



ELSEVIER

Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Personality and Individual Differences 38 (2005) 1381–1387

PERSONALITY AND
INDIVIDUAL DIFFERENCES

www.elsevier.com/locate/paid

“I hit the Shift-key and then the computer crashed”: Children and false admissions

Ingrid Candel *, Harald Merckelbach, Silvie Loyen, Hanne Reyskens

Department of Experimental Psychology, Maastricht University, P.O. Box 616, 6200 MD, Maastricht, The Netherlands

Received 19 December 2003; received in revised form 23 July 2004; accepted 1 September 2004

Available online 24 November 2004

Abstract

Confessions are often regarded as unequivocal evidence of guilt. However, both laboratory and case studies indicate that under some circumstances, false confessions might be obtained from adults and adolescents. Although case studies show that young children also display this tendency, so far, no empirical study examined false confessions in children. There are reasons to believe that individual differences in suggestibility contribute to false confessions. The current study explored the links between false confessions and suggestibility in young children. More specifically, using a false confession paradigm (Kassin & Kiechel, 1996), we asked young children ($N = 50$) to confess to a non-committed act. Suggestibility was measured using the Dutch version of the Bonn Test of Statement Suggestibility (BTSS-NL). Thirty-six percent ($n = 18$) of the children falsely confessed that they touched a forbidden computer key. Eighty-nine percent ($n = 16$) of these children internalized their confession. However, suggestibility did not predict false confessions.

© 2004 Elsevier Ltd. All rights reserved.

Keywords: False confessions; Children; Suggestibility

* Corresponding author. Tel.: +31 43 388 1905; fax: +31 43 388 4196.
E-mail address: i.candel@psychology.unimaas.nl (I. Candel).

1. Introduction

Lay people and legal professionals tend to interpret confessions as strong evidence. Therefore, police interrogators often focus on obtaining confessions from a suspect, thereby sometimes using suggestive interview techniques (Holmberg & Christianson, 2002; Kassin, 1997). Especially, in vulnerable suspects (e.g., suspects who mistrust their own memory; Gudjonsson, 1997) this might result in false confessions. Although it is impossible to estimate the frequency of false confessions, case studies and self-report studies indicate that they are not uncommon (Gudjonsson, 2003; Gudjonsson, Sigurdsson, Bragason, Einarsson, & Valdimarsdottir, 2004). Kassin and his colleagues (Kassin, 1997; Kassin & Kiechel, 1996; Kassin & Wrightsman, 1985) argued that there are three types of false confessions. Voluntary false confessions refer to confessions made without external pressure. The second type, coerced-compliant false confessions, is those in which a suspect confesses after interrogation pressure in order to avoid an aversive situation or to gain a reward. However, the suspect has the private belief that he/she is innocent. The third type is coerced-internalized false confessions in which an innocent suspect comes to believe that he/she is guilty. False confessions have been documented among adults (e.g., Gudjonsson, 2003; Kassin & Kiechel, 1996), adolescents (e.g., Redlich & Goodman, 2003), and children.

An illustrative example of false confessions among children is a Chicago murder case (Armstrong, Mills, & Possley, 2001). In 1998, two boys, ages 7 and 8, confessed to the murder of an 11-year old girl. However, laboratory tests detected semen on the victim's underwear, eliminating the boys as suspects. Why did these boys confess to a crime they did not commit? In literature, both external and internal factors are suggested as to why people confess to crimes they did not commit. External factors refer to the context of the interrogation. For example, isolating the suspect from outside influences, and sitting close to him and/or subjecting him to extremely lengthy interviews maximize the likelihood of false confessions (Inbau, Reid, Buckley, & Jayne, 2001). Internal factors, on the other hand, are related to personality characteristics. In the last decade, one particular characteristic that has received much attention is suggestibility. So it appears that the combination of suggestibility and misleading information provided during interrogations might result in false confessions. However, attempts to document the precise role of suggestibility in the development of false confessions have yielded mixed results. For example, Horselenberg, Merckelbach, and Josephs (2003) found no evidence that individual differences in suggestibility modulate participants' susceptibility to experimentally induced false confessions. More specifically, these authors used the Kassin and Kiechel (1996) paradigm to study false confessions in the laboratory. Thus, participants were led to believe that they participated in a computer-based reaction time task. They were warned not to press the SHIFT-key because this would result in a computer crash. After one minute, the computer suddenly crashed and the experimenter accused the participant of pressing the forbidden key. Compliance was assessed by asking participants to sign a statement (i.e., "I hit the SHIFT-key and caused the program to crash. Data were lost"). Moreover, interrogative suggestibility was measured. Interrogative suggestibility is referred to as "the extent to which, within a closed social interaction, people come to accept messages communicated during formal questioning, as the result of which their subsequent behavioral response is affected" (Gudjonsson & Clark, 1986, p. 345). This form of suggestibility was measured using version A of the Gudjonsson Suggestibility Scale (GSS; Gudjonsson, 1984). The GSS consists of a short story and 20 questions about the story, of which 15 are misleading. Basi-

