Factor Structure of the Italian Short Schema Mode Inventory (SMI)

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Abstract

OBJECTIVE: This study involves the initial validation of the Short Schema Mode Inventory (SMI) in Italy. A total of 109 Axis II patients and 241 controls participated in the study. METHOD: Confirmatory factor analysis on SMI data to evaluate a measurement model of 14 factors using LISREL 8.80 was performed. Assessment of fit was based on CFI, NNFI, SRMR, RMSEA and Chi-square/df ratio. Reliability and construct validity were computed using SPSS 20. RESULTS: All indices considered (Chi-square = 15481.95; df = 6694; Chi-square/df = 2.23; NNFI = .95; CFI = .95; RMSEA = .061; SRMR = .079) reflected a reasonable fit of the observed data to 14-factors model. Reliability and construct validity were also good. CONCLUSIONS: These results support the factor structure, involving 14 factors, of the Italian SMI.

Keywords: schema mode inventory, schema therapy, personality, coping, personality disorder, psychotherapy.

1. Introduction

Schema Therapy (ST), developed by Young, Klosko and Weishaar (2003), presents itself as a systematic, organized and methodical approach to treat patients with personality disorders or highly resistant to change (McGinn, & Young, 1996; McGinn, Young, & Sanderson, 1995; Young, Beck, & Weinberger, 1993; Young, & Behary, 1998; Young, & Brown, 1991; Young, & Gluhoski, 1996; Arntz, 1999). This therapy fills the gaps in the cognitive model by integrating contributions from other theories (Cacioppo, Berntson, Larsen, Poehlmann, & Ito, 2000; Cacioppo, Klein, Berntson, & Hatfield, 1993), such as attachment theory (Ainsworth, 1969), Gestalt theory (Field, & Horowitz, 1998; Horowitz, & Znoj, 1999), psychodynamic theory (Mayer, & Merckelbach, 1999; Wiser, & Goldfried, 1998) and behaviorism (Beck, 1979; Mahoney, 1993). Recently, in Holland, ST has been studied and compared to Transference-Focused Psychotherapy (TFP), a psychodynamic treatment method developed by Giesen-Bloo and his colleagues (Giesen-Bloo, van Dyck, Spinhoven, Van Tilburg, Dirksen, *et al.,* 2006). ST presents more effective results than TFP in reducing Borderline Disorder Patients (BDP) symptoms and other psychopathological aspects related to patients' quality of life also in forensic patients (Bernstein, Arntz, & de Vos; 2007). Four years after the beginning of the treatment, follow-up studies point out that 52% of the patients treated with ST recovered from BPD, while more than two thirds showed clinically significant symptom reduction (unstable relationships, identity disorder, impulsivity, suicidal ideations, emotional instability, feeling of emptiness, rage, paranoid and dissociative ideations). Despite the high cost of the treatment, the cost-clinical efficacy ratio proves that ST is cost-effective, as it obtains better results than TFP and is less expensive. Moreover, ST entails lower dropout rates and the reduction of the social cost of BDP, which results in a globally smaller financial commitment in spite of the expensiveness of the treatment (van Asselt, Dirksen, Arntz, Giesen-Bloo, Van Dyck, *et al.,* 2008).

The concept of *mode* is the essential and most complex aspect of the theoretical model proposed by Young and colleagues (Lobbestael, van Vreeswijk, & Arntz, 2008; Young, Arntz, Atkinson, Lobbestael, Weishaar, *et al.*, 2007). It can be defined as the predominant emotional state, schemas, and coping responses, which are activated in a given subject, at a specific time. By definition the modes are transient and may comprise both adaptive and maladaptive responses (Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010; Young, Arntz, Atkinson, Lobbestael, Weishaar, *et al.*, 2007). In socio-cognitive terms the modes are the conception of the self that are active at a given time. They are the part of the self, or the identity of that person, who leads the way in which the subject himself anticipates, sees, responds to the world around him/her (Kellogg, & Young, 2006).

In particular, a dysfunctional mode is characterized by maladaptive schemas or coping responses erupting into distressing emotions, avoidance responses or self-defeating behaviors that influence an individual's response and control his/her emotional and behavioral functioning. There are four mode categories. The first one refers to the Child modes. The modes that describe this category are characterized by strong distressing emotions, such as intense fear of abandonment, sadness and rage. These modes develop when the child's basic emotional needs were not recognized and met during childhood. This category of mode also includes a functional mode, the so-called Happy Child, which is expressed when an individual sees fulfilled his/her primary emotional needs.

