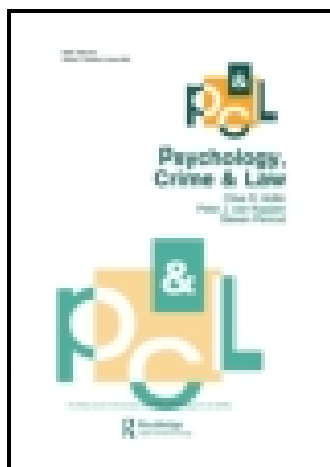


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Measuring public perceptions of sex offenders: reimagining the Community Attitudes Toward Sex Offenders (CATSO) scale

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The Community Attitudes Toward Sex Offenders (CATSO) scale is an 18-item self-report questionnaire designed to measure respondents' attitudes toward sex offenders. Its original factor structure has been questioned by a number of previous studies, and so this paper sought to reimagine the scale as an outcome measure, as opposed to a scale of attitudes. A face validity analysis produced a provisional three-factor structure underlying the CATSO: 'punitiveness,' 'stereotype endorsement,' and 'risk perception.' A sample of 400 British members of the public completed a modified version of the CATSO, the Attitudes Toward Sex Offenders scale, the General Punitiveness Scale, and the Rational-Experiential Inventory. A three-factor structure of a 22-item modified CATSO was supported using half of the sample, with factors being labeled 'sentencing and management,' 'stereotype endorsement,' and 'risk perception.' Confirmatory factor analysis on data from the other half of the sample endorsed the three-factor structure; however, two items were removed in order to improve ratings of model fit. This new 20-item 'Perceptions of Sex Offenders scale' has practical utility beyond the measurement of attitudes, and suggestions for its future use are provided.

Keywords: attitudes towards sex offenders; stereotypes; punitiveness; risk perception; CATSO

The Community Attitudes Toward Sex Offenders (CATSO; Church, Wakeman, Miller, Clements, & Sun, 2008) scale is an 18-item self-report questionnaire designed to measure respondents' attitudes toward sex offenders. Items are responded to using a 6-point Likert scale, with possible responses being 'strongly disagree,' 'disagree,' 'probably disagree,' 'probably agree,' 'agree,' and 'strongly agree.' Scores range from 18 to 108, with high scores indicating negative attitudes. Cronbach's alpha reliability ratings for the CATSO demonstrate adequate levels of internal reliability, with coefficients consistently being reported as .74 (Church et al., 2008; Conley, Hill, Church, Stoeckel, & Allen, 2011; Jones, 2013; Malinen, Willis, & Johnston, 2014; Shackley, Weiner, Day, & Willis, 2013; Shelton, Stone, & Winder, 2013).

The CATSO was developed as an alternative to existing scales that had either (1) not been validated adequately (e.g. 'the Attitudes Toward Sex Offender Treatment scale'; Wnuk, Chapman, & Jeglic, 2006), (2) used a predominantly qualitative design (e.g. Lea, Auburn, & Kibblewhite, 1999), or (3) been based on measures designed to examine attitudes toward other offender groups (e.g. 'prisoners,' Hogue, 1993 or 'mentally ill

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offenders,' Weekes, Pelletier, & Beaudette, 1995). Church et al.'s (2008) factor analyses of the initial CATSO validation data identified an underlying four-factor structure to the scale – labeled as 'social isolation,' 'capacity to change,' 'dangerousness/severity,' and 'deviancy.' Each of these factors (with the exception of deviancy) demonstrated adequate levels of internal consistency (all $\alpha > .70$).

Previous uses of the CATSO

The CATSO has been utilized as either a dependent or control measure in a number of studies since its inception, with scores being similar (~50) across a range of samples, including counselors working with sexually abusive adolescents (Jones, 2013), criminology undergraduates (Marteache, 2012), and a cohort of the Australian public (Shackley et al., 2013). Public samples have been found to score higher on the CATSO than professional populations (Malinen et al., 2014; Shackley et al., 2013), with other factors influencing scores being experience of working with sex offenders (experience is correlated with lower scores; Jones, 2013) and educational attainment (lower educational attainment is correlated with higher scores; Malinen et al., 2014). These findings corroborate previous research into attitudes toward sex offenders using different measures (e.g. Hogue, 1993; Kjelsberg & Loos, 2008; Sanghara & Wilson, 2006).

A number of studies have sought to validate the CATSO with new factor analyses (e.g. Conley et al., 2011; Shackley et al., 2013; Shelton et al., 2013; Tewkesbury & Mustaine, 2013). None of these studies (with the exception of Tewkesbury & Mustaine, 2013) have reported the same underlying factor structure as Church et al. (2008), calling into question the validity and generalizability of the original analysis. Conley et al. (2011) suggested that only 8 of the original 18 CATSO items could be used reliably to measure distinct constructs, suggesting a two-factor structure of 'social isolation' ($\alpha = .84$) and 'capacity to change' ($\alpha = .77$). Two items were found to significantly skew the use of the CATSO (item 4: 'male sex offenders should be punished more severely than female sex offenders'; and item 17: 'a sex offense committed against someone the perpetrator knows is less serious than a sex offense committed against a stranger') to the extent that they were completely withdrawn completely from Conley et al.'s (2011) analysis.

Shackley et al. (2013) proposed less radical alterations to the CATSO. A four-factor structure was proposed, reconceptualizing Church et al.'s (2008) original classifications to 'social tendencies' ($\alpha = .86$), 'treatment and punishment' ($\alpha = .83$), 'crime characteristics' ($\alpha = .59$), and 'sexual behavior' ($\alpha = .58$). The first two of Shackley et al.'s (2013) factors map closely to the two-factor structure advocated by Conley et al. (2011). Considering the reliability coefficients of the remaining two factors, however, it could be argued that Shackley et al.'s (2013) findings offer greater support to Conley et al. (2011) than to Church et al. (2008).

