.*, (2008). This evaluation looks at the overall costs of BPD and compares this with the treatment costs. Although it is beyond the scope of this evaluation to go into this paper in more depth, this evaluation appears to provide compelling evidence to suggest that ST, is a cost effective treatment when taking into account the wider costs associated with

supporting clients with personality disorders both within the NHS in addition to wider societal costs.

Thirdly, and finally, even when all the above difficulties have been overcome, ethics committees may still have concerns about approving implementation of such a new treatment. Overall, these difficulties may explain the scarcity of research into ST.

### *Research recommendations*

Despite these challenges, research in this field is needed. Therefore clinicians who work in this field need to balance the needs of individuals with personality disorders with, succinct, cost effective treatments. The complex nature of personality disorders is likely to require them to provide more intensive interventions therefore it may be important to look at ways this can be achieved within the healthcare organisations such as the NHS. For example, rather than individual sessions, group ST may be a viable alternative. This is supported by Farrell *et al's* (2009) study which suggests that group processes may improve the effectiveness of ST whilst also reducing the length of treatment required.

Finally, although difficult to perfectly match psychological therapies in terms of intensity, duration, structure and treatment goals, future research should aim to use control conditions which are as similar to ST as possible. Additionally, it is also important to compare ST to evidenced based alternatives. The most recent Cochrane Review on psychological treatments for BPD indicates Dialectical Behaviour Therapy (Linehan *et al.*, 2006) has the strongest evidence for treating BPD (Binks *et al.*, 2009). Although it should also be recognised that this recommendation may be somewhat based on the quantity of evidence for DBT compared to other treatments (Vedel & Emmalkamp, 2010). For example, most treatments only have one or two published PCT demonstrating their effectiveness whilst DBT has seven (Vedel & Emmalkamp, 2010). This makes DBT the

most robust evidence for BPD. In order to ensure individuals are being offered the *most* efficacious treatments available, it may be beneficial to compare ST with Dialectical Behaviour Therapy in a high quality randomised controlled trial.

### **Schema Therapy for PTSD**

The study by Cockram, Drummond & Lee (2010) aimed to determine if group ST would reduce PTSD symptoms in war veterans compared to a comparison CBT group that was previously run in the clinic. The main difference between the ST group and the CBT group was the content of six cognitive restructuring sessions. In the ST group, these six sessions focussed exclusively on schema work and included trauma imagery which allowed reprocessing of childhood experiences. There was also reference to how early experiences could have made some individuals more vulnerable to PTSD which was absent in the CBT group. Overall, this study suggests the ST group had significantly better outcomes than the CBT group in reducing PTSD symptoms and anxiety. There was no significant difference between the ST and CBT group in depressive symptoms.

This study benefits from having a control condition which was similar in content, structure and duration to the ST group. However, there are some methodological and statistical weaknesses which could be addressed in future research. In this study, the participants were recruited during different time frames which meant that randomisation was not possible. Additionally, it is possible that other changes in the clinic may have impacted on the outcomes; for example, treatment fidelity and therapist experience were not reported in this study.

A particular strength of this study was the measurement of schema change. As the primary aim of schema therapy is to reduce the impact of early maladaptive schemas, more studies would benefit from formal assessment of schema change. Unfortunately as data



was collected retrospectively the control CBT group had not completed a post intervention schema measure. As the content and structure of these groups had large amounts of overlap, it would be interesting to determine if the relatively small amount of schema change work in the ST group impacted upon early maladaptive schemas as compared to the control CBT group. This flaw makes it impossible to determine if schemas reduced more in the ST than in the CBT group.

Overall, this study provides an indication that further research in this area would be beneficial. Ideally large scale randomised controlled trials comparing individual and group interventions for PTSD are needed. Additionally, it would be interesting to look at interventions that target PTSD that had arisen from a greater variety of trauma experiences. It would also be beneficial to compare ST to other psychological interventions which have evidence in treating trauma such as Prolonged Exposure (Foa *et al.*, 2007), Cognitive Restructuring (Ellis & Harper, 1975) or Eye Movement Desensitisation and Reprocessing (Shapiro, 2001).

