



## Introducing the APOD: Analysis of patterns of denial among males accused of sexual offending<sup>☆</sup>

Darrel B. Turner<sup>\*</sup>

Lake Charles, LA, United States

### ARTICLE INFO

#### Keywords:

APOD  
Analysis of patterns of denial  
Sexual offending  
Detecting deception

### ABSTRACT

Sex offenders have great incentive to deny and/or minimize their offense, and both researchers and treatment providers regularly encounter their socially desirable response patterns. Despite the importance of distinguishing those who are lying about their innocence from those who are truly not culpable, law enforcement agencies and clinicians have few resources, other than the polygraph, to discern false denial from truthful, actual denial using scientifically supported methods. The Analysis of Patterns of Denial (APOD), a checklist of denial techniques, was developed to assist in making this distinction. It was developed by comparing a sample of guilty persons who denied their offense conduct with persons who were falsely accused (i.e., accused and investigated but later convincingly cleared by polygraph, a DNA non-match, and/or confession by another person). Items that satisfactorily discriminated between the two groups were retained in the final checklist. The APOD is intended to help those who work with sex offenders identify denial response patterns to more accurately determine if an alleged sex offender is being truthful or deceptive.

For those who work with sex offenders, regardless of their role or the setting in which they work, an advantageous – if not critical – skill is the ability to recognize denial and detect deception. Unearthing undetected criminality and aberrant sexual behavior is important for clinicians as they develop treatment plans for sex offender therapy, for investigators who must quickly and accurately assess the validity of a suspect's responses, for practitioners involved with sex offender risk assessment, and for supervision officials as they determine appropriate conditions for monitoring offenders in the community and appropriately allocating limited resources. There is a growing interest in and need for research in this area. Some studies have examined the demographic and psychological differences between “deniers” and “admitters,” but research-supported means of differentiating between the two groups, based solely on their response patterns, is lacking (Ware, Blagden, & Harper, 2020). Further, the extant laboratory-based deception detection studies have been criticized for overoptimistic accuracy rates (Kleinberg, Arntz, & Verschuere, 2019).

A guilty suspect who engages in denial of his or her sexual offense is, by definition, engaging in a form of deception. “I didn't do it” is a primitive defense mechanism, but it is one that can be very difficult to overcome. But ascertaining the truth about what offenders fantasize

about, the acts they planned (or are planning) to carry out, and any undetected crimes they have committed are crucial to comprehensively assess the risks they pose and accurately identify areas to be addressed in treatment. It therefore is not surprising that researchers and practitioners have devoted significant resources to understanding and detecting deception (Stromwall & Willen, 2011), such as examining nonverbal and verbal cues of deception (Vrji, 2014).

Despite the somewhat instinctive belief that denial of sexual offending must speak to an increased risk of reoffending, meta-analytic studies by Hanson and Morton-Bourgon (2005) indicate no significant relationship between the two. “Denial,” however, is a notoriously difficult construct to operationally define. To whom is the person denying? Does denial include minimizing, or are we only examining outright denial? Perhaps if we were better able to identify and define denial as a construct, we might be better equipped to examine its relationship to risk.

Unfortunately, lying is a common occurrence in social interactions, including both outright deception as well as “white lies” designed to avoid hurting others' feelings. Thus, many researchers have focused their efforts on how to better identify lies in the criminal justice arena and intelligence community (cf. Grubin & Madsen, 2005; Stromwall &

<sup>☆</sup> The Author would like to thank Leigha Robinson, Jillian Strauss, Samm Zachary, and Dr. Michael Bourke for their assistance

<sup>\*</sup> Turner Forensic Psychology, P.O. Box 3245, Lake Charles, LA 70602, United States.

E-mail address: [dbt@turnerforensicpsychology.com](mailto:dbt@turnerforensicpsychology.com).

