

MEASURING SHAME REGULATION: VALIDATION OF THE COMPASS OF SHAME SCALE

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Shame is a powerful self-conscious emotion that can interfere with healthy psychological functioning. We examined the validity of the Compass of Shame Scale (CoSS), a self-report measure designed to assess shame regulation styles. In this paper, the construct validity of the Dutch version and two newly developed subscales of the CoSS were investigated in a survey of 324 adolescents. The results confirmed that the Dutch version and the two new subscales have satisfactory psychometric qualities. We also studied the higher level factor structure of the CoSS for measuring shame by introducing the concepts of internalizing and externalizing shame-coping styles and the results support the observation that the CoSS measures maladaptive neurotic internalizing shame regulation, as well as externalizing shame regulation.

Keywords: Compass of Shame Scale, Test of Self-Conscious Affect for Adolescents, Interpersonal Reactivity Index, Moral Orientation Measure, empathy, shame, internalization of shame, externalization of shame, delinquency.

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Of the so-called self-conscious or moral emotions, shame probably interferes most with people's healthy psychological functioning, often hampers medical compliance, and weakens the quality of the therapeutic relationship in psychotherapy (Black, Curran, & Dyer, 2013; Kyngäs, Hentinen, Koivukangas, & Ohinmaa, 1996). In most of the literature on shame, scholars use Lewis's (1971) seminal description of shame. When people feel shame the focus of their evaluation is on the self or identity. It is a painful experience often accompanied by a sense of worthlessness, powerlessness, wanting to disappear from view, or by aggression (Elison, Garofalo, & Velotti, 2014; Schalkwijk, 2015; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010; Tangney, Stuewig, Mashek, & Hastings, 2011). Shame is experienced only after a more or less conscious cognitive or experiential evaluation, and depends heavily upon one's psychological make-up (Mills, 2005).

Some shame scales and measures are used to assess emotional states (i.e., feelings of shame as a brief emotional state), whereas others are used to assess emotional traits or dispositions (shame proneness). In shame research, the most widely used is a scenario-based measure, the Test of Self-Conscious Affect (TOSCA; Tangney, Stuewig, & Mashek, 2007). Items in the form of stems are formulated in the third person and describe an event without specifying the feeling the person might have. For example, "You break something at work and then hide it..." The subject is then asked to indicate on a 5-point scale how likely/unlikely it is that possible reactions characterized as pride, shame, guilt, detachment, or externalizing would apply to him/her.

Elison, Lennon, and Pulos (2006) developed and validated the Compass of Shame Scale (CoSS), which they claimed as the first self-report measure specifically designed to assess how individuals regulate their shame once it is experienced. The stems in the CoSS are formulated in the first person, and describe a shameful event. For example, "When I think I have disappointed other people..." The respondents indicate how they would react to this shameful feeling or thought. As for the TOSCA, the respondent is asked to indicate on a 5-point scale how (un)likely it is that the possible alternative reactions presented would apply to him or her.

Theoretically, the shame regulation styles assessed by the CoSS are based on Nathanson's (1992) compass of shame model, which includes attack self, attack other, withdrawal, and avoidance styles. Some of these styles magnify, and others minimize, the impact of shame. The styles are not necessarily independent constructs; a person might use more than one of them in a situation. The authors of the CoSS claimed that the styles may be viewed from either a state or a trait perspective. In our opinion, however, the stems used in the CoSS are all from a trait perspective, as the CoSS is used to assess preferred emotional reaction

patterns to shameful experiences that have developed over time and, thus, they may be assumed to be firmly established.

Since it was developed, the CoSS has been used in research on a variety of clinically relevant topics, such as coping with shame after physical or sexual abuse (Dorahy et al., 2013), psychological distress (Strömsten, 2011), psychopathy (Campbell & Elison, 2005; Nyström & Mikkelsen, 2013), narcissism (Egan & Lewis, 2011), the therapeutic relationship (Black et al., 2013), and hypersexuality (Reid, Harper, & Anderson, 2009).

