

The Sexual History Polygraph Examination and Its Influences on Recidivism

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The polygraph in postconviction sex offender testing is used to assist in the treatment and supervision of convicted sex offenders by more than 70% of the jurisdictions that supervise these offenders in the United States. Prior researchers have failed to convincingly demonstrate how the polygraph can be used to target risk behaviors and reduce recidivism. Consequently, the use of the sexual history polygraph examination (SHPE) has not been demonstrated to reduce recidivism. We sought answers as to how the SHPE influences the behaviors of sexual offenders required to undergo a SHPE, and whether or not there is a difference in recidivism between those offenders who undergo a SHPE as compared to those who do not. Within the group that took a polygraph, recidivists went longer before taking a SHPE, and there was a significant difference in recidivism between those who took a polygraph and those who did not. This information may be useful in assisting other jurisdictions both in the United States and internationally in making better choices in the implementation of supervision and getting the maximum return in the use of the polygraph. It is hoped that ultimately this would lead to more knowledgeable decisions to promote positive social change for the sex offender, which would ultimately lead to positive social change in the community by reducing recidivism of childhood sexual abuse among convicted sex offenders.

Keywords: *polygraph, recidivism, risk, containment approach, sexual history*

Introduction

The polygraph has been used with convicted sex offenders in the United States since the 1970s (Abrams & Abrams, 1993) and has since become more prevalent here (McGrath, Cumimng, Burchard, Zeoli, & Ellerby, 2010) and in Europe (Meijer, Verschuere, Merckelbach, & Crombez, 2008; Ben-Shakhar, 2008). During this time, few studies have been conducted on the polygraph as used with convicted sexual offenders regarding its effect on recidivism. Most studies initially focused on the utility of the sexual history polygraph examination (SHPE) to produce more complete sexual histories. For example, Abrams, Hoyt, and Jewell (1991) demonstrated that the SHPE resulted in offenders admitting more victims and paraphilias. Subsequently, Hindman and Peters (2001) demonstrated that the SHPE could give treatment providers more information regarding offending

behaviors and prior victimization of the convicted offender. Later in the United Kingdom, Wilcox and Sosnowski (2005) demonstrated similar findings.

Critics of the polygraph noted that although the polygraph does elicit more information from the offender, which has been called utility (Williams, 1995), little is known about the accuracy of the polygraph as used in postconviction sex offender testing. Accuracy in this sense is whether or not the polygraph can accurately assess if the examinee is being deceptive when answering the relevant questions on the polygraph test. Ben-Shakhar (2008) suggested that relying on the polygraph might result in poorer decisions being made, which could result in more harm than good. As such, critics of the polygraph have noted that there has not been any evidence to suggest that the use of the polygraph reduces recidivism. In one study, polygraphed offenders did not significantly reoffend (sexually) less than nonpolygraphed offenders, but they did reoffend (violently) significantly less compared to those not polygraphed (McGrath, Cumming, Hoke, & Bonn-Miller, 2007). To understand these differences in reoffending, it is important to understand the current policies and practices of the use of the polygraph in postconviction sex offender testing (PCSOT).

The Polygraph

The polygraph, often called the lie detector, is an instrument that measures physiological changes in respiration, electrodermal activity, and cardiovascular activity. The polygraph has been relatively unchanged since its development in the early part of the 20th century other than its conversion to digital with the advent of the computer (National Research Council, 2003) and the addition of a motion sensor device, which has been shown to improve detection of countermeasures (Ogilvie & Dutton, 2008). The most widespread method for using the polygraph is the use of the comparison question test (Ben-Shakhar, 2008).

The comparison question test requires that the polygraph examination be divided into three distinct phases. The first phase is the pretest interview, in which the examiner reviews official reports and discusses issues with the examinee. During this process, the examiner develops the comparison, or *probable lie*, questions and the relevant questions. Comparison questions are questions that tend to be somewhat vague and are assumed to be questions that most people would lie about—for example, asking an offender if he or she had ever lied to a corrections official (Waller, 2001). According to Abrams (1997), the relevant questions are the questions of most concern, or the focus of the investigation, and should be short, straight to the point, and devoid of emotional content as much as is possible. For example, these questions might be about having sexual contact with a minor. There are other questions that are used in various locations depending on the variation of the comparison question test (Backster, 2007); the idea is that the truthful person will find the comparison questions more threatening, while the person lying will find the relevant questions more threatening (Offe & Offe, 2007; Senter, Weatherman, Krapohl, & Horvath, 2010). The physiological reactions to both the comparison and relevant questions are compared and scored numerically (Krapohl, Stern, & Brankema, 2003). Those with significantly stronger physiological reactions to the comparison questions are considered to be truthful, while those with significantly stronger reactions to relevant questions are considered to be deceptive (Krapohl, et al., 2003). Although there have been ongoing arguments about the plausibility of this idea (Cross, Dougherty, & Saxe, 1985; Ben-Shakhar, 2008) most researchers have concluded that there is evidence to support this argument (Offe & Offe, 2007).

