Polygraph in Civil Commitment Programs for Sexually Violent Predators

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Abstract
This paper is a description of the use of polygraph in the civil commitment setting. Similarities and differences are described between post-conviction polygraph supervision of sex offenders in the community and the use of the polygraph in civil commitment settings. Discussion includes attention to complexities involving examinee suitability, testing the limits of admitted behavior, clinical applications and risk assessment implications of the use of the polygraph, as well as the need for continued research to support the development of evidence-based practices in the use of the polygraph in civil commitment programs.

Keywords: Polygraph, civil commitment, CCIT, sex offender, sexually violent predator, SVP, post-conviction sex offender testing, PCSOT

Civil commitment provides a legal mechanism for the continued civil confinement of habitual or predatory, violent sex offenders after criminal prosecution, conviction and incarceration. Civil commitment programs emerged in the context of laws enacted since the late 1990s that permit a court to determine a sex offender to be a Sexually Violent Predator (SVP). These laws arose from high profile cases involving convicted sex offenders who committed violent and tragic new offenses following their release to the community.

Because the SVP determination is a legal decision, different states and jurisdictions have defined different criteria for this legal determination, though they rely on clinical and actuarial information. In general, convicted sex offenders who are determined to be SVPs are those offenders who have been previously convicted of specified sex offenses against one or more victims, and have been diagnosed with a mental disorder that deems them likely to re-engage in sexually violent, predatory behaviors if released back to the community. Civil commitment involves involuntary confinement, at the decision of the court, of mentally ill sex offenders as patients in a secure treatment facility following the completion of a criminal sentence. Civil commitment programs provide that secured treatment setting. In some jurisdictions, civil commitment can be concurrent with parole supervision.

Information from the Association for the Treatment of Sexual Abusers (ATSA; 2010) showed that 20 states and the District of Columbia have enacted laws pertaining to SVPs, and the number can be expected to have increased since that time. There have

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been constitutional challenges to civil commitment involving due process, ex-post facto and double jeopardy clauses, but the United States Supreme Court has so far upheld the constitutionality of civil commitment: (Kansas v. Hendricks, 521 U.S. 346, 356-358, 117 S. Ct. 2072, 138 L.Ed.2d 501 (1997); Kansas v. Crane, 534 U.S. 407, 122 S. Ct. 867, 151 L.Ed.2d 856 (2002); and United States v. Comstock, 560 U.S., 2010 WL 1946729 (US) (2010). Confinement of a patient to a civil commitment setting commonly includes a right to periodic judicial review for placement in the least restrictive environment (LRE) that can be determined adequate to provide treatment and supervision to reduce recidivism. Less restrictive environments may include parole supervision while living independently in the community, may also include structured residential or supervised living arrangements in the community, and can involve a variety of surveillance and behavioral monitoring protocols including global positioning and other electronic surveillance, surveillance professionals, chaperone requirements, polygraph or other forms of behavioral monitoring. ATSA (2010) does not take a position either in favor of or opposed to the use of civil commitment for sexual offenders (http://www.atsa.com/civil-commitment-sexually-violent-predators), but has recommended that jurisdictions that implement SVP legislation should do so in a manner that is consistent with relevant research and best practices in assessing, treating, and managing sexual offenders.

The SVP designation is not applied to all convicted sex offenders. For example, California Department of State Hospitals (2012) reported that 98% of inmate evaluations determined that the offender was not an SVP, and that of all registered sex offenders in the state, only 0.6% were given the designation. Some patients in civil commitment have refused to participate in treatment. California Department of State Hospitals (2013) reported that of the approximately 1000 patients committed to Coalinga State Hospital, the hospital designated to provide treatment to SVPs in California, about 300 had agreed to participate in the treatment program. Typically, patients are eligible for consideration for transfer to a LRE, such as a supervised conditional release program in the community, after participation and completion of the sex offender treatment program. Patients may also be transferred to treatment in an LRE if it is determined that the patient’s mental disorder has changed such that treatment can be safely completed in a less restrictive setting. A patient may also be unconditionally released if he no longer meets criteria as an SVP, which is typically determined by the court at the recommendation of a psychologist.

**Treatment of sexually violent predators in civil commitment**

Offenders who are civilly committed under SVP laws are deemed to be mental health patients rather than inmates and are offered treatment for their mental disorders. The objective of the treatment is to reduce the risk for re-offending and future victimization of others. A combination of several treatment models is common, including Relapse Prevention (Laws, 1989), Cognitive Behavioral Therapy (Beck, 2011), and a Risks, Needs and Responsivity model of sex offender treatment (Abracen & Looman, 2015). Patient treatment progress is generally subject to ongoing and periodic assessment through forensic and clinical observations of completion of treatment objectives and empirical treatment progress scales, clinical and actuarial measures, and ancillary measures such as penile plethysmography (PPG). Polygraph testing is also used to develop information to assess treatment goals such as accepting personal responsibility for offenses; identify treatment needs; demonstrated decrease in deviant sexual interests involving children, violence, and predatory activity; improved ability to cope with high risk factors for offending, and rule compliance.