Schalkwijk, Stams, Stegge, Dekker, and Peen (2016) have used the CoSS in research on the functioning of the conscience in juvenile delinquents. Currently, the CoSS is being used in several ongoing research projects in The Netherlands in which one of the authors of the current study is involved. In one of these projects, as shame is thought to be an important factor in maintaining symptoms of posttraumatic stress disorder, the CoSS is being used to differentiate between shame regulation in people diagnosed with different dissociative disorders. The CoSS is also being used for treatment evaluation purposes in the treatment of people diagnosed with borderline personality disorder and in a forensic day clinic.

In most of this research, a more recent version of the CoSS (i.e., the CoSS-5) has been used, but no specific validation studies on the CoSS-5 have been published. We are the first researchers to do so in this current study.

The CoSS is a measure of emotion-focused coping. We decided to change the CoSS-5 slightly in order to have more variation in answers for each stem. Also, as we were working with adolescents, we wanted to reduce the time needed for filling out the survey. Therefore, our first step was to regroup the original 48 items and 12 stems into 40 items under 4 stems. Respondents answer these 40 items, which are divided into six subscales, on a 5-point Likert scale ranging from 1 = *never* to 5 = *almost always*.

In the *attack self* style, the individual recognizes shame, it is accepted as valid, and magnified by internalization. The individual assesses inward-directed anger and self-blame; the self is experienced as failing (four items in the CoSS subscale). In the *withdrawal* style, shame is recognized, accepted as valid, and the individual makes attempts to withdraw or hide from the situation (four items in the CoSS subscale). In the *avoidance* style, the shame message is not recognized or accepted, and the individual tries to distance him- or herself from shame, making it into something neutral or positive (e.g., a joke; 12 items in the subscale). In the *attack other* style, the shame message is neither recognized nor accepted and the individual directs his or her evoked anger outward by blaming others for the situation, leading to a diminished experience of shame (eight items in the subscale). In the *adaptive* style, the individual assesses acknowledgement

of shame and his/her motivation is to apologize and/or make amends (eight items in the subscale). Shame proneness is assessed with four items. In a study conducted by Elison et al. (2006) test–retest reliability correlations ranged from .81 to .92.

The Present Study

Our purpose in this study was twofold. The first aim was to test the convergent and divergent validity of the Dutch version of the CoSS. Also, as, to our knowledge, there were no published data on the validity of the most recently added subscales of adaptive and shame proneness in the CoSS-5, we believed that we would also be the first to assess their validity. We tested internal consistency reliabilities of the scales using Cronbach's alpha and assessed construct validity by measuring the fit of the theoretical (correlated) factor model using confirmatory factor analysis (CFA) with data obtained from a sample of adolescents (Jöreskog & Sörbom, 1989). We tested measurement invariance by comparing a group of adolescents who had committed a criminal offence with a group of nonoffending adolescents. Convergent and divergent validity were investigated by relating the CoSS to tests used for measuring shame, guilt, and externalizing (Test of Self-Conscious Affect for Adolescents, TOSCA-A; Luyten, Fontaine, & Corveleyn, 2002; Tangney & Dearing, 2002; Tangney, Wagner, & Gramzow, 1989), empathy (Interpersonal Reactivity Index, IRI; Davis, 1983), and moral development (Moral Orientation Measure, MOM; Stams et al., 2008).

We investigated convergent validity by testing whether or not the CoSS subscales in which shame is assessed would be positively related to the TOSCA-A shame-proneness subscale. The two externalizing CoSS subscales (attack other and avoidance) were expected to be associated with the TOSCA-A externalization and detachment subscales, as they are both designed to assess warding off the potential shame experience. Because guilt has been associated with adaptive behavior in the literature on self-conscious emotions (Tangney & Dearing, 2002), we expected that the relationship between the CoSS adaptive style and guilt in the TOSCA-A would be positive. Because the attack self, withdrawal, and adaptive styles of shame regulation and shame proneness all pertain to the individual's ability to reflect on his/her own and others' emotions, we hypothesized that these would all be positively correlated with measures of empathy. In addition, we formed this hypothesis on the basis that shame is associated with the individual's heightened awareness of being scrutinized and judged negatively by another person (the eyes of the other) and also may have internalized this awareness so that the concrete presence of that other person is no longer necessary to maintain that heightened awareness. We also hypothesized that individuals who turn shame into aggression toward others (CoSS; Elison

et al., 2006) would be focused on punishment (MOM; Stams et al., 2008). For example, the individual using aggression may ask himself or herself: "Can I get away with being aggressive?", whereas we expected that those who internalize their shame would be more focused on the victim than on the punishment.