Shelton et al.'s (2013) evaluation of the CATSO led to the authors removing six items from the scale (items 4, 5, 9, 13, 15, and 17) due to poor item-total correlations and facility indices. Their resultant 12-item scale ($\alpha = .77$) comprised of two factors: 'social isolation' ($\alpha = .81$) and 'capacity for change' ($\alpha = .83$). Shelton et al. (2013) concluded that the CATSO should be comprehensively revised and argued that 'it is unclear whether it is sufficiently reliable for use in the UK' (p. 115).

Reimagining the CATSO

Advancing the suggestions made by previous authors, it is considered appropriate to reimagine how the CATSO is used. According to Church et al. (2008), the CATSO 'was designed specifically to address perceptions and stereotypes of sex offenders' (p. 258). Whilst this is a valuable area of investigation, it is contended that the CATSO is not, therefore, a suitable replacement for existing attitude measures.

An attitude is defined as a 'psychological tendency that is expressed by evaluating a particular entity with some degree of favour or unfavour' (Eagly & Chaiken, 1993, p. 1). In contrast, stereotypes are conceptualized as prototypical traits associated with a particular social group (Greenwald & Banaji, 1995). It can therefore be stated that the key distinction between these concepts is that attitude judgments require affective evaluations of particular subjects, whilst stereotype judgments require knowledge-based evaluations. With reference to the CATSO, several items refer to stereotypical (knowledge-based) judgments about sex offenders (e.g. 'most sex offenders are unmarried men,' and 'people who commit sex offenses want to have sex more than the average person'). The expression of these stereotypes may well provide some insight as to the respondents' *perceptions* (knowledge judgments) about sex offenders but offers little with regards to their *attitudes* (affective evaluations) toward them.

That is not to say that the CATSO does not measure attitudes toward sex offenders at all. However, the attitude-related items on the CATSO (e.g. 'trying to rehabilitate sex offenders is a waste of time' and 'only a few sex offenders are dangerous') can also be found on the measures that Church et al. (2008) initially characterized as inappropriate, such as the Attitudes Toward Sex Offenders (ATS; Hogue, 1993) scale. As opposed to being in competition, it is proposed that scales such as the CATSO and ATS should perhaps be used in a complimentary manner, with the ATS measuring direct attitudes toward sex offenders and the CATSO examining perceptions about the characteristics this group.

After conducting a face validity analysis of the existing CATSO items, it is argued that three knowledge-based (as opposed to attitudinal) factors underlie the scale: 'punitiveness,' 'stereotype endorsement,' and 'risk perception.' This analysis comprised of the authors reviewing theoretical literature pertaining to the distinction between attitudinal/affect-driven and knowledge-driven cognition and examining the items on the CATSO alongside this literature. These are all important issues to consider when examining community responses to sexual crime and may be manifestations of underlying general attitudes toward sex offenders. Figure 1 provides an overview of the interrelatedness of these factors and their potential impact upon sexual crime policy. If this alternative model is correct, the measure could have significant utility beyond the sphere of measuring attitudes.

With this model in mind, it may be expected that factors of the CATSO will correlate with existing scales measuring generalized punitiveness toward criminal justice or broader measures of thinking styles. For instance, the expression of punitive beliefs about the best ways in which to sentence and manage sex offenders may be indicative of a generalized view that offenders of all types should be treated harshly. Furthermore, Berger (2007) reported that a preference for intuitive information processing contributes to a propensity to generalize exemplars to larger cases and exaggerate the risks posed by particular stimuli following exposure to them. Within the context of the current

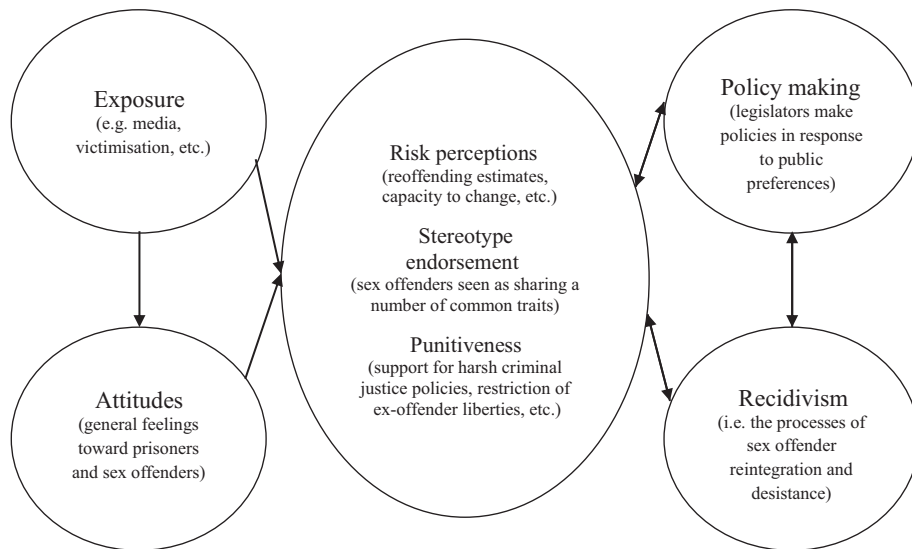


Figure 1. The proposed roles of risk perception, stereotype endorsement, and punitiveness in public and political responses to sexual crime.

study, a reliance or preference for intuitive information processing may therefore be correlated with the endorsement of stereotypical views about sex offenders. Preferences for intuitive information processing (and its reverse, ‘rational information processing’; Epstein, 1994) can be measured using the Rational-Experiential Inventory (REI; Pacini & Epstein, 1999).

