

The measurement and influence of child sexual abuse supportive beliefs

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Abstract

The identification of offence-related cognition is a major target of most cognitive-behavioural treatment programmes for sexual offenders, and a number of measures are available for this purpose. This study assessed the psychometric properties of a brief measure of beliefs that support and justify child sexual abuse: the Sex With Children (SWCH) scale. Factor analysis revealed two distinct types of belief: that sex with children is harmless, and that children actively provoke adults into having sex with them. The SWCH was also found to have good internal consistency, test-retest reliability and concurrent validity. Child molesters scored significantly more highly on the SWCH than did rapists or non-offenders, and high-risk child molesters reported more entrenched offence-supportive beliefs than lower risk child molesters. A relationship was also observed between general offence-supportive beliefs as measured by SWCH and offence-specific cognitions ascribing responsibility or enjoyment to the offender's victim. The SWCH subscales appeared to closely match two of the implicit theories hypothesized by Ward and Keenan (1999) to be related to child molestation. Sex offender treatment providers need to be aware of the relationship between underlying implicit theories and offence-specific distorted cognitions about the victim's experience.

Keywords: *Child sexual abuse, offence-supportive beliefs, cognitive distortions, implicit theories*

Introduction

Most modern treatment programmes for sexual offenders aim to identify and challenge offence-related cognitions expressed by offenders (Marshall, Anderson, & Fernandez, 1999). This is a basic premise of the cognitive-behavioural approach, which to date is believed to be the most effective way of reducing re-offending (Hanson et al., 2002). However, research into the nature of sexual offenders' cognitions has suffered from unclear and inconsistent definitions of the range of cognitive phenomena probably involved in offending (Mann & Beech, 2003; Maruna & Mann, 2006). The popular term "cognitive distortion" (Murphy, 1990) has been variously used to describe excuses, justifications, denial, attitudes, and information processing errors. As Mann and Beech (2003) pointed out, it is not at all clear from the current literature whether "cognitive distortions" result from conscious processes employed post-offending in order to reduce the level to which the

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offender feels stigmatized by others; or whether they result from unconscious processes which serve to protect the offender from shame and guilt; or whether they are surface evidence of a more entrenched belief system that allows an offender to overcome internal inhibitions and commit sexual assault [as in Finkelhor's (1984) popular four-stage model of offending].

In this paper, we are concerned specifically with beliefs that support child sexual abuse, such as the idea that children can enjoy sexual activity with adults. Although such beliefs are often included in the definition of "cognitive distortion", there is no theoretical or empirical base for assuming that they are similar phenomena to excuses and justifications. More recently, it has been suggested that such beliefs may more appropriately be seen as category schemas (Mann & Beech, 2003) or implicit theories (Ward & Keenan, 1999). Defined in this way, offence-supportive beliefs are the mechanisms that generate offence-permitting surface cognitions that arise at the time of offending.

Measurement of child abuse supportive beliefs

The first quantitative study of child abuse supportive beliefs was reported by Abel et al. (1989). These authors constructed a "Cognitive Distortions Scale" (also labelled at some points in their paper as the "Cognitions Scale") and examined scores from child molesters, non-child molester paraphiliacs, and a non-offender sample. The Cognitive Distortions Scale was found to have six factor-based subscales which were labelled as follows: (1) Child-adult sex helps the adult; (2) Children initiate child-adult sex; (3) Adults initiate child-adult sex for specific reasons; (4) Child's behaviour shows a desire for child-adult sex; (5) Adults can predict when child-adult sex will damage the child; and (6) Child-adult sex is, or will be, acceptable. The Cognitive Distortions Scale had acceptable inter-item consistency and test-retest reliability but not discriminant validity: None of the scales discriminated between child molesters and non-child molesting paraphiliacs. It is not clear from the paper how many of the scales discriminated child molesters from a general, non-criminal sample. Results indicated that scores were sensitive to the duration of molesting, in that offenders with longer histories of molesting had higher scores. The scale also differentiated offenders with a greater range of victims (age/gender) from those with little range. However, the scale was not sensitive to amount of aggression used during offending, or to the number of attempts that had been made at molesting. These results have usually been taken to support the notion that offence-supportive beliefs play a maintenance role in offending rather than a causal one, because they appear to develop in strength over the duration of the offending period, as if each offence strengthens the degree to which the beliefs are held.

Other studies using the Cognitive Distortions Scale have replicated Abel et al.'s (1989) findings. For example, Browne and Carlyle (1993; cited in Browne, 1994) found significant differences between child sex offenders and medical students on the first five subscales, using a British sample (although with a small sample size and not a particularly appropriate comparison group in terms of socio-economic status, education, etc.). Hayashino, Wurtele, and Klebe (1995) found that extra-familial child molesters scored higher on the Cognitive Distortions Scale than incest offenders, rapists, non-sex offenders and laypersons.