We investigated divergent validity by testing the relationships between opposing subscales. We expected that there would not be a correlation between the internalizing regulation style CoSS subscales (attack self, withdrawal) and the TOSCA-A externalizing subscales (externalizing, detachment), and we also expected that there would not be a correlation between the avoidance regulation style, with its emotional minimization, and shame proneness in the TOSCA-A. We expected that the externalizing attack other subscale in the CoSS would be correlated with shame proneness in the TOSCA-A, but that the correlation would not be strong as an attack other style manifests in anger in reaction to shame. Externalizing is clinically contradictory to being empathic, so that we expected that the correlations between CoSS externalizing subscales (attack other, avoidance) and empathy would be negative. We further hypothesized that those who deny being affected emotionally by shame (avoidance style) would not be concerned about impact on the victim or about punishment (MOM; Stams et al., 2008). For example the individual using an avoidant style may be thinking: "I just don't care."

Our second aim was to investigate the construct or structural validity of the CoSS. First, we simply tested the construct validity of the six subscales comprising the CoSS (model 1). Second, we investigated the possibility of a deeper structure in the CoSS by creating in the analysis two higher order latent variables representing the concepts of internalizing and externalizing coping styles, which are important concepts in developmental psychopathology (Wenar, Ludlow, & Kerig, 2012). The attack self and withdrawal subscales were grouped into a broadband subscale labeled *internalizing regulation styles* and avoidance and attack other were grouped in a broadband subscale labeled *externalizing regulation styles* (model 2). Third, we introduced into the analysis an assumed concept of a common overarching concept of shame regulation, and searched for the differential contribution of the six subscales to shame regulation in general (model 3). This enabled us to investigate the nature of shame regulation pertaining to the CoSS as a whole (see Figure 1 later in this article).

Method

Participants and Procedure

The sample (comprising a comparison group and a delinquent group) consisted of 324 adolescents between 13 and 18 years of age living in Amsterdam and two rural towns in The Netherlands. The comparison group consisted of 275 adolescents (60% boys, 40% girls, $M = 14.5$ years old). In The Netherlands, an

adolescent is considered to belong to an ethnic minority group when at least one of his or her parents was born outside the Netherlands. Among the adolescents in our participant group 70% were the sons or daughters of parents who were of Dutch ethnicity, and 30% were the sons or daughters of parents who belonged to one of the ethnic minority groups in The Netherlands. The delinquent group consisted of 59 adolescents (80% boys, 20% girls, $M = 15.5$ years old, 40% with Dutch parents, and 60% parents belonging to an ethnic minority). All participants completed all of the measures.

We recruited the comparison group of participants by asking students at schools in the three communities to participate in our study, whereas the juvenile delinquents were recruited by forensic psychologists who were examining these adolescents in juvenile detention centers where they were either waiting for trial or had been sentenced. Both these groups of adolescents participated on a voluntary basis, and informed consent was obtained from both the adolescents themselves and from their mothers and fathers. The research was introduced to the participants as “a survey on the opinions of adolescents to help teachers better understand adolescents.” Anonymity ensured that no data could become available to either the schools or the forensic psychologists.

The regrouped stems and items from the English version of the measures were translated into Dutch by two of the researchers (Frans Schalkwijk and Geert Jan Stams). After discussing both these versions, the two translators considered the alternatives and agreed upon a final version, which was then back translated into English by a native-speaking English professional translator. This translator had not seen the original English version. Finally, all three translators met and formulated the final Dutch version. From here on, the Dutch version of the CoSS-5 will be referred to in this article as the CoSS.

Criterion Measures

The Test of Self-Conscious Affect for Adolescents (TOSCA-A; Luyten et al., 2002; Tangney & Dearing, 2002; Tangney et al., 1989) is designed to measure the proneness to experience the self-conscious emotions of shame, guilt, and pride (we did not use the two pride subscales in our study). There are two other subscales designed to assess regulation styles that are used with the aim of minimizing the emotional impact on the self: externalization of blame and detachment from the situation. The scale consists of 65 items describing 15 scenarios that are answered on a 5-point Likert-type scale (ranging from 1 = *not at all likely* to 5 = *very likely*). In the present study, reliabilities were at levels considered as questionable to good (Streiner, 2003) for shame (.82), guilt (.83), detachment (.60), and externalization (.78). In our research, we used an existing Dutch translation of the TOSCA-A (Vrij-Hoogendoorn, Drossaert, & Baneke, 2009).