Aims of this study

The aim of this study was to reimagine the use of the CATSO and to argue the case for the scale’s continued use as an outcome, and not an attitudinal, measure in response to the critique provided above in relation to the distinction between stereotypes and attitudes. Specifically, establishing the CATSO’s factor structure and underlying reliability coefficients was a key objective. The links between the CATSO and other measures such as the ATS (Hogue, 1993), the General Punitiveness Scale (GPS; Maruna & King, 2009), and the REI (Pacini & Epstein, 1999) were also examined, in line with the predictions set out above.

Methods

Participants

Four hundred British members of the public (112 males, 248 females, 40 declined to provide gender; mean age = 33.24 years; $SD = 11.66$ years) comprised the sample and were recruited online using email invitations and advertisements placed on social media websites (e.g. Facebook and Twitter). Detailed demographic information is provided in Table 1.

Table 1. Sample demographics.

	<i>N</i>	%
<i>Sex</i>		
Male	112	28
Female	248	62
Information not disclosed	40	10
<i>Age</i>		
18–27	143	35.8
28–46	160	40
47 or above	57	14.5
Information not disclosed	39	9.7
<i>Highest qualification</i>		
<Undergraduate degree	116	29
Undergraduate degree	149	37.3
>Undergraduate degree	134	33.5
Information not disclosed	1	0.2
<i>Newspaper preference</i>		
Tabloids only	41	10.3
Broadsheets only	138	34.5
Tabloids and broadsheets	78	19.5
No newspapers	142	35.5
Information not disclosed	1	0.2
<i>Knows a sexual crime victim</i>		
Yes	258	64.5
No	132	33
Information not disclosed	10	2.5
<i>Knows a sexual offender</i>		
Yes	168	42
No	226	56.5
Information not disclosed	6	1.5

Materials

Demographic Questionnaire

A demographic questionnaire (DEM) was developed and completed by participants prior to data collection. Questions requested information about participants' gender, age, highest obtained qualification, preferred newspaper type, and experience of sexual crime.

Community Attitudes Toward Sex Offenders scale

The CATSO (Church et al., 2008) was administered in its original 18-item form (sample item: 'sex offenders have difficulty making friends, even if they try real hard'), with eight additional items added at the end (sample item: 'sex offenders should have all of their details announced to local communities'). These new items corresponded to the aforementioned proposed three-factor structure, specifically looking to evaluate respondents' views about the risks posed by sex offenders, and their views of sex offender sentencing. The original 18-item CATSO was factor analyzed, as was an alternative 22-item scale. This 22-item scale was comprised of all the items presented, with the exception of items 4, 5, 15, and 17 of the original CATSO scale, due to issues previously

raised about their utility (see Conley et al., 2011; Shelton et al., 2013). The alternative scale contained six items that were reverse-scored. Responses were indicated on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). A score of 1 was subtracted from each item score, leaving a scoring range of 0–5 for each item, such as to be consistent with other measures in use within this area (e.g. the ATS; Hogue, 1993). High scores on the CATSO indicated that the respondent held negative views about sex offenders.

Attitudes Toward Sex Offenders scale – short version

The ATS (Hogue, 1993) was originally developed as a 36-item self-report questionnaire, adapting Melvin, Gramling, and Gardner's (1984) 'Attitudes toward Prisoners scale.' Hogue (in press) has since undertaken to revalidate the ATS, and has produced a shortened 21-item version (from here, 'ATS-21'), which was used in the present study (sample item: sex offenders are no better or worse than other people). This shortened version correlates extremely highly with the original 36-item ATS ($r = .98, p < .001$; Hogue, in press). ATS items were scored using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Eleven items were reverse-scored, and a constant of 1 was removed from each item before final scores were calculated. The ATS-21 has a scoring range of 0–84, with high scores indicating positive attitudes. The measure demonstrated excellent internal consistency in the present study ($\alpha = .94$).

General Punitiveness Scale

Maruna and King (2009) developed the eight-item GPS, based upon statements made in academic, political, and popular discourse around crime and punishment (sample item: 'my general view towards offenders is that they should be treated harshly'). These items were rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Four of the items were reverse-scored, and an average of the scores across the eight items was taken as a composite measure of generalized punitiveness. The GPS demonstrated excellent internal consistency in the present study ($\alpha = .90$).

Rational-Experiential Inventory

Pacini and Epstein's (1999) REI is a 40-item scale measuring preferences for rational (sample item: 'I have a logical mind') and experiential (sample item: 'I often go by my instincts when deciding on a course of action') information processing. Based on cognitive-experiential self-theory (Epstein, 1991, 1994), rational processing relies on the logical evaluation of information, whilst experiential processing is rapid and based upon an affective evaluation of stimuli. Items on the REI were rated on a 5-point Likert scale, ranging from 1 (definitely not true of myself) to 5 (definitely true of myself). The 40-item scale consists of 20 items relating to rationality and 20 items relating to experientiality. Composite scores for each subscale were calculated by averaging responses across the items. The REI demonstrated very good internal consistency in the present study (rationality $\alpha = .86$; experientiality $\alpha = .92$).

Procedure

Participants were self-selecting by responding to electronic invitations sent via email and Internet-mediated announcements via social media websites. Invitations gave a brief outline of the study and a link to the survey web page, which was hosted by the Qualtrics

Research Suite system for a period of one week. Upon arriving at the web page, participants were provided with an introduction to the study and the task to be completed. If participants were happy to proceed, they were then taken to the first page of the survey on the next screen.

The presentation order of the scales was the same for all participants (DEM–REI–GPS–ATS–CATSO). This was done such as to minimize the potential for confounding variables influencing the data. Upon completion of the scales, participants were provided with a full overview of the study. Data were exported from the Qualtrics Research Suite into *IBM SPSS Statistics for Windows* (version 21) for analysis.