Following some criticisms of the design of the Cognitive Distortions Scale (e.g. that it is too transparent and vulnerable to socially desirable responding; Langevin, 1991) new scales for measuring offence-supportive beliefs in child molesters have been developed. Probably the best known of these is Bumby's MOLEST scale (Bumby, 1996). Items for the MOLEST scale were drawn from clinical and research experience, including some

adaptations of items from the Cognitive Distortions Scale. The final version of the MOLEST scale was found to have excellent internal consistency and acceptable test–retest reliability. It discriminated child molesters from rapists, and non-sexual criminals. It was free from a socially desirable response bias (i.e. not correlated with a social desirability scale) and showed convergent validity when compared with the Cognitive Distortions Scale and the “Cognitive Distortions and Immaturity” and “Justifications” subscales of the Multiphasic Sex Inventory (MSI; Nichols & Molinder, 1984). Furthermore, the MOLEST scale was sensitive to change following treatment. Blumenthal, Gudjonsson, and Burns (1999) also found that child molesters scored higher on the MOLEST scale than rapists, using a British sample. There are, however, some problems with the MOLEST scale. Not all items measure beliefs that might reasonably be thought to have encouraged offending to take place, such as the item, “I think child molesters often get longer sentences than they really should”. Furthermore, some items seem to presume that all child molesters are motivated to offend by deviant sexual preference. The scoring for items such as “Many men sexually assault children because they are stressed and molesting helped to relieve that stress” implies that to consider that some child molesters do not have a deviant preference would be considered “distorted”. Yet it is by no means established that all child molesters show deviant preferences for children.

Child molesters’ beliefs about sex with children have been differentiated from those of other groups on other similar attitude scales (e.g. Cortoni, Gordon, Malcolm, & Ellerby, 1991; Veach, 1999). The boundaries of the differences between child molesters and non-offenders have also been explored. Hanson, Gizzarelli, and Scott (1994) reported the development of a Sex Attitudes Questionnaire where incest offenders were found to perceive children as sexually attractive, sexually motivated and unharmed by sexual contact compared to community non-offenders and male batterers. There were no differences between the incest offenders and comparison subjects on other subscales measuring attitudes towards affairs, sexual frustration, and the confusion of sex and affection. Thus it seems that child molesters’ attitudes differ from non-molesters’ attitudes only in that they positively evaluate the notion of sexual activity with children.

In summary, child abuse supportive beliefs, such as beliefs that sex is good for children, sex is not harmful, and/or sex is actively enjoyed by children, have consistently differentiated child molester groups from other offender groups and from non-offenders. A difference is observed even with measures that are transparent, where the socially desirable response appears obvious. Child abuse supportive beliefs seem to strengthen over a period of offending.

Ward (2000) and Ward and Keenan (1999) suggested that offence-supportive beliefs should be reconstrued as “implicit theories”; that is, lay theories that individuals develop from an early age in order to understand and explain their social world. Implicit theories are then used to explain human actions and interactions in the individual’s life. Ward and Keenan analysed the offence-supportive belief scales described above (the Cognitive Distortions Scale and the MOLEST scale) to try to identify the nature and scope of implicit theories that could be related to child molestation. They identified five implicit theories, likely to have developed from the offender’s own experiences of being abused by others either mentally, physically or sexually: children as sexual objects (children enjoy and desire sex), entitlement (I am superior and have the right to assert my needs), dangerous world (other people desire to hurt and reject me), uncontrollability (the world and my behaviour are controlled by external forces) and nature of harm (sex is always beneficial and therefore is unlikely to harm children).

According to Ward and Keenan, child molesters could hold from one to all of these implicit theories and they hypothesized that different types of child molesters could hold different implicit theories. Such implicit theories, because they are used as a heuristic for interpreting the behaviour of others, could lead to distorted perceptions of the experiences of specific abuse victims. Ward (2000) reaches the same conclusion as Abel et al. (1989), that offence-supportive beliefs will strengthen as offending persists over time. Thus, Ward and his colleagues have proposed a mechanism by which offence-supportive cognitions could be generated and could lead to offence-permitting beliefs about specific potential victims.

Study aims and hypotheses

The current study aimed to describe and validate a measure of child abuse supportive beliefs: the “Sex with Children” (SWCH) scale. The measure concerned was adopted as an unpublished measure by HM Prison Service in 1992 when the Service’s national Sex Offender Treatment Programme (SOTP; Mann & Thornton, 1998) was introduced. Thus this measure pre-dated Bumby’s MOLEST scale, although its properties have not been published until now. The SWCH scale is widely used in prison and community settings in the UK, and forms part of a wider assessment of risk and treatment targets with sexual offenders. It is therefore important to establish that the SWCH is a reliable and valid measure. The present study also aimed to explore the relationship between general child abuse supportive beliefs and sexual offenders’ specific beliefs about their own offences and victims.