The second category concerns the dysfunctional Parent modes, referring to the hypercritic and strict parental behavior that the patient internalized during childhood or adolescence and that imposes on him/her excessively high standards. The third concerns the dysfunctional coping modes and reveals the strict and excessive use of the cognitive strategies of Overcompensation, Avoidance and Surrender.

The last category represents the Healthy Adult, which is the mode ST tries to strengthen through therapy and by teaching patients how to identify and, consequently, modify the modes that are unsuitable to their good functioning in the environment (Young *et al.,* 2003). Therefore, the role of the therapist, having to evaluate and recognize a patient's modes, is fundamental. In fact, every personality disorder is characterized by a specific configuration of maladaptive modes. The mode model was at first developed for the BPD (Young *et al.,* 2003; Arntz, & van Genderen, 2011) and is based on five specific modes: Abandoned Child, Angry and Impulsive Child, Punitive Parent, Detached Protector and Healthy Adult.

Although clinical interest in ST has increased over the last few years, empirical tests on the effectiveness of the mode model are still scarce. In this regard, the Dutch pioneering study (Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010) resulting in the development and validation of the *short Schema Mode Inventory* (SMI), is fundamental. In fact, the SMI is an essential tool, for it allows the therapist to evaluate adequately the active modes of a patient at a given time. Results revealed an adequate fit for the hypothesized 14-factor model. In order to confirm the validity of the psychometric properties of the examined tool, studies highlighted a distinctive mode configuration for each personality disorder. As well as Netherland, Germany was in need of a test that could evaluate the ST modes and could be used in psychotherapeutic practice. Therefore, a confirmatory study was conducted in order to validate the German SMI (Reiss, Dominiak, Harris, Knornschild, Schouten, & Jacob, 2012). In accordance with Lobbestael and colleagues' (2010) analysis, the authors set out to evaluate the factor structure, the internal consistency and the intercorrelations between subscales of the German SMI. The results were compared to those of the original version: the empiric data conformity was examined through a confirmatory factorial analysis. The study shows that also in Germany the hypothesized 14-factor model satisfactorily fits the factor structure taken into consideration. As far as the intercorrelations between subscales are concerned, results are in line with those of the Dutch research: the adaptive modes correlate positively and, in statistic terms, significantly with each other, as do the maladaptive ones. Finally, discriminant validity is always significant, except for the "Self-Aggrandizer" factor.

The SMI is composed of 14 subscales that can be grouped into 4 different macro-categories. The first, concerning the Child, is the largest and includes the following modes. The *Enraged Child* presents heightened, exaggerated and excessive aggressive feelings almost inevitably resulting in harming people or damaging objects (Exemplifying item: "I physically attack people when I'm angry at them"). By contrast, the *Angry Child*'s feelings of anger, frustration and impatience are because his needs have neither been considered nor satisfied ("I'm angry with someone for leaving me alone or abandoning me"). The subscale of the *Impulsive Child* refers to a person acting impulsively, immediately and directly in order to meet his/her needs or desires, without being able neither to postpone his/her gratification nor to predict the consequences of his/her actions ("It is impossible for me to control my impulses").

The *Undisciplined Child* mode describes an extremely frustrated person, unable to make efforts in order to fulfill routine or boring tasks, who, consequently, easily decides to give up ("If I can't reach a goal, I become easily frustrated and give up"). The *Vulnerable Child* feels sad, scared, alone, unworthy and impossible to love ("I often feel alone in the world"). By contrast, the *Happy Child* subscale refers to a person who feels loved, accepted, understood, safe and at ease acting spontaneously ("I feel loved and accepted").

The second macro-category focuses on the maladaptive Coping modes. Concerning the Avoidance strategy, there is the *Detached Protector* mode, characterized by emotional and psychological withdrawal of the individual, who suppresses his/her feelings, depersonalizes him/herself and does not feel linked to or in contact with others. Therefore, feelings of emptiness, boredom and abulia are typical of this context ("I don't want to get involved with people"). Contrarily, the *Detached Self-soother* subscale refers to an emotionally detached person, who tries to suppress and silence his/her emotions by compulsively and excessively committing to merely distracting and soothing activities, such as eating, watching TV, abusing drugs and having promiscuous sex ("In order to be bothered less by my annoying thoughts or feelings, I make sure that I'm always busy"). Among the dysfunctional coping strategies, diametrically opposed to the avoidance one, there is the overcompensation that, according to Lobbestael and colleagues (2010), is composed of two subscales: the *Self-Aggrandizer* and the *Bully/Attack*. Someone that is in the *Self-Aggrandizer* mode acts egoistically, shows little empathy for the needs and feelings of others and thinks he/she should not follow the rules of his/her community ("I do what I want to do, regardless of other people's needs and feelings"). The *Bully/Attack* subscale is characterized by the will to strategically harm others physically, psychologically, verbally and through antisocial or criminal actions ("I mock or bully other people"). The Surrender strategy is related to the *Compliant Surrender* mode, referring to a passive, servile, submissive behavior of someone constantly looking for everyone's approval. Fearing conflict or a refusal, the individual could even tolerate abuses and silence his/her needs or desires ("I allow other people to criticize me or put me down").