Davis (1983) devised the Interpersonal Reactivity Index (IRI) to measure empathy. In the present study, an existing Dutch translation of the IRI was used (De Corte et al., 2007). We used a 5-point Likert-type scale (ranging from 1 = *does not describe me well* to 5 = *describes me very well*). The Index contains four subscales, each consisting of seven items: (a) perspective taking refers to spontaneous attempts to adopt the perspective of other people cognitively; (b) fantasy is the tendency to identify with characters in movies, novels, plays, and other fictional situations; (c) empathic concern is a measure of the respondent's feelings of warmth, compassion, and concern for others; and (d) personal distress represents self-oriented feelings of anxiety and discomfort that result from observing another's negative experience. There are two methods of working with the IRI data, both of which we used in our study. Following Pulos, Elison, and Lennon (2004), we computed a summed score of empathic concern, fantasy, and perspective taking to represent the traditional notion of empathy and treated personal distress as a separate factor. Also, following the meta-analysis of Jolliffe and Farrington (2004), we used the four separate subscale scores in the analyses. Perspective taking was assumed to assess cognitive empathy with empathic concern assessing affective empathy. Internal consistency reliabilities in terms of Cronbach's alpha ranged from .69 (perspective taking) to .79 (personal distress). Reliability for the empathy scale, consisting of empathic concern, fantasy, and perspective taking, was .85.

The Moral Orientation Measure (MOM; Stams et al., 2008) is an 18-item Dutch self-report measure, designed to assess adolescents' proneness to a punishment- or victim-based moral orientation. In the MOM nine morally relevant situations are presented, each with a perpetrator and a victim. The respondent is asked to evaluate how serious the consequences are for the victim and how serious the punishment is for the perpetrator on a 4-point Likert-type scale, ranging from 1 = *not serious* to 4 = *very serious*. In the present study, internal consistency reliability for the punishment-based orientation was .88, and for the victim-based orientation it was .93.

Data Analysis

First, internal consistency reliability of the CoSS subscales was tested by means of Cronbach's alpha coefficients using SPSS 22. Cronbach's alpha coefficients of .60 are considered to be sufficient, coefficients around .70 to be satisfactory, and coefficients of .80 or higher are considered to be good (Streiner, 2003). Convergent and divergent validity were assessed by means of simple correlation analyses using SPSS 22.

Second, structural validity was assessed by means of CFA in Lisrel 9.1. Fit indices were used that are insensitive to sample size: The comparative fit index (CFI) and the root mean square error of approximation (RMSEA; Kline, 2005).

The indices of CFI > .90 and RMSEA < .08 are considered as good, and CFI > .95 and RMSEA < .06 as very good (VanHeule, Rosseel, Vlerick, Van de Ven, & Declercq, 2012). Next, measurement invariance of the best fitting of the models was investigated by comparing the CFI and RMSEA of the group of delinquents with those of the group of nonoffenders. Delta CFI < .01 signifies measurement invariance, .01 < Delta CFI > .02 signifies doubt about measurement invariance, whereas Delta CFI > .02 signifies measurement variance (Cheung & Rensvold, 2002).

Results

Internal Consistency

Internal consistency was examined for the six subscales of the CoSS. Cronbach's alpha coefficients were satisfactory or good (avoidance, .75; attack other, .76; attack self, .86; withdrawal, .75; adaptive, .78; and shame proneness, .87). These findings replicate the published internal consistencies of the CoSS-3 (avoidance, .75; attack other, .85; attack self, .91; and withdrawal, .75; Elison et al., 2006), and an unpublished finding (Elison, 2015) for adaptive (.80).

Convergent Validity

In Table 1, the correlations between the CoSS and the TOSCA-A, IRI, and MOM are presented. Correlations between .00 and .20 may be considered weak, between .20 and .50 moderate, and higher than .50 strong (Cohen, 1988).