This study was therefore designed to test the following specific hypotheses. First, it was hypothesized that the “Sex with Children” scale (SWCH) will be a reliable measure: it will have good internal consistency and test–retest reliability and will not be unduly invalidated by socially desirable responding. Second, the SWCH scale was expected to show concurrent validity by correlating significantly with other established measures of child abuse supportive beliefs. Third, to establish discriminant validity, it was hypothesized that convicted child molesters will score more highly on the SWCH than convicted rapists and non-offenders; and that there will be no difference in scores between convicted rapists and non-offenders. It was also expected that extra-familial offenders would score more highly on SWCH than intra-familial child molesters (following Hayashino et al., 1995 and as hypothesized by Ward, 2000). Fourth, to assess predictive validity, it was hypothesized that higher risk child molesters will score more highly on the SWCH scale than lower risk child molesters. Finally, if the measure proved to be valid, we aimed to explore the relationship between generalized beliefs and specific cognitions about one’s own offending, in order to test Ward’s implicit theory model. Based on this model, it was predicted that men with high levels of child abuse supportive beliefs will be more likely to have made assumptions about victim compliance or enjoyment within their actual offending. However, it was not expected that child abuse supportive beliefs would be related to any other type of excuse, justification, or neutralization for offending.

Method

Participants

A total of 1376 sexual offenders formed the exploratory sample in this study. All were adult (aged over 18) male offenders undergoing assessment for a cognitive–behavioural Sex

Offender Treatment Programme (“the SOTP”, see Mann & Thornton, 1998 for a detailed description of the programme) between 1993 and April 2003. For the purposes of this study, the sex offender sample was divided into categories depending on victim type. Six offender type categories were created, following the straightforward convention of Harris and Hanson (2004). The categories were: (i) Incest offenders ($n = 476$); (ii) Extra-familial child molesters with male victims ($n = 158$); (iii) Extra-familial child molesters with female victims ($n = 239$); (iv) Child molesters with both intra- and extra-familial victims ($n = 76$); (v) Rapists (adult female victims only; $n = 364$); and (vi) a Cross-over group containing men who had offended against both adult and child victims ($n = 63$). Men who had offended against adult male victims were excluded from the sample as the number was too small to allow for meaningful comparisons. To the best of our knowledge, the sample can be viewed as not having participated in any structured treatment prior to participating in the study.

A sample of 40 adult male prison officers served as a non-offending comparison group. The prison officers completed the measures during their training period, before they actually began working in penal establishments. The prison officers were chosen as a comparison group because, as criminal histories are carefully checked before employment as a prison officer, it was possible to be certain that none of them had been convicted of any criminal offence. There were some important differences between the prison officers and the sexual offender samples, which must be noted: the prison officers were substantially younger, less likely to be divorced and more educationally qualified than the sex offender samples.

The replication sample comprised 481 sexual offenders. Assessment entry criteria were identical to the exploratory sample above, with the only difference being that the replication sample had completed their assessments between April 2003 and April 2005. The offence type categories of the replication sample were: (i) Incest offenders ($n = 182$); (ii) Extra-familial child molesters with male victims ($n = 49$); (iii) Extra-familial child molesters with female victims ($n = 109$); (iv) Child molesters with both intra- and extra-familial victims ($n = 32$); (v) Rapists (adult female victims only; $n = 99$); and (vi) a Cross-over group containing men who had offended against both adult and child victims ($n = 10$).

Table I displays the demographic and offence-specific characteristics of exploratory and replication samples. Comparable risk data was not available for the replication sample because a new risk scale had been introduced by the time these men were assessed. Cell size discrepancies within the tables are the result of missing data.

A series of one-way analyses of variance (ANOVA) were conducted on the exploratory sample data in Table I ($n = 1376$). Results of these analyses revealed a significant difference in age at the time of testing between the groups: $F(6,1409) = 34.1$, $p < 0.001$. *Post hoc* testing using the Games–Howell test (appropriate for unequal group sizes and unequal variances; Toothaker, 1993) revealed that the prison officer control group was significantly younger than all the sex offender groups ($p < 0.001$ for all analyses). The rapists were significantly younger than the other sex offender groups ($p < 0.001$ for all analyses except child molesters with intra- and extra-familial victims, $p < 0.010$; and cross-over offenders, $p < 0.05$). The incest offenders were significantly older than the extra-familial female-victim child molesters ($p < 0.05$) and the cross-over offenders ($p < 0.05$). Because of these differences, the correlation between age and total SWCH score was calculated to ascertain if age needed to be included in subsequent analyses as a covariate. There was a small but significant correlation between age and SWCH score ($r(1335) = 0.15$, $p < 0.001$). As a result of this, participant age was included as a covariate in relevant analyses within the results section.

Table I. Demographic and offence-specific characteristics of the exploratory and replication samples. CM, child molesters; EF, extra-familial.

