

Outcomes in a Community Sex Offender Treatment Program: A Comparison Between Polygraphed and Matched Non-polygraphed Offenders

Robert J. McGrath · Georgia F. Cumming ·
Stephen E. Hoke · Marcel O. Bonn-Miller

Published online: 4 October 2007
© Springer Science + Business Media, LLC 2007

Abstract This study compared a group of 104 adult male sex offenders who received community cognitive-behavioral treatment, correctional supervision, and periodic polygraph compliance exams with a matched group of 104 sex offenders who received the same type of treatment and supervision services but no polygraph exams. Polygraph exams focused on whether participants were following their conditions of community supervision and treatment and had avoided committing new sexual offenses. The two groups were exact pair-wise matched on three variables: (1) Static-99 risk score (Hanson & Thornton 2000, *Law and Human Behavior*, 24, 119–136), (2) status as a completer of prison sex offender treatment, and (3) date placed in the community. At fixed 5-year follow-up periods, the number of individuals in the polygraph group charged with committing a new non-sexual violent offense was significantly lower than in the no polygraph group (2.9% versus 11.5%). However, there were no significant between-group differences for the number of individuals charged for new sexual (5.8% versus 6.7%), any sexual or violent (8.7% versus 16.3%), or any criminal offense (39.4% versus 34.6%). The results are discussed in terms of their clinical and research implications.

Keywords Sex offender · Treatment outcome · Polygraph · Sanction · Community supervision

R. J. McGrath (✉)

Vermont Department of Corrections, 105 Happy Valley Road, Middlebury, VT 05753, USA
e-mail: rmcgrath@sover.net

G. F. Cumming

Vermont Center for the Prevention and Treatment of Sexual Abuse, Burlington, VT, USA

S. E. Hoke

Vermont Department of Corrections, Middlebury, VT, USA

M. O. Bonn-Miller

Department of Psychology, University of Vermont, Burlington, VT, USA

Community treatment programs for adults who commit sexual offenses are increasingly using the polygraph as a treatment and supervision tool. According to a recent nationwide survey, its use in the United States has more than doubled in recent years, from 29 to 70 percent of programs between 1992 and 2002 (McGrath et al. 2003a). Polygraphy is now promoted in several state, national and international practice guidelines and documents (Association for the Treatment of Sexual Abusers 2005; English et al. 1997; Texas Council on Sex Offender Treatment 2006) and in some jurisdictions its use is required (e.g., Colorado; Colorado Sex Offender Management Board 2004).

Programs employing the polygraph typically administer it post-conviction and focus on four types of issues: whether examinees have (1) admitted to their most recent sexual offense conviction behavior, (2) disclosed their complete sexual history, (3) complied with their present community supervision and treatment conditions, and (4) avoided sexual reoffending (Association for the Treatment of Sexual Abusers 2005). Exams used in the present study were polygraph *compliance exams*, defined here as single exams that centered on issues three and four above.

Although the focus of post-conviction sex offender polygraph testing may differ from exams used in other contexts, such as criminal and security investigations, the basic method is the same. As Wilcox (2000) has summarized, an examiner asks an examinee a predetermined set of structured questions while measuring several of his or her physiological responses. These are typically heart rate, blood pressure, breathing patterns, and galvanic skin response. The theory is that physiological arousal is associated with telling lies. The examiner analyzes these responses and renders an opinion as to the individual's truthfulness.

Most scientific reviews conclude that polygraph tests that focus on specific, narrow and concrete issues commonly yield accuracy rates well above chance (National Academy of Sciences 2003; Raskin and Honts 2001). A common concern of critics, though, is the negative impact on examinees of even a small number of inaccurate test results (Cross and Saxe 2001). Different types of post-conviction sex offense polygraph exams are prone to varying degrees of error (Branaman and Gallagher 2005). These authors note that exams that focus on whether an individual committed a specific sexual offense for which he has already been found guilty are likely to be the most accurate although still not perfect. Least accurate are those that focus on wide-ranging issues, such as whether an individual has disclosed his or her entire sexual history or complied fully with supervision and treatment requirements. In all cases, polygraph tests are prone to false positive errors, that is, falsely judging someone who is telling the truth to be deceptive (Branaman and Gallagher 2005).