The third category of modes includes the figures concerning the Dysfunctional Parent: the *Punitive Parent* and the *Demanding Parent*. The first subscale represents the interiorized voice of very critical and punitive attachment figures. When in this mode, a person gets angry with him/herself and feels he/she need punishment for having needs which, in reality, are completely normal ("I don't allow myself to do pleasurable things that other people do because I'm bad"). The *Demanding Parent* mode concerns people constantly feeling under pressure, for they aim at reaching excessively high standards and goals. These people think they have to be perfect and always absolutely efficient, in order to be accepted by others. Moreover, others' needs are almost always considered as more important and overriding than their own ("I'm hard on myself").

Last, but not least, is the *Healthy Adult* mode, presenting significant adaptive and mediation functions between the different identified elements. It harbors and embraces the Vulnerable Child's vulnerability; sets strict limits and boundaries on behaviors to the Angry and the Impulsive Child; encourages and supports the Happy Child's functionality; fights to replace the maladaptive coping strategies and, finally, neutralizes or limits the influence of his/her dysfunctional parents. Moreover, this mode also accomplishes appropriate adult functions, such as working, adopting caregiving behaviors and taking responsibilities. Furthermore, it engages in pleasant and stimulating adult activities, such as sex, cultural and aesthetic interests and sports ("When there are problems, I try hard to solve them myself").

The aim of this study is to evaluate psychometrically the Italian translation of the SMI. In particular we want to study:

- The internal consistency of SMI;
- The factor structure, through a confirmatory factorial analysis comparing it to the results of the English and German versions;
- The divergent validity, through the comparison between a clinical group and a non-clinical one;
- The correlation between the adaptive modes as well as between the maladaptive ones;
- If the dysfunctional modes are significantly higher in patients than in controls and if the functional modes are statistically higher in controls than in patients.

2. Method

SMI has been administrated to a large sample of patients with Axis II diagnosis and to a control group without evident psychiatric disorders.

First of all, the Structured Clinical Interview for DSM-IV disorder II (SCID II; First, Spitzer, Gibbon, Williams, & Benjamin, 1994) or the Millon Clinical Multiaxial Inventory III (MCMI-III; Millon, Davis, & Millon, 1997) were administered in order to assess the presence of Axis II disorders in the psychiatric patients who took part in the study and to diagnose them. In particular, 82 patients underwent the SCID II clinic interview, while 27 underwent the MCMI-III. It has not been possible to screen the controls so as to assess the absence of potential psychopathologies. The whole sample underwent the SMI (N = 379). The control group members were contacted depending on their geographic proximity to those of the study group.

Participants were tested singularly. All participants were previously informed about the research protocol and purposes and signed informed consent.

2.1 Participants and Method

379 individuals underwent the SMI: 127 with Axis II diagnosis (study group) and 252 without evident psychiatric pathologies (control group). Only the 350 questionnaires that had been entirely filled in were analyzed: 109 in the study group and 241 in the control one.

86 out of the 127 psychiatric patients came from the accredited private hospital "Villa Maria Luigia" in Monticelli Terme (province of Parma), while 23 from the "Raymond Gledhill" community for drug addicts in the province of Rome. Exclusion criteria were: age < 18 and > 90 years old, IQ < 80, no good knowledge of Italian, intoxication by alcohol or drugs during testing and established diagnosis of schizophrenia or dementia. Of the 109 patients, 43.1% had a borderline PD diagnosis, 22.9% a personality disorder NOS, 6.4% antisocial PD, 6.4% dependent PD, 5.5% histrionic PD, 3.7% obsessive-compulsive PD, 2.8% avoidance PD, 1.8% schizotypal PD, 0.9%, schizoid PD and 0.9% paranoid PD. Most patients (79 out of 109) also presented an Axis I diagnosis: substance abuse (67.1%), major depression (13.9%), eating disorders (11.4%) and bipolar disorder (7.6%).