	Sample	CM: Incest		CM: EF male		CM: EF female		CM: Incest & EF		Rapists		Cross-over		Non-offenders	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	Exploratory	44.8	11.6	44.1	11.9	41.6	13.6	40.9	12.9	35.2	10.1	40.1	11.7	27.9	6.6
	Replication	47.7	11.9	45.1	11.7	41.6	13.0	43.7	9.7	35.1	9.7	40.4	7.4	–	–
No. of victims sex/violent offences	Exploratory	1.8	1.2	2.4	2.4	1.8	1.6	2.8	2.0	1.2	0.73	4.3	4.6	–	–
	Replication	1.7	1.2	4.0	5.4	1.5	0.90	3.0	2.0	1.3	0.90	2.4	1.3	–	–
No. of previous convictions	Exploratory	3.7	6.0	4.4	5.7	4.9	6.1	5.6	8.0	7.5	8.1	5.9	6.0	–	–
	Replication	2.6	4.2	6.1	17.8	5.5	11.2	7.0	12.2	6.8	8.5	10.7	8.8	–	–
	Sample	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Ethnicity*</i> :															
White	Exploratory	456	98.1	148	96.1	218	94.4	70	94.6	305	86.6	58	95.1	–	–
	Replication	163	97.0	47	100.0	91	88.3	28	90.3	75	84.3	10	100.0	–	–
Black	Exploratory	9	1.9	6	3.9	13	5.6	4	5.4	47	13.4	3	4.9	–	–
	Replication	5	3.0	0	0	12	11.7	3	9.7	14	15.7	0	0	–	–
<i>CM future risk</i>															
Low	Exploratory	17	4.0	7	5.1	36	17.6	4	6.1	142	43.3	15	27.8	–	–
Medium-low	Exploratory	241	56.1	42	30.7	73	35.6	18	27.3	169	51.5	14	25.9	–	–
Medium-high	Exploratory	129	30.1	47	34.3	59	28.8	21	31.8	17	5.2	19	35.2	–	–
High	Exploratory	42	9.8	41	29.9	37	18.0	23	34.8	0	0	6	11.1	–	–

*The minority-ethnic participants have been defined as 'black', using the term in its political sense to apply to all those non-Caucasians who are either Black-African, African-Caribbean, Black-Other or from the Asian sub-continent. Ethnicity data were not collected from the normative group.

A significant difference between offender groups was also found for number of victims of sexual/violent offences: $F(5,1164) = 37.6, p < 0.001$. *Post hoc* testing using the Games–Howell test indicated that the mean number of victims in the cross-over group, the child molesters with both intra- and extra-familial victims, and the extra-familial male-victim child molesters, was significantly higher than for the incest offenders, the extra-familial female-victim child molesters, and the rapists (probability ranged from 0.001 through 0.05 for these analyses). A further significant difference between the sex offender groups was found for total number of general previous convictions: $F(5,1123) = 11.4, p < 0.001$. The rapists had a significantly greater number of general previous convictions than the incest offenders ($p < 0.001$), extra-familial male-victim offenders ($p < 0.001$), and extra-familial female-victim offenders ($p < 0.001$). Pearson's correlations were computed to examine whether "total number of victims" and "total number of previous convictions" were required to be included as covariates in subsequent analyses. This was not the case, as there was no significant correlation between SWCH total score and either of these scales [$r(1115) = 0.01, p = 0.96$] and [$r(1060) = -0.01, p = 0.88$], respectively].

As the replication sample was not used to examine discriminant validity, demographic analyses were not computed.

Measures

The *Sex With Children* (SWCH) scale was assembled by Professor W. L. Marshall for use within an assessment and treatment programme for convicted male sexual offenders delivered by Her Majesty's Prison Service. The scale, given in Appendix 1, comprises 18 items. The items were derived from Professor Marshall's clinical experience with sexual offenders over 24 years, and reflected statements made by offenders which appeared to be attempts to justify sex with children. In forming the items for this scale, statements that reflected other types of distorted belief were excluded.

Response anchors for the SWCH are 0 = strongly disagree, 1 = disagree, 2 = undecided, 3 = agree, and 4 = strongly agree. No items are reverse scored. Higher scores indicate greater agreement with scale items (more strongly held beliefs). Missing items are given a score of 2. The SWCH scale can be considered to measure general beliefs that justify sexual contact between adults and children.

Concurrent validity of the SWCH was examined using three measures, the Beckett Children and Sex Scale (Beckett, Beech, Fisher, & Fordham, 1994), the Multiphasic Sex Inventory (MSI: Nichols & Molinder, 1984), and the Sex Offence Attitudes Questionnaire (Offending Behaviour Programmes Unit, unpublished). It should be noted that the MOLEST scale (Bumby, 1996) was not used because it was not yet available when the HM Prison Service test battery was designed.

The Beckett *Children and Sex Scale* is an 87-item questionnaire that measures respondents' beliefs, feelings and thoughts about children and sex. Higher scores reflect a greater degree of beliefs supporting the sexual abuse of children. Respondents rate each item on a five-point Likert scale. The response anchors are 0 = very true, 1 = somewhat true, 2 = somewhat untrue, 3 = very untrue, 4 = don't know. For analysis purposes, items are recoded 4 = very true, 3 = somewhat true, 1 = somewhat untrue, 0 = very untrue, 2 = don't know. Only 30 of the 87 items are scored. These 30 items are clustered into two 15 item sub-scales, *Cognitive Distortions* (CD) and *Emotional Congruence* (EC). Items are summed to produce a total scale score. For purpose of this study, only the CD scale was utilized. Beech, Fisher, and Beckett (1998) reported good psychometric properties for the measure.