Willen, 2011). For example, Cui et al. (2014) studied the manner in which denial and deceit are associated with specific cognitive processes. And specific mental processes associated with lying, such as theory of mind, effortful cognition, and prefrontal system involvement were identified by Arciulu, Mallard, and Villar (2010). The current article introduces a new instrument, the Analysis of Patterns of Denial (APOD), for assessing the veracity of denials provided by accused offenders.<sup>1</sup>

## 1. Denial among adult male sexual offenders

Although the need for accurate and reliable detection of deception among sex offenders cannot be overstated, what is known about the mechanics of sex offender denial typically falls into two broad points: (1) the majority of sexual offenders deny at least some aspect of their offending (Blagden, Winder, Gregson, & Thorne, 2014), and (2) these denials fall along a spectrum of deception. With regard to the first point, there is no clearly-established correlation between admitting to one's offense (including showing remorse), and a reduction in reoffending (Hanson & Morton-Bourgon, 2005). Despite this finding, many treatment providers undoubtedly would concur that "breaking through" denial is a critical step in therapy, and likely would agree that offenders benefit from accepting responsibility for *all* of their offenses, whether detected or not. Further, identifying the truth about an offender's past conduct can assist investigators in closing cases, and can help risk assessors improve their professional opinions relating to the chances the person will commit future acts of harm. The construct of denial, however, is difficult to operationally define, particularly when other variables, such as remorse, are included in the calculus. The lack of conceptual clarity and the confounding influence of extraneous factors may be hindering our attempts to fully understand the importance of confessions made by sex offenders.

Two primary approaches to assessing denials by sex offenders have been identified in the literature; these studies note that deception ranges from outright denial of any involvement, to a minimization of the offender's role, to an acknowledgment they engaged in misconduct followed by a minimization of the nature or severity of the offense. According to Gibbons and colleagues, sex offenders who participate in denial, lying, and deceit during investigative interviews routinely select elements of the offense to deny. Their denials appear to fall in predictable categories or "dimensions": (a) denying a crime was committed, (b) denying fantasy and planning, (c) denying they caused harm to the victim, (d) denying the act altogether, and (e) denying they are responsible for any impact on the victim (Gibbons, de Volder, & Casey, 2003).

A second approach to assessing denials was proposed by Blagden et al. (2014), who observe that denial is far more complex than an "all-or-nothing" determination. They describe the following types: (a) partial deniers (e.g., "It wasn't that bad," "The victim exaggerated"), (b) denials in planning (e.g., "I didn't mean to do it"), (c) denials in responsibility (e.g., "It wasn't my fault") and (d) denial in part to excuse or justify behavior (e.g., "It was the alcohol"). Their breakdown is conceptually similar, albeit somewhat more nuanced, than that offered by Gibbons et al.

As if the dimensional nature of sex offender deception did not produce enough ambiguity to impede detection efforts, we now must include the findings that suggest the type of offense affects the degree of denial an offender will use. Somewhat expectedly, less personally violating offenses tend to result in more direct admissions (Hanson and Morton-Bourgon, 2005). For example, many law enforcement agencies find that denial is less common among drug- or theft-related crimes than for sexual offenses. Further, there appears to be an "underlying hierarchy" of sexual offense transgressions, with child molesters being less

likely to admit offenses than adult rapists. These observations may not be completely surprising since people engage in denial for a variety of reasons, and the most common is to reduce the psychological cost of acknowledging one's problems (Witt & Neller, 2018). Given the pronounced shame and embarrassment experienced by ego-dystonic child sex offenders, this observation appears to be especially salient within the sex offender community.

Given the complex nature of sexual offending and the myriad of motivations and emotions that underlie denial among sex offenders, it is perhaps not surprising that no commonly-accepted methods exist for determining deception with this population. Clinicians, in particular, appear to simply use their instincts, or employ interview strategies that were developed for use in general forensic settings.

