Clinical Psychology and Psychotherapy
Clin. Psychol. Psychother. **14**, 10–18 (2007)
Published online in Wiley InterScience (www.interscience.wiley.com). **DOI**: 10.1002/cpp.511

Early Maladaptive Schemas in Children: Stability and Differences Between a Community and a Clinic Referred Sample

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This study explores whether the Early Maladaptive Schemas (EMS) proposed by Young (1994) are stable in children and whether EMS in community and clinical populations differ. The Schema Questionnaire for Children, (SQC), was completed twice by 77 children (9 out of 10 years) six months apart. The SQC completed by a community group (n = 46) attending a local school and those treated (n = 53) at a specialist child mental health clinic were compared. Significant correlations over time were found for 8 out of 12 of the EMS assessed. Significant differences between the community and referred group were found for 10 out of 12 EMS. These results are consistent with the key theoretical assumptions underlying schema therapy. Further research is required with larger samples of children to substantiate these findings. Copyright © 2007 John Wiley & Sons, Ltd.

INTRODUCTION

The importance of cognitive schemas in the development of later psychopathology is a major underlying tenet of the schema theory suggested by Young and his colleagues (Young, 1994; Young, Klosko, & Weishaar, 2003). Research with adults has highlighted a relationship between general psychopathology and specific mental health problems such as eating disorders, chronic anxiety, depression, personality disorders and adult attachment styles and core beliefs or schemas (Ball & Cecero, 2001; Cecero, Nelson, & Gillie, 2004; Cooper & Hunt, 1998; Stopa, Thorne, Waters, & Preston, 2001; Waller, Shah, Ohanian, & Elliott, 2001; Young, 1994; Young, Weinberger, & Beck, 2001). Young (1994) suggests that problems in adulthood arise as a result of early maladaptive schemas (EMS), defined as 'a broad pervasive theme or pattern comprised of memories, emotions, cognitions and bodily sensations regarding oneself and one's relationship with others' (Young et al., 2003, p. 7). They are assumed to represent entrenched, distorted and dysfunctional patterns of cognitions that 'develop during childhood or adolescence and are elaborated throughout one's lifetime' (Young et al., 2003, p. 7).

(Young, 1994) originally identified 16 EMS although later work has led to the identification of 18 (Young et al., 2003). Research substantiating the existence of the initial 16 schemas in adults has been undertaken by examining the Young Schema Questionnaire (YSQ) completed by clinical and community samples. In clinical samples support for all but one of the proposed EMS, 'social undesirability' has been found (Lee, Taylor, & Dunn, 1999; Schmidt, Joiner, Young, & Telch, 1995). In non-clinical populations 12 EMS have been supported by Schmidt et al. (1995), whereas Cecero et al. (2004) found 11 to have adequate reliability. In terms of discriminative ability, EMS have been found to be good predictors of the presence or absence of psychopathology (Rijkeboer, van den Bergh & van den Bout, 2005). Whilst EMS correctly classified 88% of a clinical and non-clinical sample,

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the authors noted that greater difficulty was experienced in classifying the clinical group.

Research into the presence of schemas in children is limited (Reinecke, Dattilio, & Freeman, 2003). Beckley (2002) administered the YSQ to a non-clinical sample of 705 children aged 11–16 and found a similar factor structure to that obtained with adults. Whilst this provides preliminary support for the presence of EMS in adolescent children, the permanence of these constructs within this age group was not determined. Assessments were only undertaken at one point in time and as such, it is not clear whether these EMS were stable and enduring. Similarly, whilst total YSQ scores were moderately associated with higher rates of psychopathology, there was no relationship between EMS and specific types of psychological disorder (Beckley, 2002). This lack of specificity was also reflected in a recent study by Cooper, Rose, and Turner (2005), who examined schemas and eating problems in a community sample of 272 girls aged 17–18. Differences in EMS between a healthy and a depressed group were found although the ability to distinguish between a healthy and eating disorder group was weaker (Cooper et al., 2005).