The second phase is the actual test. Here, the questions used on the test are presented to the examinee prior to administration of the test. Once the examinee acknowledges that he or she understands the questions and can answer them with a response of yes or no, the test can begin. The American Polygraph Association suggests that the test be administered a minimum of two times.

The third phase is the posttest interview. Once the test is completed, the examiner removes the apparatus and then scores the data. The examiner then discusses the results with the examinee. This sometimes leads to new information.

The Polygraph in Postconviction in Sex Offender Testing

Variants of the polygraph test are used for different purposes in PCSOT. The form of the test that is used most often in criminal or preconviction testing and sometimes used in PCSOT is the specific incident test. This test is used to determine an examinee's veracity regarding a specific issue or crime such as the crime of conviction. This test can be used when an offender is in denial of the crime of conviction or when the offender is accused of committing a new crime while on supervision (Edson, Lundell, & Robinson, 2007).

Another type of test used in PCSOT is the maintenance or periodic test. This test pertains to the offender's conformance to supervision and treatment rules. Some have suggested this form of testing can reduce the seriousness of behaviors being reported (Madsen, Parsons, & Grubin, 2004), while others argue that too much reliance on the test where accuracy is not known might cause poor decision making and result in more offending (Ben-Shakhar, 2008).

The last type of test used (and the focus of this study) is the sexual history polygraph examination, or SHPE. This test generally requires offenders to fill out a lengthy form listing all victims and sexual behaviors, such as paraphilias (Holden, 2000; Lundell, 2000). Once the form is filled out, offenders should discuss the information with their supervising officials and therapists (see American Polygraph Association, 2009). The focus of relevant questions used on SHPEs has been a topic of debate. Lundell (2000) argued that the polygraph is still a polygraph and the relevant questions should be on specific behaviors, while Holden (2000) argued that these tests could be conducted on whether or not the offender was lying on the disclosure forms or sexual history questionnaire. The recent model policy for PCSOT by the American Polygraph Association agreed with Lundell and suggested the examiner test on undisclosed victims on the first test (see American Polygraph Association, 2009).

The SHPE is used with the belief that sexual offenders have been engaging in highly secretive behaviors that are infrequently reported and that official documents of victimization do not capture. It is also believed that the SHPE can be used to uncover these behavior patterns. By learning about these behaviors discovered in the SHPE, some corrections officials believe they can more effectively monitor sexual offenders (English, Jones, Patrick, Pasini-Hill, & Gonzalez, 2000). Levenson (2009) argued that the polygraph can help uncover prior deviant behavior, along with current deviant behavior that could be useful in the assessment and development of a treatment plan. Levenson noted that social workers are at a disadvantage when it comes to assessing risk and developing treatment plans without an accurate past history. Levenson argued that sex offenders abuse a variety of victims, and as such, an offender who is arrested for sex crimes against an adult is not necessarily a risk to children. For family reunification purposes, a sexual history that is complete could better assess risk.

Both the specific incident examination and the SHPE are used to overcome denial. The importance of denial has been an issue of debate with different findings. Although some research indicated denial is not a predictor of recidivism (Hanson & Morton-Bourgon, 2005), others found that denial may hinder engagement in treatment (Levenson & Macgowan, 2004) and may be a factor in recidivism for some offenders, such as incest offenders (Nunes et al., 2007). The specific issue test and the SHPE were acknowledged for their success in breaking through denial (Edson et al., 2007). Although denial is one aspect of the SHPE, the test also focuses on other factors that should be viewed more

