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Introduction

- Meta-analytic studies have found that sex offender treatment programs are effective at reducing sexual recidivism (Hanson, Bourgon, Helmus, & Hodgson, 2009)
- Most of these studies, however, group offenders based on whether they were in the treatment or comparison group, thereby ignoring individual variability in treatment responses. Some offenders, for example:
 - May be within functional norms at pre-treatment (e.g., do not show problematic intimacy levels) and therefore would be expected to display limited improvement on the treatment target
 - May simply not have improved on certain putative measures
- As such, researchers (Friendship, Falshaw, Beech, 2003; Hanson, 1997) suggest that methodologies aimed at assessing individual variability in treatment change would be beneficial to:
 - Estimate the proportion of offenders who benefited from treatment
 - Clarify treatment targets' relationship with recidivism (e.g., by examining differences in recidivism between those who showed improvement on treatment targets and those who did not)
- Purpose of the study: to examine two methods of treatment change

Method

Analyses of Change

- **Group Change:** Averaging group changes between pre- and post-treatment scores (ANOVA)
- **Clinically Significant Change (Jacobson and Truax, 1991):** Examining individual change, while taking into consideration:
 - The meaningfulness of the change (i.e., following treatment, do individuals achieve a functional level on the treatment target?).
 - Based on statistical cutoffs calculated using norms from non-offenders
 - Measurement error (i.e., whether the change is statistically reliable, measured by the Reliable Change [RC] Index)
- This method allows each participant to be classified as:
 - **Recovered:** Displays a functional score at post-treatment and a statistically reliable change ($RC < \pm 1.96$)
 - **Improved:** Displays statistically reliable change ($RC < \pm 1.96$), but does not pass the functional cutoff
 - **Unchanged:** Does not have clinically reliable change ($RC \geq \pm 1.96$)
 - **Deteriorated:** Has clinically reliable change ($RC < \pm 1.96$), but in the opposite direction (i.e., become more problematic)

Participants

- Canadian sample of 313 adult male sexual offenders
- All participating in the low or moderate intensity National Sex Offender Program (NaSOP)

Table 1. Sample Demographics

Variable	Mean	SD	N
Age	43.85	12.70	313
Aggregate Sentence Length	3.84	2.50	293
Static-99	2.88	2.03	225
SIR-R1	9.31	9.91	264

Note. SIR-R1 = Statistical Information on Recidivism-Revised. Sample size fluctuates as a function of missing data. Twenty participants (6.4%) were serving indeterminate sentences.

Measures

- STABLE 2000 (Hanson & Harris, 2000; a measure of dynamic risk for sexual recidivism), MOLEST and RAPE scales (Bumby, 1996; measures of cognitive distortions supportive of child and adult sexual abuse), UCLA (Russell, Peplau, & Cutrona, 1980; a measure of loneliness), and MSIS (Miller & Lefcourt, 1982; a measure of social intimacy)

Results

Group Change Associated with Treatment Completion

- On average, participants significantly improved on the majority of the targeted needs, with the exception of social intimacy (MSIS)

Table 2. Group changes associated with treatment completion

Measure	Pre-mean (SD)	Post-mean (SD)	N	ES _{sg} (95% CI)
STABLE 2000	5.57 (2.13)	4.49 (2.28)	87	-0.49* (-0.70 - -0.28)
MOLEST	64.81 (17.53)	53.87 (14.83)	198	-0.67* (-0.81 - -0.54)
RAPE	60.14 (15.23)	49.22 (13.99)	214	-0.75* (-0.88 - -0.62)
UCLA	41.57 (10.13)	37.51 (9.55)	257	-0.41* (-0.52 - -0.28)
MSIS	135.14 (23.73)	135.98 (25.25)	262	0.03 (-0.08 - 0.15)

Note. ES_{sg} = Standardized Mean Gain Effect Size, represents the standardized magnitude of the pre-post change and enables effect size comparison between measures. * $p < .05$.

Moderators of Group Treatment Gain

- Treatment intensity and presence of a child victim were examined as possible moderators
- Participants in low intensity had significantly lower STABLE-2000 scores following treatment ($t[29] = -0.82$, $ES_{sg} = -0.16$, 95% CI = -0.54 - -0.22), whereas participants in moderate intensity did not ($t[58] = -5.97$, $ES_{sg} = -0.68$, 95% CI = -0.94 - 0.43). Groups did not differ at pre-treatment, however, were significantly different at post-treatment ($d = 0.76$, 95% CI = 1.22 - 0.30)



Figure 1. STABLE 2000 Moderated by Treatment Intensity

Presence of a victim under 12: MOLEST

- Both groups had significant change following treatment, $t_{childvictim}(93) = -9.54$, $ES_{sg} = -0.86$, 95% CI = -1.08 - -0.65, and $t_{nochildvictim}(63) = -4.97$, $ES_{sg} = -0.53$, 95% CI = -0.76 - -0.31. Groups significantly differed at pre-treatment ($d = 0.53$, 95% CI = 0.85 - 0.21), however, no longer differed at post-treatment