The control group members were contacted depending on their geographic proximity to those of the study group. Patients and control group subjects had in common three or four out of the five social and personal data variables required in the test: gender, age, marital status, educational qualification and profession. The mean age of the sample was 36.21 years (DS = 12.47), the patients' one was 38.25 (DS = 10.00) and the controls' one was 35.29 (DS = 13.35). Women slightly outnumbered men (55.7% vs 44.3%). 55.7% of the sample was single, 36.3% was married or lived together and 7.1% was separated or divorced. On average, the level of education was high.

2.2 Materials

All patients underwent singularly one of the following questionnaires, administered by psychologists of the facilities they were hospitalized in:

- *The Millon Clinical Multiaxial Inventory – III* (MCMI-III; Millon *et al.*, 1997): the MCMI-III is a 175-item dichotomous questionnaire (true/false) referring to emotional, cognitive and behavioral aspects of the examined patient. It is composed of 14 personality scales and 10 clinic scales, and is intended for adults from 18 years old on.
- *The Structured Clinical Interview - II* (SCID-II; First *et al.*,1994): the SCID-II is used to diagnose the 10 DSM-IV personality disorders (American Psychiatric Association, 1994), the personality disorder not otherwise specified and passive-aggressive or depressive disorders (included in Appendix B of the DSM-IV). The 119-question questionnaire requires at least an eighth grade reading level and generally takes 20 minutes to complete.

2.3 Statistical analysis

The confirmatory factorial analysis (CFA) was carried out through the LISREL 9.0 statistical package, using the maximum likelihood method, while the conformity between the tested model and the SMI hypothesized structure (goodness of fit) was assessed through several indices, as Cole (1987) recommends: the *Root Mean Square Error of Approximation* (RMSEA), the *Non-Normed Fit Index* (NNFI), the *Comparative Fit Index* (CFI), the *Incremental Fit Index* (IFI) and the chi-square/degrees of freedom (df) ratio (Cole, 1987; Kline, 2004). The other analysis was carried out through the SPSS statistical package, version 20. Cronbach's alpha was used to assess internal consistency; Pearson's correlation coefficient to highlight possible correlations; ANOVA trend analyses to test the construct validity and assess the differences between the two subgroups: the psychiatric patients and the controls.

3. *Results*

3.1 Goodness of fit indices

The goodness of fit indices values (table 1), quite similar to those of the previous researches, showed that the 14-factor model adequately represented the SMI test structure. In fact, as table 1 indicates, both CFI and NNFI had a value of .95. RMSEA was below .08. Finally, SRMR was below .10.

3.2 Internal consistency

The internal consistency of all the subscales of the Italian SMI was acceptable (see tables 1 and 3), for Cronbach's alpha, ranging from .66 to .95, had a mean value of .81. Therefore, results can rationally be compared to those of the previous researches. On the other hand, correlations between items ranged from .19 to .64, with a mean of .38, which was lower than the one emerged in the previous validations (Dutch = .47; German = .44). Item loadings mean value, .62, was more adequate and positive, being in line with previous results, although slightly lower.

3.3 Intercorrelations between modes

The table concerning the intercorrelations between modes (table 4) showed that all maladaptive modes correlated positively and statistically significantly with each other, as did the two functional modes. Moreover, the adaptive modes correlated negatively and statistically significantly with the dysfunctional ones. Despite the high correlations detected, none reached 1.0, which means that the SMI subscales represent different constructs. The mean intercorrelation of the two adaptive modes was .69; the mean correlation between the maladaptive modes concerning the child was .60, the one between the two dysfunctional parent modes was .51 and the one between the coping modes was .38.

Four correlations between functional and dysfunctional modes were not significant: Self-Aggrandizer with Happy Child, Adult with Self-Aggrandizer, Adult with Bully/Attack and Adult with Demanding Parent.

3.4 Construct Validity

As table 4 shows, ANOVA trend analyses showed that in the maladaptive modes subscales patients had higher scores than controls, while in the adaptive modes subscales patients had lower scores than controls. The two groups' scores were significantly different for each subscale; therefore, the tool has good divergent validity, which means it can distinguish between patients and controls. Results also revealed a good construct validity, for the patient group's scores were significantly different from the control group's ones.

4. *Discussion*

This experimental study aims to analyze and evaluate the psychometric properties of the Italian version of the SMI (Young *et al.,* 2007), a recent testing tool used both for clinical and research purposes. This is the third validation, the first two being the German (Reiss *et al.*, 2012) and the Dutch (Lobbestael *et al*., 2010) ones.

Therefore, the main purpose of the study was to conduct a confirmatory factorial analysis, which is a data synthesis method allowing us to identify the latent psychological factors upholding the coherence of the participants' answers to the items. Results confirmed a good fit to the 14-factors SMI structure, in line with the previous study (Lobbestael *et al*., 2010; Reiss *et al*., 2012).