A key premise of schema therapy is the notion that schemas develop during early childhood or adolescence and that EMS arise from 'toxic childhood experiences' (Young et al., 2003, p. 10). The earliest EMS to develop are postulated to be the unconditional schemas reflecting fixed beliefs about the self and others. Of the 18 EMS identified, 13 are hypothesized to be unconditional relating to factors such as fear of abandonment, mistrust, defectiveness and failure. Conditional schemas are assumed to develop later and can reduce the negative outcomes of unconditional schemas, albeit temporarily, through patterns of behaviour involving subjugation, self-sacrifice, approval seeking, emotional inhibition or setting unrelenting standards. Although schema therapy is well established, little research has been undertaken with children to substantiate key aspects of the underlying model. No research has been undertaken with pre-adolescent children to determine whether the EMS found in adults and adolescents are also present in this younger group. Similarly, the assumed distinction between conditional and unconditional schemas and the differential ages at which they become fixed and stable has not been substantiated.

Clarification of the above issues requires developmentally appropriate methods of assessing EMS. The commonly used method of assessing EMS with adults, the short form YSQ, is lengthy and complex rendering it unsuitable, particularly for younger children. This prompted Stallard and Rayner (2005) to develop the Schema Questionnaire for Children (SQC), consisting of a single item to assess each of the 15 empirically supported EMS. The difficulties of adequately capturing the multiple facets of each EMS within a single item were acknowledged although the preliminary evaluation appeared promising. The SQC had acceptable face validity and, in a community sample, significant correlations were obtained with the YSQ for 10 EMS with a further two approaching significance (Stallard & Rayner, 2005). Of the three insignificant items, the two assessing schemas of enmeshment/undeveloped self and insufficient self-control/self-discipline have also been found to have unacceptably low internal reliability in a non-clinical sample of adults (Cecero et al., 2004).

The purpose of this study is to explore the presence and stability of EMS in children. In particular the stability of EMS over time will be examined, the differential development of conditional and unconditional schemas explored and differences between EMS in a clinical and non-clinical population assessed.

METHOD

SQC

After the necessary ethical approvals were obtained, children completed the SQC. The development and preliminary evaluation of the SQC has previously been reported (Stallard & Rayner, 2005). A single question summarizing the essence of each of the 15 empirically supported EMS proposed by Young was created (Schmidt et al., 1995). Face validity was assessed by asking a group of experts in child cognitive behaviour therapy which EMS each item best represented. A total of 12 out of 15 items had agreement of 60% or more. The remaining three were discussed with the experts and alternative items generated. The 15 items were then rated by a further 16 experts attending a specialist child Cognitive Behaviour Therapy (CBT) meeting with 12 items resulting in inter-rater agreement in excess of 60%.

Convergent validity was determined by comparing the SQC and the YSQ (short form) completed by 46 children aged 11–16 attending a secondary school. Ten of the original 15 items of the SQC showed significant correlations with the EMS they were designed to assess. A further two showed cor-

DOI: 10.1002/cpp

relations that were approaching significance (i.e., subjugation and self sacrifice). These 12 items were therefore used in the present study. The remaining three items that assessed the EMS of abandonment ('people I love will never be therefore me'), enmeshment ('it is important that my parents are involved in everything I do') and insufficient self-control ('I am not responsible for what I do or say') were dropped. For each item children were asked to use a thought thermometer to rate on a 1–10 scale how strongly they believed each statement (Stallard, 2002, p. 87).

Participants

Stability of EMS

In order to determine the stability of EMS, 77 (43 boys and 34 girls) children in year 4/5 (aged 9/10) attending three separate junior schools in Bath and North East Somerset (BaNES) completed the SQC on two separate occasions six months apart. Of the schools, two were in urban locations and of these one had a high rate of identified emotional and behavioural problems and the second was situated in the third most deprived ward in BaNES. The third school was situated in a rural area. In terms of educational attainment, the National Key Stage 2 results of children in these schools were slightly better than the national average. The percentage of children achieving Level 4 or above in English, Maths and Science was 82% across all subjects, compared with a national rate of 79%, 75% and 86%, respectively (DfES 2005).