## 2. Approaches to denial detection

For those who work in any capacity with sex offenders, dealing with denial and deception (often one and the same, although these are not synonymous terms) can be one of the most trying elements of the job. This is particularly true in the areas of investigation, monitoring, risk assessment, and treatment provision, because in these contexts there is exceedingly strong motivation for the offenders to engage in positive impression management. The role of denial in these contexts goes beyond the psychological cost of honesty, and rather serves to help them avoid real-world outcomes such as being charged with a crime, receiving a longer prison sentence, having more restrictive conditions of supervision, or being dismissed from treatment (Witt & Neller, 2018). Detecting deception is far from easy under even the best of circumstances, but when we add the incentives and stressors associated with sex offending, it becomes even more challenging to distinguish truthful denial (i.e., falsely accused individuals) from false denial (i.e., guilty sex offenders who refuse to admit their offense). Detecting forthright responding becomes even more elusive, so the individuals who must analyze sex offender self-reports have relied upon four general strategies to detect deception: (a) polygraphy, (b) cue awareness, (c) interviews, and (d) structured assessments. The merits and limitations of each are explored below.

### 2.1. Polygraphy

The original "lie detector" relied on changes in blood pressure of those being interviewed in connection with criminal cases (Marston, 1938). In 1921, John Larson expanded this approach to include other cardiovascular activity and respiration, and the instrument continued to evolve and additional channels added (e.g., sweat gland activity) until what we know as the modern-day polygraph instrument (Grubin & Madsen, 2005) was born. Because it assesses physiological states (e.g., electrodermal activity and unique changes in respiration), the instrument is most effective at identifying subjects who are withholding information, and it is primarily used as a tool in these situations (Mundt, Smith, & Ambroziak, 2022). While certainly very useful as an interview tool, the polygraph is not a crystal ball and cannot reveal to the examiner precisely what the nature of a lie might be. Thus, calling the polygraph machine a "lie detector" is somewhat of a misnomer – and one that can be a disservice to the field (Han, 2016).

Since its creation, polygraphy has become one of the most highly researched and debated procedures in the forensic arena (Palmatier & Rovner, 2015). Central to this debate is the inability of researchers and practitioners to uniformly identify the scientific properties underlying the polygraph, combined with considerable misunderstandings of how psychophysiological detection of deception occurs. While some studies indicate polygraphy has a slightly above chance level of accuracy (i.e., true positive rates between 64 % and 71 %) (Grubin & Madsen, 2005), others reflect overall validity of more than 85 % (Han, 2016). The National Academy of Sciences (2002), reports a validity finding of 61 %. Questions surrounding validity and the utility of polygraphy has

<sup>1</sup> The "theoretical" underpinnings to the instrument are available in the APOD manual at [www.turnerforensicpsychology.com](http://www.turnerforensicpsychology.com).

resulted in landmark United States Supreme Court (USSC) decisions pertaining to its use.

The most noteworthy case with regard to the polygraph test is *United States v. Frye* (1924). The case famously gave way to the “Frye Standard,” after the admissibility of polygraph testing was called in question. The Court held that the polygraph test used at that time did not meet minimum standards of acceptability within the broader scientific community. Nearly 70 years later, the Frye standard was supplanted by stricter criteria for admissibility of scientific evidence: the *Daubert* standard. In *Daubert v. Merrell Dow Pharmaceuticals Inc.* (1993), the USSC held that “junk science” can reach general acceptance while “sound science” may not, and the newness of a technique should not be the sole impediment to its inclusion as evidence. Under the *Daubert* standard, which currently prevails in the federal judicial system and 32 states, the following factors may be considered when determining the admissibility of scientific evidence: (1) whether the theory or technique in question can be and has been tested; (2) whether it has been subjected to peer review and publication; (3) its known or potential error rate; (4) the existence and maintenance of standards controlling its operation; and (5) whether it has attracted widespread acceptance within a relevant scientific community (*Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 1993). Unlike *Frye*, *Daubert* does not directly preclude polygraph results as evidence; however, the clearly delineated standards for admissibility – including what we know and *do not* know about polygraphy – limits its widespread or continued use. In fact, only 18 of the United States allow the admission of polygraph evidence (*Han*, 2016).