Table 1. *Correlations Between the Subscales of the Compass of Shame Scale and Criterion Measures*

	CoSS subscale					
	Attack self	Withdrawal	Avoidance	Attack Other	Shame proneness	Adaptive
Criterion measures						
TOSCA-A shame	.528***	.421***	-.009	.132*	.464***	.101
TOSCA-A guilt	.349***	.218***	-.128*	-.112*	.391***	.270***
TOSCA-A detachment	-.184***	-.103	.296***	.180***	-.203***	.128*
TOSCA-A externalization	-.005	.006	.197***	.415***	-.091	-.076
IRI empathy (sum score)	.355***	.314***	.046	-.116*	.458***	.212***
IRI fantasy/identification	.198***	.142*	.068	.096	.321***	.202***
IRI perspective taking	.206***	.087	.020	-.143*	.296***	.417***
IRI empathic concern	.238***	.212***	-.027	-.196***	.364***	.183***
IRI personal distress	.368***	.439***	.053	.085	.323***	-.163***
MOM						
Punishment orientation	-.058	.017	-.060	.238***	-.171***	-.314***
MOM Victim orientation	.163***	.121*	-.051	-.297***	.325***	.366***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, one-tailed significances. IRI = Interpersonal Reactivity Index; MOM = Moral Orientation Measure. Sum score of IRI is the sum of empathic concern, perspective taking, and fantasy.

The associations we had expected between the attack self, withdrawal, and shame proneness subscales of the CoSS and shame in the TOSCA-A, were confirmed by positive correlations. There were also significant associations between these three CoSS subscales and guilt in the TOSCA-A, and, as predicted, the correlations for each of these were lower than with shame. The externalizing CoSS subscales of avoidance and attack other were moderately and positively correlated with externalization and detachment in the TOSCA-A. Specifically, and as predicted, avoidance was the style most strongly positively correlated with detachment in the TOSCA-A, and attack other was the style with the strongest positive correlation with externalization in the TOSCA-A. As hypothesized, the CoSS adaptive style was moderately positively correlated with TOSCA-A guilt.

We had predicted that the attack self, withdrawal, shame proneness, and adaptive subscales of the CoSS would be positively correlated with all IRI empathy subscales, with the exception of the CoSS adaptive subscale and personal distress in the IRI, and the results for the attack self, withdrawal, shame proneness, and adaptive subscales showed that these styles of shame regulation were, indeed, moderately positively correlated with most IRI subscales. We had expected an exception to this would be in the relationship of the CoSS adaptive style with personal distress in the IRI, and our results showed a weak and negative correlation.

In regard to acknowledging shame and moral orientation, we hypothesized that the individual who turns shame into aggression towards others would be focused on punishment (MOM). The attack other subscale of the CoSS was, indeed, positively correlated with punishment orientation, albeit moderately. Attack self and withdrawal styles were weakly associated with the MOM victim orientation. We found it interesting that the adolescents whose answers to the CoSS indicated use of an adaptive style to regulate shame were clearly differentiated between punishment and victim orientation.

Convergent validity was established. Internalizing and externalizing subscales were differentiated, correlations between CoSS subscales for styles in which individuals acknowledged shame were associated with being more empathic, and being punishment- or victim-orientated was correlated with the hypothesized shame regulation styles.

Divergent Validity

As was hypothesized, there was either a weak and negative correlation or no correlation between the internalizing character of the attack self and withdrawal styles in the subscales of the CoSS and externalization and detachment in the TOSCA-A. We reasoned that the externalizing CoSS subscales of avoidance and attack other should lead to diminishing feelings of shame. There was, indeed, no correlation between the avoidance style, and shame proneness in the TOSCA-A,

whereas there was a weak positive correlation between the attack other style in the CoSS and shame in the TOSCA-A in that some shame was acknowledged, but its source was attributed to the other person: "I am mad at you, because you make me feel ashamed." These two externalizing strategies of the CoSS were also weakly negatively associated with guilt in the TOSCA-A, so that the emotion was not acknowledged as pertaining to the self. We had not expected that there would be any association between the adaptive style in the CoSS and shame in the TOSCA-A shame and the result indicated no association.