Cronbach's alpha mean value was .81, which is very similar to the German (.85) and the Dutch (.87) ones. As far as the correlations between items are concerned, they were lower than those of the previous researches, meaning that there was a high variability of the answers given to different items testing the same construct. The average item loadings, referring to the importance in the model of each factor and to its contribution in explaining the theory, was more positive and adequate. Their mean value in this study settled at .62 and was perfectly in line with the German and Dutch one (.68).

Moreover, while most correlations between different modes were significant, none reached 1.0, which means that the subscales represent different constructs. For example, even if the Vulnerable and the Angry Child correlated significantly with each other, there were still slight differences in this maladaptive factors. In the first case the person feels sad, afraid, alone and inadequate, while the second case is characterized by rage, frustration and impatience. The four correlations that were not significant concerned associations between functional and dysfunctional modes.

In line with the initial hypothesis, the variance analysis (ANOVA) showed that the answers to the SMI subscales differed significantly between the clinic and the control groups: patients' scores were higher than the controls' ones in the maladaptive mode subscales and lower in the adaptive modes subscales. This means that the tool has good external validity.

All results are perfectly in line with the Schema Therapy mode theory and we can affirm that the 14-factors structure is a significant and adequate model to represent the nature of the Italian version of the SMI. One of the research limits is the questionnaire length, taking more than 40 minutes to complete in each session. Some participants found it difficult to stay constantly focused during the whole session. Moreover, some items presenting a double request or negation could also limit the research, for they may confuse the patients. Another aspect that should be taken into consideration is the reliability of the self-report interviews. Some studies raise doubts about the truthfulness of results obtained with this method. In particular, Lobbestael, Arntz, & Sieswerda (2005) highlight that some patients with a personality disorder diagnosis, such as an antisocial PD one, find it very difficult to report truthful auto-descriptions, for they take great care in putting themselves in a good light. Therefore, the risk is to incur social desirability bias and, consequently, a test assessing the social desirability construct should be associated with the SMI protocol.

4.1 Conclusion

This experimental study proves the SMI (Lobbestael *et al.,* 2010) validity in both the therapeutic and the research fields. Results are perfectly adequate and in line with those of the previous studies (Lobbestael *et al.,* 2010; Reiss *et al.,* 2012), which is particularly important for it shows that the test is valid in a socio-cultural context different from the original one. This indicates that the SMI theoretical structure, based on the Schema Therapy, is particularly strong, for it can be employed in different contexts. Therefore, Schema Therapy presents itself as an approach in constant evolution and as a more and more promising treatment for personality disorders.

According to the new perspective it proposes, even personality disorders particularly difficult to manage can be treated with very positive results. Therefore, the initial aim of this study was partially achieved. Moreover, this study paves the way for further scientific progress that we hope will fill the gaps in the field in order to reach a more broader and rigorous knowledge, applied even for therapeutic use. Further developments could concern carrying out the study considering a larger number of participants, including also patients with Axis I diagnosis, or enlarging the research by conducting a test-retest analysis. Moreover, as other authors have already suggested (Bernstein, Arntz, & de Vos, 2007), extra subscales, such as the "Predator", the "Conning and Manipulative" and the "Healthy Parent" should be added in order to better distinguish personality disorders from each other in the evaluation phase. Finally, in order to make the study more representative, further researches should be more multicentric, meaning that participants should be equally distributed on the whole Italian territory.

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Table 1: Goodness of fit indices (N = 350)

Model	CFI	NNFI	SRMR	RMSEA	χ^2/(df)
14 factors	.95	.95	.079	.061	14945.87 (6694)

Note: CFI = comparative fit index; NNFI = non-normed fit index; SRMR = standardized root mean square redisual; RMSEA = root mean square error if approximation; χ2 = chi-square; df = degrees of freedom.