During a classroom lesson children were provided with a copy of the SQC and the rating scale. A researcher read out each item and after any necessary clarification, the child rated each item in private.

Clinical Versus Community Comparison

The CSQ was completed by a community sample of 46 non-referred children attending a local secondary school and 53 children assessed and accepted for cognitive behaviour therapy in a specialist child mental health team. The community sample consisted of 13 boys and 33 girls aged between 11–16 with an average age of 12.91 (SD = 1.56). The clinic group consisted of 24 boys and 29 girls aged between 9–18 with an average age of 14.19 (SD = 2.04). There was no significant difference in terms of gender although the members of the clinic group were significantly older (t = 3.34, df = 97, p = 0.001).

Statistical Analysis

Pearson's bivariate correlation coefficient was computed to explore the association between scores on each EMS over time. Average scores for each EMS and the summed total of the SQC for the clinic and community groups were compared. An exploratory analysis suggested that the data did not conform to the assumptions of a normal distribution resulting in a non-parametric, Mann-Whitney analysis being undertaken.

RESULTS

Stability of EMS

Internal consistency of the SQC, as assessed by Cronbach's alpha, was 0.65 at Time 1 and 0.71 at Time 2. At Time 1 the internal consistency was borderline whilst at Time 2 the results are in line with the level of >0.7 indicating adequate internal validity (Bland & Altman, 1997).

Table 1 highlights significant correlations for eight of the 12 EMS and the total score. Of these 12 EMS, four are conditional schemas assessing EMS relating to subjugation, self sacrifice, emotional inhibition and unrelenting standards. Whilst there was a significant correlation over time in the EMS of subjugation there were no significant correlations on the remaining three conditional schemas. This is in contrast to the unconditional schemas where all but one (i.e., emotional deprivation) of the eight assessed were significantly correlated.

Whilst correlations were statistically significant they were modest, ranging from 0.267 to 0.537. Squared correlation coefficients indicate that between 7.1% and 28.8% of the variance is explained and as such a significant proportion of variance is unexplained.

Possible differences in average scores between boys and girls at Time 1 and 2 were investigated. At Time 1 there were two differences, with girls more strongly endorsing the EMS relating to subjugation (p = 0.020) and boys more strongly endorsing that relating to mistrust/abuse (p = 0.003). At Time 2 there was only one moderate difference, with boys more strongly endorsing the EMS relating to emotional deprivation (p = 0.042).

Clinical Versus Community Comparison

Table 2 summarizes the average score of the community (n = 46) and clinical (n = 53) groups for each EMS and the total score on the SQC.

DOI: 10.1002/cpp

Table 1. Average scores on the Schema Questionnaire for Children at two time periods and gender comparison