Questions about accuracy notwithstanding, advocates argue that individuals who commit sexual offenses may be deterred from reoffending when they know that they will be tested regularly and fear detection (Abrams and Abrams 1993). Advocates also cite research that polygraphed sex offenders, compared to non-polygraphed ones, admit to committing more past sexual offending behavior (Ahlmeyer et al. 2000; Hindman and Peters 2001) and more high risk behavior during community supervision (Grubin et al. 2004). This information is believed to allow for more precisely targeted rehabilitation services (Grubin et al. 2004; Kokish 2003). Certainly, providers commonly report that they believe the polygraph is a useful management tool (Kokish 2003).

An important, and to our knowledge, uninvestigated question is whether post-conviction polygraph testing of individuals who commit sex offenses results in reduced reoffending rates. In the present study, the gradual geographic phasing in of polygraph compliance exams in the state of Vermont provided the authors an opportunity to compare the 5-year re-offense rates of two matched cohorts of treated sex offenders, one that received polygraph compliance exams and one that did not.

We tested three hypotheses in this study. First, it was expected that polygraphed participants, as a result of undergoing polygraph exams, would disclose engaging in high risk behaviors that were previously unknown to their probation and parole officers and treatment providers. Although it was expected also that non-polygraphed participants would disclose less information about their high risk behaviors than polygraphed ones, data was not available for us to make comparisons. Second, staff would report that this new information about polygraphed participants' risk factors would enhance their ability to provide effective supervision and treatment services. Finally, polygraphed participants would reoffend at lower rates than individuals who were not polygraphed because supervision and treatment staff would have more useful information with which to provide targeted services to these individuals.

Method

Setting

Vermont is a state of small cities, towns and rural areas with a population of approximately 624,000 (U. S. Census Bureau 2007). All sentenced sex offenders are incarcerated in prisons because there are no state or county jails in Vermont. The Vermont Treatment Program for Sexual Abusers (VTPSA) is the state's integrated network of prison and outpatient programs operated by the Vermont Department of Corrections (DOC). The program utilizes a primarily cognitive-behavioral, group treatment model (Cumming and McGrath 2000; McGrath 1995; McGrath et al. 1998).

Program

In 1995, the VTPSA began piloting the use of post-conviction sex offender polygraph exams in one county. The local court and the state parole board were asked to make completing polygraph exams a supervision condition for all convicted sex offenders. All those that were given such a condition began undergoing periodic *compliance exams*. This type of exam was defined as a single exam that focused on two issues, (1) compliance with community supervision and treatment conditions and (2) avoidance of sexual offending. Individuals were not administered exams concerning their most recent sexual offense conviction or past sexual behavior.

The pilot program gradually expanded to adjacent counties and by 2004 was operating statewide. Four polygraphers under agreement with the VTPSA conducted exams based on protocols recommended by the American Polygraph Association (1995). In each participating county, approximately every six months, a polygrapher conducted between 10 and 14 exams during the course of a week. At the end of the week, a treatment team reviewed the results of the exams and updated each

Table 1 Demographics and risk scores for the polygraph and no polygraph groups

Variables	Polygraph group (<i>n</i> =104)		No polygraph group (<i>n</i> =104)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Demographic				
Age at community placement	35.2	11.5	36.0	14.0
Education, years	11.7	2.3	11.4	1.7
Sex conviction rate, county of residence	1.6	0.6	1.7	0.6
Risk scores				
Static-99	2.6	1.6	2.6	1.6
RRASOR	1.5	1.0	1.5	0.9
VASOR re-offense scale	29.4	18.7	27.9	18.5
VASOR violence scale	14.7	9.9	15.6	11.7

* $p < 0.05$

individual's supervision and treatment plan. This team typically consisted of the polygrapher, VTPSA program director (second author) and clinical director (first author), and participants' supervision officers and treatment providers. Participants whose test results raised concerns with the treatment team were recommended for six month follow-up testing and those that did not were recommended typically for less frequent or no testing. A few years into the project, VTPSA staff began to send treatment and supervision staff a follow-up survey requesting feedback about their views on the value of the exams as a case management tool.

Participants

Participants were 208 adult males who had committed sexual offenses and had been placed under state community correctional supervision in Vermont from 1995 through 2001 (see selection process in [Procedure](#) section). The treatment group (PG; $n=104$) had probation or parole conditions to submit to periodic polygraph compliance exams and received one or more exams during the study period. The comparison group (NOPG; $n=104$) did not undergo any polygraph exams because they did not have conditions to do so. One-third of participants ($n=35$) in each group had completed VTPSA prison-based sex offender treatment prior to community placement, and two-thirds ($n=69$) in each group did not because they either received a short prison sentence which made them ineligible for prison treatment or were given a probationary sentence.