The MSI is a 300-item true/false self-report inventory specifically designed to be used with sex offenders. The MSI has 20 scales, six of which are validity scales assessing the respondent's attitudes at time of testing. The remaining 14 scales include a variety of sexual deviance measures, a sex knowledge and belief measure, a measure of sexual dysfunction, and an assessment of motivation for treatment. Nichols and Molinder (1984) report good psychometric properties for the instrument. For the purpose of this study, only the *Cognitive Distortions and Immaturity (CDI) Scale* was utilized. The CDI Scale assesses the extent to which the individual adopts a victim stance in relation to the offence(s) he has committed. The scale is made up of 21 items and high scores (15 raw score points or over) would suggest that the individual has extreme difficulty accepting responsibility for his actions, primarily because of major distortions in cognitive perception (Nichols & Molinder, 1984).

The *Sex Offence Attitudes Questionnaire (SOAQ)* is a 50-item scale, composed of six subscales relating to levels of denial, distortion and minimization about the offender's own offence(s). Some items were derived from questionnaires designed by Hogue (1998) and Proctor (1994). Sub-scales are denial of repetition (five items), denial of premeditation (four items), denial of harm (seven items), denial of offence (three items), denial of responsibility (five items), and denial of control (nine items). Seventeen additional items within the SOAQ are not used. Sub-scales scores are summed to produce a total minimization score. Higher scores indicate greater sub-scale support. Respondents rate items on a five-point Likert scale. Scale point anchors are 0 = completely false, 1 = mainly false, 2 = unsure, 3 = mainly true, and 4 = completely true. Items are recoded 0 = 1, 1 = 2, 2 = 3, 3 = 4, and 4 = 5 for scoring purposes, and missing items are given a score of 3.

The relationship between the SWCH scale and socially desirable responding was examined using *The Balanced Inventory of Desirable Responding 6 (BIDR: Paulhus, 1984)*. The BIDR is a 40-item self-report questionnaire, which contains two subscales, Self-Deception and Impression Management. Respondents rate items on a seven-point Likert scale ranging from 1 (Not true), through 4 (Somewhat true) to 7 (Very true). The two subscales are scored separately and then added together to produce a total score. Higher scores indicate exaggerated desirable responses to questions. Example items are "I sometimes drive faster than the speed limit", "I am a completely rational person", and "I never swear". Paulhus (1984) reports excellent psychometric properties for the BIDR:6.

Risk was measured using an early actuarial scale based on research by Thornton and Travers (1991). This assessment of static risk produces two static risk scores: risk of future child molestation and risk of future violent offending (including rape). Only the risk of future child molestation scale was used for analyses in this study.

Procedure

All participants completed the SWCH, SOAQ, Children and Sex, MSI and BIDR scales as part of a wider psychometric test battery designed to assess treatment need in sexual offenders. Questionnaires were administered in 28 prisons, as part of the pre-treatment assessment procedure for the SOTP. Psychometric tests are administered in group testing sessions or are completed by individuals in the presence of an administrator. Completed questionnaires were collated by prisons and forwarded to Offending Behaviour Programmes Unit based at HM Prison Service Headquarters. The risk instrument was completed by staff within each prison at the pre-treatment stage, with results also forwarded to HM Prison Service Headquarters.

Following completion of the treatment programme, all participants were re-tested with the SWCH. Re-testing took place at least 6 weeks after completion of treatment and conformed to pre-treatment test conditions.

Test–retest reliability data was collected from a sub-group of 30 sexual offenders within the total sample. All types of sexual offender defined in Table I were represented in the test–retest sample. These participants were located in four different prisons, ranging from high security to medium security. Participants for this phase of the study completed the SWCH scale twice before entering the treatment programme. The mean length of time between testing sessions was 72 days (SD = 34.9, range 39–130 days).

Prior to analyses, outliers with scores that were greater than three standard deviations from the group mean were removed from both exploratory and replication samples (Tabachnick & Fidell, 2001).

Results

Internal consistency and reliability

Using the exploratory sample, the internal consistency of the 18 SWCH items was examined using Cronbach's alpha (Cronbach, 1951). Corrected item-to-total correlations were performed on the SWCH scale items using the sexual offender groups only. Of the 18 items, item–total correlations were >0.5 for all items and >0.7 for 61% of items. Deleting specific items did not increase the scale alpha. The alpha coefficient for the SWCH was 0.94. This indicates an excellent level of internal consistency for the scale (Nunnally, 1978). The scale also demonstrated excellent test–retest reliability [$r(28) = 0.93$].

For the replication sample, item–total correlations were again >0.5 for all items, and >0.7 for 61% of items. Deleting specific items did not increase the scale alpha. The alpha coefficient was again 0.94.

SWCH scores were significantly negatively correlated with the Self-Deceptive Enhancement subscale of the Balanced Inventory of Desirable Responding as follows: Harmless Sex with Children $r = -0.23$, $p < 0.001$; Provocative Sexual Children $r = -0.19$, $p < 0.001$; Total SWCH $r = -0.22$, $p < 0.001$.

Factor structure

Using the exploratory sample, a principal components analysis (PCA) was conducted in order to ascertain the numbers of factors to extract using Factor Analysis (Bartholomew, Steele, Moustaki, & Galbraith, 2002). Three criteria were utilized to select the number of components: (1) the Kaiser criterion of dropping factors with eigenvalues under 1 (Kaiser, 1960); (2) examination of the Cattell Scree plot (Cattell, 1966); and (3) although not a strictly mathematical criterion, we limited the number of factors to those whose dimension of meaning was readily comprehensible (Bartholomew et al., 2002).