	Time 1 average (SD) $N = 77$	Time 2 average (SD) $N = 77$	Significance	Time 1 gender		Time 2 gender	
				Male ($n = 43$)	Female ($n = 34$)	Male ($n = 43$)	Female ($n = 34$)
Unconditional schemas							
I am more important/special than others (ET)	2.57 (2.34)	3.01 (2.40)	$r = 0.387$, $p = 0.001$	2.98 (2.58)	2.06 (1.92)	3.49 (2.74)	2.41 (1.76)
No one understands me (SI)	4.18 (2.76)	4.12 (2.77)	$r = 0.361$, $p = 0.001$	4.30 (2.91)	4.03 (2.59)	4.02 (2.92)	4.24 (2.61)
Others are out to get or hurt me (MA)	4.18 (3.03)	3.81 (3.12)	$r = 0.377$, $p = 0.001$	5.09 (3.17)	3.03 (2.44)	3.77 (3.24)	3.85 (3.01)
I need other people to help me get by (DI)	6.35 (2.91)	5.39 (2.93)	$r = 0.267$, $p = 0.019$	6.14 (2.73)	6.62 (3.15)	5.16 (3.09)	5.68 (2.73)
Bad things happen to me (VH)	5.55 (2.96)	4.71 (2.74)	$r = 0.537$, $p = 0.0001$	5.49 (3.08)	5.62 (2.85)	4.77 (2.86)	4.65 (2.62)
No one loves or cares about me (ED)	2.31 (2.50)	2.19 (2.55)	NS	2.63 (2.94)	1.91 (1.78)	2.51 (2.73)	1.79 (2.27)
Other people are better than me (DS)	4.91 (2.62)	5.12 (2.57)	$r = 0.439$, $p = 0.0001$	5.00 (2.3)	4.79 (2.64)	5.47 (2.75)	4.68 (2.27)
I am a failure (FA)	3.17 (2.69)	3.06 (2.58)	$r = 0.332$, $p = 0.003$	3.19 (2.89)	3.15 (2.46)	3.05 (2.69)	3.09 (2.48)
Conditional schemas							
People will be cross or upset if I say the things I really want to say (SS)	4.92 (2.80)	5.17 (2.54)	NS	4.93 (3.01)	4.91 (2.55)	5.40 (2.52)	4.88 (2.58)
I must not show my feelings to others (EI)	5.01 (2.75)	4.44 (2.74)	NS	5.51 (2.77)	4.38 (2.63)	4.26 (2.96)	4.68 (2.46)
It is more important to put other people's wishes and ideas before my own (SB)	6.29 (3.08)	6.10 (2.50)	$r = 0.319$, $p = 0.005$	5.58 (3.04)	7.18 (2.93)	3.49 (2.74)	2.41 (1.76)
It is important to be better than others at everything I do (US)	2.70 (2.10)	3.04 (2.09)	NS	2.86 (2.17)	2.50 (2.03)	3.28 (2.35)	2.74 (1.69)
Total (15.21)	52.13 (14.80)	50.17 (15.45)	$r = 0.536$, $p = 0.0001$	53.67 (14.73)	50.18 (14.88)	51.09 (15.75)	49.00

ET, Entitlement/Grandiosity; SI, Social Isolation/Alienation; MA, Mistrust/Abuse; DI, Dependence/Incompetence; VH Vulnerability to Harm or Illness; ED, Emotional Deprivation; DS, Defectiveness/Shame; FA, Failure; SS, Self Sacrifice; EI, Emotional Inhibition; SB, Subjugation; US, Unrelenting Standards; NS, Not Significant.

DOI: 10.1002/cpp

Table 2. Schema Questionnaire for Children: Between-group comparison of community (n = 46) and clinic (n = 53) referred children: Within-group comparison of age and gender in the clinic group

	Community average (SD) N = 46	Clinic average (SD) N = 53	Significance	Clinic group (n = 53) by age and gender			
				Male (n = 24)	Female (n = 29)	13 or under (n = 16)	Older than 13 (n = 37)
Unconditional schemas							
I am more important/special than others (ET)	2.33 (2.23)	1.70 (1.28)	NS	1.92 (1.47)	1.52 (1.09)	2.44 (1.63)	1.38 (0.95)
No one understands me (SI)	4.20 (2.86)	5.81 (3.02)	$p = 0.010$	4.46 (3.09)	6.93 (2.49)	4.94 (3.51)	6.19 (2.75)
Others are out to get or hurt me (MA)	2.37 (1.97)	3.40 (2.52)	$p = 0.021$	3.50 (2.48)	3.31 (2.59)	3.50 (2.68)	3.35 (2.49)
I need other people to help me get by (DI)	4.41 (2.74)	6.58 (2.76)	$p = 0.001$	6.54 (3.08)	6.62 (2.53)	7.00 (2.73)	6.41 (2.79)
Bad things happen to me (VH)	4.83 (2.85)	6.53 (2.91)	$p = 0.004$	6.08 (2.98)	6.90 (2.85)	5.88 (3.30)	6.81 (2.72)
No one loves or cares about me (ED)	2.17 (2.29)	3.28 (2.98)	$p = 0.045$	2.83 (2.63)	3.66 (3.23)	3.00 (3.08)	3.41 (2.97)
Other people are better than me (DS)	4.59 (2.53)	5.66 (2.66)	$p = 0.035$	5.58 (3.02)	5.72 (2.37)	4.56 (3.10)	6.14 (2.34)
I am a failure (FA)	2.39 (2.30)	4.17 (2.56)	$p = 0.0001$	4.17 (2.66)	4.17 (2.52)	3.81 (2.51)	4.32 (2.60)
Conditional schemas							
People will be cross or upset if I say the things I really want to say (SS)	3.96 (2.28)	5.57 (2.86)	$p = 0.007$	5.63 (2.68)	5.52 (3.04)	4.44 (2.45)	6.05 (2.91)
I must not show my feelings to others (EI)	3.15 (2.63)	4.70 (2.87)	$p = 0.005$	5.04 (3.07)	4.41 (2.71)	5.19 (3.17)	4.49 (2.74)
It is more important to put other people's wishes and ideas before my own (SB)	4.63 (2.14)	5.91 (2.13)	$p = 0.002$	6.38 (2.36)	5.52 (1.88)	5.94 (2.24)	5.89 (2.12)
It is important to be better than others at everything I do (US)	3.48 (2.49)	3.28 (2.36)	NS	3.83 (2.41)	2.83 (2.27)	2.81 (1.60)	3.49 (2.62)
Total	42.50 (17.46)	56.45 (15.72)	$p = 0.0001$	55.96 (15.97)	56.86 (15.78)	53.06 (15.53)	56.86 (15.78)

