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The Interrogation of Vulnerable Suspects in the Netherlands: An Exploratory Study

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Abstract

This study explored the effectiveness of Dutch police interrogation practices in relation to psychologically vulnerable suspects. Examples of psychological vulnerabilities are mental disorders, abnormal mental states, and intellectual disabilities. These psychological vulnerabilities of suspects may interfere with, for example, coping with the stress of police interrogations, understanding questions, decision-making, and overseeing the implications of their answers. The General Interrogation Strategy used by Dutch police officers is an information gathering interrogation method that includes both investigative and accusatory components. In this study, suspects in police custody ($N = 36$) were psychologically screened for intellectual disabilities, mental disorders, abnormal mental states and substance abuse. Interrogation transcripts were analyzed with the Griffiths Question Map and classified as either appropriate (about 11%) or inappropriate (about 86%). Vulnerability of suspects was unrelated to appropriateness of the interrogations. Results showed that 69% of the suspects could be labelled as vulnerable, and about 85% of these vulnerable suspects were interrogated inappropriately. The findings indicate that more research is needed on the appropriateness of current Dutch interrogation methods.

Keywords: *Vulnerable suspects, police suspects, police interrogation, general interrogation strategy.*

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Introduction

On July 30, 2004, the Dutch optometrist Isabella Pongs (48) was stabbed to death in her shop. It wasn't until August 2007 that the police arrested two male suspects (20 and 22 years old at time of their arrest), who were interrogated 11 times by the police, and eventually confessed to

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committing the crime. During trial, the court noted that the suspects' confessions were contradictory on certain points, and they stated they were uncertain about their confessions. Experts testified that the first suspect suffered from intellectual disabilities and schizophrenia, as well as cannabis dependence. The second suspect was diagnosed with intellectual disabilities, a drug dependence, psychosis, and possible autism. In addition, another expert testified that the police investigators had used inadequate interrogation methods, such as putting too much pressure on the suspects, use of suggestive questions and maximization techniques, and providing misleading clues and negative feedback. As a consequence, the court ruled that the suspects falsely confessed to the crime due to their mental disorders and the inadequate interrogation techniques. They were found not guilty (Maastricht Court, 2008).

The Isabella Pongs case first illustrates that certain individuals are psychologically more vulnerable to give a false confession during police interrogations, regardless of guilt or innocence (Gudjonsson, 2010; Herrington & Roberts, 2012; Kassin, Appelby, & Torkildson Perillo, 2010a). Gudjonsson (2003) defines psychological vulnerabilities in suspects as: 'psychological characteristics or mental states which render a suspect prone, in certain circumstances, to providing information which is inaccurate, unreliable (or invalid) or misleading' (p. 316). Gudjonsson (2003) contends there are four major categories of psychological vulnerability in police suspects: mental disorders, intellectual disabilities, abnormal mental states, and personality characteristics. Suspects suffering from a mental disorder (such as depression, ADHD, or psychosis) experience troubles with perception, emotion, cognition, self-control and reality monitoring. These suspects often fail to provide a detailed and coherent statement (Gudjonsson, 2003; Kassin et al., 2010b). Suspects with intellectual disabilities may have difficulty understanding their legal rights and the interview questions (Gudjonsson & Joyce, 2011; Herrington & Roberts, 2012). In addition, these suspects face problems with memory capacity, and they are more sensitive to suggestion (giving in to leading questions) and prone to confabulation (Gudjonsson, 2003; Gudjonsson & Joyce, 2011). Suspects with an abnormal mental state do not necessarily suffer from a mental disorder, yet they have problems functioning in a stressful situation, such as a police interrogation, due to extreme distress caused by detention circumstances, alcohol or drug abuse, or medical symptoms (e.g., cardiovascular problems, diabetes, epilepsy; Gudjonsson, 2003; Van Oorsouw, Merckelbach, & Smeets, 2015). Some personality characteristics of suspects, such as suggestibility and compliance, are related to unreliable and inaccurate statements as well (Gudjonsson, 2003; Smeets, Leppink, Jelicic, & Merckelbach, 2009). Suggestibility implies personal acceptance of questions or information, while compliance implies complying with requests and instructions for some immediate instrumental gain (Gudjonsson, 2003). Both traits are related to social desirability, eagerness to please, and avoidant coping, but the main difference is that suggestibility implies personal acceptance of questions or information (thus, some degree of internalization), while compliance implies complying with requests and instructions of someone else for some immediate instrumental gain (Gudjonsson, 2003). These vulnerabilities are best viewed as risk factors (Gudjonsson, 2010). Psychologically vulnerable suspects are at increased risk of providing untruthful statements and/or false confessions, particularly in conjunction with inappropriate interrogation techniques (Gudjonsson, 2003; Kassin et al., 2010a; Kassin et al., 2010b; Walsh & Bull, 2012).