cally, Horselenberg et al. (2003) replicated Kassin and Kiechel (1996) results in that false confessions were found to be easy to elicit. However, there was no evidence that this was modulated by individual differences in suggestibility. Similar results were found in a field study by Pearse, Gudjonsson, Clare, and Rutter (1998). In that study, differences between people who confessed and those who denied offences during a police interview were analyzed. Suggestibility was not found to predict whether or not suspects confessed. This, however, is not in line with results reported by Redlich and Goodman (2003). In their study, participants of three age groups (12–13 years olds, 15–16 years olds, and young adults) were involved in the Kassin and Kiechel computer task. Moreover, suggestibility was measured. Results showed that younger and more suggestible participants were more likely than older and less suggestible participants to falsely confess that they have touched the forbidden key.

So far, no study examined false confessions and how they relate to suggestibility among children. The aim of the current study was twofold. Firstly, we examined the prevalence of false confessions¹ when children are invited to participate in the computer task described above. Secondly, we examined the relationship between suggestibility and false confessions in these children. To this end, their interrogative suggestibility was measured using a suggestibility scale especially developed for children.

2. Method

2.1. Participants

The study involved 50 primary school children (19 girls). Their mean age was 7.42 years (SD = 0.70; range: 6–9). Children participated in the experiment after parents and teachers had given their written informed consent. Moreover, the study was approved by the standing ethical committee of the Psychology Faculty. Children were tested individually. They were given a small present in return for their participation.

2.2. Measures

The Bonn Test of Statement Suggestibility (BTSS; Endres, 1997) is a reliable and valid measure of individual differences in interrogative suggestibility in 4- to 10-year old children (Candel, Merckelbach, & Muris, 2000; Endres, 1997). The rationale behind the BTSS resembles that of the GSS. In the current study, we used the Dutch version of the BTSS (BTSS-NL; Candel et al., 2000). The BTSS-NL consists of a short story, 4 coloured pictures and 27 questions. To measure individual differences in suggestibility the story is read out to the child and at the same time the illustrations are shown. The story is about a boy, Sven, who is roller-skating with his friend. Suddenly, Sven bumps into another boy. As a consequence, the boy breaks his leg. Immediately following the reading, participants are asked to recall as much as possible of the narrative. After a 15-min

¹ With respect to the Kassin and Kiechel (1996) paradigm, it would be better to use the label false admissions in stead of false confessions. However, we prefer to use the latter term throughout this article to keep consistent terminology.

interval, questions are asked about the story. Twelve questions are leading (i.e., implying a certain response; e.g., “And Oliver was just on his way to school?”) or misleading (i.e., presenting a choice between incorrect answers; e.g., “Did that accident happen on a Sunday or on a Wednesday?”). These items comprise the Yield scale. One point is assigned when the child yields to the suggestive information (range: 0–12; Cronbach’s alpha = 0.75). Seven questions are repeated questions and compromise the Shift scale. These questions convey the message that the answer just given is incorrect and that the child should change his/her answer (e.g., “Think about it once again: The rolling skates, they were ruined in that accident?”)². One point is assigned when the child changes his/her prior given answer (range: 0–7; Cronbach’s alpha = 0.71). Eight questions are memory questions that serve to disguise the real purpose of the test (e.g., “Was the boy with the skates called Sven?”). A total suggestibility score is obtained by summing Yield and Shift subscales scores (range: 0–19; Cronbach’s alpha = 0.82). Higher scores, then, indicate higher levels of suggestibility.