The PCA produced a clear two-component solution. As a result of the PCA, the SWCH items were subjected to Factor Analysis using VARIMAX Rotation (for simple structure loadings). Two factors were extracted, explaining 57% of the common variance. Eleven items loaded onto Factor 1 (factor loadings given in bold in Table II) which was labelled Harmless Sex with Children beliefs (e.g. Item 11: Having sex with a child is not really all that bad because it doesn't really harm the child). Factor 2 contained seven items and was

Table II. Factor loadings from the SWCH rotated two-factor solution by sample.

SWCH item	F1: Harmless Sex with Children		F2: Provocative Sexual Children	
	Exploratory (<i>n</i> = 1369)	Replication (<i>n</i> = 479)	Exploratory (<i>n</i> = 1369)	Replication (<i>n</i> = 479)
1	0.28	0.34	0.64	0.67
2	0.35	0.36	0.70	0.68
3	0.24	0.26	0.64	0.70
4	0.32	0.36	0.74	0.70
5	0.37	0.32	0.56	0.66
6	0.36	0.44	0.53	0.43
7	0.36	0.40	0.53	0.35
8	0.61	0.57	0.40	0.47
9	0.59	0.61	0.43	0.40
10	0.60	0.53	0.46	0.41
11	0.70	0.68	0.39	0.36
12	0.53	0.47	0.31	0.37
13	0.62	0.51	0.41	0.55
14	0.67	0.63	0.40	0.39
15	0.81	0.79	0.30	0.30
16	0.82	0.84	0.31	0.29
17	0.83	0.77	0.34	0.36
18	0.70	0.68	0.36	0.42

Bold text shows items loading on the factor.

an index of Provocative Sexual Children beliefs (e.g. Item 3: Many children are sexually seductive towards adults). Table II presents the loadings of the SWCH two-factor solution for the exploratory and replication samples.

The internal consistency of the two factors was excellent (Harmless Sex with Children $\alpha = 0.93$; Provocative Sexual Children $\alpha = 0.87$).

The SWCH items from the replication sample were subjected to Factor Analysis using VARIMAX Rotation (for simple structure loadings). Two factors were extracted, explaining 56% of the common variance. Examination of the loadings in Table II shows that there is an almost perfect replication/item distribution of the original two-factor solution. The only discrepancy relates to item 7: Children who are unloved by their parents are actually helped by men who have sex with them. This item now loads on Factor 1 (Harmless Sex with Children). However, for analyses purposes, item 7 was retained in Factor 2 (Provocative Sexual Children).

The internal consistency of the two factors was again excellent (Harmless Sex with Children $\alpha = 0.93$; Provocative Sexual Children $\alpha = 0.87$).

Concurrent validity

Using the replication sample, subscale and total SWCH scores were correlated with the Beckett Cognitive Distortions scale; the Cognitive Distortions and Immaturity Scale of the Multiphasic Sex Inventory, and the Sex Offence Attitudes Questionnaire. Table III shows the result of these analyses.

SWCH scores were significantly correlated with both Beckett's Cognitive Distortions Scale and the Cognitive Distortions and Immaturity Scale of the MSI.

Table III. Concurrent validity correlations using replication sample.

	SWCH subscale		
	Harmless Sex with Children	Provocative Sexual Children	Total SWCH score
BIDR: Self Deceptive Enhancement ($n=445$)	-0.23**	-0.19**	-0.22**
BIDR: Impression Management ($n=445$)	-0.09*	-0.03	-0.06
BIDR: Total Score ($n=445$)	-0.18**	-0.12*	-0.15**
Beckett: Cognitive Distortions scale ($n=462$)	0.56**	0.64**	0.63**
MSI: Cognitive Distortions and Immaturity ($n=445$)	0.36**	0.37**	0.38**
SOAQ: Denial of Repetition ($n=466$)	-0.05	-0.01	-0.02
SOAQ: Denial of Premeditation ($n=165$)	0.08	0.10*	0.10*
SOAQ: Denial of Harm ($n=458$)	0.41**	0.50**	0.48**
SOAQ: Denial of Offence ($n=465$)	0.13**	0.16**	0.16**
SOAQ: Denial of Responsibility ($n=464$)	0.42**	0.46**	0.47**
SOAQ: Denial of Control ($n=464$)	0.07	0.07	0.08
SOAQ: Minimization Total Score ($n=466$)	0.32**	0.39**	0.39**

** $p < 0.001$; * $p < 0.05$.

Discriminant validity

The six sexual offender groups within the exploratory sample and the non-offender group were compared in terms of subscale and total SWCH scores. Mean scores for each group are displayed in Table IV.

A one-way ANOVA showed a significant difference between groups for the SWCH subscales and total score: [Harmless Sex with Children, $F(6,1288) = 21.45$, $p < 0.001$; Provocative Sexual Children, $F(6,1298) = 30.44$, $p < 0.001$; SWCH Total Score, $F(6,1283) = 31.21$, $p < 0.001$]. *Post hoc* testing using the Games–Howell test (for unequal variances and sample size) revealed that the comparison group (prison officers), crossover group and rapist group had significantly lower scores on SWCH total and both subscales than any of child molester groups ($p < 0.001$ for all analyses). Within the child molester

Table IV. SWCH scores by offender type using exploratory sample. CM, child molesters.