The Isabella Pongs case also illustrates that suspects – particularly psychologically vulnerable suspects – must be interrogated adequately in order to obtain a reliable and accurate statement (Farrugia & Milne, 2012; Herrington & Roberts, 2012; Leo & Davis, 2010; O'Mahony, Milne, & Grant, 2012). A number of key principles are important during police interrogations, for example, interrogators should be open-minded and act fairly (Soukara, Bull, Vrij, Turner, &

Cherryman, 2009), and they should use appropriate questions (Shepherd & Griffiths, 2013). Appropriate or productive questions are relevant, respectful, sensible, sensitive, short, single, simple and sincere, and stimulate the suspect's thinking and disclosing of thoughts. These questions are open prompts, for example, instructions (tell, describe, explain), or probing questions (why, what). Appropriate questions contribute optimally to obtain an accurate and extensive account, in contrast to inappropriate questions. Inappropriate or counter-productive questions are, for example, leading (suggestive) questions, option posing or forced choice questions, multiple questions, or hypothetical questions (Oxburgh, Myklebust, & Grant, 2010; Shepherd & Griffiths, 2013). Especially when interrogating suspects with psychological vulnerabilities, such as a mental disorder or intellectual disabilities, it is important that police officers slow down the pace of the interrogation, try to reduce stress, and avoid inappropriate questions and lengthy interrogations (Herrington & Roberts, 2012; Leo & Davis, 2010).

At time of this study, Dutch police officers are taught to perform interrogations as prescribed in the so-called Interrogation Manual (*Handleiding Verhoor*; Van Amelsvoort, Rispens & Grolman, 2015, sixth edition), first published in 2005 and used by the Police Academy of the Netherlands to educate police officers up until today. The authors are a police psychologist and two police experts, who wrote the Interrogation Manual based mainly on past experiences of police officers (Nierop, 2005), and a small laboratory experiment, which explored effective interrogation behavior with the help of four experienced police interrogators and four actors, in order to derive basic interrogation principles (Hoekendijk & Van Beek, 2015).

The Dutch Interrogation Manual divides a police interrogation into three parts. The first part is called 'first contact', in which the suspect is informed of his/her rights, and the procedure of the interrogation is explained. The second part, termed the 'person oriented interrogation', aims to establish rapport, to collect information about the suspect (e.g., education, family, work, finances), and to explore whether the suspect is willing to provide a statement. The third part, the 'case oriented interrogation', concerns interrogating the suspect about the alleged crime (Van Amelsvoort et al., 2015). During this third part, Dutch police officers usually use the General Interrogation Strategy (GIS; Duker & Stevens, 2009; Hoekendijk & Van Beek, 2015) as described in the Interrogation Manual (Van Amelsvoort et al., 2015). The GIS basic rules are: (1) minimizing resistance of suspects against telling the truth, (2) encircling tactical clues to avoid evasions, which is done by asking questions about possible alternatives in order to rule them out, (3) building up pressure by confronting the suspect with evidence, and (4) rewarding the suspect if 'he or she adjusts his or her statement in line with the truth' (Van Amelsvoort et al., 2015, p. 445). Obviously, some of these basic rules are accusatory in nature, and some even appear to resemble the highly criticized Reid technique of interrogating police suspects (Duker & Stevens, 2009; Gudjonsson, 2003). The GIS may be used when three conditions are satisfied: (1) availability of enough tactical and technical clues for making an interrogation plan, (2) the suspect must be 'sensitive to pressure in a normal manner', and (3) the suspect is willing to provide a statement (Van Amelsvoort, 2015, p. 445).