## 2.2. Cue awareness

Approaches to detecting deception often involve a focus on behavioral cues. These cues range from changes in body language to vocal shifts. For instance, response latency, pitch and rate of speech, and frequency of pauses have been shown to be present during deception (*Reynolds & Rendle-Short*, 2011). However, outside the confines of a laboratory, lies are more readily detected from contextual information (e.g., third-party statements, physical evidence, inconsistencies in prior knowledge) rather than behavioral cues. Despite the danger of deciding if someone is or is not telling the truth based solely on the behavioral cues he or she might manifest, some individuals are tempted to disregard investigative information in favor of “deceptive behaviors” they observe (*Masip*, 2017). Humans fare slightly worse than even the most critical examinations of polygraph, routinely making accurate predictions at rates that hover around chance (about 54 %, *Reynolds & Rendle-Short*, 2011).

## 2.3. Interviews

A subset of researchers have focused on designing interview techniques intended to elicit differences in speech behavior in persons truthfully denying, rather than falsely denying, crimes (*Masip*, 2017). These techniques generally follow one of two approaches: (a) information gathering and accusations, or (b) reality monitoring.

The information gathering and accusatory approach appears to be most heavily utilized in the law enforcement community. It involves using a variety of open-ended questions meant to elicit longer, more detailed responses. These then are coupled with confronting an individual with accusatory information and gauging his reaction (*Vrij, Man, Kristen, & Fisher*, 2007). The most common focus in these interviews is on detecting verbal signals of deceit, such as logical restructuring, reproductions of speech, and spontaneous corrections. However, it is believed that these indicators are found much more frequently in truthful, rather than deceptive statements (*Vrij et al.*, 2007). In other words, the field’s hallmark deceptive speech patterns are more readily associated with honesty.

## 2.4. Structured assessments

In the area of forensic psychology, researchers and practitioners have used assessment instruments in attempts to identify sex offender denial and deceit. The rationale for their use is based on a commonly understood phenomenon among sex offenders; that is, they develop and utilize a number of offense-supporting or culpability-reducing cognitive distortions (*Arciulu et al.*, 2010; *Blagden et al.*, 2014).

The Denial and Minimization Checklist-III (DMCL-III; *Langton, Barbaree, & McNamee*, 2003), Facets of Sex Offender Denial (FoSOD; *Schneider & Wright*, 2001), and Sex Offender Acceptance of Responsibility Scales (SOARS; *Peacock*, 2000) are used to help assess denial in sexual offenders. Unlike the APOD however, none of the aforementioned instruments were normed using a comparison group of men who were accused of sexual crimes but were in fact innocent, and therefore honest in their denial.

## 3. The APOD

The APOD is a checklist that was developed by comparing a group of guilty sex offenders who engaged in denial and deception during their interviews with law enforcement personnel with a group of falsely accused suspects who truthfully denied they engaged in the criminal behavior. Throughout 10 years of interviewing sex offenders the author noted a “pattern” of frequently used denial techniques. To test these observations, data was collected from videotaped interviews with persons accused of a sexual offense by police investigators. The subjects ultimately were divided into three groups: (a) suspects who were eventually convicted of the sexual offense, (b) suspects who admitted outright to the offense for which they had been convicted, and (c) suspects who were believed, following the initial interview, to have been innocent of the offense. This third group was titled the “Falsely Accused,” group, and, in order to avoid false negatives, a stringent set of criteria was set in place for screening of cases into this group. Law enforcement agencies only offered interviews for this group if the department believes the suspect was actually innocent, and this was generally predicated on passing a polygraph, DNA not matching the suspect, another person confessing, or irrefutable evidence that surfaced proving their innocence (e.g., video security footage identifying the actual offenders). Over the next nearly eight years, this author and the research team examined hundreds of interviews. A group of graduate level researchers were trained to code the data using the same training currently provided by this author to certify persons to competently use the APOD. Scoring of all interviews was blind, and only this author was aware which interviews would ultimately belong in the “guilty deniers,” “guilty admitters,” or “innocent deniers [falsely accused]” group. Granted, the “guilty admitters” end placement would have been obvious to the coders; however, in some cases, some “guilty deniers” appeared to admit in full but in fact only provided a partial admission. The particular method used for data collection (i.e., using videos from cases that were closed and had already gone through the judicial system) also meant the interviews were conducted by various law enforcement officers, with different approaches and styles, who each were unaware the interview later would be used for research or coded in any manner. The inter-rater reliability of individual items is strong ( $ICC_{A,1} = 0.941, p < .001$ ). The rater agreement for the individual APOD items was also strong with ( $\kappa = 1.00, p < .001$ , for five items and with  $\kappa$  between  $=0.80, p < .001$ , and  $\kappa = 0.90, p < .001$ , for the remaining seven items).