Group	SWCH Subscale								
	Harmless Sex with Children, range: 0–44			Provocative Sexual Children, range: 0–28			Total SWCH score, range: 0–72		
	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD
Incest	446	3.4	4.5	442	2.5	2.9	444	5.9	7.0
CM: Extra-familial male victim	148	4.7	5.4	150	4.1	3.8	151	9.2	9.2
CM: Extra-familial female victim	215	3.0	4.5	221	2.6	3.2	216	5.5	7.1
CM: Intra- and extra-familial victims	69	4.1	5.0	68	2.9	3.2	68	6.7	7.2
Rapists	326	1.0	2.2	330	0.81	1.5	322	1.6	3.1
Cross-over	51	0.94	2.1	53	1.1	2.1	50	1.7	3.2
Non-offenders	34	0.88	1.2	35	0.80	1.1	33	1.6	2.0

Table V. SWCH scores for each risk category using exploratory sample.

Risk of future child molestation	SWCH subscale								
	Harmless Sex with Children, range: 0–44			Provocative Sexual Children, range: 0–28			Total SWCH score, range: 0–72		
	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD	<i>n</i>	Mean	SD
Low risk	201	1.2	2.3	206	1.3	2.2	204	2.7	4.5
Medium-low risk	519	2.7	4.2	522	2.0	2.8	516	4.7	6.8
Medium-high risk	271	3.1	4.4	270	2.4	3.0	271	5.6	7.0
High risk	133	4.3	5.1	133	3.4	3.5	130	7.4	8.0

groups, those with extra-familial male victims had significantly higher scores than those with extra-familial female victims and incest offenders, on SWCH total and both subscales ($p < 0.001$ for all analyses).

Predictive validity

Table V shows the offenders' pre-treatment SWCH scores by static risk level. The data in Table V were analysed using one-way ANOVA. A significant difference between risk groups was found on the SWCH total score and both subscales: Harmless Sex with Children, $F(3,1123) = 15.93$, $p < 0.001$; Provocative Sexual Children, $F(3,1130) = 16.54$, $p < 0.001$; SWCH Total Score, $F(3,1120) = 14.68$, $p < 0.001$. *Post hoc* testing using the Games–Howell test (for unequal variances and sample size) revealed that the low risk group reported significantly fewer offence-supportive beliefs than all other groups across all SWCH scales ($p < 0.001$ for all analyses). The medium-low group reported significantly fewer offence-supportive beliefs than the high risk group on total score and both scales (Harmless Sex with Children, $p < 0.01$; Provocative Sexual Children, $p < 0.001$; SWCH Total Score, $p < 0.005$). Finally, the medium-high group reported significantly fewer offence-supportive beliefs than the high group on the Provocative Sexual Children scale ($p < 0.05$).

Relationship between beliefs and offence-specific justifications

The data in Table III show a significant correlation between SWCH scores and denial of premeditation (Provocative Sexual Children subscale and total SWCH score only), denial of harm, denial of offence, denial of responsibility, and total minimization score. There was no correlation between SWCH scores and denial of repetition or denial of control.

Discussion

The first aim of this paper was to assess the psychometric properties of the SWCH scale. A two-factor structure to the questionnaire was observed, with the first factor incorporating beliefs that sexual abuse of children is harmless, and the second factor relating to beliefs that children are sexual beings who provoke sexual contact from adults. The two-factor structure replicated almost perfectly across two samples. The scale was found to have excellent reliability, and showed discriminant validity, with child molesters scoring significantly higher than rapists and a non-offender control group. High-risk child molesters

reported more entrenched offence-supportive beliefs than lower risk child molesters, thus indicating predictive validity. Concurrent validity was also established, with the SWCH correlating significantly with two other benchmark measures of child abuse supportive beliefs: the Cognitive Distortions Scale (Beckett, 1987) and the Cognitive Distortions and Immaturity Scale of the MSI (Nichols & Molinder, 1984). While there was a significant correlation with self-deceptive enhancement, the scale does not appear to be susceptible to conscious impression management. These data provide substantial support for the reliability and validity of the SWCH as a measure of offence-supportive beliefs for men convicted of child sexual abuse.

The second aim of this study was to explore the relationship between general offence beliefs and cognitions reported by offenders that related specifically to their own offences. In addressing this question, attention should be drawn to the fact that the two subscales of the SWCH are an excellent match to two of Ward and Keenan's (1999) hypothesized implicit theories of child molesters. That is, the Provocative Sexual Children subscale closely resembles the Children as Sexual Objects implicit theory; and the Harmless Sex with Children subscale is identical in content to the Nature of Harm implicit theory. Based on Ward's theory, therefore, offenders who strongly identify with the beliefs measured by SWCH should be more likely to generate distorted statements about the victims of their own offences.