**Polygraph in civil commitment**

Civil commitment institutional testing (CCIT) of patients determined by the courts to be SVPs is related to, though somewhat different than, post-conviction sex offender testing (PCSOT) which involves treatment and supervision in the community. Primary goals of both PCSOT and CCIT are to promote the achievement of desired therapeutic and behavioral compliance outcomes by investigating and monitoring honesty in self-reporting, and to identify areas of functioning that may improve by additional supervision or therapeutic inter-
vention. Polygraphs, like other tests, can be conducted for either diagnostic or screening purposes.

Diagnostic polygraphs are those tests conducted in response to a known incident or allegation for which the examinee is suspected of involvement. Results from diagnostic exams do not themselves determine any subsequent decision or action, but are a statistical or probabilistic classifier intended to serve as a basis of evidence, in addition to other information, to support a diagnostic conclusion that will be the basis for a determination that subsequent action is or is not necessary. Screening exams are those tests conducted in the absence of a known incident or allegation. Results from screening examinations do not themselves determine any subsequent action or decision, but are a statistical classifier intended to provide a basis of evidence to support a categorical conclusion to rule out or maintain continued concern for the potential of a problem within the scope of the test topics. Screening polygraphs are often conducted as multiple issue exams due to their increased sensitivity to a wider range of possible problems, and these are regarded as useful despite the loss of precision due to the multiplicity of statistical classifications. Some types of polygraph exams are similar for CCIT and PCSOT.

**Instant offense exam**

The instant offense polygraph is used to investigate the details of a sexual offense for which the patient was convicted. This examination is similar to a diagnostic exam in that it is conducted in response to a known incident or allegation. However, patients in civil commitment programs have already been convicted, and have often completed a prison sentence, and the instant offense examination is not intended to formulate a basis of evidence for any legal action. The instant offense exam is conducted as a single issue exam regarding behavioral allegations that the patient denies. Investigation of additional unreported behavior is not a part of the instant offense exam, but may be accomplished in a separate examination. It should be noted that overall research has found neither denial nor minimization is related to reoffending (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004). In addition, denial and minimization do not predict within-treatment gains (Beckett, Beech, Fisher, & Fordham, 1994; Kennedy & Grubin, 1992). For this reason, within the CCIT, wherein one co-author is employed, this polygraph examination is rarely utilized. However, this examination can be used when the treating clinician concludes that a particular patient’s denial of important details of the instant offense or the entire offense may present a barrier to effective engagement and progress in a sex offender treatment program, and that polygraph investigation of the details of the convicted offense may improve the patient’s capability to engage in and respond successfully to the treatment program.

**Sexual history disclosure exam**

The sexual history disclosure exam is used to investigate a patient’s history of sexual offenses. Ideally, a patient will have prepared a written sexual history summary or have answered a questionnaire containing questions about the patient’s sexual history, and will have reviewed this in individual or group therapy. The purpose of this summary document is to provide the patient with a structured way to review and organize one’s personal history and to identify sexual behavior that may have been abusive, unlawful, and also to identify areas of sexual behavior and activity that was within normal limits. An additional goal of this preparation is to develop a suitable operational vocabulary to describe and discuss matters of sexual behavior for which clear and balanced communication can be disrupted by overly metaphorical, vulgar or vague description. It will be important to remain realistic about the capabilities of the polygraph when conducting sexual history exams. It is not possible or realistic to hope that we will ever know everything about the pervasiveness and extent of some patient’s sexual abuses; and the notion of a full sexual history polygraph, in the manner this term was used in the early era of PCSOT testing, is unrealistic and should be avoided. Topical issues for the sexual history polygraph may include the underreporting of physical force or violence, child molestation, incest, sexual contact against sleeping, unconscious or incapacitated persons, and other sexual behavior. However, additional sexual history testing may sometimes be useful to investigate and rule-out the presence of sexual compulsivity, sexual preoccupation, or sexu-
al deviance issues when offenders fully deny problems in these areas.

The sexual history polygraph is often conducted as a multiple issue exam, and interpreted with an assumption of independent criterion variance. It is possible to conduct this examination as a series of single issue examinations, though research has shown no advantage in doing so (i.e., multiple series exams, like multiple issue exams are effective at discriminating deception and truth-telling, but have been shown to be ineffective at discriminating areas of deception and truth-telling within a series of exams or within a single exam; Barland, Honts & Barger, 1989).

Anecdotally, increases in disclosure of the number of victims has been observed in CCIT polygraph programs similar to that observed in response to PCSOT sexual history disclosure polygraph examinations (Hindman & Peters, 2001; Heil, Ahlmeyer, and Simons, 2003; English, Jones, Pasini-Hill, Patrick, & Cooley-Towell, 2000). These polygraphs have also increased disclosures related to the use of force utilized during sexual offending. The sexual history disclosure polygraph also increases disclosure of the victim typology as well as types of sexual acts a patient has engaged in in the past including bestiality (sex with animals), voyeurism, exhibitionism, and frotteurism. Research has found that sex offenders who exhibit diversity in sexual offending (deviant sexual preferences) are at a higher risk of recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004).