Results

CATSO reliability and factor structure

Cronbach's alpha for the original 18-item CATSO was .83, which is a higher coefficient than previous studies and indicates a good level of internal consistency. The Kaiser–Meyer–Olkin measure of sampling adequacy was calculated as 0.86, while Bartlett's test of sphericity was significant ($\chi^2(153) = 3007.60, p < .001$). Factors with eigenvalues of >1 were extracted, with loadings of <0.5 being suppressed (Field, 2009).

A four-factor structure was found. However, the items loading on to each of these factors did not support Church et al.'s (2008) CATSO structure. The 'social isolation' factor did remain intact ($\alpha = .85$), but each of the other three factors contained items that varied from Church et al.'s (2008) original model. These remaining three factors were thus labeled 'punishment and risk' (items 1, 2, 9, 11, 12, 13, 18; example item: 'sex offenders should wear tracking devices so their location can be pinpointed at any time'; $\alpha = .87$), 'perceptions of sexual crime' (items 5, 15, 17; example item: 'a sex offense committed against someone the perpetrator knows is less serious than a sex offense committed against a stranger'; $\alpha = .59$), and 'sexual activity' (items 3, 4, 10; example item: 'sex offenders have high rates of sexual activity'; $\alpha = .68$). These data support previous studies using the CATSO, indicating a structure comprised of two strong factors and two weak factors.

22-item scale reliability and principle components analysis

The factor structure of the alternative 22-item scale was examined using data from half of the sample ($N = 200$; 47 males, 135 females, 18 declined to provide gender; mean age = 34.07 years, $SD = 12.68$ years), with participant data being randomly assigned to either this stage of the analysis of the subsequent confirmatory factor analysis (CFA) stage. A sample size of 200 for each stage of the analysis conforms to the recommendations of Costello and Osborne (2005), who argued that researchers should attempt to exceed the frequently cited rule-of-thumb of five observations per scale item. In the present study, each sample of 200 equates to approximately nine observations per scale item.

The alternative scale produced a Cronbach's alpha coefficient of .92, indicating that this measure had excellent internal consistency. The Kaiser–Meyer–Olkin measure of sampling adequacy was calculated as 0.90, while Bartlett's test of sphericity was significant ($\chi^2(231) = 2619.47, p < .001$). Principle components analysis (PCA) with direct oblimin rotation was used to establish the underlying factor structure. As with the 18-item CATSO, factors with eigenvalues of greater than 1 were extracted, with loadings of less than 0.5 being suppressed.

PCA suggested a four-factor solution. Table 2 displays the item loadings for the four-factor solution, with data also provided for an alternative three-factor structure. The rationale for bringing together two of the factors is threefold, and based upon observations of the PCA scree plot (see Figure 2), a low eigenvalue for 'Factor 3,' and a strong Cronbach's alpha coefficient of the combined factor.

A three-factor structure for the 22-item scale was therefore proposed. These factors were labeled 'sentencing and management' (10 items; $\alpha = .93$; scoring range of 0–50 with high scores indicating that sex offenders should be harshly punished), 'stereotype endorsement' (7 items; $\alpha = .84$; scoring range of 0–35 with high scores indicating high levels of stereotype endorsement), and 'risk perception' (5 items; $\alpha = .80$; scoring range of 0–25 with high scores indicating that sex offenders are viewed as a risky population).

Confirmatory factor analysis

A CFA was conducted using *IBM SPSS Amos* (version 22) using data from the other half of the sample ($N = 200$; 65 males, 113 females, 22 refused to provide gender; mean age = 32.41 years, $SD = 10.42$ years), with the new three-factor structure as the default model. Goodness of fit data demonstrated that this structure had poor model fit. A further CFA was conducted after two items were removed due to low factor loadings ($<.50$) onto the 'stereotype endorsement' factor. These were items 3 and 10 from the original CATSO, which both pertained to respondents' perceptions about sex offenders' sexual activity levels, and formed a distinct factor in the original PCA (see Table 2). The resulting 20-item scale (Figure 3) demonstrated acceptable levels of model fit (goodness of fit index [GFI] = .87; adjusted goodness of fit index [AGFI] = .84; root mean square error of approximation [RMSEA] = .06). These model fit statistics are comparable to those reported by Church et al. (2008) in their CFA of CATSO development data. However, the superior reliability coefficients of the 20-item scale indicate that this new scale may be a stronger measure of perceptions about sex offenders than the original CATSO.

Upon confirming the underlying factor structure of the alternative 20-item measure, the data from all 400 participants were pooled to examine factor reliability coefficients and demographic and psychometric differences.

The 20-item scale produced a Cronbach's alpha coefficient of .92, indicating excellent internal consistency. Each of the three factors also demonstrated excellent levels of reliability: 'sentencing and management' ($\alpha = .93$), 'stereotype endorsement' ($\alpha = .85$), and 'risk perception' ($\alpha = .81$).

Participants' scores on the alternative CATSO correlated highly with their scores on each of the three new factors (all $p = .001$). Each of the factors, in turn, correlated highly with each other (all $p < .001$). For example, the 'sentencing and management' factor and the 'risk perception' factor share a correlation coefficient of .70, indicating that as perceived risk increases, so does the belief that sex offenders should be harshly punished and punitively managed. The only exception to this trend of significant correlations was the relationship between the 'stereotype endorsement' and 'risk perception' factors ($r = .09$, $p = .08$, ns).

20-item alternative scale scores by demographics

Females scored significantly higher (therefore expressing more negative views about sex offenders) on the 20-item scale than did males ($M = 38.69$ vs. 33.04 ; $t(358) = 2.69$, $p < .01$). This pattern was also found on each of the alternative CATSO factors:

Table 2. Structure matrix of the alternative 22-item CATSO^a.