Table 2. Internal Reliability of the SMI (N = 350)

Scale	**N Item**	**α Cronbach**	**Correlation between indices**	**Mean weight of each item**
Vulnerable Child	10	.95	.64	.80
Angry Child	10	.86	.38	.62
Enraged Child	9	.88	.48	.69
Impulsive Child	8	.85	.42	.65
Undisciplined Child	5	.76	.40	.62
Happy Child	10	.89	.45	.67
Compliant Surrender	7	.74	.29	.55
Detached Protector	9	.88	.46	.68
Detached Self-soother	4	.70	.38	.62
Self-aggrandizer	10	.76	.24	.50
Bully/Attack	9	.66	.19	.44
Punitive Parent	10	.88	.43	.66
Demanding Parent	7	.79	.35	.59
Healthy Adult	10	.79	.28	.52
Mean	**8.4**	**.81**	**.38**	**.62**

Table 3: Item loadings of the SMI

	SMI Item	Scale	Factorial weight
4.	Mi sento profondamente inadeguato, imperfetto e carente	VC	.74
6.	Mi sento disorientato	VC	.71
34.	Mi sento disperato	VC	.84
48.	Mi sento solo	VC	.82
63.	Mi sento umiliato	VC	.79
67.	Mi sento solo anche se sono in mezzo alle persone	VC	.74
101.	Spesso mi sento solo al mondo	VC	.87
102.	Mi sento debole e impotente	VC	.88
106.	Mi sento isolato o escluso	VC	.87
113.	Ho la sensazione che nessuno mi ami	VC	.77
22.	Se non mi oppongo agli altri, sarò maltrattato o trascurato	AC	.55
40.	Sono arrabbiato perché le persone mi privano della mia libertà e indipendenza	AC	.59
45.	Mi sento infuriato con qualcuno	AC	.65
47.	Ho accumulato molta rabbia e ho bisogno di esprimerla	AC	.75
53.	Se qualcuno non è con me, è contro di me	AC	.67
59.	Sono arrabbiato con qualcuno perché mi ha lasciato o abbandonato	AC	.64
72.	Mi arrabbio quando qualcuno mi dice come devo sentirmi o comportarmi	AC	.52
75.	Mi sento di rimproverare le persone per il modo in cui mi trattano	AC	.53
99.	Vorrei colpire o fare male a qualcuno per quello che mi ha fatto	AC	.67
105.	Sono stato ingannato e trattato ingiustamente	AC	.63
14.	Ho violente esplosioni di emozioni	EC	.47
24.	Quando sono arrabbiato con qualcuno lo aggredisco fisicamente	EC	.67
25.	Quando comincio ad essere arrabbiato, spesso non mi controllo e perdo completamente la calma.	EC	.72
44.	Quando sono arrabbiato, lancio gli oggetti	EC	.64
51.	Quando sono arrabbiato, perdo il controllo su me stesso e minaccio gli altri	EC	.79
88.	Se sono arrabbiato, posso perdere il controllo in modo da far male ad altri	EC	.82
94.	Quando sono arrabbiato rompo gli oggetti	EC	.73
97.	La mia rabbia è fuori controllo	EC	.81
117.	Posso essere talmente arrabbiato da essere in grado di uccidere qualcuno	EC	.60
12.	Ho dei problemi nel controllo dei miei impulsi	IC	.73
15.	Agisco in modo impulsivo o esprimo emozioni che creano problemi o turbano gli altri	IC	.78
33.	Seguo le mie emozioni ciecamente	IC	.31

38.	Agisco in modo impulsivo o esprimo emozioni che creano problemi o turbano gli altri	IC	.78
62.	Non rispetto le regole e poi me ne pento	IC	.65
65.	Prima agisco e poi penso	IC	.59
74.	Dico ciò che sento o agisco in modo impulsivo senza pensare alle conseguenze	IC	.74
93.	Trovo impossibile controllare gli impulsi	IC	.62
13.	Se non riesco a raggiungere un obiettivo, mi sento facilmente frustrato e rinuncio	UC	.69
21.	Non riesco a sforzarmi per portare a termine attività di routine o compiti noiosi	UC	.58
61.	Non riesco a fare cose che sono noiose, anche se so che sono per il mio bene	UC	.55
66.	Mi annoio facilmente e perdo interesse nelle cose	UC	.73
103.	Sono pigro	UC	.57
2.	Mi sento amato e accettato	HC	.67
17.	Mi sento contento e a mio agio	HC	.80
19.	Mi sento in contatto con altre persone	HC	.57
46.	Ho la sensazione di trovarmi a mio agio con le persone	HC	.77
57.	Sento di avere molta stabilità e sicurezza nella mia vita	HC	.74
64.	Mi fido della maggior parte delle persone	HC	.34
91.	Mi sento sicuro	HC	.77
92.	Credo di essere ascoltato, compreso e accolto	HC	.71
108.	Sono ottimista	HC	.67
116.	Mi sento spontaneo e vivace	HC	.69
8.	Faccio molti sforzi per piacere agli altri, così da evitare il conflitto, lo scontro o il rifiuto	CS	.59
18.	Cambio in funzione delle persone con cui mi trovo, in modo da piacergli o da ottenere la loro approvazione	CS	.46
35.	Consento agli altri di criticarmi o umiliarmi	CS	.68
36.	Nelle relazioni lascio che sia l’altro a dominare	CS	.69
52.	Invece di esprimere i miei bisogni, lascio che siano gli altri a decidere	CS	.76
96.	Rimango passivo anche quando qualcosa non mi piace	CS	.49
104.	È saggio accettare qualsiasi cosa dalle persone che per me sono importanti	CS	.19
27.	Mi sento indifferente	DP	.57
31.	Mi sento freddo nei confronti degli altri	DP	.66
32.	Mi sento distaccato (non sono in contatto con me stesso, con le mie emozioni o con gli altri)	DP	.72
37.	Mi sento distante dagli altri	DP	.85
41.	Non sento alcuna emozione	DP	.59
56.	Non voglio essere coinvolto in relazioni con altre persone	DP	.54
60.	Non mi sento legato ad altre persone	DP	.62