Increased disclosures can provide additional information that may increase a patient’s estimated risk level to reoffend. Although many offenders are evaluated prior to being civilly committed with risk assessment instruments such as the Structured Risk Assessment–Forensic Version (SRA-FV; Thornton & Knight, 2013) and the (STABLE 2007; Hanson, Harris, Scott & Helmus, 2007), without the use of the polygraph, the use of the polygraph during the treatment process can provide additional information for evaluators that may indicate a patient has an increased risk to reoffend. The SRA-FV and STABLE 2007 both have dynamic risk factors relating to sexual preoccupation and deviant sexual interests. For example, Hanson and Morton-Bourgon’s (2004) meta-analysis, found that sexual preoccupations significantly predicted sexual, violent, and general recidivism. In subsequent studies by Knight and Thornton (2007) and Hanson et al. (2007) it was also found to be a significant predictor of sexual recidivism. A meta-analysis by Hanson and Morton-Bourgon (2004) indicated sexual preference for children significantly predicted sexual recidivism. Sexual interest in violence predicted sexual recidivism in Knight and Thornton’s (2007) study. In addition, Hanson and Morton-Bourgon found paraphilias were significantly associated with sexual recidivism. Also, in Knight & Thornton’s (2007) study, for child molesters, multiple paraphilias was one of five variables that predicted sexual recidivism. Although there is some disagreement in the published literature regarding whether some dynamic risk factors such as sexual preoccupation and deviant sexual preferences are actually dynamic or are static (see, for example Seto, Harris, Rice and Barbaree, 2004) information from polygraph testing is still important because whether dynamic or static these factors have been found to increase risk for recidivism. However, it should be noted that the polygraph should never be used in isolation for diagnostic purposes, treatment planning, or in informing estimates of risk, but should be used in conjunction with collateral information and a thorough discussion with the patient.

On a final note, Konopasek & Nelson (2015) showed a small but statistically significant correlation between favorable outcomes and the achievement of non-deceptive sex
history polygraph results within the first six months of treatment. It will be important to interpret this effect cautiously because it is not possible at this time to make attributions about causality. More information is needed before any conclusions or recommendations can be made towards attempts to leverage sexual history polygraph outcomes to improve recidivism or treatment outcomes.

**Maintenance Exam**

CCIT maintenance polygraphs are used to investigate honesty and compliance with treatment and supervision team members and the rules and requirements of a civil commitment institution and sex offender treatment program. Use of this exam is similar to maintenance testing in PCSOT programs. Identification of early onset indicators of an escalating risk level may allow intervention that will both improve patient progress in treatment and success in institutional setting, and may reduce sexual or other recidivism and improve safety of patients in community settings. PCSOT Maintenance exams for patients living in the community can also include questions about unauthorized contact with children, including physical contact, being alone with children, proximity contact or unreported interactions with children in the community. Topics for the CCIT maintenance examination can include a variety of behaviors related to rule compliance, sexual contact with others, drug and alcohol use, child pornography, violent behavior, and the possession of contraband and weapons. Like PCSOT maintenance polygraphs for sex offenders living in the community, CCIT maintenance testing is intended to both increase the level of vigilance and monitoring of patients in the civil commitment setting, and develop information that can be used to improve treatment and supervision efforts that will increase patient compliance and successful outcomes.

Clinically, disclosures, for example, regarding the use of child pornography within a civil commitment institution are important because if a patient indicates he is viewing child pornography within the facility this is an indication he is not managing his sexual interest and likely needs additional treatment. As stated above, these treatment groups and possibly individual therapy sessions may include the patient learning skills to manage his deviant sexual arousal. A patient’s use of child pornography also speaks to risk level because a patient viewing child pornography within a secure treatment facility likely is an indication that he continues to possess deviant sexual interests and is unable or unwilling to manage his sexual interests in children within the facility and likely will not be able to or will be unwilling to manage these sexual interests if released into the community. In addition, cooperation with supervision is a dynamic risk factor that relates to risk of recidivism and this dynamic factor includes whether a patient follows institutional rules and participates in treatment (Thornton & Knight, 2013; Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2004).

PCSOT research by Abrams and Ogard (1986) reported an encouraging effect for supervision outcomes in an early pilot study involving two samples that totaled 35 offenders, including seven convicted sex offenders. However, McGrath, Cumming, Hoke, and Bonn-Miller (2007) showed no effect for polygraph testing on the reduction of sex offense recidivism, and Rosky (2013) was critical of the lack of controlled experimental evidence regarding the relationship between increased disclosure and measurable supervision and treatment outcomes. More research is needed to better understand the contribution of maintenance testing to treatment, supervision and recidivism outcomes.