The average age of participants was 35.6 years ($SD=12.8$; range=18–76). *T*-tests revealed no significant between-group differences for the age of participants in the PG and NOPG group or on any of the other demographic and risk score variables examined (see [Table 1](#)). Consistent with Vermont's lack of racial diversity, all but five participants (2%) were White.

[Table 2](#) gives the percentages of the types of offenders in the PG and NOPG groups using definitions established by the Association for the Treatment of Sexual Abusers (Gordon et al. 1998). A chi-square test revealed no significant differences in the percentage of types of offenders between the two groups ($p < 0.05$). Excluded from the study were individuals whose sexual offending history precluded them from being scored on the Static-99 (Harris et al. 2003), a risk instrument described

Table 2 Offender types in the polygraph and no polygraph groups

Offender type	Polygraph Group (<i>n</i> =104)		No Polygraph (<i>n</i> =104)	
	<i>n</i>	Percent	<i>n</i>	Percent
Rapists	13	12.5	14	13.5
Child molesters, female victims only	51	49.0	54	51.9
Child molesters, any male victims	11	10.6	11	10.6
Incest offenders	17	16.3	20	19.2
Non-contact offenders	12	11.5	5	4.8

* $p < 0.05$

below. As a consequence, the sample did not, for example, include individuals whose only sexual offense was statutory rape or child pornography possession.

Risk Assessment Measures

The Rapid Risk Assessment for Sex Offense Recidivism (RRASOR; Hanson 1997) is a 4-item actuarial risk measure used to aid in assessing sexual recidivism risk among adult males who have been convicted of committing sexual offenses. RRASOR items consist of number of prior charges or convictions for sexual offenses, age at placement in the community, any male victims, and any unrelated victims. Scores fall into one of six levels reflecting the probability of sexual reoffending at 5- and 10-year intervals.

The Static-99 (Hanson and Thornton 2000) includes the four items that comprise the RRASOR as well as six other items: prior sentencing dates, any convictions for noncontact sexual offenses, index offense of a non-sexual violent nature, prior non-sexual violent offense, any stranger victims, and lack of a substantial cohabitation history. The resulting 10-item actuarial risk measure is used in a similar manner as the RRASOR. Scores fall into one of seven levels reflecting the probability of sexual reoffending at 5-, 10-, and 15-year intervals.

The Vermont Assessment of Sex Offender Risk (VASOR; McGrath and Hoke 2001) is a risk scale designed to aid probation and parole officers in making placement and supervision decisions about adult males who have been convicted of committing sexual offenses. A 13-item re-offense risk scale is composed of many of the unchangeable risk factors found on the Static-99 as well as several changeable risk factors, such as alcohol and drug use, residence and employment stability, and treatment cooperation. Scores on this scale fall into one of three levels reflecting the probability of sexual reoffending at 5 years. The six-item violence scale concerns the individual's violence history and offense severity.

Outcome Measures

Recidivism data was obtained for each study participant for all new charges for sexual, violent, and other offenses. The definition of a new sexual offense included a charge for a violation of supervision conditions if the incident could have been charged as a criminal sexual offense. "Violent" offenses were non-sexual violent and

“other” offenses were defined as non-sexual and non-violent. Charges were counted based on criminal record checks in the states where each participant was known to have resided during the study period. The Vermont DOC computer database was used to identify violation of supervision charges and re-incarcerations.

To determine whether information obtained during polygraph exams led to any new charges for sexual or non-sexual violent reoffenses, we examined recidivists’ DOC case files and interviewed probation or parole officers and treatment providers.

Procedure

Vermont DOC databases were used to identify the exhaustive sample of 125 individuals who met criteria for assignment to the PG group. These were individuals supervised primarily in the three initial polygraph pilot project counties. They were given a probation or parole condition to submit to periodic polygraph compliance exams and received one or more exams during the study period between 1995 and 2001. During this time, almost all men who had committed a sexual offense and had a polygraph condition were given exams. However, in the last few years of the study period, the number of individuals who had a polygraph condition exceeded the available examination slots. In these instances, local probation and parole officers used unknown criteria to select, from an estimated pool of 30 offenders, approximately 15 individuals for inclusion in the PG group.