DOI: 10.1002/cpp

Table 3. Discriminant function-variable correlations and tests of equality of group means (Wilks' lambda, *F*-statistic) of the community ($n = 46$) and clinical ($n = 53$) groups

SQC item	Canonical correlation	Wilks' lambda	F(df1 = 1; df2 = 97)	Significance
Unconditional schemas				
I am more important/special than others (ET)	0.174	0.970	3.046	0.084
No one understands me (SI)	0.266	0.929	7.394	0.008
Others are out to get or hurt me (MA)	0.221	0.951	4.982	0.028
I need other people to help me get by (DI)	0.370	0.863	15.351	0.0001
Bad things happen to me (VH)	0.285	0.919	8.589	0.004
No one loves or cares about me (ED)	0.204	0.958	4.214	0.043
Other people are better than me (DS)	0.204	0.958	4.202	0.043
I am a failure (FA)	0.368	0.865	14.867	0.000
Conditional schemas				
People will be cross or upset if I say the things I really want to say (SS)	0.297	0.912	9.391	0.003
I must not show my feelings to others (EI)	0.272	0.926	7.724	0.007
It is more important to put other people's wishes and ideas before my own (SB)	0.288	0.917	8.764	0.004
It is important to be better than others at everything I do (US)	0.041	0.998	0.160	0.690

The results demonstrate a significant between-group difference on 10 of the 12 items and the total score. There were no significant between group differences on the items assessing the EMS of unrelenting standards, ('It is important to be better than others at everything I do') and entitlement, ('I am more important/special than others').

The confidence intervals around the mean scores of each item resulted in some overlap between the clinical and community samples thereby raising the possibility that the two groups were endorsing items in a similar way. A discriminant functional analysis was undertaken to determine whether the clinical and community sample differed in terms of their response on all subscales. The results are presented in Table 3.

The overall results were significant (Wilks' lambda = 0.691, chi square = 32.94, df = 12, $p = 0.001$) and suggest that the scoring profiles of the two groups were different. An analysis of individual items revealed significant differences for all items apart from those assessing entitlement and unrelenting standards. Correlation coefficients were modest although ten items were beyond the 0.20 threshold that has been suggested for identifying predictor variables (Tabachnick & Fidell, 1996).

Gender and Age Effects

A comparison was undertaken within the clinical group to explore possible age and gender effects. In view of the fact that the average age of the members of the community group is almost 13, the clinical group was split into those children aged 13 and below ($n = 16$) and those over 13 ($n = 37$). A significant age difference was found in only one item with younger children more strongly endorsing the item assessing the EMS of entitlement, ('I am more important special than others', $p = 0.01$). This was one of the two items that did not differentiate between the community and clinic referred group.