71.	Niente mi interessa, per me non c'è niente di importante	DP	.80
84.	Mi sento privo di emozioni	DP	.73
39.	Lavoro o pratico attività sportive in modo molto intenso, così che non devo pensare alle emozioni che mi turbano	DSS	.43
49.	Mi piace fare qualcosa di stimolante o rilassante per evitare le mie emozioni (ad es., lavorare, giocare d'azzardo, mangiare, fare acquisti, fare attività sessuali o guardare la TV)	DSS	.66
54.	Per evitare di essere turbato da pensieri o emozioni fastidiose, faccio in modo di avere sempre qualche occupazione	DSS	.72
82.	Voglio distrarmi da pensieri ed emozioni che mi turbano	DSS	.67
10.	Faccio cose che mi mettano al centro dell'attenzione	SA	.45
11.	Mi arrabbio quando le persone non fanno quello che gli chiedo di fare	SA	.45
26.	Ritengo importante essere sempre il migliore (ad esempio, il più amato, quello con più successo, il più ricco, il più potente)	SA	.70
29.	Non accetto di essere il secondo	SA	.70
42.	Faccio ciò che voglio fare, indipendentemente dai bisogni e sentimenti degli altri	SA	.27
70.	Mi sento speciale e migliore degli altri	SA	.54
77.	Sono piuttosto critico nei confronti degli altri	SA	.42
85.	Devo sempre essere il migliore in quello che faccio	SA	.70
87.	Sono esigente nei confronti degli altri	SA	.52
109.	Ritengo di non dover rispettare le stesse regole che seguono gli altri	BA	.25
1.	Mostrando agli altri che non sei una persona con cui scherzare, imponi il rispetto	BA	.37
23.	Chi consente ad altri di prenderlo in giro, si dimostra un perdente	BA.	.28
30.	L'attacco è la miglior difesa	BA	.39
50.	La parità non esiste, quindi meglio dominare gli altri	BA	.43
73.	Se non si comandano gli altri, saranno loro a comandare te	BA	.57
89.	Sono irraggiungibile	BA	.53
95.	Quando si dominano gli altri non può accadere niente di male	BA	.96
98.	Prendo in giro gli altri	BA	.33
107.	Sminuisco gli altri	BA	.62
3.	Mi nego esperienze piacevoli perché non me le merito	PP	.69
5.	Sento il bisogno di punirmi facendomi male (ad esempio, tagliandomi)	PP	.57
9.	Non sono in grado di perdonare niente a me stesso	PP	.69
16.	È colpa mia se accade qualcosa di negativo	PP	.72
55.	Se mi arrabbio con qualcuno, sono cattivo	PP	.51
68.	Non mi consento di fare le cose piacevoli che fanno altri perché sono cattivo	PP	.74
80.	Merito di ricevere una punizione	PP	.77