The first three authors used case files to score each potential PG group participant on the selected risk assessment measures, and when scores already existed, ensured their accuracy. Then, using comparison archives consisting of approximately 1200 sex offenders, the authors, blinded to individuals’ identity, attempted to find a match for each potential PG participant on three variables. These were: (1) Static-99 score, (2) whether or not the individual completed VTPSA prison sex offender treatment prior to placement in the community, and (3) calendar year placed in the community, plus or minus one year. The authors computed the risk scores of potential NOPG group members the same way as were those in the PG group. If a potential NOPG group member’s Static-99 risk score changed as a result of recoding, the case was returned to the archive and the matching process was started again. Exact pair-wise matches were found for 104 of the 125 individuals who met criteria for assignment to the PG group.

Each participant was followed for a fixed five year period beginning on the first date he was placed in the community under correctional supervision following his conviction for the index sexual offense.

We also examined variations in sexual offending detection rates in the counties in which participants resided. This was important because if individuals in one of the treatment groups were disproportionately more likely than individuals in the other treatment group to reside in counties in which detection rates of sexual reoffending were significantly higher, this would be a threat to the validity of the study. Consequently, for each participant we calculated a risk metric. This was the number of individuals convicted of a sexual offense in the participant’s resident county, per 1000 county residents, during the five year period beginning the calendar year in which he was placed on community supervision for his index sexual offense. Population data for the midway year of the study (U.S. Census Bureau 2007) were used for these calculations.

Results

By study design an exact pair-wise match was achieved for the three selected matching variables, Static-99 score, history of prison program completion, and year placed in the community. As previously noted, there were no significant between-group differences on other demographic and risk score variables shown in Table 1 or for offender type as shown in Table 2.

To further explain the sexual conviction rate metric shown in Table 1, PG participants resided in counties in which, on average, 1.6 individuals per 1,000 population were convicted of a sexual offense over participants five year follow-up periods. This rate was 1.7 for the NOPG group. Across Vermont's 14 counties, this rate ranged from 0.9 to 4.0 ($M=1.7$; $SD=0.6$).

Polygraphers administered 230 polygraph compliance exams, with a mean of 2.2 exams per PG participant ($SD=1.4$; range=1–6). In terms of exam frequency, during the average 49.0 months PG participants were under community supervision, they received, on average, one polygraph test every 22.2 months. Polygraphers classified the results of 158 (68.7%) of these tests as *no deception indicated*, 46 (20.0%) as *deception indicated*, 21 (9.1%) as *inconclusive*, and five (2.2%) as *test discontinued*.

During these exams, participants reported engaging in a considerable number and variety of high risk behaviors (see Table 3). Although baseline pre-polygraph disclosure rates were not obtained, one or more of us (the first three authors) attended each team meeting during which polygraph results were reviewed and we estimate that between 60 and 80% of high risk behaviors reported to examiners during exams were previously unknown to service providers.

Almost all service providers reported that they believed that the information they obtained as a result of polygraph exams was valuable. As Table 4 indicates, of 236 surveys returned, 230 (96%) rated polygraph exams as *helpful* or *very helpful* in the managing of individual cases. A paired samples *t*-test was conducted in order to determine whether the ratings of the supervising officer differed from those of the treatment provider in regard to the utility of the polygraph exams. Results indicated that, though both groups reported polygraphs to be helpful, supervising

Table 3 Number of polygraph exams ($n=230$) during which participants reported engaging in various high risk behaviors

High risk behavior	<i>n</i>	Percent
Committed a new sexual offense	0	0.0
Committed a new non-sexual violent offense	0	0.0
Committed a new non-sexual, non-violent offense	8	3.5
Had contact with a child	37	16.1
Had contact with a person he sexually offended	10	4.3
Used alcohol	44	19.1
Used drugs	29	12.6
Viewed sexually stimulating materials of children	11	4.8
Viewed sexually stimulating materials of adults	66	28.7
Used a computer for sexual purposes	20	8.7
Masturbated to offense-related sexual fantasies	36	15.7
Committed technical violations not listed above	38	16.5

Categories are not all mutually exclusive

Table 4 Provider satisfaction rates with polygraph exams

Respondents (surveys returned)	Frequency ratings							
	Very helpful		Helpful		Unhelpful		Very unhelpful	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Supervision officers (<i>n</i> =127)	57	44.9	68	53.5	1	0.8	1	0.8
Treatment providers (<i>n</i> =112)	29	25.9	76	67.9	5	4.5	2	1.8
Total (<i>n</i> =239)	86	36.0	144	60.3	6	0.3	3	0.1

For each polygraph exam conducted, one survey was sent to the supervising officer and one to the treatment provider

officers found the polygraph to be significantly more helpful than the treatment providers ($t(91) = -2.42, p < 0.05$).