Bearing out this prediction, the SWCH was found to correlate highly with some subscales of a comprehensive measure of offence-specific minimization (the SOAQ); namely subscales measuring denial of harm, denial of offence, and denial of responsibility. The offence-specific minimizations covered by these subscales included statements such as "S/he enjoyed themselves at the time of the offence" (Denial of harm); "I [do not] accept that I committed a sexual offence" (Denial of offence); and "We have to share some of the blame because my victim knew how to seduce me" (Denial of responsibility). However, SWCH scores did not correlate with other types of offence-specific minimization, such as denial of repetition (e.g. "This was a one-off"); denial of premeditation (e.g. "This offence happened out of the blue"); or denial of control (e.g. "I could not control myself at the time of the offence").

It therefore seems that beliefs that support sexual abuse of children can indeed be viewed as implicit theories that produce surface cognitions at the point of sexual offending, so that the offender believes that his victim is consenting to, or even requesting, the sexual contact, and is not harmed by what is happening. The offender who has these implicit theories, it appears, may not even define his actions as sexual offences.

It is important that those providing treatment to sexual offenders understand this link between underlying beliefs and surface cognitions. As noted in the Introduction to this paper, most current treatment programmes address denial and justifications for offending. However, if this work does not extend to exploration of underlying offence-supportive beliefs, then the likelihood is that challenging of offence-specific justifications will be insufficient. An offender who holds underlying beliefs about the acceptability of sex with children may be led to see that a victim of past abuse was not complying with or consenting to the sexual activity. He may even be persuaded, perhaps through evocative role-play methods (such as those described by Mann, Daniels, & Marshall, 2002) that the victim of a past offence was traumatized or damaged by the experience of being victimized. However, crucially, this knowledge may not generalize automatically to future potential victims unless underlying implicit theories are also altered.

One limitation to this exploratory analysis must be acknowledged. The measure of offence-specific cognition used cannot be guaranteed to represent actual cognitions experienced at the point of offending. It is possible that it is merely a measure of *post hoc* neutralization or justification. It is difficult to imagine what measure could identify cognitions experienced during offending itself, and the probable futility of attempting to do this reliably has been acknowledged (Maruna & Copes, 2005). Other methodologies for measuring cognition, such as the Articulated Thoughts in Simulated Situations paradigm (Davison, Vogel, & Coffman, 1997), may yield more interesting findings than self-report measures.

Because the sex offender test battery of which SWCH is a part was designed prior to the availability of the MOLEST scale, this study was not able to validate SWCH against MOLEST. A cross-validation between the two instruments would be a useful further study. Furthermore, examining the items that comprise MOLEST reveals a good number of items that suggest children are provocative (e.g. "Some children can act very seductively") or that sex does not harm children (e.g. "Many children who are sexually assaulted do not experience any major problems because of the assaults"). However MOLEST also contains a range of items that do not appear likely to fit with either of the themes covered by SWCH, including items which do not appear related to implicit theories (such as "A lot of times sexual assaults on children are not planned, they just happen"). It would therefore be a useful exercise to conduct a factor analysis of MOLEST, to determine if the same patterns emerge as in the present study.

The findings of this study are strengthened by the sample size used, the replication of the factor structure of the SWCH, and the opportunity to compare a range of offender and non-offender groups of different risk levels in validating the tool. The SWCH can be confidently used as a measure of beliefs relevant to child molestation and risk of further offending, is not apparently affected by intentional impression management, and could be considered in particular to be a useful measure of two of Ward and Keenan's (1999) implicit theories. It is not apparently cluttered with items that do not relate to implicit theories, which is a weakness of other "cognitive distortions" scales. It is our conclusion that the offence-supportive beliefs measured by SWCH are appropriate targets for child molester treatment programmes.

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Appendix 1: SWCH items

1. Children actually enjoy sex with a man if the man is nice to them. (F2)
2. Most children actually enjoy sex with an adult so long as the man does not hurt them. (F2)
3. Many children are sexually seductive towards adults. (F2)
4. Children enjoy sexual attention from adults. (F2)
5. Men who have sex with children are usually led into it by the child. (F2)
6. Children who do not wear underwear and who sit in a way that is revealing are suggesting sex. (F2)
7. Children who are unloved by their parents are actually helped by men who have sex with them. (F2)
8. Sex between adults and children is quite natural and healthy and it is only because of the repressive rules of our society that men are punished for doing this. (F1)
9. It is far better for young people to have their first sexual experience during childhood with an adult than to risk what is sure to be an unpleasant experience with someone their own age when they are a teenager. (F1)
10. A man can't help having sex with a child if the child acts in a provocative manner. (F1)
11. Having sex with a child is not really all that bad because it doesn't really harm the child. (F1)
12. If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime. (F1)
13. Children are old enough to decide whether or not they want to have sex with someone. (F1)
14. Having sex with a child is a way of expressing your love and affection for that child. (F1)
15. Having sex with a child is a good way to teach them about sexuality. (F1)
16. Many children benefit from having sex with an adult. (F1)
17. It is OK to have sex with a child as long as you don't force the child into it. (F1)
18. Nowadays it is not so bad to have a sexual relationship with someone who is under-age because kids know so much more about sex than they used to. (F1)

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