No.	Item	Rotated loadings			
		Factor 1	Factor 2	Factor 3	Factor 4
22 (n)	People who commit sex offences should be subject to harsh restrictions on their liberty for the rest of their lives	.895			
18	Convicted sex offenders should never be released from prison	.846			
11	Trying to rehabilitate a sex offender is a waste of time	.799			
2	People who commit sex offenses should lose their civil rights (e.g., voting and privacy)	.795			
25 (n)	It's not <i>if</i> a sex offender commits another crime, it's <i>when</i>	.762			
21 (n)	The death penalty should be reintroduced for sex offenders	.760			
1 ^b	With support and therapy, someone who committed a sexual offense can learn to change their behaviour	.749			
26 (n)	Sex offenders should have all their details announced to local communities	.714			
19 (n)	Sex offenders will almost always commit further offenses	.712			
12	Sex offenders should wear tracking devices so their location can be pinpointed at any time	.646			
7	Most sex offenders do not have close friends		.903		
8	Sex offenders have difficulty making friends even if they try real hard		.887		
16	Most sex offenders keep to themselves		.793		
6	Sex offenders prefer to stay home alone rather than be around lots of people		.774		
14	Most sex offenders are unmarried men		.583		
10	Sex offenders have high rates of sexual activity			-.905	
3	People who commit sex offenses want to have sex more often than the average person			-.870	
23 ^b (n)	People are far too on edge about the risks posed by sex offenders				.801
13 ^b	Only a few sex offenders are dangerous				.788
24 ^b (n)	More sex offenders should be given sentences in the community				.742

Table 2 (Continued)

No.	Item	Rotated loadings			
		Factor 1	Factor 2	Factor 3	Factor 4
9 ^b	The prison sentences sex offenders receive are much too long when compared to the sentence lengths for other crimes				.697
20 ^b (<i>n</i>)	Some sex offenders should be allowed to work in schools				.629
	Eigenvalue	8.38	3.32	1.01	1.25
	Scoring range	0–50	0–25	0–10	0–25
			Combined = 0–35		
	Mean score	26.21	12.46	5.32	21.08
			Combined = 17.78		
	Cronbach's alpha	.93	.85	.80	.80
			Combined = .84		

Note: *n* denotes new item; 22-item scale; scoring range = 0–110; mean score = 65.06; Cronbach's alpha = .92.

^a*N* = 200; ^bItem is reverse-scored.

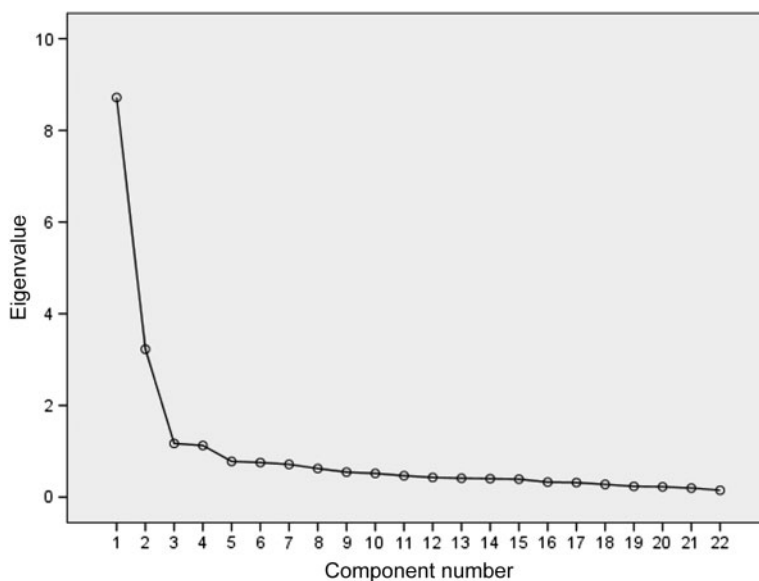


Figure 2. Scree plot for the 22-item revised CATSO scale.

‘sentencing and management’ ($t(358) = 2.92, p < .05$), ‘stereotype endorsement’ ($t(358) = .36, p = .73, ns$), and ‘risk perception’ ($t(358) = 4.26, p < .001$).

Personally knowing either a victim or perpetrator of sexual crime did not significantly influence scores on the 20-item alternative scale. However, knowing an offender did lead to lower (and, therefore, more positive) scores than not knowing an offender, with this difference approaching statistical significance ($M = 34.86$ vs. 38.18 ; $t(392) = 1.92, p = .06$).

A number of one-way analyses of variance (ANOVAs) were conducted on the remaining demographic variables (see Table 3). Younger participants, those whose highest qualification was lower than an undergraduate degree, and those who read either tabloid newspapers or no newspapers at all scored lower than participants who did not share these characteristics. Whole-scale scores were generally reflective of scores for the ‘sentencing and management’ (with the exception of age, where no differences were found) and ‘risk perception’ factors. However, no significant differences were found in relation to the ‘stereotype endorsement’ factor. In Table 3, the ‘age’ variable is broken down into three categories, based upon the average age of new parents in the UK (for further discussion on why this distinction may be important, see Malinen et al., 2014).