critically. The SHPE (as currently recommended) addresses the number of victims which could be considered another aspect of denial. The denial of victims could also be viewed as an aspect of risk. We have not found any studies that suggested the number of victims is relevant to recidivism. Another focus of the SHPE is paraphilias. The SHPE has been shown to elicit more information about paraphilias (Abrams, Hoyt & Jewell, 1991). However, it has not been demonstrated that a history of multiple paraphilias could be a factor of recidivism when considered as a static factor. Cook (2011) conducted a study on the use of the SHPE and whether or not admitting to a history of two or more paraphilias added to the prediction of recidivism, and this factor did not significantly add to accurate prediction of recidivism when added to the Static-99 (Hanson & Thornton, 2000) risk assessment instrument using logistic regression. The Static-99 is an actuarial instrument that consists of 10 aggregate items that have been found to be significant in predicting recidivism. These factors are age, history of cohabitation with a partner, current and prior nonsexual violence, prior sex offenses, prior sentencing dates, prior noncontact sex offenses, unrelated victims, stranger victims, and male victims. Cook (2011) also suggested that being victimized and offending at an early age did not add to the accuracy of prediction. Cook suggested that although offenders tend to have been victimized more often than nonoffenders (Jespersen, Lalumière, & Seto, 2009), this does not necessarily translate to these same offenders reoffending more often than those who were not victimized. This supported earlier findings by Hanson and Morton-Bourgon, (2005).

Despite limited evidence to suggest that those who undergo a maintenance examination are less likely to offend violently (McGrath et al., 2007), the concern is exactly what effect the requirement of undergoing a SHPE has on the convicted sexual offender. McGrath et al. (2007) conducted a matched-pairs study involving a group of offenders ($n = 104$) who had a polygraph compared to a group of offenders who did not ($n = 104$). The polygraphed group had a mean of 2.2 polygraphs, or one polygraph every 22.2 months. These polygraph examinations were maintenance or periodic examinations and no offender had a SHPE (McGrath, personal communication, 2010). There was no significant difference in sexual recidivism; however, there was a significant difference in violent recidivism, in which three of the polygraphed offenders committed a nonsexual violent offense and 12 of the nonpolygraphed offenders committed a nonsexual violent offense. McGrath et al. (2007) could not explain the difference in violent offending in the two groups. McGrath et al. suggested that those offenders who are polygraphed tend to reoffend violently less often than those who are not, but we do not know why.

In addition to the McGrath et al. (2007) study, Cook (2011) conducted a study on a sample of sexual offenders who underwent a SHPE. The focus of that study was on the influence the SHPE had on the Static-99. Although not the focus of that study, there was an observed difference in reoffending between those convicted sexual offenders who had a SHPE and those who did not. This study is an analysis of data to determine if there is a significant difference in reoffending between those who had a SHPE and those who did not.

Method

Setting

The sample was taken from a single community corrections office in one rural Oregon county. In Oregon, nearly all convicted sexual offenders are mandated to submit to a polygraph examination as directed by the Corrections Department. Depending on the crime, an offender can be initially placed on probation or be sentenced to prison and eventually released on parole.

Participants

Participants were 166 sexual offenders placed on community supervision from January 1999 to August 2005. This sample was drawn from a larger sample of 201 offenders. The offenders excluded from the study were a combination of female offenders and offenders who were supervised in other counties. Females were excluded because the Static-99 has not been normed for the use with female offenders. This study included all 93 male sexual offenders who received a SHPE and all 73 male sexual offenders who did not receive a SHPE and were supervised in the participating county from January 1999 to August 2005.

For the 93 offenders with SHPEs, the age range was 17–73 years old with a median age of 29 years, a mean age of 34.5 years, and a standard deviation of 15.36. The sample consisted of 75 white offenders, 16 Hispanic offenders, and 2 Asians. Demographic data were not available for the 73 offenders who did not have a SHPE.

Static-99

The Static-99 is an actuarial instrument that uses 10 static items to measure risk of reoffense. These items are age, history of cohabitation with a partner, current and prior nonsexual violence, prior sex offenses, prior sentencing dates, prior noncontact sex offenses, unrelated victims, stranger victims, and male victims (Hanson & Thornton, 2000). The final scores are an aggregate of the 10 dichotomous items in which the higher the score, the higher the risk of reoffense. For this study, the range of the scores was 0–7. The state, and therefore the county, where the study was conducted began using the Static-99 in late 2004.

Recidivism

Recidivism was defined as two dichotomous variables: sexual recidivism (*Yes/No*) and nonsexual violent recidivism (*Yes/No*). Recidivism was counted when there was any sexual or nonsexual violent conviction within 5 years of being placed in the community. Probationers would typically be placed in the community the day they were sentenced to probation, and for parolees, it was the date released from prison. We identified new convictions by searching the Oregon Department of Corrections computer database.

