

# A Cumulative Meta-Analysis of Studies Comparing Child Molesters to Non-molesters on the Social Avoidance and Distress Scale

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## INTRODUCTION

- in theory, social competency deficits play a role in the initiation and maintenance of sexually aggressive behaviour (Hudson & Ward, 2000)
- social competency deficits are important offense-specific targets in contemporary sex offender treatment programs (Beech & Fisher, 2002; Marshall, 1999)
- qualitative review (see Hudson & Ward, 2000) and quantitative analysis (see Dreznick, 2003) has suggested consensus within empirical literature that sexual offenders against children (SOC) display social competency deficits
- in the empirical research literature, the Social Avoidance and Distress scale (SAD; Watson & Friend, 1969) is a self-report measure commonly used to assess social distress in SOC samples

Table 1. Meta-analysis of Differences Between SOC and Non-SOC on the SAD

Study	<i>d</i>	95% CI	Variance	SOC <i>n</i>	Non-SOC <i>n</i>
Horley, Quinsey, & Jones (1997)	-0.12	-.53, .29	0.044	47	44
Katz (1990)	0.38	.06, .70	0.027	31	105
Marshall et al. (1995)	0.59	.24, .95	0.033	36	59
McCoury (1998)	0.69	.47, .90	0.012	127	297
Napolitano (1996)	1.49	.69, 2.29	0.17	14	17
Overholser & Beek (1986)	0.30*	-.16, .77	0.06	12	48
Segal & Marshall (1985)	0.68*	.23, 1.13	0.05	20	80
Aggregate Effect (Random Effects Model)	0.51	.25, .77	0.02	287	650

$Q = 19.39, p = .004, df = 6$   
\*Estimated effect size value

Table 2. Meta-analysis of SOC vs. SOA, NSO, and NO on the SAD

	SOC vs. SOA	SOC vs. NSO	SOC vs. NO
<i>d</i> (95% CI)	0.59 (.21, .96)	0.49* (-.13, 1.1)	0.59 (.43, .76)
<i>Q</i> ( <i>p</i> -value)	0.77 (.68)	12.88 (.005)	2.93 (.57)
Variance	0.037	0.099	0.0072
<i>k</i> (SOC <i>n</i> /comp. <i>n</i> )	3 (68/51)	4 (104/107)	5 (226/420)

Note. SOA = sexual offenders against adults; NSO = non-sex offenders; NO = non-offenders  
\*Indicates random effects model

### Purpose of current research

- conduct a new empirical study comparing SOC and NSO on the SAD
- incorporate findings from new study into the existing literature using a cumulative meta-analysis procedure (see Hanson & Broom, 2005)

## METHODS

### Participants

- Sexual offenders against children (SOC).  $n = 30$ ; Static-99:  $M = 5.70$  ( $SD = 2.10$ ; ranging = 1 to 9); Prior sex offence convictions:  $M = 1.97$  ( $SD = 2.67$ ); Index sex offence convictions:  $M = 7.07$  ( $SD = 10.62$ ); 7 (23.3%) exclusively victimized girls, 13 (43.3%) exclusively victimized boys, and 10 (33.3%) victimized both; 10 (33.3%) completed high, moderate, or low intensity sex offender treatment program during the current sentence
- Non-sex Offenders (NSO).  $n = 31$

## METHODS

Table 3.

Description of Participants

Variable	SOC		NSO	
	<i>n</i>	<i>M</i> ( <i>SD</i> ) or %	<i>n</i>	<i>M</i> ( <i>SD</i> ) or %
Age	30	47.57 (14.74)	31	38.19 (10.69)
Education (years)	30	9.83 (2.61)	31	10.10 (1.94)
Non-Aboriginal vs. Aboriginal	30	96.7%	30	80.0%
Prior violent convictions	30	1.07 (1.51)	31	2.97 (3.85)
Index violent convictions	30	0.70 (1.02)	31	2.55 (3.53)
Heterosexual vs. homo/bisexual	28	57.1%	29	96.6%

Note. All differences except for education were significantly different between groups ( $p < .05$ ).