PCSOT maintenance polygraph exams have been shown to help develop additional information that may be useful to treatment and supervision professionals (Ahlmeyer, Heil, McKee & English, 2000; English, Jones, Pasini-Hill, Patrick & Cooley-Towell, 2003; Madsen, Parson, & Grubin, 2004; Wilcox & Sosnowski, 2005). Grubin (2010a) showed that polygraphed sex offenders in the community were about fourteen times more likely to make significant disclosures and admissions when compared to a control group of non-polygraphed offenders. In a community sex offender sample, Grubin, Madsen, Parsons, Sosnowski, and Warberg (2004) described a reduction in admissions of non-compliance at subsequent polygraph tests, though was not clear whether decrease in admissions was a reduction of non-compliance or an increased re-
luctance to make admissions. Gannon, Wood, Pina, Vasquez, and Fraser (2012) reported a tendency towards decreased admissions of non-compliance at subsequent polygraph tests for sex offenders in the community, along with a tendency toward increased rates of non-deceptive results. Gannon also reported that sex offender managers viewed polygraph testing as helpful at all stages of the process, and also reported that convicted sex offenders indicated that polygraph testing caused them to be more inclined to comply with supervision rules despite the fact that they dislike the test. Harrison & Kirkpatrick (2000) found that PCSOT sex offenders in their small sample believed the use of the polygraph in treatment helped them to increase their honesty with their clinicians and their group members. In addition, they found that participants felt it had helped them achieve treatment goals and comply with treatment and supervision requirements.

**Polygraph examinations unique to CCIT**

**Post Penile Plethysmograph (PPG) exam**

PPG exams - involving a strain gauge designed to record microscopic changes in penile tumescence that can occur in response to visual or auditory test stimuli - are used to test a patient’s sexual arousal patterns. Information from the PPG can then be compared to the patient’s self-report. The PPG exam may also include respiration, electrodermal and behavioral activity that can be used to evaluate non-cooperation or faking during testing. Because faking strategies might also include mental or visual distraction, in addition to masturbation activities prior to testing, a patient may be referred for polygraph testing following a non-responsive or suspicious PPG exam. This examination is typically conducted as a single issue polygraph with the topical or target issue formulated around attempts to alter the accuracy of the PPG or violation of the PPG testing instructions.

It is important to remain aware that the results of a polygraph test cannot be interpreted as actually validating or verifying the results of the PPG exam. Moreover, the results of any examination cannot be taken to validate the results of a different type of exam, though concurrent or convergent validity may be of interest when results from two different tests are thought to be related. Validity of the PPG, like any test, is a scientific matter for which the evidence must be evaluated for the test in general. In other words, test validity is not established at the level of an individual exam. At the level of the individual examination, a test result is simply correct or incorrect. Tests of any kind are needed whenever there is a desire or need to measure or evaluate a phenomena for which neither deterministic observation nor direct physical measurement are possible. PPG test results, like polygraph and other test results, can be thought of as probabilistic evidence. Valid tests are those for which data collection is replicable and analytic results are reproducible, and for which the test results have been shown to correlate to a meaningful criterion in a way that permits more effective classification and inference than could be accomplished without the test. In practical terms, results from a Post PPG Polygraph test can be thought of as intended to provide a basis of probabilistic information to support a conclusion to rule out or maintain continued concern for the possibility that a patient has engaged in faking or non-cooperation in attempt to alter the PPG test result.

Typically, within the civil commitment institution where one co-author is employed, a post PPG polygraph examination is utilized with patients who do not respond to any stimuli presented during the PPG assessment or whom are observed during the PPG assessment behaving in ways that look as if they are attempting to alter the results of the PPG examination. The PPG stimuli follow the Association for the Treatment of Sexual Abusers (2014) content guidelines and includes audio/video vignettes involving sexual activities with children, sexual acts between mutually consenting adults as well as non-sexual violence. Anecdotally, patients have been observed to blink repeatedly during the presentation of visual/audio stimuli and fallen asleep during the PPG assessment. These patients are referred for a post PPG polygraph assessment to assess whether the patient attempted to alter the results of their PPG. Patients also may attempt to masturbate prior to their scheduled PPG examination as a way to alter their results or think of other non-sexual thoughts during the PPG examination itself in
order to alter the results.

If a patient discloses that he attempted to manipulate the results or he denies that he has and his polygraph results indicate deception this may be an indication that the patient is continuing to be deceitful regarding his sexual interests and behaviors. This should then lead to a conversation between the patient and his treating clinicians about his use of tactics to manipulate the results in an attempt to explore the issue for that particular patient further. This discussion may lead to an open discussion about the patient’s sexual interest as Travis, Cullin, Melella (1988) found in their study. Laws (2002) and Murphy & Barbaree (1994) contend that results can be used to discuss a denier’s sexual interests. If a patient indicates he has not attempted to manipulate the results in any way and there is no deception indicated during the polygraph examination, this may indicate he did not experience a significant sexual response to the stimuli presented. It should also be noted that a lack of significant response to the PPG stimuli does not necessarily mean that a patient is absent sexual interest in children and/or use of force during sex.

