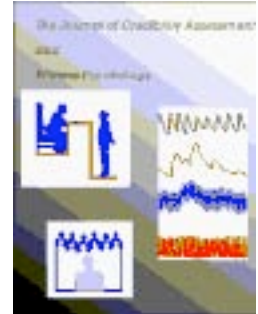


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Symptom Validity Testing Of Feigned Crime-Related Amnesia: A Simulation Study

Marko Jelacic, Harald Merckelbach, and Saskia van Bergen

University of Maastricht, The Netherlands

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ABSTRACT: Perpetrators sometimes claim loss of memory for crimes they have committed. For the forensic psychologist, the veracity of such crime-related amnesia is difficult to assess. The aim of the present study was to investigate the usefulness of Symptom Validity Testing (SVT) to detect feigning of crime-related amnesia. Visitors of a public library (N=20) were instructed to commit a mock crime and asked to feign complete amnesia for the event. Subsequently, they were given 25 forced-choice items about the “crime”. Each item included the correct answer and an equally plausible alternative. To counteract chance performance, test items were intermixed with 25 bogus questions that contained two equally plausible alternatives. Results show that a majority of participants (40%) scored significantly below chance level on the critical items of the SVT. It is argued that SVT might be a helpful challenge task to identify feigned crime-related amnesia.

Symptom Validity Testing Of Feigned Crime-Related Amnesia: A Simulation Study

Forensic psychologists are sometimes confronted with cases in which perpetrators claim amnesia for their offences. In fact, claims of crime-related amnesia are relatively common. For example, Taylor and Kopelman (1984) interviewed 34 murderers and found that 9 (26%) of them reported amnesia for their crime. In a study of 64 men convicted of homicide or other violent crimes, 21 (32%) claimed crime-related amnesia (Gudjonsson, Petursson, Skulason & Sigurdardottir, 1989). By and large, it seems that about 20 to 30% of individuals who commit violent crimes report no recollections of the pertinent events (see for a review, Cima, Merckelbach, Nijman, Knauer & Hollnack, 2002). Although crime-related amnesia is common in cases involving extreme violence, it has also been found in individuals charged with non-violent crimes such as fraud (e.g., Kopelman, Green, Guinan, Lewis & Stanhope, 1994).

Amnesia for criminal offences may be explained in various ways. To begin with, some crimes, in particular those involving extreme violence, are often committed by individuals intoxicated by alcohol and/or drugs (Bourget & Bradford, 1995). Alcohol or drug intoxication may undermine the encoding of crucial events in memory (Kopelman, 2002). Because of poor storage of information, crime-related details might therefore not easily be retrieved from memory. This type of amnesia can be considered a form of organic amnesia (Cima et al., 2002). A second explanation emphasizes that many violent offences are committed in a state of high arousal, i.e., during extreme rage or anger. It has been suggested that during such a radical emotional state, information is stored in an exceptional context (Kihlstrom, Tataryn & Hoyt, 1993). When the person later finds him- or herself in a more calm or relaxed state and tries to retrieve crime-related memories, these memories would be inaccessible. This type of amnesia is sometimes referred to as dissociative amnesia (Cima et al., 2002). A third explanation is that individuals who have committed a crime may feign crime-related amnesia in order to obstruct police investigation and/or to reduce responsibility for

their acts (Cima et al., 2002). A famous historical example is that of Rudolf Hess, who at the start of the Nuremberg trials, claimed to have no recollections of his Third Reich period. Several prominent psychiatrists examined Hess and were convinced that his amnesia was genuine. When Hess found out that he could not respond to the allegations because of his so-called memory loss, he suddenly stated during one of the trial sessions that he had simulated his amnesia (Gilbert, 1947). Although older studies suggested that about 20% of criminals with “no recollections” of their offences are feigning their memory loss (Hopwood & Snell, 1933), some authors have argued that the true rate of malingering in this population is much higher. According to Cima et al. (2002) and Porter, Birt, Yuille and Hervé (2001), many individuals claiming crime-related amnesia because of intoxication or extreme emotions are actually simulating their loss of memory. In line with this, Cima, Merckelbach, Hollnack, and Knauer (2003) noted that more than 50% of psychiatric prison inmates who claimed crime-related amnesia scored above the cut off of a self-report instrument tapping the tendency to feign rare and bizarre symptoms (e.g., the Structured Inventory of Malingered Symptomatology; SIMS; Smith & Burger, 1997; Merckelbach & Smith, 2003) against 18% of psychiatric prison inmates who did not claim crime-related amnesia. On the other hand, Kopelman (2002) has pointed out that even though criminals may claim amnesia, they themselves often report their crimes to the police. According to this author, this would argue against the view that all claims of amnesia for crime can be accounted for in terms of malingering.