### Measures

- Social Avoidance and Distress (SAD) Scale (Watson & Friend, 1969). Total score is the average response across 28 true/false items and can range from 0 to 1, with higher values indicating greater social avoidance and distress
- Impression Management Scale of the Balanced Inventory of Desirable Responding (BIDR-IM; Paulhus, 1984). 20-item self-report scale designed to assess response bias due to deliberate attempts to present oneself in a favorable light. Scores can range from 0 to 20 with higher scores indicating greater impression management
- participants completed the measures and their criminal files were reviewed Static-99 scores were obtained from offenders' assessment reports ( $n = 23$ ) or scored from file information ( $n = 7$ )

## RESULTS

- SOC and NSO did not differ on the SAD scale (see Table 4)
- BIDR-IM scores were not significantly different between SOC and NSO (see Table 4)
- The results did not change meaningfully when age, race, sexual orientation, or BIDR-IM scores were included as covariates in a parallel series of analysis of covariance (ANCOVA)

Table 4.

Comparison of SOC and Non-Sex Offenders on the SAD and BIDR-IM

Scale	SOC		NSO		95% CI	
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>d</i>	Lower	Upper	
SAD	0.35 (0.34)	0.35 (0.33)	0.01	-0.49	0.51	
BIDR-IM	7.31 (4.97)	5.26 (4.89)	0.42	-0.09	0.92	

Note. SAD = Social Avoidance and Distress scale. BIDR-IM = Impression Management scale of the Balanced Inventory of Desirable Responding

### Cumulative Meta-Analysis Results

Table 5.

Cumulative Meta-analysis for SOC vs. Non-SOC, NSO on the SAD

	SOC vs. Non-SOC	SOC vs. NSO
<i>d</i> (95%CI)	0.46* (.20, .71)	0.37* (-0.11, 0.85)
<i>Q</i> ( <i>p</i> -value)	22.44 (.002)	14.01 (.007)
Variance	0.017	0.059
<i>k</i> (SOC <i>n</i> /NSO <i>n</i> )	8 (317/681)	5 (134/138)

Note. \* $Q\Delta = 3.15, p = .08, df = 1$ ;  $^bQ\Delta = 2.08, p = .15, df = 1$

## RESULTS

### Moderator Variable Analyses

- Age of Sample: adolescent ( $k = 2$ ) & adult ( $k = 6$ ) samples have similar aggregate effect sizes ( $Q_B = 0.41, p = .52, df = 1$ )
- Effect Size Estimation: samples with estimated effect sizes ( $k = 2$ ) and calculated effect sizes ( $k = 6$ ) have similar aggregate effect sizes ( $Q_B = 0.24, p = .63, df = 1$ )

## DISCUSSION

- results from the current study showed no difference between SOC and NSO on the SAD ( $d = 0.01$ )
- integrating the current study's findings into the existing literature comparing SOC to Non-SOC produced a medium cumulative effect size ( $d = 0.46, 95\% CI = 0.20 - 0.71, N = 1045$ ). The results from the current study were not significantly different from the original meta-analysis summary ( $Q\Delta = 3.15, p = .08$ )
- integrating the current study's findings into the existing literature comparing SOC to NSO on the SAD produced a small, non-significant cumulative effect ( $d = 0.37, 95\% CI = -0.11 - 0.85, N = 272$ ). The results from the current study were not significantly different from the original SOC vs. NSO meta-analysis summary ( $Q\Delta = 2.08, p = .15$ )
- there was significant heterogeneity between studies ( $Q(7) = 22.44, p = .002$ ), although two moderator variables, age of sample and estimation of effect size, did not account for a significant portion of the between study variance
- findings suggest that SOC experience significantly more social distress than sexual offenders against adults and non-offenders, but not non-sex offenders
- social distress, as measured by the SAD, seems to be an aspect of social competence that differentiates SOC from some comparison groups

## REFERENCES

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Full references for meta-analysis studies are available on handout or from 1<sup>st</sup> author, address all correspondence to Ian McPhail [imcphail@cnmest.carleton.ca](mailto:imcphail@cnmest.carleton.ca)

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