**Sexual thoughts and fantasies exam**

Reduction of deviant sexual thoughts and fantasies is an important goal for patients in sex offender treatment programs. This is because deviant sexual thoughts and fantasies typically play a role in motivating an offender to plan sexual offenses and act on them. Among the goals of sex offender treatment is to help the patient to gain self-awareness and self-control over his sexual thoughts and fantasies, and also to develop and increase skills and motivation to redirect deviant sexual thoughts and fantasies when they occur. Self-reporting is one method to gain information in this area, though it can be assumed that patients might engage in minimization and under-reporting. Treatment mechanisms such as masturbation logs, weekly reports, fantasy logs, and other reporting protocols can improve clinical insight. However, some degree of underreporting and secrecy around sexual fantasies may be within normal limits for both sex offender and non-offender populations.

Due to this issue, the sexual thoughts and fantasies polygraph examination becomes increasingly important. The sexual thoughts and fantasy polygraph within a civil commitment facility addresses a patient’s current sexual thoughts and fantasies within the facility. Disclosures by patients that indicate they are still actively fantasizing about children, their previous victims, or using force or causing humiliation in sexual activities is an indication that the patient is unable or unwilling to manage their deviant sexual thoughts within the facility. Clinically, this is critical because it should lead to discussions between the patient and his treating clinicians about his continued sexual interest in children or the use of violence or humiliation in sexual activities and the patient’s inability or unwillingness to manage these thoughts and fantasies. Again, ongoing deviant sexual thoughts and fantasies also relates to risk level because if a patient is still actively fantasizing about sexual activities with children for example this can be indication of continued risk to reoffend against children in the community, if released. Research indicates a history of deviant behavior and continued deviant sexual interest and behavior has been found to be linked to risk and recidivism (Hanson & Bussiere, 1998; Hanson & Harris, 2001; Hanson & Morton-Bourgen, 2004; Quinsey, Lalumiere, Rice, and Harris, 1995).

The degree to which sexual fantasies play a role in diagnosing a mental disorder is dependent on the information disclosed by the patient during the polygraph. It is possible that a patient may disclose sexual fantasies that involve use of force beyond that which is necessary for compliance (such as purposely cutting or threatening to kill a victim with a weapon) or that what sexually arouses the patient is the physical or psychological suffering of the other person. This information may have been unknown prior to the polygraph, and can possibly change a patient’s diagnosis. However, a careful and thorough discussion between a patient and his clinician should take place before assigning a new diagnosis or a different diagnosis to a patient.

As stated above, polygraph testing of compliance with fantasy reporting procedures and masturbation activities is intended to improve the quality of information available to assist clinical and supervision professionals in
formulating effective individualized treatment and supervision plans. Testing of fantasies, unless connected with masturbation behaviors or reporting behaviors, may be inconsistent with more general polygraph practices and may represent a practice that is not within the scope of published polygraph validity studies or the general practice recommendations of the American Polygraph Association. For example, the American Polygraph Association (2009) model policy for PCSOT, sections 7.1.2.A-G includes recommendations that relevant questions are behaviorally descriptive, easily answered “no”, are simple, avoid unnecessary jargon, time-delimited, free of assumptions of guilt, and free of references to mental state or motivation. These recommendations are premised on polygraph studies that have uniformly employed behaviorally descriptive test questions for which examinees answer “no.” There are no polygraph validity studies on confirmatory tests. Attempts at polygraph testing of fantasies not connected with overt behavior may push outside the limits of good science and good polygraphy. Regardless of the complexities in this area, underreporting of sexual fantasies by patients in a sex offender treatment program has been viewed as having the potential for being problematic.

**Memory testing**

Some patients in civil commitment sex offender treatment programs can be expected to disclaim memory of their offenses due to the use of alcohol or drugs, or due to the length of time since the offense. Clinicians can request this type of polygraph when the patient states he cannot fully remember (due to alcohol blackout, brain injuries, or other cognitive impairment) the sexual assault(s) he committed and this impacts his ability to complete treatment assignments because he cannot recall his behaviors. Anecdotally, for example, a patient stated he could not recall his qualifying offense because of an alcohol blackout. In a post-test polygraph discussion with the polygraph examiner, the patient admitted that he did remember the assault of one of his victims.

Expectations should be formulated cautiously and realistically when testing these patients and when using polygraph questions that refers to memory, intent, or state of mind; it is doubtful whether polygraph testing will rectify a highly resistant patient’s motivation to engage successfully in a sex offender treatment program. The polygraph has been shown to be a valid test of the credibility of an examinee’s statements of denial of involvement in a behavioral issue of concern, but has not been validated as a test of memory or intent. A general requirement for the polygraph is that test questions describe a behavioral issue for which the examinee can be reasonably expected to know the truth about his or her past behavior. Although polygraph test questions pertaining to memory, intent, and motivation are generally not supported, the American Polygraph Association (2009) Model Policy for Post-Conviction Sex Offender Testing, section 7.1.2.G recommends that questions about memory may be used when the examinee has admitted the behavior issue under investigation. In other words, questions about memory may be used after an examinee first admits the behavioral act, and when issue of memory is then the remaining target of the investigation.