Some of these conditions are problematic. First, the Interrogation Manual does not explain how many tactical and technical clues are necessary in order to use the GIS. A previous version of the Interrogation Manual, called the Suspect Interrogation Manual (Van den Adel, 1997), mentioned a number of five to ten clues, but did not describe the rationale for these numbers (Duker & Stevens, 2009). Second, the Interrogation Manual does not provide guidelines on how to determine whether a suspect is 'sensitive to pressure in a normal manner', it only mentions that the suspect 'must not give extreme reactions, or no reactions at all, where you would normally expect this' (Van Amelsvoort et al., 2015, p. 445). Yet, studies have demonstrated that pressure

during interrogations may increase stress levels in suspects, especially in vulnerable suspects, which in turn increases the risk of inaccurate statements, or even false confessions (Gudjonsson, 2010; Herrington & Roberts, 2012; Kassin et al., 2010b). Still, it is stated in the Interrogation Manual the aim of the GIS is to build up so-called 'internal pressure', which is assumed to be 'the tension aroused in the mind of the suspect by the perceived incriminating power of the pieces of evidence at hand' (Hoekendijk & Van Beek, 2015, p. 4), and which is believed to be different from external pressure, described as 'everything that might be used to force the suspect to talk or confess' (Hoekendijk & Van Beek, 2015, p. 4). Nevertheless, 'internal pressure' is a form of pressure which aims to influence a suspect's statements, and it could thus be argued that there is actually little difference between internal and external pressure (Gudjonsson, 2003; Kortlever, 2011; Leo & Davis, 2010; Verhoeven & Stevens, 2012). Moreover, the Interrogation Manual mentions that it is allowed for police interrogators 'to incisively interrogate the suspect and thereby use a certain amount of pressure' (Van Amelsvoort et al., 2015, p. 340). According to the GIS, the interrogation ends 'if the suspect's statement is in line with the tactical clues' (Van Amelsvoort et al., 2015, p. 456). This implies not only that police officers will continue to interrogate the suspect in case he or she provides a statement that is not in line with the tactical clues, but it also enhances the risk of confirmation bias and guilty bias in police officers (Duker & Stevens, 2009; Kortlever, 2011; Leo & Davis, 2010). To conclude, although the GIS is officially termed an information gathering interrogation method, its aim to deliberately build up pressure in suspects (Van Amelsvoort et al., 2015, pp. 445-457) reveals an accusatory component as well (Boon, Odinot, Horselenberg, & Geijsen, 2016; Duker & Stevens, 2009; Kortlever, 2011; Stevens & Verhoeven, 2011; Verhoeven & Stevens, 2012; Vrij, 2003).

Research on police interrogation in The Netherlands has demonstrated that police officers use inappropriate questions and tactics (e.g., maximization, minimization, accusation, or suggesting a particular scenario). Stevens and Verhoeven (2012) analyzed 168 Dutch police interrogations of murder and manslaughter suspects, and found that police interrogations only partially conformed to the guidelines in the Interrogation Manual. Three interrogation techniques, viewed by the Interrogation Manual as appropriate, were used frequently (i.e. building trust, 71.4%; encircling tactical and technical clues, 44.6% – 51.8%), yet inappropriate interrogation techniques were used frequently as well (i.e. leading and suggestive questions, 44%; asking about hypothetical scenarios, 22.6%; pushing to evoke feelings of guilt, 49.4%; expressions of impatience, frustration and anger, 28.6%; Stevens & Verhoeven, 2012). Moreover, these authors found that an important interrogation technique of the GIS (e.g. confrontation with evidence) was used in only 51.8% of the interrogations, and that Dutch police officers sometimes even resorted to manipulation and intimidation techniques, especially during the second and third interrogations (i.e. physical intimidation, 4.2%; minimization techniques, 4.2%; Stevens & Verhoeven, 2012). By using inadequate interrogation techniques, police officers risk to obtain an unreliable statement, or even a false confession, especially from vulnerable suspects (Gudjonsson, 2003; Herrington & Roberts, 2012; Kassin et al., 2010b).

For a number of years, the Dutch National Police and the Police Academy have been paying attention to the issue of vulnerable suspects. During initial training, police recruits receive information about interrogation techniques in regard to vulnerable suspects. In 2013, a new training program 'Interrogation of Vulnerable Suspects' was launched, which trains police officers signal vulnerabilities in police suspects and to effectively interrogate these suspects (Nierop & Van den Eshof, 2014).

Based on the guideline in the Interrogation Manual and previous research, the question arises if vulnerable suspects are appropriately interrogated by Dutch police officers. We

hypothesize that, as prescribed by the Interrogation Manual (Van Amelsvoort et al., 2015, pp. 95-101), Dutch police officers conduct interrogations by mostly using appropriate questions (i.e., open questions), and by avoiding inappropriate questions (e.g., closed questions, multiple questions, forced choice questions). We expect comparable results to the study of Stevens and Verhoeven (2012). In addition, we expect the percentage of appropriate interrogations to be significantly higher for vulnerable suspects, compared to non-vulnerable suspects, as a consequence of increased awareness building on vulnerable suspects within the Dutch police force. To investigate our hypotheses, tests for different psychological vulnerabilities (i.e., intellectual disabilities, mental disorders, and an abnormal mental state; Gudjonsson, 2003), and the Griffiths Question Map (GQM; Shepherd & Griffiths, 2013) for classifying interview questions, are used in a sample of police suspects detained in Dutch police detention centers.