Inter-scale correlations

The 20-item alternative CATSO and its underlying factors correlate significantly with most of the other scales (and their factors) that were administered (see Table 4). Among the highest correlations were the ATS-21 and the 20-item full scale ($r = -.84, p < .001$) and the GPS and the alternative scale’s ‘sentencing and management’ factor ($r = .78, p < .001$). These correlations indicate that more generalized attitudes toward sex offenders are linked to perceptions of their risk and the endorsement of stereotypes about who sex offenders are, and a generally punitive approach to the criminal justice system is associated with support for harsh sentencing and management procedures in relation to

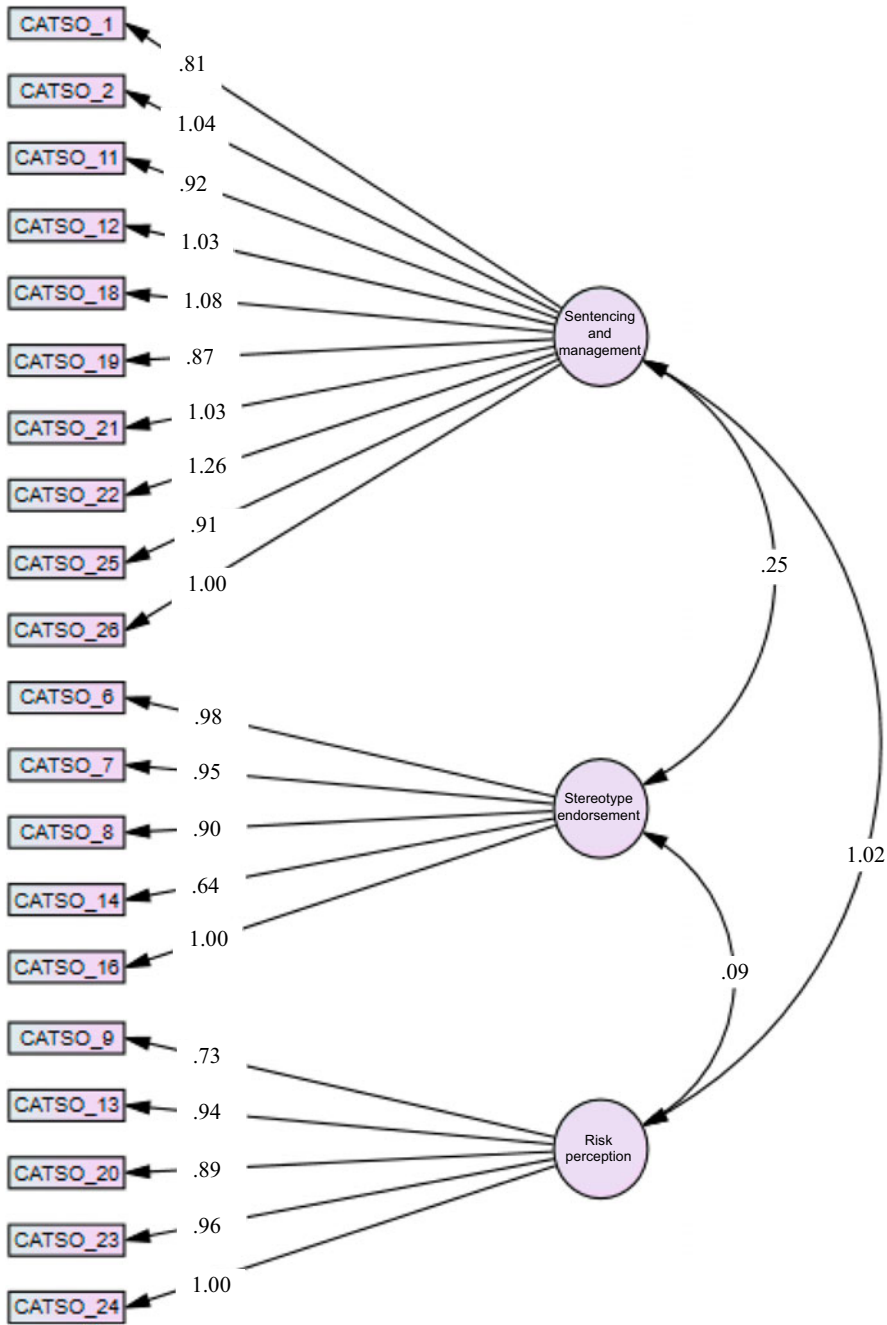


Figure 3. CFA of the 20-item scale.

sex offenders. These findings broadly support the underlying assumptions that the new scale could be used as an outcome measure in relation to respondents' perceptions of sex offenders and issues related to their sentencing and post-conviction management. Such strong correlations between the alternative CATSO factors and independent measures of

Table 3. ANOVA data for demographic differences on the 20-item alternative scale.

Variable	<i>M</i>	<i>SD</i>	<i>F</i>	<i>df</i> (between, within)	<i>p</i>
<i>Age</i>					
18–27 years ^a	39.97	16.09	3.36	2, 357	.04
28–46 years ^a	35.18	18.44			
Over 46 years	35.26	15.61			
<i>Highest qualification</i>					
<Undergraduate degree ^{b,c}	44.41	21.12	19.89	2, 395	<.001
Undergraduate degree ^b	35.37	14.85			
>Undergraduate degree ^c	31.78	12.26			
<i>Newspaper preference</i>					
Tabloids only ^{d,e}	45.83	18.07	7.51	3, 395	<.001
Tabloids and broadsheets ^e	36.37	15.49			
Broadsheets only ^{d,f}	32.64	16.23			
No newspapers ^f	38.44	16.81			

Note: Labels that share a superscript differ significantly ($p < .05$).

attitudes and generalized punitiveness is also indicative of strong construct validity for the alternative CATSO.

Discussion

This study aimed to examine the factor structure of the CATSO and to establish whether an alternative scale could be developed with the addition of new items. The data corroborated previous CATSO studies, finding two strong factors and two weak factors underlying the main scale. The addition of eight new items and the removal of four

Table 4. Pearson correlations between study scales.