Procedure

All offenders convicted of a sexual offense in the county and/or released to the county from prison that were sentenced from January 1999 to August 2005 were extracted from the state's database. This resulted in a list of 201 offenders, 166 of whom were county-supervised males. Of these offenders, 155 had Static-99 scores, and 93 had been given a SHPE. However, 11 of the 93 with SHPEs did not have a Static-99 score, most likely due to the date of implementation in the state of Oregon. One of the authors scored a Static-99 for the 11 participants who did not have a Static-99; the author was trained in the Static-99 in April, 2009. Information from the files was used to score the Static-99 on the 11 offenders who did not have a Static-99 score.

The SHPEs for the 93 offenders and the scores of the Static-99s were extracted from the county's archival files. Subsequently, the reconviction data and the Static-99 scores for all $n = 166$ (except the ones scored by the author as previously mentioned) were extracted from the state Department of Corrections databases. For the purpose of measuring recidivism, a cut-off date of 5 years after being released to the community was used. Time to taking the SHPE was calculated from time of release;

thus, some offenders took the SHPE long before release and others long after so that for some offenders, the polygraph was conducted after the 5 years that was used to calculate recidivism.

Results

As demonstrated by other studies (Abrams, Hoyt, & Jewell, 1991; Hindman & Peters, 2001), offenders undergoing a SHPE provided more information than available in official documents. For example, using information from the SHPE, 16 offenders were found to have male victims, as compared to 7 of those scored with the Static-99 using official records only. Information from the SHPE also increased the number of identified stranger victims and unrelated victims reported (see Table 1).

Table 1: Number of Polygraphed Offenders Who Reported Each Type of Victim

Victims	Official Records (Before Polygraph)	Polygraph Additions	Total
Male	7	9	16
Stranger	13	5	18
Unrelated	73	12	85

There was also a difference in the Static-99 scores between those who had a SHPE and those who did not. The range of the scores for both groups was 0–7. However, the group that did not undergo a SHPE had a significantly ($t[164] = 3.347, p < 0.03$) higher Static-99 score ($M = 2.59, SD = 1.89$) compared to the SHPE group ($M = 1.79, SD = 1.49$). However, Static-99 scores of those who had a SHPE and reoffended ($M = 2.72, SD = 1.27$) were not significantly different ($t[130] = -.957, p < 0.946$) than those who reoffended who did not have a SHPE ($M = 2.76, SD = 1.41$). Differences in recidivism were also significant within the 5-year period between the group who had a SHPE and those who did not. Among the group who underwent a SHPE ($n = 93$), there were 8 offenders who reoffended sexually and 4 offenders who reoffended violently, for a total of 11 recidivists (one offender offended both sexually and violently [nonsexual]). For the group that did not undergo a SHPE ($n = 73$), there were 10 offenders who reoffended sexually and 11 offenders who reoffended violently, for a total of 21 recidivists. Violent and sexual recidivism combined (any recidivism) was significant, $\chi^2(1, N = 166) = 7.54, p = .006$, indicating that those who did not have a SHPE reoffended significantly more frequently than those who did. Chi square for sexual recidivism was not significant, $\chi^2(1, N = 166) = 1.10, p = .295$. Chi square for violent recidivism was significant $\chi^2(1, N = 166) = 5.769, p = .016$.

An additional analysis was conducted regarding the time from release to the community to the time of the SHPE using a t test. Based on the assumption of homogeneity of variance, there was a significant ($t[91] = 3.304, p = .001$) difference in the number of days from start of supervision to the offender undergoing a SHPE for recidivists ($M = 3252.64, SD = 8054$) and nonrecidivists ($M = 388.5, SD = 423.5$) indicating that those who committed a new offense were on supervision significantly longer prior to undergoing a SHPE. However, Levene's test indicated that the variances were not equal ($F = 33.24, p = .000$). Using the adjusted degrees of freedom based on the lack of homogeneity of variance, the means between recidivists and nonrecidivists were not significantly different ($t[10.01] = -1.179, p = .266$). In spite of this lack of significance with respect to the means, the difference between the variances was very large. In fact, the variance for recidivists was 361.7 times the variance of the nonrecidivists, indicating that comparing means may not be the best way to evaluate the data. In addition, the extraordinarily large variance for the reoffender group is interesting in its own right.