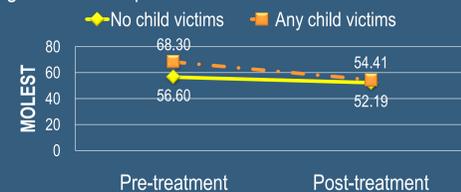


Figure 2. MOLEST Moderated by the Presence of a Victim under 12

Presence of a victim under 12: UCLA

- Both groups had significant change following treatment, $t_{nochildvictim}(104) = -3.46$, $ES_{sg} = -0.33$, 95% CI = -0.52 - -0.14, and $t_{childvictim}(110) = -5.68$, $ES_{sg} = -0.52$, 95% CI = -0.71 - -0.33. Groups differed at pre-treatment, $t(204) = -2.49$, $d = -0.34$, 95% CI = -0.61 - -0.07 and were no longer significantly different at post-treatment

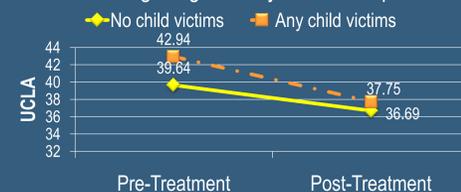


Figure 3. UCLA Moderated by the Presence of a Victim under 12

Results

Individual Change Associated with Treatment Completion: Clinically Significant Change

Table 3. Norms and Cutoffs used to Calculate Clinical Significance

Measure	Functional M	Functional SD	Dysfunctional M	Dysfunctional SD	Cutoff	Reliability	SDiff
STABLE	2.93	1.21	6.57	1.52	4.54	.74	1.10
MOLEST	51.80	10.39	68.56	17.59	58.02	.84	9.95
RAPE	55.90	18.00	60.66	15.63	58.45	.86	8.27
UCLA	37.06	10.91	41.48	10.25	39.34	.94	3.55
MSIS	137.80	21.48	124.50	20.80	131.04	.96	5.88

Note. Dysfunctional norms are based on the NaSOP sample. Functional norms are based on non-offenders, with the exception of the STABLE 2000, which was based on the NaSOP sample with scores less than 4 (i.e., low risk; $n = 40$). The reliability value is the test-retest correlation, usually derived from the literature.

- Figure 4 through 8 presents the treatment status of participants for each measure

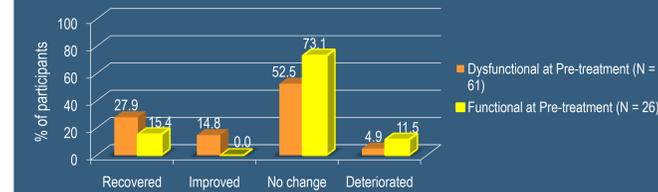


Figure 4. Individual Change on the STABLE 2000



Figure 5. Individual Change on the MOLEST



Figure 6. Individual Change on the RAPE

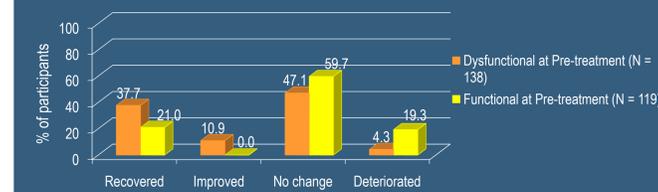


Figure 7. Individual Change on the UCLA



Figure 8. Individual Change on the MSIS

Results

Moderators of Individual Gain

- Treatment intensity and presence of a child victim were also examined as moderators of individual treatment gain for participants with dysfunctional pre-treatment scores
- Treatment Intensity had no significant moderating effect
- Any victim under 12 moderated both the MOLEST and UCLA scales
 - MOLEST: participants with child victims were significantly more likely to improve post-treatment (47.6%) than those with no child victims (25.0%; $\phi = .22$, $p = .03$, $N = 95$).

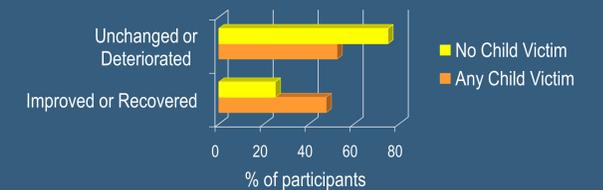


Figure 9. Moderating effect of a Child Victim on the MOLEST

- UCLA: participants with child victims were more likely to be improved or recovered at post-treatment (54.0%) than those without child victims (37.3%; $\phi = .17$, $p = .08$, $N = 114$).

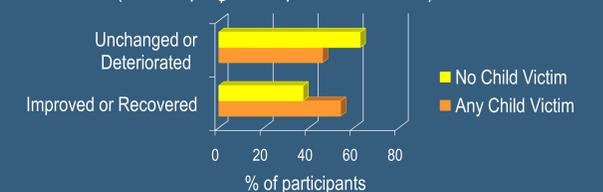


Figure 10. Moderating effect of a Child Victim on the UCLA

Discussion

- This study found significant group changes in all measures, with the exception of social intimacy (MSIS)
 - The STABLE 2000 was moderated by treatment intensity, with the moderate intensity group having greater treatment gains
 - The UCLA and MOLEST scale were moderated by the presence of a child victim, with those with child victims showing a significantly greater reduction in cognitive distortions and loneliness than those without child victims
- This study used the Jacobson and Truax method (1991) to assess the reliability of an individual's pre- and post-treatment change and the meaningfulness of the change through the use of functional norms
 - Those who displayed functional scores at pre-treatment were more likely to be unchanged than those classified as dysfunctional.
 - About half of offenders showed significant improvement when defining non-offenders as the functional group
 - The presence of a child victim continued to be a significant moderator for both the MOLEST and UCLA scale. Participants with child victims were significantly more likely to be classified as improved or recovered than those without child victims

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