In regard to the relationship between the CoSS and empathy, we expected that the two externalizing CoSS subscales would be either negatively associated with the IRI subscales or that there would be no association at all. There was, indeed, no significant correlation of the avoidance style of the CoSS with any of the IRI scales, whereas the attack other style was weakly negatively correlated with perspective taking and empathic concern in the IRI.

In regard to the relationship between the CoSS and moral orientation, we had hypothesized that those who deny being emotionally affected would score low on both MOM orientations. Indeed, the correlation between the avoidance style and either of the MOM orientations was nonsignificant in a negative direction. It was further hypothesized that people who externalize shame into aggression would not be focused on the victim. The attack other style of the CoSS was, indeed, moderately negatively correlated with the victim orientation in the MOM. On the other hand, the association between the two internalizing CoSS styles of attack self and withdrawal and the punishment orientation of the MOM was slightly negative but to a nonsignificant degree. Divergent validity was established.

Construct Validity

Construct validity was investigated by calculating the fit of the theoretical (correlated) scales in a CFA, using the data from all 324 adolescents in both groups (delinquent and comparison). Results in Table 2 show that the CoSS (model 1) had a good fit. These results replicate the finding reported by Elison et al. (2006) for the original CoSS-3 (RMSEA = .0655; CFI = .913). When adding the first higher order latent variables, externalizing or internalizing, the values were too low (model 2). If, however, the overarching concept of shame regulation was included in the analysis as well, results in model 3 show a good fit.

Next, measurement invariance of the models with the best fit was investigated across the delinquent and comparison groups. Results in Table 3 show that constraining the factor loadings in model 1 led to a CFI difference indicating configural invariance. Further restrictions by constraining intercepts led to a CFI difference that is an indication of weak variance as the difference is between 0.01 and 0.02. Constraining factor means led to a CFI difference close to complete invariance. In conclusion, there is evidence for configural invariance in model 1.

Constraining the factor loadings in model 3 led to a CFI difference indicating configural invariance. Further restrictions by constraining intercepts led to a CFI difference that is an indication of measurement variance. Constraining factor means, however, led to a CFI difference that indicates strong configural variance in model 3.

Table 2. *Confirmatory Factor Analysis Fit Statistics*

Delinquent and comparison groups	χ^2	<i>df</i>	<i>p</i>	RMSEA	CFI
Model 1: items, 6 subscales	1700	725	.001***	.0641	.908
Model 2: items, 6 subscales, and internalization/externalization	2332	730	.001***	.0819	.848
Model 3: items, 6 subscales, internalization/ext., and shame regulation	1754	732	.001***	.0654	.903

Note. *N* = 324, *** *p* < .001 one-tailed significances. CFI = comparative fit index, RMSEA = root mean square error of approximation.

The highest level factor structure of the CoSS is represented by the overarching concept of shame regulation (model 3). In Figure 1 the factor loadings of the subscales are presented. The broadband internalizing subscale (comprising withdrawal and attack self) and the shame proneness subscale loaded positively on the overarching concept of shame regulation. The broadband externalizing subscale (comprising avoidance and attack other) loaded negatively on shame regulation. The factor loading for the adaptive subscale approached zero.

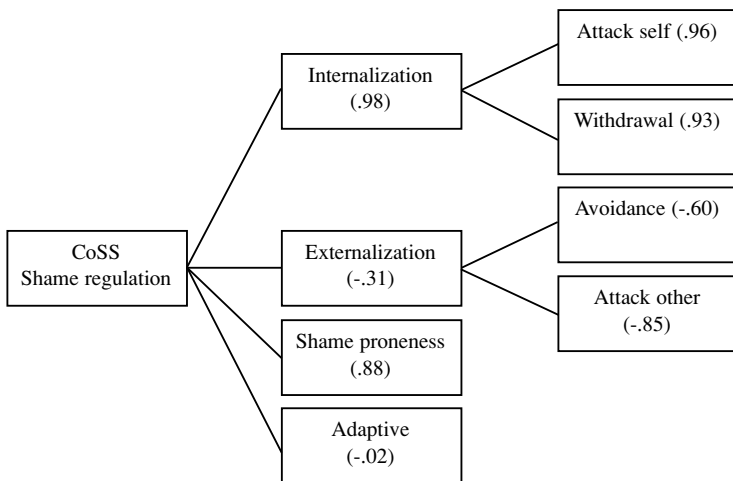


Figure 1. *Factor Loadings of model 3.*

Note. Factor loadings of scale items are not presented.

