

SURVEY REGARDING POLYGRAPH TESTING OF JUVENILES BY LAW ENFORCEMENT

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This study examined law enforcement's use of the polygraph with juveniles. Law enforcement polygraph examiners responded to a survey regarding their use of the polygraph with juveniles, types of test and special procedures used, in addition to any perceived limitations. The results indicate the polygraph is being administered to juveniles in a variety of law enforcement contexts, and that many examiners express concern over testing juveniles below age twelve. A majority of the examiners make no modifications when testing juveniles. However, several reported specific limitations in using the polygraph with juveniles under a certain age. Of greatest concern regarding the use of the polygraph with juveniles was potential limitation related to cognitive/attention development. The current survey indicates that the polygraph is being used with juveniles, however little research exists regarding its use with this population. This indicates a need to further explore the validity of the polygraph with this population.

While the use of the polygraph to detect deception is often not allowed in court, the practice of polygraphing adult suspects, as part of a criminal investigation, is commonplace (Goldzband, 1999). In addition, many courts require periodic polygraph tests as a condition for parole or as a component of treatment for sex offenders (Blasingame, 1998). Over the past 25 years there has been a substantial body of research conducted to examine the validity of using physiological changes, as measured by the standard polygraph test, to detect deception in adults (Raskin, Honts, & Kircher, 1995). This research had included highly controlled laboratory simulations and detailed analysis of field data (for reviews see Raskin, Honts, & Kircher, 1995; Raskin, & Kircher, 1992, Raskin, 1986). However, the primary focus of this research has been on applying the polygraph to an adult population. As greater attention and resources are being focused on the issue of juvenile violence and juvenile offenders, it is reasonable to infer that law enforcement may be interested in using the polygraph to detect deception in suspects from this population. In addition, the polygraph is being utilized as a part of juvenile probation, particularly for sex offense (Oregon Administrative Rules, 416-460-0030, 1995). The present study explores the use of the polygraph with juveniles, under what circumstances it has been used, and if polygraph examiners have identified any potential limitations.

While the number of juveniles being investigated for serious crimes has declined since its peak in the early 1990s, a significant number of violent crimes involve juvenile suspects (OJJDP, 2000). In these cases it is reasonable to believe that the investigator may want to utilize the polygraph to identify if the juvenile suspect is being deceptive. The results of such tests would likely hold significant weight in the investigation. There are no set national guidelines for the use of the polygraph with juveniles nor is there a minimum testing age. To date there has been a remarkable absence of research regarding the use of the polygraph with juveniles. From the existing handful of studies addressing the issue (Abrams, 1975; Adang, 1995; Craig, 1997); only Craig (1997) has conducted a laboratory simulation of the polygraph with participants less than 16 years of age. In the Craig (1997) study of 9 to 15 years-olds, only 73.8% of the participants were correctly classified as being deceptive or truthful following a mock crime like scenario.

The first step in understanding the use of the polygraph with juveniles is to assess how often it is used with this population, the methods of testing that are most often used, and if any special alterations are being made. In addition, it is important to assess if those who are giving the exams have identified any limitations in using the polygraph with juveniles and if they have a minimum age for testing. The present study attempts to assess these questions related to the use of the polygraph with juveniles in an investigative setting using information obtained via anonymous survey from law enforcement examiners from across the United States.

Methods

Participants

A sample of 101 polygraph examiners was obtained as a result of sending 400 anonymous surveys to law enforcement polygraph examiners. Respondents included 93 males and 8 females all of whom reported working for either a local (77%), state (21%) or federal (1%) law enforcement agency. Respondents ages ranged from 27 to 64 ($Mdn = 46$), they had between 1 and 30 years experience conducting polygraph tests ($M = 8.9$, $SD = 7.5$), and had conducted between 4 and 750 polygraph examinations in the past year ($Mdn = 82$).

Materials

A survey was developed which requested demographic information and asked the examiner to identify the number of adults as well as juveniles they had tested, including the age of the youngest of juvenile tested. In addition, specifics were requested regarding what age they considered a juvenile too young to be tested and what limitations, if any, they perceived may be of influence when testing a juvenile. In addition to the open-ended request for potential limitation, examiners were asked to rate on a 7-point scale the importance of 12 specific items in determining whether or not to conduct a polygraph with a particular juvenile (Table 1). An additional set of questions asked examiners the percentage of juvenile polygraphs they had conducted related to specific types of crimes: none, 1%, 5%, 10%, 25%, 50%, 75%, 90+%.