2.3. Procedure

During the first test occasion, children were administered the BTSS-NL. The story was read out to the participants. Next, children recalled everything they remembered of the story. During the 10-min filler task that followed, they made a drawing. Finally, the 27 questions were asked. One week later, during the second test occasion, children were given a computer task. They were asked to press the keys corresponding to letters presented on the computer screen. Before the session began, children were explicitly warned not to press the SHIFT-key because doing so would result in a computer crash. After the presentation of 10 successive letters, the computer supposedly crashed. The experimenter falsely accused the child of having pressed the SHIFT-key by asking: “You pressed the SHIFT-key, didn’t you?” If the child denied, he/she was told that the test session was over due to the computer problems. After receiving a small present, the child left the room. For those children who confessed to having pressed the forbidden key, the session continued with telling them that it was not a big deal. Next, the experimenter left the room to get some tools to fix the computer. Upon leaving, a confederate entered the room. To examine whether the child had internalized the false confession, the confederate asked: “What happened? Did the computer crash?” Answers were written down and were scored as follows. One point was assigned if the child confessed by answering for example: “I hit the SHIFT-key and then the computer crash”, whereas no point was assigned when the child did not explicitly take responsibility for the crash (e.g., “I don’t know what happened; the computer suddenly crashed”). When the experimenter returned, she told the child that the computer would be fixed soon. She thanked the child for his/her participation and handed over a small present. For the computer task, a Texas Instruments computer was used. Stimuli appeared on a 15in. computer screen, in black against a white background.

² At this point, the BTSS-NL is different from the GSS. The repeated questions of the BTSS-NL are asked immediately after the answer is given. This implicit negative feedback contrasts with the explicit negative feedback of the GSS. That is, after answering the GSS-questions, the person is explicitly told that he/she has made a number of errors and that it is necessary to ask the questions once again.

3. Results

3.1. False confessions

Thirty-six percent ($n = 18$) of the children confessed to having pressed the SHIFT-key. Eighty-nine percent of these children ($n = 16$) internalized their confession. No sex differences were found with respect to false confessions [$\chi^2(1) = 1.72$; $p = 0.19$] or internalization [$\chi^2(1) < 1.0$; ns].

3.2. Suggestibility

Mean scores on the BTSS-NL subscales were 7.30 (SD = 2.38) and 3.42 (SD = 2.09) for the Yield and the Shift scale, respectively. The mean total suggestibility score was 10.72 (SD = 3.93). These scores come close to those previously reported for this age group (Candel et al., 2000). Logistic regression was conducted to predict false confessions. The dichotomous false confession variable was the dependent factor, whereas scores on the Yield and the Shift scale of the BTSS-NL were the independent factors. The overall model was non-significant, $\chi^2(2) = 3.56$; $p = 0.17$. Moreover, both Yield and Shift suggestibility scores appeared to be non-significant predictors of false confession, $Wald = 3.04$, $p = 0.08$, and $Wald = 0.35$, $p = 0.56$, respectively.

4. Discussion

The results of the current study can be summarized as follows. To begin with, more than one third of our sample confessed to an act that they did not commit. Secondly, almost all confessors internalized their confession, i.e., they believed they were responsible for the computer crash. Thirdly, neither Yield nor Shift suggestibility scores were found to predict whether children confessed.

The percentage of 36% false confessions is lower than that reported in adult studies using a similar paradigm. Both Kassin and Kiechel (1996) and Redlich and Goodman (2003) found 69% of their participants to have falsely confessed pressing the forbidden key. Note, however, that all of their participants initially denied having pressed the SHIFT key. Only after giving false incriminating evidence (e.g., computer printout), participants confessed. In our study, children confessed without such evidence. Given their young age, we did not confront them with false evidence. Thus, false confessors in our study just answered “yes” to the simple question: “You hit the SHIFT-key, didn’t you?” Interestingly, the percentage of children internalizing their confession (i.e., 89%) was high. In other studies, this percentage ranged from 28% (Kassin & Kiechel, 1996) to 42% (Horselenberg et al., 2003). These results show that it is relatively easy to elicit false confessions in children and that when they confess, they often come to believe that they are responsible. Admittedly, confessing the touch of a forbidden computer key is rather different than confessing a serious crime. However, given the ethical restrictions of laboratory studies, it is a difficult task to develop a more ecologically valid paradigm than the current one.