Discussion

There was a significant difference between the recidivism rates of those who had a SHPE (polygraphed group) as compared to those who did not have a SHPE (nonpolygraphed group). According to policy and or supervision conditions, all sexual offenders in the county where the data were collected are to submit to polygraph examinations as directed by their corrections official (Oregon.gov, 2011). The reasons for not being polygraphed could be numerous; however, some reasons could be that the offender was not compliant with supervision and not in treatment; the offender was in treatment, but not progressing to a level to where he was ready for a SHPE; the offender was simply overlooked and did not have to complete a SHPE; or the offender avoided the polygraph. Avoidance is not uncommon, as there were high attrition rates with volunteers in prior PCSOT studies (Madsen, Parsons, & Grubin, 2004; Wilcox & Sosnowski, 2005). According to the National Research Council (2003), the utility of the polygraph with pre-employment is that undesirable candidates avoid applying for jobs for which a polygraph is required. Similarly, Matthies (2011) found that applicants for a police officer position who delayed the polygraph were less likely to pass a background investigation and significantly less likely to successfully complete the police academy. As such it may be that offenders fearing the polygraph avoid it, even at the risk of incarceration, for fear of detection of unreported criminal behavior.

We found a difference between recidivism for the polygraphed group compared to the nonpolygraphed group regarding violent recidivism—and within the polygraphed group, recidivists, on average, went longer without undergoing a SHPE compared to nonrecidivists. However, there was a wide range of variability in this group. A plausible explanation for this is that offenders who had reoffended or were at risk of reoffending delayed the SHPE as long as possible. It also appears that some of the offenders avoided the SHPE until a new conviction and then underwent the SHPE following their release for the new conviction. Therefore, we contend that the SHPE can be viewed as a gauge of who is engaged in treatment and willing to comply with treatment and supervision requirements and who may not be. Those not engaged are more likely to reoffend.

McGrath et al. (2007) reported that offenders who participated in maintenance polygraph testing reoffend less than do those who do not undergo polygraph testing, and we found the same thing with the SHPE. In this study, we also found significant difference between the Static-99 (Static99.org) scores of the SHPE group compared to the no-SHPE group. However, in spite of these differences, we did not find a significant difference between the Static-99 scores of reoffenders who had a SHPE and those who did not. The difference in risk scores (i.e., Static-99 scores) between those who reoffended and those who did not should not be surprising, as it indicates that offenders with higher risk tend not to comply with supervision and/or treatment. What this study provides is a broader perspective of the polygraph influences on the sexual offender. Therefore, with this data, it appears that the use of the polygraph in a jurisdiction does not necessarily result in less recidivism. Rather, the polygraph appears to separate those who tend to not reoffend as often (those who undergo sexual history polygraph testing) from those who tend to reoffend more often (those who avoid the sexual history polygraph).

Implications for Corrections

The above differences can have various implications. For those using the containment approach, this might suggest that there should be further study as to the different roles the triad (polygraph examiner, therapist, and community corrections official) plays in arranging the SHPE. Collaboration is an important component of the containment approach (English, 1998). A lack of collaboration and/or a written policy as to who is to supervise an offender's compliance with the SHPE, combined

with the offenders avoidance of the polygraph, may result in a significant number of offenders delaying a SHPE, particularly those offenders with more risk to reoffend. Furthermore, those who use the polygraph could focus more resources on offenders who avoid the polygraph with the intention to not only minimize sexual reoffense, but violent reoffense as well. It is possible that a more concerted effort resulting in more offenders undergoing a SHPE closer to their release would reduce recidivism, and as such, we suggest more study be given to this issue.

We use caution in assuming those who avoided the SHPE are necessarily at more risk. It may be possible that this group of offenders has prior offenses that they are attempting to conceal. There may be a number of these offenders who are later convicted of these crimes; we did not consider this research question. If fear of prosecution of prior offenses is a reason for avoidance of the SHPE, it is also likely to result in avoiding sex offender treatment—which is problematic if, as Lösel & Schmucker (2005) suggested, certain types of treatment reduce recidivism.

It is also likely that some who avoid the SHPE have other behaviors to hide that may not include prior victims or other high risk behaviors. This could explain why some offenders of lower risk might postpone undergoing a SHPE or avoid the SHPE altogether, and in doing so, disengage from treatment. The result here is possibly that low-risk offenders not receiving treatment are at higher risk for reoffense than their counterparts who are in treatment.

Further research is needed to determine the consequences associated with requiring or not requiring convicted offenders to undergo a SHPE. However, the results of this study may be useful in assisting other jurisdictions in making better choices in the implementation of supervision or in getting the maximum return from the polygraph. It is important to balance the needs of the community with fairness to the convicted sex offender who has been given a “second chance” at freedom. More knowledgeable decisions would promote positive social change for the sex offender, leading to positive social change in the community by reducing recidivism of childhood sexual offenders.

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