The overall 5-year sexual recidivism rate of the sample was 6.3%. As shown in Table 5, of seven categories of recidivism examined in the study, the only significant between-group difference found was that fewer individuals in the PG group were charged with committing a new non-sexual violent re-offense than in the NOPG group (2.9% versus 11.5%). Of note, no information obtained during exams led to any charges for new sexual or non-sexual violence offenses against any of the recidivists. Only one of the six sexual recidivists in the PG group committed a crossover sexual offense, that is, offended against a victim who belonged to an age, gender, or relationship category that was dissimilar to his known sexual offense history. Data concerning whether information obtained during exams led to PG group members being charged for non-sexual and non-violent or violation of supervision offenses or being returned to prison were not systematically collected.

Some group differences were found for the types of interventions delivered to participants once placed in the community. PG group participants, compared to NOPG participants, received lengthier community correctional supervision (49.0 versus 44.9 months; $t(206) = -1.98, p < 0.05$) and community treatment (37.4 versus 32.9 months; $t(189) = -2.13, p < 0.05$). No significant difference was found between length of time PG and NOPG group participants spent in prison (9.7 versus 15.0 months), though a trend was evident ($p = 0.06$).

Finally, no risk measure used in the study predicted sexual recidivism at an alpha level of 0.05. The Area Under the Curve for the Static-99 was 0.63 (95% CI=0.48–0.77), for

Table 5 Five-year recidivism rates of participants in the polygraph and no polygraph groups

Type of recidivism	Polygraph group (<i>n</i> =104)		No polygraph group (<i>n</i> =104)		χ^2
	<i>n</i>	%	<i>n</i>	%	
Sexual	6	5.8	7	6.7	0.08
Violent	3	2.9	12	11.5	5.82*
Sexual or violent	9	8.7	17	16.3	2.81
Other (non-sexual and non-violent)	37	35.6	31	29.8	0.79
Any (sexual, violent, or other)	41	39.4	36	34.6	0.52
Violation of supervision conditions	54	51.9	47	45.2	0.94
Return to prison	49	47.1	40	38.5	1.59

* $p < 0.05$

the RRASOR was 0.59 (95% CI=0.42–0.75), and for the VASOR reoffense risk scale was 0.65 (95% CI=0.50–0.80).

Discussion

The results of this study support research findings cited earlier indicating that individuals who have committed sexual offenses and who undergo polygraph compliance testing admit to engaging in previously withheld high risk behaviors and that providers find this information relevant for improving treatment and supervision services. Although it seems logical that these outcomes would lead to lower recidivism rates, the present results do not provide much support for this hypothesis. Polygraph participants in this study had lower non-sexual violent re-offense rates compared to non-polygraphed participants, but no treatment impact was found for sexual, sexual and violent combined, or general recidivism, or violation of community supervision or reincarceration rates. We do not have an explanation as to the outlier finding concerning treatment impact on non-sexual violent reoffending rates.

The current study is noteworthy because the impact of sex offender post-conviction polygraph testing on reoffending has not previously been investigated. A few other strengths of the study are worthy of mention. The two treatment groups were well matched on all pre-treatment variables examined, including three measures of re-offense risk and one of offense severity. Variations in release date can be associated with differences in re-offense detection (Friendship and Thornton 2001), and this was controlled for by the matching process. Similarly, jurisdictional differences in detection rates are common, and this was examined and was not found to be a concern. A single agency provided training and supervision to all service providers, giving some assurances that the content and structure of treatment and supervision was consistent with program expectations.

Some methodological weaknesses also were present. Assignment to treatment conditions was not random. Although almost all participants assigned to the PG group were consecutive admissions, thereby reducing the likelihood of selection bias, in a small number of instances probation and parole officers had control over the selection process. In these cases, it is reasonable to presume that the officers selected individuals who they perceived were at higher risk for sexual re-offense. Even though participants were matched on a static risk measure, the result may have been that a small number of individuals in the PG group had greater dynamic risk than those in the NOPG group.

The trend indicating that PG group participants spent less time in prison than NOPG participants (9.7 versus 15.0 months; $p=0.06$) brings up the issue of how their greater time-at-risk in the community could have affected their re-offense detection rates. On the other hand, the PG group underwent longer periods of treatment and supervision, arguably reducing their risk to reoffend.