Table 3. *Measurement Invariances*

	χ^2	df	p	RMSEA	CFI
Comparison group, model 1 (<i>n</i> = 275)	758	344	.001	.0669	.905
Delinquent group, model 1 (<i>n</i> = 59)	587	344	.001	.0110	.793

	χ^2	df	p	χ^2 difference in subsequent models	df difference in subsequent models	p	CFI	CFI difference in subsequent models	RMSEA
Model 1:									
Configurational invariance	2915.06	1460	.001				0.861		0.078
+ Invariance factor loadings	2968.11	1494	.001	53.05	34	.020*	0.859	0.002**	0.078
+ Invariance intercepts	3174.43	1568	.001	259.37	113	.001***	0.846	0.013*	0.079
+ Invariance factor M	3348.37	1619	.001	433.31	169	.001***	0.835	0.011*	0.081
Model 3:									
Configurational invariance	2941.46	1452	.001				0.858		0.079
+ Invariance factor loadings	2995.80	1495	.001	54.34	43	.115	0.857	0.001***	0.079
+ Invariance intercepts	3460.50	1565	.001	519.04	113	.001***	0.819	0.038*	0.086
+ Invariance factor M	7586.87	1621	.001	4645.41	169	.001***	0.430	0.389	0.150

Note. Model 1: Six subscales; Model 2: not included as RMSEA and CFI were too low (see Table 1); Model 3: Six scales, internalizing/externalizing, and shame regulation. * $p < .05$, ** $p < .01$, *** $p < .001$ one-tailed significances. RMSEA = root mean square error of approximation, CFI = comparative fit index.

Discussion

We confirmed the convergent and divergent validity of the Dutch translation of the CoSS, and of the two additional subscales of adaptive style and shame proneness in the CoSS-5 that had not previously been validated. Our findings confirm that the Dutch version of the CoSS can be used to validly and reliably measure shame regulation, including measurement of shame proneness and use of an adaptive style to regulate shame. The pattern of correlations we found among the measures fits well with clinical reality: People's reactions to shame will vary depending on the context; they do not always react in the same all-or-none way, but will show a certain preference for a specific style.

For those who used the attack self style, we expected that their shame would be accepted as pertaining to the self and would be intensified by internalization. In our study the strong correlation of the attack self style with shame proneness in the TOSCA-A confirmed that these individuals accepted being ashamed. Clinically, as previously described, shame is associated with heightened awareness of the scrutiny and judgment of another and this may be internalized, so that the awareness continues even without the physical presence of the other person (Schalkwijk, 2015). Our result of a positive correlation between the attack self shame regulation style in the CoSS and fantasy/identification and perspective taking in the IRI affirms that the emotion of shame was kept alive in the mind of the shamed person. In addition, in the clinical context, the individual who internalizes his shame experience is expected to be more focused on the victim than on punishment.

For those who use a withdrawal style of regulation, shame is also recognized as pertaining to the self, but in contrast to the attack self style, these people make attempts to withdraw from the situation, thus diminishing the intensity of the emotion. The moderate/strong correlation of the withdrawal shame regulation style in the CoSS with shame proneness in the TOSCA-A confirmed that these individuals accepted being ashamed, but, in relation to empathy, in contrast to the result for the attack self style, there was a nonsignificant correlation with perspective taking in the IRI, and the correlation with fantasy/identification was somewhat weaker than with the attack self style.

When an avoidance style is used, shame is disavowed and the individual distances him- or herself from the negative emotions of the situation. The externalizing aspect of the avoidance style was confirmed by the finding of a moderate positive correlation/association with externalization in the TOSCA-A, whereas emotional distancing was confirmed by the result of the highest association of avoidance being with detachment in the TOSCA-A, by absence of empathy, and a lack of interest in victim or punishment: "I do not feel anything negative and if I were to, it certainly would not pertain to me." Similar results were found in a study by Yelsma, Brown, and Elison (2002).