Our data show that suggestibility is not related to the tendency to confess to a non-committed act. This study and other studies (e.g., Horselenberg et al., 2003) indicate that the relationship between suggestibility and false confessions is not a straightforward one. Even studies that obtained

supportive results for the existence of such a relationship are mixed. More specifically, Redlich and Goodman (2003) found only the Yield suggestibility scale to be a predictor of taking responsibility for a non-committed act. Sigurdsson and Gudjonsson (1996), on the other hand, found that prison inmates who claimed to have made a false confession did not differ from other prison inmates with respect to their GSS scores. However, coerced-internalized false confessors obtained higher suggestibility scores than other confessors. The reason for these incongruent results might be a methodological one. Previous studies used a field (Pearse et al., 1998; Sigurdsson & Gudjonsson, 1996) or a laboratory approach (Horselenberg et al., 2003; Kassin & Kiechel, 1996) which is characterized by, for example, different questioning procedures. Moreover, participants involved highly diverse groups such as prison inmates (Sigurdsson & Gudjonsson, 1996) or normal adolescents (Redlich & Goodman, 2003). Obviously, environmental conditions play a role in the relationship between suggestibility and false confessions. One important factor might be the extent to which false feedback during interrogations or lab procedures involve misleading information. When the plausibility of a confession heavily depends on the acceptance of misleading information provided by an authority figure, there might be a clear link between suggestibility and false confessions. On the other hand, in situations in which false confessions have a strong prima facie plausibility (pressing a key) and do not depend on misinformation, the influence of suggestibility might be trivial. Under these circumstances, compliance might be a more important factor. It might be fruitful to include measures of compliance in studies on false confessions in children. Clearly, this issue warrants further research.

Although we were not able to clarify the precise relationship between suggestibility and false confessions our study is the first to show that only a mild manipulation is needed to elicit false and internalized confessions in a non-trivial minority of children.

References

- Armstrong, K., Mills, S., & Possley, M. (2001). Coercive and illegal tactics torpedo Cook County murder cases. *Chicago Tribune*, 16 December.
- Candel, I., Merckelbach, H., & Muris, P. (2000). Measuring interrogative suggestibility in children: Reliability and validity of the Bonn Test of Statement Suggestibility. *Psychology, Crime & Law*, 6, 61–70.
- Endres, J. (1997). The suggestibility of the child witness: The role of individual differences and their assessment. *The Journal of Credibility Assessment and Witness Psychology*, 1, 44–67.
- Gudjonsson, G. H. (1984). A new scale of interrogative suggestibility. *Personality and Individual Differences*, 5, 303–314.
- Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scale*. Hove: Psychology Press.
- Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions. A handbook*. Chichester: Wiley.
- Gudjonsson, G. H., & Clark, N. K. (1986). Suggestibility in police interrogation: A social psychological model. *Social Behaviour*, 1, 83–104.
- Gudjonsson, G. H., Sigurdsson, J. F., Bragason, O. O., Einarsson, E., & Valdimarsdottir, E. B. (2004). Confessions and denials and the relationship with personality. *Legal Criminological Psychology*, 9, 121–133.
- Holmberg, U., & Christianson, S.-Å. (2002). Murderers' and sexual offenders' experience of police interviews and their inclination to admit or deny crimes. *Behavioral Sciences and the Law*, 20, 31–45.
- Horselenberg, R., Merckelbach, H., & Josephs, S. (2003). Individual differences and false confessions: A conceptual replication of Kassin and Kiechel (1996). *Psychology, Crime & Law*, 9, 1–8.
- Inbau, F. E., Reid, J. E., Buckley, J. P., & Jayne, B. C. (2001). *Criminal interrogation and confessions* (fourth ed.). Gaithersburg, MD: Aspen.
- Kassin, S. M. (1997). The psychology of confession evidence. *American Psychologist*, 52, 221–323.

- Kassin, S. M., & Kiechel, K. L. (1996). The social psychology of false confessions: Compliance, internalization, and confabulation. *Psychological Science*, 7, 125–128.
- Kassin, S. M., & Wrightsman, L. S. (1985). Confession evidence. In S. M. Kassin & L. S. Wrightsman (Eds.), *The psychology of evidence and trial procedure* (pp. 67–94). Beverly Hills, CA: Sage.
- Pearse, J., Gudjonsson, G. H., Clare, I. C. H., & Rutter, S. (1998). Police interviewing and psychological vulnerabilities: Predicting the likelihood of a confession. *Journal of Community & Applied Social Psychology*, 8, 1–21.
- Redlich, A. D., & Goodman, G. S. (2003). Taking responsibility for an act not committed: The influence of age and suggestibility. *Law and Human Behavior*, 27, 141–156.
- Sigurdsson, J. F., & Gudjonsson, G. H. (1996). The psychological characteristics of ‘false confessors’. A study among Icelandic prison inmates and juvenile offenders. *Personality and Individual Differences*, 20, 321–329.