The PG group, by virtue of being polygraphed, might have been more vulnerable than the NOPG group to detection of recidivism. In spite of this possibility, analyses found that information obtained during exams did not lead to the discovery of any sexual or violent re-offenses in the PG group. In contrast, we were unable to specify the number of participants who, as a direct or indirect result of disclosures that they made

during exams, were charged with a new non-sexual non-violent offense or violation of supervision, or returned to prison. We do know, however, that it was rare that such disclosures were the precipitating events that led to new charges or incarceration.

Some might question the frequency of polygraph exams administered in the present study. Practitioners and practice guidelines generally advocate that sex offenders on community supervision be given compliance exams approximately every six months (Colorado; Colorado Sex Offender Management Board 2004; Pullen 1997; Stalans 2004). In the present study we attempted to match the frequency of polygraph exams to individuals' treatment and supervision compliance level. The result was that participants, even though they knew that they could be retested every six months, received an exam on average only once every 22 months. Optimal test frequency is an important empirical question.

Another potential criticism is that most programs that use polygraphy administer tests examining not just offenders' behavior during supervision, as was done in this study, but history of sexual offending as well (McGrath et al. 2003a). Polygraph advocates note that sexual history testing often uncovers a pattern of crossover offending and that this information is useful for focusing supervision and treatment efforts on each individual's relevant offending patterns (Heil et al. 2003). In this study, however, use of sexual history exams to modify services would not have resulted in statistically significant findings as only one of the six PG group sexual recidivists committed a crossover sexual re-offense.

Not replicated here were our previous findings that the Static-99, RRASOR, and VASOR predicted, with moderate accuracy, sexual reoffending in other samples of sex offenders in Vermont (McGrath et al. 2003b; McGrath and Hoke 2001). This may be because the earlier samples were composed of a diverse group of treatment completers, drop outs, and refusers, whereas the current sample was composed primarily of individuals actively receiving services. The risk reducing impact of these services may have diminished the predictive ability of these instruments.

The finding that increased information about PG participants' risk behaviors was not associated with overall reduced reoffending rates may seem counterintuitive, but viewed from other perspectives it is not surprising. If one views polygraphy as a sanction, akin to intensive surveillance supervision programs, drug testing, and electronic monitoring, in which "catching" the offender doing something wrong is a major component, the failure to find between-group differences in reoffending is understandable. Considerable empirical evidence from the general correctional literature indicates that sanctions or threat of sanctions have little impact on recidivism (Andrews and Bonta 2007; Aos et al. 2006; Gendreau et al. 2001).

Other factors could undermine the intended impact of compliance polygraph exams and are worthy of future research efforts. More information does not necessarily lead to better decision making. It needs to be relevant and used appropriately. For example, information overload has long been known to complicate the task of weighing and responding to what is important (Harris et al. 2002; Turk and Salovey 1988). As well, when a client is obliged to disclose unfavorable personal information and this is overemphasized in treatment or supervision, recent research in the self-presentational psychotherapy literature suggests that this may actually solidify a client's negative self image (Kelly 2000). Even though service providers should expect that some offenders will lie and withhold information (Heil et al. 2003), the nature and number of some

revelations learned about offenders from polygraph exams can be unsettling. Providers need to be sure that such information does not undermine their ability to relate therapeutically to those they supervise and treat, as the quality of the working relationship between the offender and service provider is closely linked to outcome (Andrews and Bonta 2007; Gendreau 1996; Marshall 2005).

If subsequent research is to find that polygraphy is indeed a useful tool for reducing the re-offense rates of sexual offenders, it will likely be embedded in programs that follow well-established principles of effective correctional practice—primarily those of risk, need and responsivity (Andrews and Bonta 2007; Hanson 2006). Accordingly, the *risk principle* would indicate that polygraphy in programs treating moderate and high risk offenders will be more effective than in programs treating individuals at a low risk to re-offend. Of note, the mean Static-99 risk score of the present sample was in the moderate–low range.

Programs that follow the *need principle* will target during polygraph exams, and in treatment and supervision, those problems of sex offenders that are closely linked to sexual reoffending. Sometimes called criminogenic needs, these problems include deviant sexual interests, antisocial orientation, and sexual preoccupation (Hanson and Morton-Bourgon 2005).

The *responsivity principle* concerns delivering services in a manner to which individuals can optimally respond. For example, the most effective treatment interventions with offenders, including sex offenders, are cognitive-behavioral ones (Aos et al. 2006). Successful correctional programs use positive reinforcers much more frequently than punishers. When punishment is used it is consistent with learning theory and, for example, is immediate, reasonable, and inescapable (Andrews and Bonta 2007; Gendreau 1996). Service providers give clear direction to offenders and are warm, rewarding, and empathic (Marshall 2005). Offenders plan and spend considerable time practicing prosocial behaviors (Andrews and Bonta 2007; Gendreau 1996). They learn not just to avoid risks but also set approach goals and learn how to create a “good life” that is incompatible with offending (Mann et al. 2004).