Method

Subjects ($N=178$) who participated in a study on the prevalence of psychological vulnerabilities among police suspects in the Netherlands (Geijsen, Kop, & De Ruiter, 2017) were asked to participate in the current study. Subjects were at least 18 years of age, not visibly intoxicated by alcohol or drugs, and able to speak the Dutch language. Subjects were psychologically assessed at six police detention centers (Amsterdam, Breda, Eindhoven, Heerlen, Maastricht and Tilburg) of four police regions in the Netherlands (Amsterdam-Amstelland, Limburg-Zuid, Brabant Zuid-Oost, and Midden en West Brabant) between June 24, 2014, and May 7, 2015.

Thirty-seven subjects gave permission to use their interrogation transcripts, so they were included in the present study. Their age ranged from 18 to 60 ($M_{age} = 31.68$; $SD_{age} = 11.37$). Thirty-two male subjects (86.5%) and five female subjects (13.5%) participated and all subjects stated they possessed the Dutch nationality. The distribution of subjects across the police detention centers was: Breda, $n = 9$ (24.3%); Eindhoven, $n = 15$ (40.5%); Heerlen, $n = 9$ (24.3%); and Maastricht, $n = 13$ (35.1%).

Procedure

Assessors approached prospective subjects in their cells and invited them to participate. If a subject agreed, the aim and procedures of the study and the informed consent were explained in a separate room. The subjects were assured that the assessors were bound by confidentiality and that they would be free to stop their participation at any moment without having to provide a reason. Before starting the assessment, all subjects were asked to sign an informed consent, by which they agreed to voluntarily participate in the psychological assessment. In addition, 37 subjects granted access to their interrogation transcripts by signing an additional consent. The psychological assessments were performed by an MSc psychologist (first author) and two Master's students in Forensic Psychology from Maastricht University, carefully instructed and supervised. It was assured that the psychological assessment would not interfere with the police investigation in any possible way. The assessments lasted between about one hour and one hour and a half. Four months after completion of all assessments, the interrogation transcripts of the 37 subjects were collected. All interrogation transcripts were anonymized after the analyses.

Approval.

This study was approved by the Office of the Attorney General of the Netherlands, the Chief Constable of the Dutch National Police Force, and the standing Ethical Review Committee Psychology and Neuroscience of Maastricht University (ERCPN number: 03_10_2014).

Measures

Malingering.

In order to detect possible malingering of symptoms, a short form (SF) of the Wildman Symptom Checklist (WSC; Wildman & Wildman, 1999) was included in the assessment battery. Previous research found that out of the original 70 items of the WCS, four items discriminated optimally between respondents who were asked to answer honestly and respondents asked to exaggerate symptoms (Merckelbach, Smeets, & Jelicic, 2008; Merckelbach, Langeland, De Vries, & Draijer, 2014). The four items of the WCS-SF concern non-credible, yet disturbing, cognitive symptoms: 'I have headaches that are so severe my feet hurt', 'the buzzing in my ears keeps switching from the left to the right', 'I notice that the color of things around me keeps shifting', and 'I find myself frequently blacking out when I sit down.' These items are answered on a 5-point Likert scale (0 = *not at all* to 4 = *extremely*). The total score of the WCS-SF is the sum of all item scores (range = 0 - 16), and a score of 4 or higher serves as an indication for malingering (Merckelbach et al., 2014). Cronbach's alpha of the four items in the present study was .75.

Criteria for identifying vulnerable suspects.

A suspect was classified as a vulnerable suspect when he or she met one or more of the following three criteria, based on the categorization of vulnerable suspects of Gudjonsson (2003): mental disorder, intellectual disabilities, and/or an abnormal mental state. The fourth category, personal characteristics (suggestibility and compliance), was not included in this study, because there are no cut-off points for the Gudjonsson Suggestibility Scale (GSS; Gudjonsson, 1997) and the Gudjonsson Compliance Scale (GCS; Gudjonsson, 1989), and therefore these scales are not helpful to identify vulnerable suspects in this study.

Mental disorders.