What options do forensic psychologists have when they are asked to evaluate crime-related amnesia of a perpetrator? One possibility would be to administer well-validated self-report scales that measure the degree to which a person displays a tendency to malingering symptoms (e.g., the SIMS; Smith & Burger, 1997). Such scales, however, only provide the psychologist with indirect information regarding the veracity of crime-related amnesia. Symptom Validity Testing (SVT) might be a more direct procedure. SVT procedures were originally developed to detect malingering of deafness (Pankratz, 1979) and cognitive dysfunction (Binder & Pankratz, 1987). More recently, SVT has been proposed as a tool for assessing the veracity of memory loss in individuals who claimed to have no recollections of crimes they had committed (e.g., Denney, 1996; Frederick, Carter & Powel, 1995). Briefly, SVT consists of a forced-choice procedure in which perpetrators are asked a series of questions about the details of the crime. For each question, the perpetrator must choose between two equally plausible answers one of which is correct and the other is incorrect. Genuine amnesia (either organic or dissociative) for a crime should result in random performance (i.e., correct and incorrect answers are selected approximately equally often). Below chance performance (i.e., the incorrect answer is chosen significantly more often than the correct answer) indicates deliberate avoidance of correct answers, and, hence, intact memory for the crime. Below chance performance during a SVT procedure thus provides strong evidence for malingering of crime-related amnesia.

Tentative evidence for the usefulness of the SVT in evaluating crime-related amnesia comes from two sources. To begin with, in a number of case studies, SVT was successfully applied by forensic psychologists to detect malingering of memory loss in perpetrators of a crime (Denney, 1996; Frederick et al., 1995). A second source consists of simulation studies. Merckelbach, Hauer, and Rassin (2002) tested the efficacy of SVT to identify simulated amnesia for a mock crime. Twenty students were asked to “steal” money from a bar and then were instructed to feign complete amnesia

for this event. Next, they had to answer a series of forced-choice questions that always contained the correct answer and an equally plausible alternative. It was found that approximately 40% of the participants performed significantly below chance on this SVT procedure. To make the SVT less transparent for participants, Jelacic, Merckelbach and van Bergen (2003) conducted a follow-up study in which they modified the procedure used by Merckelbach et al. (2002) by adding a series of bogus questions (i.e., questions with no correct answers) to the critical SVT items. With this approach, Jelacic et al. (2004) found that 59% of their participants were correctly identified as malingerers by the modified SVT.

In summary, apart from anecdotal reports (e.g., Denney, 1996), it appears that only two simulation studies have looked at the diagnostic utility of SVT as a tool for identifying feigned amnesia. Both studies relied on undergraduate students. Therefore, one could argue that the results of these studies are difficult to generalize to other populations (Schulz, 1969). The aim of the present study was to assess the efficacy of SVT to detect feigning of crime-related amnesia in a more naturalistic environment using participants drawn from the general population.

Methods

Participants

Participants were 20 visitors of a public library (10 men) who volunteered to take part in a simulation study in return for a small financial compensation (approximately 5 US \$). They were randomly selected from all people who visited the library on a few consecutive days. The study was approved by the standing ethical committee of the Faculty of Psychology (University of Maastricht). Mean age was 37 years ($SD= 16.2$; range: 12-77 years).

Procedure

Participants were given written instructions to enter a café located in the public library of Maastricht (a middle-sized Dutch town). Participants were asked to stay for 5 minutes in the café while paying attention to all the details of the café interior. At the end of that period, they had to steal an envelope containing a magazine that lay on top of one of the tables in the café. Participants were instructed to return to the experimenter (in a room outside the café) and to imagine that they were suspects in a criminal investigation. More specifically, they were asked to behave in such a way as to convince others that they had no recollections of visiting the café whatsoever.

Symptom Validity Testing: After their return from the café, participants were given a SVT that consisted of 25 critical and 25 bogus two-choice items. Using a Doob and Kirshenbaum (1973) pilot procedure, the 25 critical items had been selected from a larger pool of 40 items. During the pilot, these 40 items were given to 10 visitors of the library who had never been in the café. They were asked to select the most plausible alternatives. Next, mean binomial probabilities were calculated and items with probabilities of correct answers below .3 or above .7 were removed from the set. This selection resulted in 25 unbiased items pertaining to the details of the café interior. For each item, participants had to choose between two answer options.

Typical examples are “There are plastic trees in the café 1. yes or 2. no” and “ The stolen envelope contained 1. a book or 2. a magazine.” For each participant, correct items were summed to obtain a total SVT score. The 25 bogus items were used to counteract random performance during the SVT procedure. These items had to do with the café, but did have two equally plausible alternatives. Typical examples are “The windows of the café are cleaned every 1. three weeks or 2. four weeks” and “The temperature in the café is 1. 21 degrees Celsius or 2. 22 degrees Celsius”. The bogus items were completely intermixed with the critical items.

Following completion of the SVT, participants were instructed to give up their role as an amnesic thief. Next, they once again completed the 25 critical SVT items, but this time participants were asked to respond honestly. Answer options now not only included correct and incorrect alternatives, but also a “don’t know” option. Correct answers were summed to determine genuine memory levels. Participants were also requested to write down what they thought was the purpose of the experiment and which strategy they had used to feign loss of memory for the theft. They were also asked if they had ever taken courses in statistics. Finally, participants were fully debriefed, paid, and thanked for their participation.