**Discussion**

Effective policies for the use of the polygraph test in civil commitment programs will be premised on an understanding of civil commitment laws and sex offender treatment models, as well as the contribution of polygraph testing to treatment, supervision and recidivism outcomes. There is little doubt that sexual victimization is harmful, and that it serves both individual and public good to seek improved ways to reduce the threat of sexual recidivism presented by persons known to have committed sexual offenses in the past. The public is protected from sexual reoffending when the mentally ill sex offender is not permitted to reside in the community. However, restriction of rights and liberties for indeterminate periods in the absence of a new crime or offense has been viewed as controversial, and the right to treatment in a least restrictive environment is a feature that is likely to continue play an important role in the ability of the courts to reach favorable decisions regarding the legality or constitutionality of civil commitment programs.

Effective policies for the use of the polygraph in civil commitment programs will also be premised on a realistic understanding of the theory and capabilities of the polygraph test and how those capabilities may be affect-
ed by the known limitations of the polygraph test. There is general support that conditional release programs are associated with reduced rates of criminal, violent and sexual recidivism rates and re-hospitalization (Morrissey, Domino & Desmarais, 2013), but less information is available to describe the effect of civil commitment on recidivism outcomes. Gaining insight into the potential contribution of polygraph towards reduced recidivism rates, following release from civil commitment to a LRE or the community, will begin with an understanding of sex offense recidivism rates in general.

**Sex offense recidivism rates**

Sex offense recidivism rates have been reported as slightly under 14% across aggregated groups of sex offenders (Hanson & Bussiere, 1998; Hanson & Morton-Bourgon; 2004). Some findings may initially appear to be counterintuitive to readers not familiar with the published literature. Degree of violence during a sexual offense has been correlated with increased violent recidivism though not with sexual recidivism, and the degree of intrusiveness of sexual offenses is negatively correlated with sexual recidivism risk. Some subgroups of sex offenders have been found to present higher rates of recidivism (Quinsey, Harris, Rice & Cormier, 1998). Psychotherapies developed specifically to reduce sex offense recidivism – referred to as offense specific therapies – have been shown to reduce recidivism rates for both sexual and general offenses (Hanson et al., 2002). In terms of non-sex recidivism, more serious crimes of conviction are negatively correlated with higher recidivism rates, with murder among the lowest subcategories of reoffense (California Department of Corrections and Rehabilitation, 2014). Interpretation of these data are necessarily cautious in that overall recidivism rates increase with longer supervision and record-keeping periods. Another general trend has been that offenders with developmental disabilities and mental illness recidivate at higher rates than other offenders. For example: California Department of Corrections and Rehabilitations (2012) reported that released felons who were diagnosed with a developmental disability showed a recidivism rate almost 14 percentage points greater than those who did not have a developmental disability.

Data are not available to describe recidivism rates specific to sex offenders who have been determined by the courts to be SVPs, and those subject to civil commitment treatment programs. Additionally, our knowledge about sex offense recidivism rates is sometimes filtered both by a tendency to react emotionally and morally to the problem of sex offending, by disproportionate attention to a small number of sex offenders responsible for the most egregious and saddening offenses, and also by data sets that have been largely incomplete for past years. Despite the difficulty of data collection and estimation in these areas, some data are available for recent years. For example: California Department of Corrections and Rehabilitation (2011) reported an 86% recidivism rate for sex offenders, for which over 84% involved rule violations, while 10% involved non-sex crimes, and 6% were due to sexual reoffense. Data for 2013 (California Department of Corrections and Rehabilitation, 2014) indicate a 91% recidivism rate for which 88% involved rule violations, 7% were non-sex crimes, 3% consisted of failure to comply with registration requirements, and 2% involved new sex crimes. California has had among the highest recidivism rates in the nation, leading all states except Minnesota for the periods from 1999 to 2007, and some research has attributed this to systemic issues (Pew Center on the States, 2011).

**Theory of the Polygraph**

Effective use of CCIT polygraphs will be premised on correctly understanding the capabilities and limitations of the polygraph test in terms of test theory, probability and decision theory, psychology, physiology, and information theory. In particular, it will be helpful for field polygraph practitioners and other professionals to become educated in contemporary polygraph science and evidence based practices that forgo continued reliance on fear-based hypotheses that have been described repeatedly as false and inadequate (Blalock, Nelson, Handler & Shaw, 2012; Handler & Nelson, 2007; Honts, 1997; National Research Council, 2003; Nelson, 2015a; Sent-
Correct and effective use of polygraph results will depend in part on a correct application of a testable and falsifiable scientific hypothesis or theory, and upon correctly understanding polygraph test results as fundamentally probabilistic test, despite the fact that test data are reduced to categorical results for convenience, with known and calculable margins of uncertainty.