	Alternative CATSO factors			
	Alternative CATSO	'Sentencing and management'	'Stereotype endorsement'	'Risk perception'
Original CATSO	.88**	.81**	.66**	.58**
Social isolation	.44**	.26**	1.00**	.09
Capacity to change	.93**	.96**	.27**	.68**
Severity/dangerousness	.64**	.57**	.21**	.65**
Deviancy	.27**	.23**	.41**	.06
ATS-21	-.84**	-.83**	-.18**	-.78**
Trust	-.77**	-.74**	-.13*	-.79**
Intent	-.78**	-.78**	-.26**	-.62**
Social distance	-.77**	-.77**	-.11*	-.74**
GPS	.77**	.78**	.23**	.61**
REI rationality	-.18**	-.18**	-.05	-.14*
REI experientiality	.19**	.17*	.01	.22**

* $p < .01$; ** $p < .001$.

redundant CATSO items led to a 22-item scale with excellent internal consistency. PCA suggested four underlying factors to this scale, but upon observing the factors and conducting further reliability analyses, a three-factor structure was put forward for confirmation. Each of these three factors were broadly supported through the CFA and demonstrated strong internal consistency. Two items were removed, leaving a final model consisting of 20 items reflecting different facets of community perceptions about sex offenders: 'sentencing and management,' 'stereotype endorsement,' and 'risk perception.' These factors demonstrated strong correlations with other measures, such as Pacini and Epstein's (1999) REI (rationality was associated with lower ratings of perceived risk) and Maruna and King's (2009) GPS (generalized punitiveness was associated with support for sex offenders to be treated harshly by the courts and upon their reentry into the community). This model is generally supportive of the alternative proposed at the outset, with the 'sentencing and management' factor equating to 'punitiveness,' and 'stereotype endorsement,' and 'risk perception' remaining the same.

The Perceptions of Sex Offenders scale

As indicated previously, there is some doubt as to whether the original CATSO is an appropriate measure of attitudes toward sex offenders. The distinction between the definitions of attitudes (Eagly & Chaiken, 1993) and stereotypes (Greenwald & Banaji, 1995) leads to the conclusion that the majority of the items on the CATSO (and by extension the alternative 20-item scale) measure knowledge-based attributions about sex offenders, as opposed to respondents' affective judgments about them. With this attitude-stereotype distinction in mind, Shelton et al.'s (2013) tentative suggestion of changing the name of the CATSO is also supported. Instead, it is proposed that the new 20-item scale be named the 'Perceptions of Sex Offenders scale' (from here referred to as the PSO). This title avoids the ambiguity bought about by referring to the scale as an attitude scale and more accurately reflects the types of inferences that can be made by researchers using the tool. A full list of PSO items (and scoring instructions) is provided in [Appendix 1](#).

Future use of the PSO

The PSO constitutes a reconceptualization of the CATSO scale, in that it seeks to change the original use as an attitude measure to one as an outcome scale, where changes in perceptions about sex offenders following public education initiatives can be measured empirically and accurately. Again, the rationale for this is that many of the original CATSO items required respondents to make knowledge-based evaluations of sex offenders, as opposed to affective judgments that would typically be found in already existing attitude measures (e.g. the ATS; Hogue, 1993). The three factors underlying the PSO, described above, represent distinct, albeit interrelated, aspects of the wider societal discourse about sex offenders and their management. For this reason, each of the factors can be seen to represent a way of understanding respondents' (1) understanding of who sex offenders are, and (2) perceptions about how sex offenders should be sentenced and/or managed post-conviction. These are the constructs that the PSO seeks to examine.

Criticizing definitions of punitiveness that conceptualize it as an instrumental pursuit of some penal outcome (e.g. Gault & Sabini, 2000), Maruna and King (2009) defined punitiveness as a general tendency to support harsher criminal justice policies, such as the increased use of long custodial sentences and the curtailment of offenders' basic human

rights. This claim is supported by the PSO data through the ‘sentencing and management’ factor’s correlation with the GPS. General levels of societal punitiveness are said to be a key driver of the political discourse around crime and punishment (Bosworth, 2011; Frost, 2010). As such, understanding this punitiveness at a deeper level should be a priority for researchers seeking to facilitate better communication between law enforcement agencies, the judiciary, and the general public. In this context, future studies should seek to establish the predictive validity of the ‘sentencing and management’ factor of the PSO with regards to support for punitive policies in relation to the sentencing of sex offenders and their management in the community.

At its core, the process of assigning an individual to a category (e.g. ‘sex offender’) involves the process of essentializing them (Bastian & Haslam, 2006; Estrada, Yzerbyt, & Seron, 2004; Levy, Stroessner, & Dweck, 1998). Further, Fiske (1998) identified stereotypical thinking as a component of a tripartite theory of discrimination and prejudice. For this reason, it is argued that examining levels of stereotype endorsement in relation to sex offenders offers some insight into the causes of discriminatory behavior toward them that is not provided by traditional attitude measures.

Although the ‘stereotype endorsement’ factor demonstrated good levels of internal consistency, the frequency of agreement with the items in this factor was much lower than in the other two factors. It may be that the participants in this study do not endorse stereotypical thoughts about sex offenders. However, a more likely explanation for lower ‘stereotype endorsement’ scores is that, whilst these items do hold together relatively well, they are not representative of stereotypes that are actually held within the general population. Future research should seek to establish the true nature of stereotypes about sex offenders and seek to incorporate these concepts into work on discrimination toward this group.