Results

Table 1 shows the distribution of total SVT scores. Following the binomial formula presented by Spiegel and Castellan (1988; p. 43), 8 participants (40%) had total SVT scores significantly below chance (i.e., total SVT < 8; $p < .05$) indicating strategic avoidance of correct alternatives, while 6 participants (30%) performed in the random range. The remaining 6 participants had scores significantly above chance level (total SVT > 17) suggesting that they were unable to feign amnesia. Raw scores of those participants who showed performance in the random range were subjected to runs tests in order to determine whether their sequence of answers followed a truly random pattern (see, Cliffe, 1992, for a similar procedure). None of the 6 participants had a pattern that departed from random guessing.

Table 1. Distribution Of Total Scores On The 25-Item Svt And The 25-Item True Memory Test In Absolute Frequencies (Proportion Of Participants Are Shown Between Parentheses)

Items Correct	SVT	True Memory
< 8	8 (40)	0 (0)
8 – 17	6 (30)	5 (25)
> 17	6 (30)	15 (75)

The distribution of true memory performance scores is also shown in Table 1. There were no scores in the significantly below-chance range. Accordingly, mean SVT scores were substantially lower than true memory scores, means being 11.9 ($SD = 7.3$) and 18.8 ($SD = 3.7$), respectively, $t(19) = 3.4$, $p < .01$.

When asked about the purpose of the experiment, none of the participants had any post hoc understanding of the rationale behind the SVT. When asked about the

strategy they had adopted to feign amnesia, 8 of the participants said that they deliberately had given incorrect answers to most questions. There were 7 participants who said they had attended one or more statistics courses as part of their formal education. The SVT scores of these participants did not differ from those without knowledge of statistics.

Discussion

The present simulation study tested to what degree people from the general population can defeat a SVT procedure when they are asked to feign amnesia for a mock crime. Our results show that a substantial number of participants (40%) performed significantly below chance, which indicates that they intentionally gave wrong responses. In a previous study with undergraduate students, we found that 59% of the participants were defeated by a similar SVT procedure (Jelicic et al., 2004). Differences in understanding what it means to feign amnesia may partly account for these discrepant findings. In the current study, 30% of the participants scored significantly above chance level, while in our previous study only 15% of them had such scores. If the participants with scores significantly above chance level are removed from both data sets, there are hardly any differences between the two studies with regard to the proportion of participants who were detected by the SVT.

In research on malingering of cognitive impairments participants are often asked to simulate the effects of pathology (e.g. closed head injury, epilepsy etc.) on memory and other cognitive functions (Haines & Norris, 1995). Perpetrators who claim crime-related amnesia use different excuses for their memory loss (Cima, et al., 2002). While some of them will argue that they cannot remember the pertinent events because of alcohol intoxication, others will say that their memory loss has to do with extreme rage or brain pathology. For this reason, we decided to ask our participants just to feign amnesia for their “crime”.

The results of the present study (as well as our previous findings) are in line with anecdotal reports about the efficacy of SVT in detecting feigning of crime-related amnesia. Denney (1996) used a SVT procedure in 3 perpetrators who claimed memory loss for the crime they had committed. The perpetrators all had below chance performance on a series of forced-choice questions pertaining to the criminal offence. SVT can therefore be regarded as a promising tool to assess the veracity of memory loss in perpetrators who claim crime-related amnesia. It should be stressed that in forensic practice, SVT is only informative when perpetrators who claim crime-related amnesia perform significantly below chance levels. In these cases, strategic avoidance of giving correct responses indicates knowledge of the criminal event. Given that 30% of our research participants feigning amnesia were able to defeat the SVT procedure by providing random responses, perpetrators who perform at chance levels may still feign their memory loss. In other words, below chance performance constitutes diagnostically relevant information, but chance performance does not, which means that the SVT is a challenge test.

Note that the present study does have a few potential limitations. First, apart from age and gender, demographic characteristics from the participants were not collected. As a consequence, we were unable to determine if our participants were

truly representative for the general population. Given that (a) Dutch people from all socio-economic classes visit public libraries, and (b) our participants were randomly selected, one could argue that our participants were drawn from the general population. In future research on the efficacy of SVT to detect feigning of crime-related amnesia, more demographic information should be collected. Second, we instructed our participants to commit a mock crime – theft of an envelope – that may have little ecological validity. Indeed, in the literature, most cases of feigned crime-related amnesia pertain to violent crimes involving high levels of arousal in combination with alcohol or drug use (cf. Cima et al., 2002). On the other hand, crime-related amnesia has also been reported in cases involving non-violent offences such as fraud (Kopelman et al., 1994). Third, participants were first asked to feign amnesia and later to respond honestly. It is possible that the instructions to simulate loss of memory may have influenced performance on the true memory test. In future research, it would be better to counterbalance the two different test instructions. Notwithstanding these limitations, the present study underlines the notion that the SVT technique is a useful tool in determining the veracity of crime-related amnesia. This is especially true since most strategies to detect malingering rely on the interviewing skills of forensic psychologists (e.g., Jaffe & Sharma, 1998). Although these skills are undoubtedly important, their scientific basis is difficult to explain to courts. With its straightforward statistical rationale, this is considerably easier with the SVT.

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