In terms of gender, there was only one significant difference with girls more strongly endorsing the item assessing the EMS of social isolation ('no one understand me', $p = 0.005$).

Higher-Order Factor Analysis

An exploratory analysis of the combined community and clinic groups ($n = 93$) was undertaken in order to explore the higher-order clustering of items.

An initial Kaiser-Meyer-Olkin measure (KMO) of sampling adequacy (KMO = 0.813) indicated that patterns of correlations were relatively compact and thus factor analysis appeared appropriate. A principal-components factor analysis was undertaken with a Varimax rotation in order to optimize the factor structure. Selecting factors with eigenvalues of greater than 1 resulted in a four-factor solution accounting for 66.14% of the variance. The final model, before and after rotation, is summa-

DOI: 10.1002/cpp

Table 4. Final factor structure and total variance explained by the SQC with and without Varimax rotation (n = 93)

Component	Extraction sums of squared loadings			Rotation sums of squared loadings		
	Eigenvalue	% of variance	Cumulative %	Eigenvalue	% of variance	Cumulative %
1	4.31	35.89	35.89	3.80	31.68	31.68
2	1.41	12.41	48.30	1.54	12.87	44.55
3	1.13	9.38	57.68	1.40	11.70	56.25
4	1.02	8.47	66.15	1.19	9.90	66.15

Table 5. Final rotated four-factor component matrix

Item	Factor			
	1	2	3	4
Bad things happen to me (VH)	0.740			
No one loves or cares about me (ED)	0.736			
I am a failure (FA)	0.731			
No one understands me (SI)	0.700			
I must not show my feelings to others (EI)	0.677			
Others are out to get or hurt me (MA)	0.657			
People will be cross or upset if I say the things I really want to say (SS)	0.650			
Other people are better than me (DS)	0.542			
It is important to put other people's wishes and ideas before my own (SB)		0.749		
I am more important/special than others (ET)		–0.650		
It is important to be better than others at everything I do (US)			0.895	
I need other people to help me get by (DI)				0.920

rized in Table 4. There was comparatively little difference in the variance explained by each factor before and after rotation.

Items loading 0.40 or greater on any factor were assigned to that factor and if an item loaded on two or more factors the item was assigned to the factor on which they loaded most highly. All items loaded on one factor with the final rotated four factor matrix are summarized in Table 5. The items assigned to each factor were identical in the unrotated and rotated model.

Eight items loaded on the first factor. The second factor consisted of two items, with the item assessing subjugation loading positively whilst that assessing entitlement loading negatively. The final two factors consisted of single items relating to the EMS of dependence/incompetence and unrelenting standards.

DISCUSSION

These findings provide preliminary support for the presence and stability of the EMS proposed by Young (1994) in a non-clinical sample of 9/10-year-old children. Significant correlations over a six-month period were found for two-thirds of the EMS assessed. Further analysis supported the assumed theoretical distinction between conditional and unconditional schemas and their differential rates of development. Significant correlations were obtained for 7 out of 8 of the unconditional EMS that are assumed to develop earlier compared with only 1 out of 4 of the conditional EMS assumed to develop later. The one conditional EMS that was stable assessed subjugation, a behaviour that is relatively common for children who regularly succumb to the wishes and ideas of others, particularly parents and teachers. The stability of this EMS may therefore reflect the developmental context of children where subjugation is a normal and pervasive experience. Greater variations in subjugation may become evident with older children who may be better at distinguishing between subjugation as a personally and actively chosen response as opposed to normal conformity to externally imposed demands.

Whilst these preliminary results suggest the possible stability of EMS in children, this conclusion should be viewed with caution. First, these findings need to be substantiated with a larger group and within a clinical population. Second, although correlations were statistically significant they nonetheless accounted for only a small proportion

DOI: 10.1002/cpp

of the total variance. The time frame assessed was relatively short (i.e., six months) and it is unclear whether EMS would show greater or less stability over a longer time period or across a different developmental stage (e.g., adolescence) In addition, it is recognized that the correlations reported in this study could be an artefact of the measure used to assess EMS, the SQC. The development of the SQC involved a simplification of each EMS. Distilling each EMS into a single question may result in the multiple dimensions of each schema becoming lost. The correlations reported in this study may therefore reflect a consistency across the singular cognitive dimension assessed by the SQC with possibly important and subtle developmental variations within each EMS not being adequately captured.