A primary purpose of treatment and supervision efforts with individuals who commit sexual offenses is to prevent sexual victimization. Sex offender treatment programs have increasingly utilized post-conviction polygraph testing to enhance their ability to achieve this goal. While this is an important effort, its widespread use has far outpaced empirical examination of its effectiveness (Gannon et al. *in press*). The findings of one study should not necessarily transform providers’ practice patterns, but we hope they will serve to motivate others to study this critical issue.

Acknowledgements We thank William Murphy, Maia Christopher, and two anonymous reviewers for helpful comments; and Tammy Smith for research support. The views expressed in this article are those of the authors and do not necessarily reflect the views of the Vermont Department of Corrections.

References

- Abrams, S., & Abrams, J. (1993). *Polygraph testing of the pedophile*. Portland, OR: Ryan Gwinner Press.
- Ahlmeyer, S., Heil, P., McKee, B., & English, K. (2000). The impact of polygraph on admissions of victims and offenses in adult sexual offenders. *Sexual Abuse: A Journal of Research and Treatment*, 12, 123–138.

- American Polygraph Association (1995). *Standards for post conviction sex offender testing: Practice guideline*. Chattanooga, TN: Author.
- Andrews, D. A., & Bonta, J. (2007). *The psychology of criminal conduct* (4th Ed.). Cincinnati, OH: Anderson Publishing.
- Aos, S., Miller, M., & Drake, E. (2006). *Evidence-based adult corrections programs: What works and what does not*. Olympia, WA: Washington State Institute for Public Policy.
- Association for the Treatment of Sexual Abusers (2005). *Practice standards and guidelines for the evaluation, treatment, and management of adult male sexual abusers*. Beaverton, OR: Author.
- Branaman, T. F., & Gallagher, S. N. (2005). Polygraph testing in sex offender treatment: A review of limitations. *American Journal of Forensic Psychology*, 23, 45–64.
- Colorado Sex Offender Management Board (2004). *Standards and guidelines for the assessment, evaluation, treatment and behavioral monitoring of adult sex offenders*. Denver, CO: Author.
- Cross, T. P., & Saxe, L. (2001). Polygraph testing and sexual abuse: The lure of the magic lasso. *Child Maltreatment*, 6, 195–206.
- Cumming, G. F., & McGrath, R. J. (2000). External supervision: How can it increase the effectiveness of relapse prevention. In D. R. Laws, S. M. Hudson & T. Ward (Eds.), *Remaking relapse prevention with sex offenders* (pp. 236–253). Newbury Park, CA: Sage.
- English, K., Pullen, S., & Jones, L. (1997). *Managing adult sex offenders in the community: A containment approach*. Washington, DC: National Institute of Justice.
- Friendship, C., & Thornton, D. (2001). Sexual reconviction for sexual offenders discharged from prison in England and Wales: Implications for evaluating treatment. *British Journal of Criminology*, 41, 285–292.
- Gannon, T. A., Beech, A. R., & Ward, T. (in press). Does the polygraph lead to better prediction for sexual offenders? *Aggression and Violence Behavior*.
- Gendreau, P. (1996). The principles of effective intervention with offenders. In A. T. Hartland (Ed.), *Choosing correctional options that work* (pp. 117–130). Thousand Oaks, CA: Sage.
- Gendreau, P., Goggin, C., Cullen, F. T., & Andrews, D. A. (2001). The effects of community sanctions and incarceration on recidivism. In L. L. Montiuk & R. C. Serin (Eds.), *Compendium 2000 on effective correctional programming: Vol. 1* (pp. 18–21). Ottawa: Correctional Service Canada.
- Gordon, A., Harris, A., Murphy, W., Seto, M., Hanson, R. K., Marques, J. K., et al. (1998). *Collaborative data base of sex offender treatment outcome*. Beaverton, OR: Association for the Treatment of Sexual Abusers, July.
- Grubin, D., Madsen, L., Parsons, S., Sosnowski, D., & Warberg, B. (2004). A prospective study of the impact of polygraphy on high-risk behaviors in adult sex offenders. *Sexual Abuse: A Journal of Research and Treatment*, 16, 209–222.
- Hanson, R. K. (1997). *The development of a brief screening scale for sexual offense recidivism*. Ottawa: Solicitor General of Canada.
- Hanson, R. K. (2006). *What works: The principles of effective interventions with offenders*. Presentation at the 25th Annual Conference of the Association for the Treatment of Sexual Abusers. Chicago, IL.
- Hanson, R. K., & Morton-Bourgon, K. (2005). The characteristics of persistent sexual offenders: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology*, 73, 1154–1163.
- Hanson, R. K., & Thornton, D. (2000). Improving risk assessment for sex offenders: A comparison of three actuarial scales. *Law and Human Behavior*, 24, 119–136.
- Harris, A., Phenix, A., Hanson, K., & Thornton, D. (2003). *Static-99 coding rules*. Ottawa: Department of the Solicitor General of Canada.
- Harris, G. T., Rice, M. E., & Cormier, C. A. (2002). Prospective replication of the Violence Risk Appraisal Guide in predicting violent recidivism among forensic patients. *Law and Human Behavior*, 26, 377–394.
- Heil, P., Ahlmeyer, S., & Simmons, D. (2003). Crossover sexual offenses. *Sexual Abuse: A Journal of Research and Treatment*, 15, 221–236.
- Hindman, J., & Peters, J. M. (2001). Polygraph testing leads to better understanding adult and juvenile sex offenders. *Federal Probation*, 65(3), 8–15.
- Kelly, A. E. (2000). Helping construct desirable identities: A self-preservational view of psychotherapy. *Psychological Bulletin*, 126, 476–494.
- Kokish, R. (2003). The current role of post-conviction sex offender polygraph testing in sex offender treatment. *Journal of Child Sexual Abuse*, 12, 175–194.
- Mann, R. E., Webster, S. D., Schofield, C., & Marshall, W. L. (2004). Approach versus avoidance goals in relapse prevention with sex offenders. *Sexual Abuse: A Journal of Research and Treatment*, 16, 65–75.
- Marshall, W. L. (2005). Therapist style in sexual offender treatment: Influence of indices of change. *Sexual Abuse: A Journal of Research and Treatment*, 17, 109–116.