Community perceptions about the risks posed by convicted sex offenders have important implications for the reintegration of people with sexual convictions and support for political policies aimed at managing offenders in the community. This claim is supported by the high correlation between the PSO’s ‘sentencing and management’ and ‘risk perception’ factors. Risk perceptions can be skewed by misrepresentative media reporting about the issue of sexual crime (Harper & Hogue, 2015). For instance, the UK national newspaper *News of the World* (now defunct following a scandal about its involvement in hacking the phone messages of senior politicians, celebrities, and victims of crime) responded to the abduction, sexual assault, and murder of schoolgirl Sarah Payne in 2000 by launching a ‘name and shame’ campaign against people with sexual convictions involving children. Its front page carried the warning:

There are 110,000 child sex offenders in Britain ... one for every square mile. The murder of Sarah Payne has proved police monitoring of these perverts is not enough. So we are revealing WHO they are and WHERE they are ... starting today. (*News of the World*, 23rd July 2000)

This type of presentation implied to the audience that child sex offenders are a risk to everybody in their community, in spite of official statistics suggesting that this group of offenders has a comparatively low base rate of reoffending – 9% compared with more than 35% for offenders in general (Ministry of Justice, 2013). Additionally, this approach feeds the view that stranger attacks against children are common, when in fact they make

up only around 10–15% of sexual offenses against children (Lieb, Quinsey, & Berliner, 1998; Radford et al., 2011). The outcome of this presentation is an increased perception of the risks associated with unknown potential offenders in local communities. In turn, this contributes to public thinking about the best ways to manage sex offenders (Thakker, 2012).

Future studies using the PSO could examine whether different forms of psychoeducation with regards the true nature of sexual crime (e.g. deliberative processes, media engagement) have the potential to reduce perceptions of risk associated with sex offenders. These kinds of studies would also be utilizing the PSO in its intended outcome-orientated way.

Limitations and conclusions

This study was conducted within an exclusively British context and, as such, some of the new items that are present in the PSO may not be directly applicable to different jurisdictions. One such example of an item is ‘the death penalty should be reintroduced for sex offenders.’ Where the death penalty is already in statute for particular crimes, a modification of this item could be ‘the death penalty should always be an option when sentencing sex offenders.’ If this modification is adopted, reliability coefficients for the scale would require re-analysis.

It is also of note that the term ‘sex offenders,’ which is used throughout the PSO, CATSO, and other measures of attitudes toward sex offenders, is an excessively broad phrase for such a heterogeneous group. Future research could counteract this limitation by examining differences in PSO scores for specific offender groups, either by substituting ‘sex offender’ for a more specific offender type (e.g. ‘child molester’ or ‘rapist’) or explicitly asking respondents to consider a certain type of offender.

As indicated previously, the precise nature of widely held stereotypes about sex offenders may not be accurately reflected in the PSO, and so additional work is required in order to address this shortcoming. Nonetheless, it is felt that the reimagined scale represents a stronger tool for use than the original CATSO, given its internal consistency coefficients. As with any new scale, future studies should also seek to validate the factor structure, reliability, and validity of the PSO with different (and truly ‘community’) populations before the scale can be formally used in more serious or political contexts.

This paper has presented a reimagined version of the CATSO. The ‘PSO’ provides a new way of examining social cognition about sex offenders, and has great potential for use as a tool for scoping sites for sex offender treatment facilities (e.g. communities with lower risk perceptions may be more accepting of plans to open a treatment facility in their area, thus improving the likelihood of its success; for a discussion on the impact of social conditions on desistance from crime, see Goebbels, Ward, & Willis, 2012; LeBel, Burnett, Maruna, & Bushway, 2008), or as an outcome measure for evaluating educational programs (e.g. is a program effective in breaking down stereotypes associated with sex offenders?). For these reasons, the PSO should not be considered a stand-alone measure and should be used as part of a battery of measures (e.g. with the ATS; Hogue, 1993) for use by researchers looking at community responses to sexual crime and its perpetrators.

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Appendix 1. The Perceptions of Sex Offenders Scale

No.	Item	Factor
1*	With support and therapy, someone who committed a sexual offense can learn to change their behaviour	1 – Sentencing and management
2	People who commit sex offenses should lose their civil rights (e.g. voting, privacy)	1 – Sentencing and management
3	The death penalty should be reintroduced for sex offenders	1 – Sentencing and management
4*	People are far too on edge about the risks posed by sex offenders	3 – Risk perception
5*	More sex offenders should be given sentences in the community	3 – Risk perception
6	Sex offenders prefer to stay home alone rather than be around lots of people	2 – Stereotype endorsement
7	Most sex offenders do not have close friends	2 – Stereotype endorsement
8	Sex offenders have difficulty making friends, even if they try real hard	2 – Stereotype endorsement
9*	The prison sentences sex offenders receive are much too long when compared to the sentence lengths for other crimes	3 – Risk perception
10	People who commit sex offenses should be subject to harsh restrictions on their liberty for the rest of their lives	1 – Sentencing and management
11	Trying to rehabilitate a sex offender is a waste of time	1 – Sentencing and management
12	Sex offenders should wear tracking devices so their location can be pinpointed at any time	1 – Sentencing and management
13*	Only a few sex offenders are dangerous	3 – Risk perception
14	Most sex offenders are unmarried men	2 – Stereotype endorsement
15	It's not <i>if</i> a sex offender commits another crime, it's <i>when</i>	1 – Sentencing and management
16	Most sex offenders keep to themselves	2 – Stereotype endorsement
17	Sex offenders should have all of their details announced to local communities	1 – Sentencing and management
18	Convicted sex offenders should never be released from prison	1 – Sentencing and management
19	Sex offenders will almost always commit further offenses	1 – Sentencing and management
20*	Some sex offenders should be allowed to work in schools	3 – Risk perception

Scoring instructions: Each item is responded to on a 6-point Likert scale of 1–6 (strongly disagree – disagree – probably disagree – probably agree – agree – strongly agree). A constant of 1 is removed from each item score, meaning that the functional scoring range for each item is 0–5. Add up the scores for each item to compute whole-scale and individual factor scores. Items marked with an asterisk are reverse-scored.