The operational or analytic theory of the polygraph is that differences in physiological activity are loaded onto different types of test stimuli as a function of deception and truth-telling in response to the relevant target stimuli (Honts, 1997; Honts & Reavy, 2015; Honts & Raskin, 1988; Nelson, 2014; 2015a, 2015b; Raskin & Kircher, 2014). Differences in physiological activity can be acquired and recorded from an array of sensor technology and then combined into structural models that can then be normed for deception and truth-telling. Data from individual examinations can be compared to statistical reference data to calculate a probabilistic classifier to support a categorical conclusion of deception or truth-telling. Polygraph does not measure lies or truth per se. The term lie detector is used only as a term of convenience and not as a term of science. Although tests are evaluated in terms of differences in physiological activity in response to different types of test stimuli, polygraph questions can be thought of as inquiring as to whether an examinee will respond to a stimuli as a function of involvement in the behavioral issue. Differences in response are loaded for different types of test stimuli as a function of deception or truth-telling when an examinee denies involvement in a behavioral issue of concern.

A truthful examinee will deny both involvement in a behavior, and that he or she will exhibit the kinds of response differences that are expected from a person who has engaged in the behavior. Differences in physiological response to different types of test stimuli can be thought of as generally involving a combination of mental effort necessary to conceal the truth and assert a lie, emotion related to the behavioral act or the potential consequences for the act, and conditioning to the descriptive stimulus as a result of involvement or experience in the behavioral act (Nelson, 2015a).

Polygraph accuracy

Validity research on polygraph accuracy has not been conducted at the level of individual topics or target issues. Differences in effect size for polygraph scores have not been found when comparing sex crime questions with other crime questions (Honts & Raskin, 1988), and there is presently no basis of evidence to describe or support the notion that differences in effect size are related to the topic or target issue. Instead, our present knowledge-base on polygraph accuracy is based on research that includes a wide variety of target behaviors with a fundamental requirement that polygraph target questions that describe sexual and other crimes for which the examinee is capable of knowing the truth about his or her past behavior. The National Research Council (2003) reported median accuracy as .87 using the receiver operating statistic. The American Polygraph Association (2011) has reported evidence showing the accuracy of both diagnostic and screening polygraphs to be capable of providing accuracy that significantly exceeds chance levels. Mean accuracy for diagnostic polygraph techniques was reported as .89 with a 95% confidence range of (.83 to .95), while accuracy of polygraph techniques used for multiple issue screening exams, for which the test questions are scored and interpreted with an assumption of independent criterion variance (i.e., it is conceivable that an examinee may have engaged in behaviors described by one or more behavioral topic are but not others), was reported as .85 with a 95% confidence interval from .77 to .93. Informed and cautious readers will be primarily interested in the lower limit of test accuracy as opposed to the more optimistic mean or upper limit.
Examinee Suitability for Polygraph Testing

Known limitations of the polygraph include its limited capability with psychotic persons (Abrams & Weinstein, 1974), persons whose intelligence level is at or below the lower limit of the normal range (Abrams, 1974) and persons with severe deficits in functional maturity (Abrams, 1975). These limitations may warrant special attention in CCIT polygraph programs because patients with developmental disabilities, neurologically based learning disorders, or chronic mental health problems may be over-represented in civil commitment settings in comparison to other population groups. The American Polygraph Association (2012) published a useful set of guidelines for polygraph exams with special populations and individuals that may be marginally suitable for polygraph testing.

Problems associated with testing fantasies not connected to behavior

Neither existing studies nor polygraph theory support the capability of the polygraph to discriminate the existence or non-existence of fantasies that are not actualized in behavior, or to identify truth or deception regarding mental fantasies. Moreover, attempts to apply the polygraph to this area may be outside the limits or requirements of science and scientific testing as there will appear to be no suitable external criterion with which to determine test effectiveness. Despite this limitation, polygraph testing may be very useful towards obtaining information about deviant or problematic fantasies for patients who may be otherwise inclined to withhold information from the therapeutic discussion. While some degree of minimization can be expected around issues of sexual fantasy and deviancy, polygraph examination of sexual fantasies that are expressed in behavioral actions such as masturbation or pornography use may be especially useful with those patients who present with complete denial and avoidance in this area.

The problem of truth detection and testing the limits of admitted behavior

Polygraph testing has been shown to discriminate deception and truth-telling at rates significantly greater than chance when investigating behavioral issues for which the examinee denies involvement (National Research Council, 2003; American Polygraph Association, 2011). However, at the present time there are no published studies that describe the effectiveness of the polygraph to validate or verify that an examinee has been completely truthful or has reported everything. Neither existing studies nor the basic theory of the polygraph supports the capability of the polygraph to validate self-report in the sense of verifying that an examinee has been completely truthful or has reported every detail regarding a repetitive or pattern behavior.