- McGrath, R. J. (Ed.) (1995). *Vermont clinical practices guide for the assessment and treatment of adult sex offenders*. Williston, VT: Vermont Center for Prevention and Treatment of Sexual Abuse.
- McGrath, R. J., Cumming, G. F., & Burchard, B. L. (2003a). *Current practices and trends in sexual abuser management: The Safer Society 2002 nationwide survey*. Brandon, VT: Safer Society Press.
- McGrath, R. J., Cumming, G., Livingston, J. A., & Hoke, S. E. (2003b). Outcome of a treatment program for adult sex offenders: From prison to community. *Journal of Interpersonal Violence, 18*, 3–17.
- McGrath, R. J., & Hoke, S. E. (2001). *Vermont assessment of sex offender risk manual*. Middlebury, VT: Author.
- McGrath, R. J., Hoke, S. E., & Vojtisek, J. E. (1998). Cognitive-behavioral treatment of sex offenders: A treatment comparison and long-term follow-up study. *Criminal Justice and Behavior, 25*, 203–225.
- National Academies of Sciences (2003). *The polygraph and lie detection*. Washington, D.C.: National Academies Press.
- Pullen, S. (1997). Using the polygraph. In K. English, S. Pullen, & L. Jones (Eds.), *Managing adult sex offenders in the community: A containment approach* (pp. 15.3–15.6). Washington, DC: National Institute of Justice.
- Raskin, D. C., & Honts, C. R. (2001). The comparison question test. In A. Gale (Ed.), *Handbook of polygraph testing* (pp. 1–47). New York: Academic Press.
- Stalans, L. J. (2004). Adult sex offenders on community supervision: A review of recent assessment strategies and treatment. *Criminal Justice and Behavior, 31*, 564–608.
- Texas Council on Sex Offender Treatment (2006). *Rules and regulations relating to council on sex offender treatment*. Austin, TX: Author.
- Turk, D. C., & Salovey, P. (Eds.) (1988). *Reasoning, inference, and judgment in clinical psychology*. New York: Free Press.
- United States Census Bureau (2007). *United States Census*. [Online] Available: <http://www.census.gov>.
- Wilcox, D. T. (2000). Application of the clinical polygraph examination to the assessment, treatment and monitoring of sex offenders. *The Journal of Sexual Aggression, 5*, 134–152.