For those who use the attack other style, their externalization is clearly seen by the result of the highest association of any of the styles with externalization in the TOSCA-A. The shame experience was projected onto others, by blaming them for making the individual feel ashamed: "You are making me angry, because you are putting shame on me." The latter part of this statement explains why the attack other style had a weak positive correlation with shame in the TOSCA-A; in contrast to avoidance, use of an attack other style keeps the shame feeling alive, albeit as a result of projecting it, and thus the individual is experiencing shame to some extent.

For those who use the adaptive style, this way of regulating shame does, indeed, seem to tap into adaptive coping. People using this adaptive coping strategy might not be very shame-prone, but may experience shame more as a passing emotion with much less emotional impact on them. The negative correlation we found with personal distress in the IRI indicated that adaptive coping coincides with a lower level of negative empathic arousal. The clear differentiation preference for victim orientation above punishment orientation among those using the adaptive style again gives the impression that this seems to signal healthy functioning.

According to our results, shame proneness seems to measure a persistent conscious focusing on shame, as can be seen in the result of a strong association with both internalizing shame style scales, and a nonsignificant association with the adaptive style. Individuals prone to experiencing shame will regulate their shame less adaptively than will individuals who are not prone to experiencing shame.

Our introduction of the broadband internalization/externalization factors of the CoSS proved to be valid only in combination with the overarching concept of shame regulation (model 3). The higher level factor structure of the CoSS seems to measure neurotic internalizing shame regulation; our results showed that the higher level factor structure of the CoSS was positively associated with internalizing shame styles and negatively associated with externalizing shame styles, whereas the result for the relationship with the adaptive style was close to zero. The validity of the broadband internalizing and externalizing factors may be clinically important in psychodiagnostics where the division between internalization and externalization becomes an increasingly important concept. In the *Diagnostic and Statistical Manual of Mental Disorders-5*, personality disorders are grouped into internalizing disorders with anxiety, depressive, and somatic symptoms prominent, and externalizing disorders with impulsive behavior, disruptive conduct, and substance use symptoms prominent (American Psychiatric Association, 2013) and in the Minnesota Multiphasic Personality Inventory-2-Restructured Form® (MMPI-2-RF®) the differentiation between internalizing versus externalizing personality traits is also prominent (Ben-Porath & Tellegen, 2008).

Although we put much effort into recruiting a sufficient number of juvenile offenders as participants in our study, 59 respondents is still a relatively small sample, which makes it hard to compare the groups of offenders and the nonoffenders. This also limits the possibility of generalizing from our sample to the total population of juvenile delinquents. Although it is possible to distinguish between the functioning of the conscience of offenders and nonoffenders (Schalkwijk et al., 2016), assessing the contribution of specific shame regulation styles to criminal behavior requires a larger number of research subjects. With a larger number it would also be possible to study different shame regulation styles of specific groups of offenders. For example, adolescents who are developing an antisocial or narcissistic personality disorder might use different regulation strategies from sex offenders.

Notwithstanding these limitations, we still believe that the CoSS is a promising instrument for measurement of shame regulation styles. In the context of treatment of patients, addressing shame, and particularly an individual's regulation style, is a powerful technique as it can prevent those people from dropping out of treatment and from not telling their counselor or therapist what is really on their mind, which might strengthen the therapeutic relationship (Black et al., 2013). In the program of reintegrative shaming that is widely used in juvenile criminal treatment (Braithwaite, 1989), shaming is used as a technique for preventing recidivism. We believe that it would be interesting to use the CoSS as a diagnostic instrument to establish who can benefit from such a treatment program. Using the reintegrative shaming program to treat an adolescent who uses aggression as his or her main regulation style might have aversive effects.

Evaluation of shame plays an important role in the work of forensic reporting psychologists with juvenile delinquents. The psychologist evaluates the functioning of the conscience of the young person by assessing his or her capacities for empathy, moral reasoning, and capacity to experience self-conscious emotions (Schalkwijk, 2015). The conscience is important not only for understanding how this individual thinks and feels about his or her offending, but also for estimating how he or she could benefit from a specific treatment. We believe that it would be enlightening to carry out a study encompassing the CoSS and personality measurements, such as the MMPI-2 or the NEO-PI-R, thus making a clinical connection between shame regulation styles and personality, and deepening understanding of the dynamics of shame regulation.

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