After the videos of initial interviews of these “persons of interest” (POI) were provided to the author by agencies across the country, it became clear that an insufficient sample of female offenders and of juvenile offenders existed with which to make generalizations about these sub-populations. These subjects were dropped from the analysis. Ultimately, three groups remained: Guilty Deniers (those accused of a sexual offense who denied their guilt to some degree) ( $N = 137$ ); Guilty Admitters (those accused of a sexual offense who admitted their guilt

outright) ( $N = 34$ ); and Falsely Accused (those who were accused of a sex offense but (honestly) denied their guilt (because they were truly innocent) ( $N = 60$ ). This resulted in an overall sample size of  $N = 231$ .

The instrument (see Table 1) is scored by checking the box next to any of the 12 denial techniques represented on the coding form. A manual has been written with descriptive information about each item, as well as to provide examples and exceptions that should be made when scoring the instrument. Possible scores range from 0 to 12. The highest score obtained in our sample was 11/12. Preliminary findings indicate Falsely Accused males use, on average, 1 of the 12 denial techniques during the course of their interview ( $\bar{X} = 1$ , Mode = 0). In contrast, offenders who were guilty but falsely denied their involvement in the crime, on average, scored 7 of the 12 techniques ( $\bar{X} = 7$ , Mode = 8). For comparison purposes, the Guilty Admitters results were markedly similar to the Falsely Accused group ( $\bar{X} = 1$ , Mode = 0). In a preliminary analysis of more than 250 interviews, there seems to be very little overlap in score ranges; “5 and above” were consistently found in the Guilty Admitter group, while “3 and below” were represented only in the total Falsely Accused group. Scores of “4” represented the only overlap in the data analysis.

A preliminary statistical analysis was run to assess the effect size of the difference between the Falsely Accused and Guilty Deniers total APOD scores; results indicated the Guilty Deniers' total APOD scores were significantly larger than the Falsely Accused total APOD scores ( $d = 3.72$ ,  $p < .001$ ). These results suggest the APOD is quite strong and robust in its ability to differentiate by way of measuring the likelihood that a randomly selected Guilty Denier will have a higher score than a randomly selected Falsely Accused person (AUC is 0.86, 95 % CI: 0.78–0.94;  $p < .001$ ).

The APOD instrument provides a unique and much needed addition to the current body of literature and adds a tool for use by law enforcement and clinicians, alike. The APOD may be particularly helpful to law enforcement in that it can indicate whether a POI's response pattern is more like that of a Guilty Denier's response pattern or a Falsely Accused response pattern. At the very least, it provides frontline interviewers with a scientifically sound instrument, supported by research, that can help make inferences about the response style of a particular suspect. It can also help prevent false accusations from becoming false charges, and also may assist agencies in determining