Procedure

Members of the American Polygraph Association, identified via address as working in the legal system, were sent a package containing the anonymous survey and a self-addressed prepaid return envelope. To ensure confidentiality the surveys were numbered in the order by which they were returned.

Written responses to the question regarding the limitations in testing a juvenile below the minimum age listed by each examiner were coded to identify the specific type of limitation the examiner felt was significant. A coding system with 8 independent criteria was developed which categorized responses in separate domains (Table 2). Two raters coded a total of 101 written statements for the presence of the 8 criteria resulting in a total of 140 coded remarks; a single statement could be coded with more than one criteria. The raters achieved an 80% agreement (Cohen's Kappa .765). Any differences in coding between the two raters were resolved through discussion.

Results

Analysis of the 101 law enforcement polygraph examiners responses indicates that 74.3% reported having tested at least one juvenile (under the age of 16), with those examiners having given between 1 and 1000 juveniles a polygraph test in their careers ($Mdn = 6$, $Inter-quartile\ Range = 160.5$). Examiners reported having polygraphed significantly more adults ($M = 128.24$, $SD = 127.65$) in the past year than total number of juveniles reported polygraphed ($M = 60.51$, $SD = 167.62$), $t(90) = 3.47$, $p < .05$. Figure 1 presents the age of the youngest juveniles examiners reported testing, $M = 13.10$, $SD = 1.91$. For those examiners who reported having given a polygraph to a juvenile, 66.7% reported making no special alterations in the test. When asked to list the type of test they have used with juveniles 70 reported using the Control Questions Test, 8 reported using a Guilty Knowledge Test, 8 reported using the Relevant/Irrelevant test, and 3 used a Directed Lie Test.

The mean reported minimum age for conducting a polygraph examination was 12.84, $SD = 1.79$ (Figure 2). For the 140 coded responses to the limitations in giving a polygraph to a juvenile below the minimum age the examiner specified, a significant difference was found for the types of limitations cited ($\chi^2(8, N=140) = 79.85$, $p < .05$). Examiners identified insufficient cognitive skills as the most common concern (30.7%) as to why the polygraph may be ineffective with a juvenile (Figure 3).

A principle factor analysis using varimax rotation of importance ratings for the 12 specified limitations revealed three separate factors ($\lambda > 1.0$) accounting for 67% of the variance in the data. The first factor was loaded with items related to either the juvenile's moral understanding/behavior or whether they had been abused. The second factors captured cognitive/attention issues, and the third addressed presence of siblings (Table 3). The third factor was dropped from further analysis due to the examiners feeling the juvenile having siblings as being unimportant regarding the polygraph tests (93% reporting Neutral to Not important). The averaged importance ratings (1 unimportant to 7 very important) for each factor were calculated and analyzed using paired sample t-test to identify which factor investigators felt was of the greatest concern when polygraphing a juvenile. Consistent with the analysis of the coded responses, the cognitive/attention factor ($M = 5.93$, $SD = .09$) was rated as significantly more important ($t(92) = -11.93$, $p < .001$) than moral understanding/behavior or whether they had been abused ($M = 4.40$, $SD = .13$).

The responses regarding the types of crimes juveniles had been polygraphed for, were averaged for each crime type and converted to z scores. Three crime types were identified as accounting for the most reported types of offenses juvenile suspects were being polygraphed for ($z > 2.00$). Property crime ($M = 3.04$, $SD 2.47$), rape or sexual assault ($M = 2.72$, $SD = 2.25$), and child sexual abuse ($M = 2.36$, $SD = 2.00$) were identified as the crime types for which examiners most often conducted polygraph with juveniles (Figure 4).

Discussion

The results indicate that law enforcement examiners are actively using the polygraph to detect deception in juveniles. While examiners test significantly more adults in a single year than the number juveniles they have tested in their careers, there were still a substantial number of juveniles being given polygraph tests. In addition, many examiners had used the polygraph with early adolescent populations including juveniles as young as 7. It is important to note that more than half of the respondents do not use any special modifications when testing a juvenile, treating them exactly like an adult during the test.

While most examiners do not make special modifications when using the polygraph with a juvenile, examiners did identify specific limitations for testing this population. Based on these perceived limitations, many examiners believed that a polygraph should not be used with any one below the age of 12. Some of the most frequent limitations cited were that juveniles lacked cognitive skills and moral understanding to produce meaningful physiological responses to the various polygraph questions. These perceived limitations correspond with fact that the most commonly used polygraph test indicated was the Control Question Test, a rather cognitively sophisticated test. Research using less cognitively demanding tests procedures, like the Directed

Lie test or the Guilty Knowledge test would be useful in addressing these perceived limitations.