### **Schema therapy for agoraphobia and cluster C personality disorders**

Three studies have investigated the evidence for applying group ST to inpatients with agoraphobia and cluster C personality disorders (Gude & Hoffart, 2008; Gude, Monsen & Hoffart, 2001; Hoffart & Sexton, 2002). Two of these studies had no control conditions (Gude, Monsen & Hoffart, 2001; Hoffart & Sexton, 2002) making any inference about ST impossible as the benefits may be due to psychological contact or the inpatient environment. The other had a control condition that differed in type of group (one was open the other closed) content, structure and possible behavioural experiments (Gude & Hoffart, 2008). Any one of these differences may have influenced the difference in outcomes. An important note made by the authors was also the different data collection

procedures used. The comparison group were sent the follow-up questionnaires by post whilst the ST group had personal interviews. It is known that personal interviews can result in more favourable outcomes due to the potential of participants wanting to please the researcher.

Overall, the lack of control groups in these studies makes it difficult to draw clear conclusions. However these initial promising findings suggest that future larger scale, high quality RCTs are warranted.

### **Dual focus schema therapy for substance misuse**

Two studies were found that targeted substance misuse and concurrent personality disorders (Ball, 2007; Ball *et al.*, 2005). The research in this area was difficult to review for a number of reasons. Firstly, the authors of this research described difficulties retaining participants and collecting data. Secondly, there was an absence of power calculations which potentially means the sample size may have been too small to detect effects. Thirdly, the main outcome measures were reductions in substance use, not reduction in early maladaptive schemas.

Although schema therapy may benefit individuals who use substances, care should be taken to ensure participants are not contra-indicated for therapy. For example, participants should be screened to ensure they are not actively withdrawing, facing other crises and are stable in other respects (Young *et al.*, 2003). When this is not possible, it must be recognised that such influences may impact on the effectiveness of ST. Future research should also evaluate schema change as one of the outcome measures, as this is the primary goal of schema therapy. Ideally, control groups should be run with an evidenced based treatment alternative delivered in an equally structured, focused and intensive way using the same outcome measures to the ST condition. Practically, this may prove difficult

to substantiate within the NHS where therapies for this population are few and far between. Furthermore, future studies should evaluate schema and personality change as well as substance misuse. Finally, to achieve a high quality randomised controlled trial in this area care should be taken to address the difficulties that were encountered and described by these studies. This will likely involve putting procedures in place to overcome the difficulties found in relation to recruitment, retention and data collection.

### **Schema therapy for eating disorders**

To our knowledge only one pilot study has attempted to look at the effectiveness of schema therapy in an eating disorder population (Simpson *et al.*, 2010). This study had a very small number of participants (8) and no control group. For these reasons clinical recommendations cannot be based on this study alone. Despite this study's small size it benefits from having sound outcome measures including schema severity administered at regular intervals and in controlled way. Reductions were found in eating disorder severity, anxiety and shame whilst quality of life increased. These benefits resulted in large effect sizes at the six month follow up. The benefits of this pilot study demonstrate that further research is warranted in this area. Future research should use a control condition to ensure that the benefits were attributable to the schema therapy component rather than other factors (such as a well run, structured and closed group).

## Summary and recommendations

Overall this review highlights the gap between the clinical popularity of schema therapy and the evidence base. Within the current economic climate, without a strong evidence base it may become difficult for clinicians to justify the use of this therapy. In order to establish itself as an evidence based treatment, clinicians and researchers need to plan and implement studies of a similar methodological standard to the study by Giesen-Bloo *et al* (2006). Such research with the personality disorder population would likely involve a large funding application to ensure that the necessary resources are available. As previously discussed, within the current economic climate such funding may be difficult to secure. It is recommended that the economic evaluation by van Asselt *et al.*, (2008) is referred to as a way to demonstrate ST can be a cost-effective treatment.

Overall, the area appears to benefit from using good screening and assessment measures but needs to focus on some key areas. These are:

1. Using randomised controlled designs with larger participant numbers.
2. Using power calculations when planning sample size.
3. Ensuring control groups comprise of evidence based treatment alternatives or that control for 'non-specific effects' such as therapist contact, support etc.
4. Planning quality assessments and ensuring regular schema therapy training and supervision for the therapists.
5. Measuring schema change as an essential outcome measure.

6. Ensuring the intervention is accessible to clinicians by exploring time frames and formats that can be implemented within clinical psychology services in healthcare organisations such as the National Health Service. As previously mentioned, this might include looking further at ST groups or using single case experiments in routine practice as an alternative way of gathering data.

Finally, no one has yet systematically reviewed the theoretical evidence for schema therapy. A theoretical review of ST would make an interesting and clinically useful contribution to the literature.

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