Comparatively few gender effects were observed in both the community and clinical groups with boys and girls tending to endorse items in a similar way. In some respects this result is unexpected given the reported differences in the prevalence of internalizing and externalizing disorders in boys and girls. The age range in these studies was, however, limited with comparatively few children being under the age of 11 or over 15. It is therefore possible that gender effects in EMS may become more apparent during latter adolescence, a suggestion that would be consistent with the findings of research involving older adolescents and adults where more substantive gender differences in EMS have been reported (Beckley, 2002; Dench, Murray, & Waller, 2005).

In terms of age, an analysis within the clinical group revealed few differences, a finding that is consistent with our previous study exploring EMS in a community group (Stallard & Rayner, 2005). However, as mentioned above both studies are limited by a small sample size and a limited age span. Age effects may become more apparent with a larger sample where more detailed analysis within specific age ranges can be undertaken. Furthermore, this study has not explored the stability of EMS in adolescence, a period of rapid and significant developmental change. It is therefore unclear whether EMS become more or less stable as the adolescent assumes increased personal responsibility and independence and becomes more aware of, and susceptible to, social pressure. This highlights the need for prospective studies initiated with young children to determine the development of EMS and the specific age at which conditional and unconditional EMS become stable and more enduring.

The ability of the SQC to discriminate between a community and clinic referred group was good with significant differences being found on 10 out of 12 EMS and the total score. Although the discriminative ability of individual items was modest the 10 significant items yielded correlation coefficients suggesting that they did discriminate between the two groups. Of those EMS, which were significant, the clinical group tended to endorse each item more highly. It is interesting to note that the two non-significant schemas assessing unrelenting standards and entitlement also had the lowest discriminative ability in a recent study with adults (Rijkeboer et al., 2004). Further studies are required to determine whether the discriminative ability of the SQC increases with a larger sample. The results of this study do however support the theoretical model underlying schema therapy and in particular the association between EMS and psychopathology. Further exploration of the relationship between specific problems and EMS in children would be useful.

Finally, the higher-order factor structure of the EMS in the clinical group was explored. The resulting four-factor solution appeared identifiable and related to issues of personal vulnerability (vulnerability/harm, emotional deprivation, failure, mistrust/abuse), inferiority (subjugation and entitlement), personal accomplishment (unrelenting standards) and a need for protection (dependency/incompetence). Whilst this solution is different from the higher-order solution obtained with adults, it may not necessarily reflect a developmental variation. In the present study a single item was used to assess each schema with the SQC assessing only 12 of the 16 empirically supported EMS. Ideally this analytic method requires a minimum of 20 items, a requirement that was not met by the 12-item SCQ (Nunnally, 1978). Similarly the reduced number of EMS assessed will affect the higher-order structure and the subsequent factor loadings that emerge.

In conclusion, whilst this study is limited by a small sample size and narrow age range, the results are consistent with many of the key assumptions underlying schema therapy. The EMS proposed by Young (1994) appear to be present in 9/10-year-old children, a finding that is consistent with the assumption that EMS develop and become stable during childhood. The assumed distinction between unconditional and conditional schemas was supported with unconditional schema, as predicted, becoming stable earlier than conditional schemas. Finally, predicted differences in the EMS

DOI: 10.1002/cpp

of children with psychological problems attending a specialist mental health clinic and those in a community sample were found. Further research is required to substantiate these findings and to extend this work to younger age groups. If replicated these findings would have major implications for the delivery of services for children with child mental health problems. Interventions designed to promote adaptive schemas could be developed and provided as a way of preventing EMS becoming established. In addition, the extension of developmentally modified schema-focused interventions, particularly for those children with complex and enduring problems, would appear indicated.

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DOI: 10.1002/cpp