Whether to give a test, the type of test employed, and any modifications that might be made are left to the discretion of the individual examiner. There is no set of guidelines as to how the polygraph should be used with juveniles, nor a set minimum age. Future research should focus on the types of tests commonly used with adults to see if they are accurate when conducted with juveniles. Potential limitations identified by these examiners should be addressed by such research. In addition, the criminal contexts under which juveniles are being polygraphed are also of interest. In recent years the notion of trying a juvenile as an adult has become increasingly popular. Many states have amended their juvenile justice laws and have adopted adult criminal sanctions pertaining to certain crimes where the juvenile may be treated as an adult (Griffin, Torbet, & Szymanski, 1998). It is imperative that the existing standards by which adults are tested are not automatically used with juveniles without reasonable research support.

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Table 1

Questions from survey of polygraph examiners

In your opinion is there a cut-off age, where you feel, a polygraph should not be given or is ineffective?
Age?
Why?
In making a determination on whether or not to polygraph a juvenile how important are each of the listed factors about the juvenile?

	Not Important	Neutral	Very Important
Attention span	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to sit still for extended period	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The juvenile having ADHD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding of the truth vs. a lie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lower than average intelligence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The juvenile having older siblings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The juvenile having younger siblings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Previous experience with a polygraph	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A history of telling lies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty in school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A history of aggressive behavior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having been abused	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table 2

Coding system for written responses

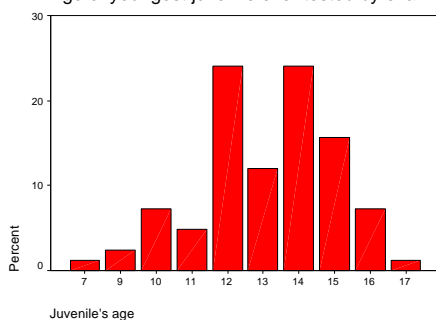
- (1) School told them to
- (2) Attention span/memory/mental maturity
- (3) Knowledge between truth and lie - understanding the implications of their actions
- (4) Physical issues/ maturity
- (5) Unable to comply with the requirements of the test
- (6) Regulations prohibiting
- (7) Ethical considerations or personal prohibitions
- (8) Other

Table 3

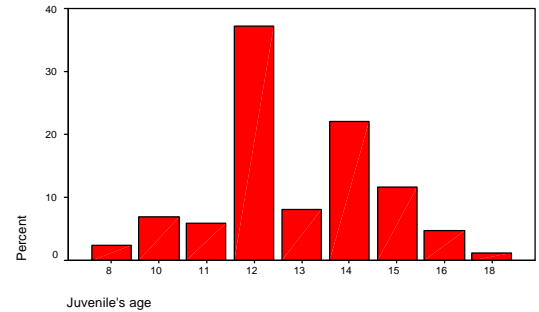
Factors for examiner responses to potential limitations importance ratings

	Rotated factor loadings	Communalities	
Factor 1 -			
Having been abused	.868	.779	
A history of aggressive behavior	.860	.839	
A history of telling lies	.824	.699	
Difficulty in school	.780	.735	
Understanding of the truth vs. a lie	.513	.423	
Factor 2 -			
Ability to sit still for extended period	.806	.651	
Attention span	.772	.628	
The juvenile having ADHD	.622	.534	
Lower than average intelligence	.602	.491	
Factor 3 -			
The juvenile having younger siblings		.957 .948	
The juvenile having older siblings		.948 .946	
Eigenvalues	4.50	1.95	1.61
% of Variance	37.5	16.2	13.4

Age of youngest juvenile ever tested by examiner



Self-reported minimum age for polygraph test



Reasons for reported minimum age

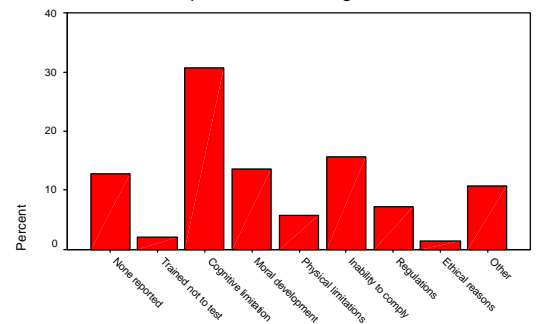


Figure 4