83.	Sono arrabbiato con me stesso	PP	.77
90.	Sono una persona cattiva	PP	.52
112.	Se mi accade qualcosa di spiacevole non merito alcuna comprensione	PP	.57
7.	Sono duro con me stesso	DP	.55
43.	Non mi permetto momenti di relax o divertimento fino a che non ho portato a termine tutto ciò che devo fare	DP	.54
78.	Sono costantemente sotto pressione per raggiungere degli obiettivi e portare le cose a termine	DP	.66
79.	Tento di non fare errori, altrimenti mi deprimo	DP	.69
86.	Sacrifico le attività piacevoli, la salute e la felicità per essere all'altezza dei miei standard	DP	.69
100.	So che c'è sempre un modo giusto e un modo sbagliato di fare qualcosa, faccio molti sforzi per fare le cose nel modo giusto, altrimenti divento molto critico nei miei confronti	DP	.58
110.	Mi sforzo per essere più responsabile della maggior parte delle persone	DP	.42
20.	Quando incontro dei problemi, faccio molti sforzi per risolverli da solo	HA	.21
28.	Riesco a risolvere i problemi in modo razionale, evitando di essere sopraffatto dalle emozioni	HA	.55
58.	So quando esprimere o non esprimere le mie emozioni	HA	.62
69.	Asserisco i miei bisogni senza esagerare	HA	.46
76.	Sono capace di prendermi cura di me stesso	HA	.56
81.	Sono in grado di apprendere, maturare e cambiare	HA	.55
111.	Se credo di essere stato criticato ingiustamente, di essere vittima di abusi o di sfruttamento sono in grado di difendermi	HA	.50
114.	Credo di essere sostanzialmente una brava persona	HA	.50
115.	Se necessario, porto a termine attività di routine e noiose per riuscire a raggiungere obiettivi per me importanti	HA	.56
118.	Ho una buona consapevolezza di ciò che sono e di ciò che devo fare per rendermi felice	HA	.73

Note: Vulnerable Child (VC); Angry Child (AC); Enraged Child (EC); Impulsive Child (IC); Undisciplined Child (UC); Happy child (HC); Compliant Surrender (CS); Detached protector (DP); Detached Self-soother (DSS); Self-aggrandizer (SA); Bully/Attack (BA); Punitive Parent (PP); Demanding Parent (DP); Healthy Adult (HA).

Table 4: Inter-correlations between SMI subscales (N = 350)

	VC	AC	EC	IC	UC	HC	CS	DP	DSS	SA	BA	PP	DP
VC													
AC	70**												
EC	.54**	.71**											
IC	.55**	.65**	.71**										
UC	.65**	.56**	.43**	.51**									
HC	-.77**	-.48**	-.41**	-.39**	-.56**								
CS	.58**	.48**	.32**	.41**	.47**	-.32**							
DP	.74**	.59**	.44**	.47**	.59**	-.63**	.53**						
DSS	.47**	.57**	.38**	.41**	.31**	-.27**	.46**	.39**					
SA	.26**	.51**	.43**	.45**	.23**	-.04	.29**	.27**	.33**				
BA	.31**	.59**	.49**	.50**	.38**	-.14**	.33**	.43**	.41**	.56**			
PP	.80**	.66**	.55**	.61**	.54**	-.61**	.63**	.67**	.49**	.35**	.42**		
DP	.44**	.44**	.23**	.24**	.19**	-.23**	.50**	.29**	.44**	.48**	.30**	.51**	
HA	-.52**	-.28**	-.29**	-.36**	-.50**	.69**	-.28**	-.42**	-.16**	.06	-.07	-.43**	.03

Note: N = 350. * significant for *p*<.05; ** significant for p< .001.
Vulnerable Child (VC); Angry Child (AC); Enraged Child (EC); Impulsive Child (IC); Undisciplined Child (UC); Happy child (HC); Compliant Surrender (CS); Detached protector (DP); Detached Self-soother (DSS); Self-aggrandizer (SA); Bully/Attack (BA); Punitive Parent (PP); Demanding Parent (DP); Healthy Adult (HA).

Table 5: Construct validity of the SMI

	Patients	Controls	F (1.348)	η^2
Scale	**Mean (SD)**	**Mean (SD)**		
Vulnerable Child	3.28 (1.24)	1.80 (.73)	193.986***	.358
Angry Child	3.03 (.99)	2.04 (.59)	133.320***	.277
Enraged Child	2.23 (1.01)	1.41 (.46)	106.449***	.234
Impulsive Child	2.98 (.94)	2.00 (.68)	120.069***	.257
Undisciplined Child	3.20 (1.10)	2.38 (.79)	61.399***	.150
Happy Child	2.97 (.97)	3.98 (.74)	112.090***	.244
Compliant Surrender	2.96 (1.01)	2.37 (.66)	41.564***	.107
Detached Protector	2.62 (1.16)	1.63 (.56)	114.224***	.247
Detached Self-soother	3.37 (.97)	2.43 (.90)	76.590***	.180
Self-aggrandize	2.71 (.86)	2.34 (.62)	20.642***	.056
Bully/Attack	2.22 (.69)	1.83 (.53)	32.084***	.084
Punitive Parent	2.63 (.98)	1.61 (.49)	165.671***	.323
Demanding Parent	3.47 (1.08)	2.94 (.81)	25.183***	.067
Healthy Adult	3.69 (.77)	4.29 (.67)	54.867***	.136