The polygraph, for pragmatic purposes, is said to be a lie detector not a truth-detector, though it does not detect or measure lies per se. Reasons for this have much to do with the epistemological and philosophical complexities inherent to attempts at defining truth compared to the pragmatic expediency of defining deception. It will be hazardous to ever assume that a patient has told us everything or that we can possibly know the complete truth about the entire scope of a lifetime or lifestyle of deviancy. Additionally, it may be a disservice to victims of abuse to pretend that we can ever fully comprehend either the extent of everything that was done to them or the impact of abuse. Equally important, it is somewhat doubtful whether admissions during a polygraph pretest interview, under the external motivation of the impending test, or confessions during posttest review with a skilled polygraph examiner, again under the external motivation of attempting to salvage a test result, can be safely or realistically interpreted as indicative of authentic progress in a sex offender treatment program. It is more likely that the determination of authentic change or progress in treatment will remain a complex clinical endeavor involving many variables. Fortunately, clinical experience and studies on treatment effectiveness have suggested that although good information is critical, and although more information is often helpful, effective progress and improvement has been demonstrated towards the objectives of improved mental health, and healthy living and pro-social behavior even though it may not be possible to ever know everything.
Conclusion

There is no known reason why the basic mechanisms of psychology, physiology and scientific testing would differ simply because of the topic (i.e., sex behavior vs. non-sex behavior), or simply because a court has made a legal determination that some individuals meet the legal definition of SVP, or simply because a test is conducted in a community setting or within the secured perimeter of a state hospital. If polygraph testing is anchored in science and reality it is more likely that the same general theory, principles and practices will apply when testing patients in a civil commitment hospitals or in the community, though the prevalence of persons who are unsuitable or marginally suitable for polygraph testing may be different based on developmental and mental health factors. Current polygraph theory principles and practices are applied whether testing examinees in civil commitment or in the community. The principles of validity and science underlying the polygraph do not change simply as a matter of environment.

Professionals who work in civil commitment programs are often diligent, conscientious and optimistic. They also experience considerable human stress as a result of empathic sensitivity towards the impact of sexual abuse on victims and the impact that sex offending behavior levies on the self-concept and lifestyles of offenders themselves. The complexity and depth of issues surrounding sexual abuse and sex offender treatment is such that there is sometimes a lingering tendency to wish for simple solutions regardless of whether or not simple solutions exist. The responsibility will fall on polygraph field examiners to correctly inform and educate other professionals about the capabilities of the polygraph test. In doing this it will be important to remain within the boundaries of scientific validity and what is known about the polygraph test, in terms of probabilistic error rates, suitability for testing, applicability of testing procedures and normative reference data to population of examinees, and the theoretical and decision theoretic foundations of the polygraph test. Neglecting to correctly educate others about the capabilities and limitations of the polygraph test will lead to wishful thinking and that may not be within the capabilities of the polygraph or any other test, and will lead to eventual frustration and aggravation when observed reality cannot be reconciled with unrealistic expectations.

Use of evidence-based practices has become an important aspect of all clinical work, including work with convicted sex offenders and patients in civil commitment programs. Questions and discussions about evidence-based practices, if they do not already, will eventually include discussions about whether the use of polygraph can be shown through evidence to contribute to improved clinical outcomes. Clinical outcomes for patients in civil commitment programs for sexually violent predators will be inextricably linked to recidivism outcomes. For this reason, questions and discussions about outcome effects associated with polygraph testing will be linked to both clinical and recidivism outcomes.

For polygraph professionals to support the evidence-based practices of mental health professionals who work with patients in civil commitment programs, and to continue to prevail in response to continued legal and ethical challenges to the use of the polygraph, it will be important for polygraph professionals to remain steadfast within the established evidence-based practice boundaries that exist within the polygraph profession. Designing testing practices for mere convenience, based on conjecture or hypothesis that are inconsistent with sound polygraph theory and practice, should be avoided. It is likely that the same principles of valid polygraph apply to both CCIT and all other types of polygraph testing. In the same way that valid principles and practices of polygraph testing in general are synonymous with the principles of science, testing and decision theory, it is likely that the valid principles and practices for polygraph in civil commitment programs will be similar to evidence-based practices in other polygraph testing contexts.

Finally, this paper is descriptive only, and that neither description nor expert opinion alone is sufficient to establish the validity of CCIT polygraph as an evidence-based practice. Polygraph professionals will be increasingly faced with questions about the basis of evidence to support the use of the polygraph. Areas of needed research are many and include the suitability of patients in civil commitment,
effectiveness of the polygraph at discriminating truth and deception when testing the limits of admissions, base rates or incidence rates for behaviors, and the contribution of polygraph testing to clinical and supervision outcomes including sexual and other recidivism rates. It will be important to continue to develop discussions and relationships between clinicians, scientists and researchers who are capable of formulating research questions and methods to further investigate the potential usefulness of polygraph in the treatment and supervision of patients in civil commitment programs for sexually violent predators. Polygraph has emerged as a potentially useful component of the civil commitment programs and it is hoped that this description of the CCIT paradigm will stimulate additional discussion and additional research into the potential contribution of polygraph testing toward improved treatment, supervision, and recidivism outcomes with the CCIT setting.
References


Polygraph in Civil Commitment Programs for Sexually Violent Predators