**Table 1**  
Descriptions of the APOD items.

Item #	Item Label	Brief Description
1	Crime Perpetrated by Someone Else	Blaming another person for the crime
2	Denigration of the Victim/ Victim Initiation	Degrading the victim or specifically claiming the victim started the contact
3	Asexuality	Claiming to be uninterested in sex entirely
4	Excessive Detail	Providing large amounts of superfluous information that is unrelated to crime
5	Graduated Pseudo-Admission	Changing one's story in a way that increasingly incriminates the person of interest, without overtly confessing to the crime
6	Hedge Phrasing	Qualifying a direct answer with “buffering” terms (e.g., ‘basically’), allowing avoidance of definitive statements
7	Hero/Victim	Claiming to be overly virtuous, a helper of people, dedicated to good or the opposite
8	Claim of Honesty	Repetitively stating that they are being honest
9	Religion	Maintaining spiritual virtue as a reason they would not possibly commit any crime
10	Revenge/Out to Get Me	Citing specifically why a person or persons would falsely accuse them
11	Amnesia	Reporting to have absolutely no memory of the offense or related events
12	Legal Technicalities	Attacking the legal merits of the case

where to direct investigative resources.

#### 4. Discussion, limitations, and future directions

Using real law enforcement interviews with men accused of sexual offending, the current author attempted to determine if those who were honestly denying the offense in question could be distinguished from those who were using denial techniques to avoid detection. Behaviors were subjectively derived but are consistent with the extant literature. Although the APOD Total Scores appear to reliably and accurately predict which category a subject belongs to, more rigorous data analysis is needed to support these initial findings.

The study is limited by the stringent criteria for accepting a case into the falsely accused group. However, after nearly 10 years of collecting interviews voluntarily submitted by law enforcement, defense attorneys, and prosecuting attorneys, the sample size is sufficient to make inferential claims about each population. Police agencies often are reluctant to share data, not to mention investigative interviews, with individuals from outside ranks for law enforcement. They, or their in-house legal counsel, may find it easier to say “no” to a researcher who wants to study their videotaped activity. This limitation often was overcome by a presentation about the intended outcome of the research, at which time many agencies realized the APOD could make an important contribution to their future cases and became more open to providing interviews for review. It is this author's opinion that the sample, especially of the falsely accused group, are fairly representative and that generalizability is not significantly affected by a biased or non-representative sample.

Additional limitations also include the lack of females and juvenile POIs included in the sample. This would be an excellent avenue for future empirical studies of the APOD. In time, and as more persons become familiar with the instrument, additional research may help shed light on how the APOD can be used with these populations. It is important to note that the instrument in its current form is not appropriate for use with non-contact offenders, including offenders who produce, download, possess, or distribute child sexual abuse material (unfortunately often referred to as “child pornography”). An investigation into which APOD items, if any, cross over and are equally useful with online offenders would be a welcome addition to the literature.

Finally, after speaking with law enforcement personnel about the instrument, this author has become aware of another important application - whether the APOD may be of value to investigators when they interview other offenses (e.g., violent but non-sexual offenses). This question stems from the observation that the techniques may pick up on behaviors that are used by people who are being deceptive, even if it has nothing to do sexually-motivated crimes, in particular. It is possible the APOD could be effective (perhaps with some modification) in detecting deception with other offenses and offender populations; however, this would require additional interview data, and thus is predicated on ongoing (and perhaps increased) cooperation with the agencies who ultimately will benefit from this endeavor.

#### 5. Conclusion

The initial informal examination of the data suggests a clear delineation in patterns of responding among the POIs in our study. Stepping away from the context of sexual offending, the analyses of the three groups showed the two groups of men who were telling the truth appeared strikingly similar (those who admitted outright without minimizing, and those who were falsely accused). The group that looked markedly different was comprised of those offenders who were guilty but were being dishonest by denying complicity. It appears commonly used techniques of denial by sex offenders are decidedly different from persons accused of these offenses who have not committed them. The implications of these findings and the ability of this instrument to identify these findings should be obvious to any persons who work in this field, and the continued hope is to prevent crimes and protect the

innocent.

### Declaration of competing interest

I have no known conflicts of interest to disclose.

### Data availability

The data that has been used is confidential.

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