Mental disorders were screened with the Brief Jail Mental Health Screen (BJMHS; Steadman, Scott, Osher, Agnese, & Clark Robbins, 2005). The BJMHS is a tool to screen for mental health problems, originally validated against the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 2002). In a previous study, the BJMHS correctly classified 73.5% of male prisoners and 61.6% of female prisoners on the basis of SCID diagnoses (Steadman et al., 2005). The BJMHS was translated into Dutch by the first and fourth author for the purpose of this study. Examples of BJMHS items are: 'Do you currently believe that someone can control your mind by putting thoughts into your head or taking thoughts out of your head?' (Item 1); 'Are you currently taking any medication prescribed for you by a physician for any emotional or mental health problems?' (Item 7); and 'Have you ever been in a hospital for emotional or mental health problems?' (Item 8). All eight items are scored either 'no' (0 points) or 'yes' (1 point). A score of

more than two points on items 1 through 6 and/or 1 point on items 7 and 8 indicate a need for further mental health assessment (Steadman et al., 2005).

Intellectual disabilities.

Intellectual disabilities were measured with a short form of the WAIS-III-NL (Wechsler, 1997; Dutch version: Uterwijk, 2000): Information (verbal comprehension), Block Design (perceptual organization), Arithmetic (working memory), and Symbol Substitution Coding (processing speed). The validation study of the short form included 75 patients with a diagnosis of schizophrenia, 73 of their non-schizophrenia siblings, and 84 unrelated healthy controls (Velthorst et al., 2013). It was found that the four subtests had adequate predictive accuracy and differentiated between patients, relatives and healthy controls. The correlation coefficient between the WAIS-III and the WAIS-III short form was found to be $r = .95$, thus the WAIS-III short form was proven to be a valid alternative to estimate general intellectual ability (Velthorst et al., 2013). In this study, intellectual disabilities were defined by a full-scale IQ score lower than 70 (DSM-IV-TR; American Psychiatric Association, 2000).

Abnormal mental state.

First, an abnormal mental state was assessed by means of the Mini Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975). This instrument screens for impaired cognitive functioning. We used the Dutch standardized version of the MMSE (Kok & Verhey, 2002), with a cut-off score of 25 (a score below 25 indicates an abnormal mental state). Examples of MMSE items are: 'What is the date/day/month/year/season?' and a three-stage instruction: 'Take this piece of paper, fold it in half, and then put it on your lap.'

In addition, an abnormal mental state related to alcohol and/or drug abuse was assessed as well. This was documented based on self-report, subjects were asked about their use of alcohol and/or drugs. If the subject stated that he or she was addicted to alcohol and/or drugs, or admitted that he or she used alcohol and/or drugs on a daily basis, the subject was classified with a substance use disorder.

Interrogations analyses.

In the Netherlands, police interrogations are not recorded as a standard procedure. Audio or video recording of police interrogations is only mandatory in particular cases (according to the judicial guideline 'Aanwijzing auditief en audiovisueel registeren van verhoren van aangevers, getuigen en verdachten', 2012), for example, in cases when the victim is deceased, when the suspect could be sentenced to imprisonment for more than 12 years, or when interrogators are coached by a police psychologist. We chose to include all types of cases (and offenses) in our study and analyzed the written transcripts of these interrogations. All interrogation transcripts were written in a question-answer format and reflected the first 'case oriented interrogation' (Van Amelsvoort et al., 2015).

The interrogation transcripts were analyzed with the GQM (Shepherd & Griffiths, 2013). Based on the research literature, the GQM identifies eight types of questions, labelled as either appropriate or inappropriate. Appropriate questions – open ended, probing, and appropriate closed questions – are questions associated with neutral and effective information gathering. An open question is to obtain detailed information, a probing question is to get micro-details, and an

appropriate closed question is to seek confirmation and/or clarification. In contrast, inappropriate questions – inappropriate closed, leading, multiple questions opinion statements, and forced choice – produce insufficient and/or unreliable information. Inappropriate closed questions only provide a yes or no answer, leading questions are associated with suggestibility (Gudjonsson, 2003; Oxburgh et al., 2010), multiple questions make it unclear which question is to be answered, and an opinion statement and a forced choice reflect a biased interrogator (Shepherd & Griffiths, 2013; Walsh & Bull, 2012). Although the GQM was originally designed for analysis of audio recordings of interrogations for training purposes, we used the GQM because it provides a detailed map with an overview of the type of questions used during an interrogation (Shepherd & Griffiths, 2013), and because of its proven utility in previous research (Griffiths & Milne, 2006).

A GQM was constructed for all 37 interrogation transcripts. First, the first author and a Master's student in Forensic Psychology of Maastricht University (who also participated in the data collection) independently scored 16 (43.2%) interrogation transcripts. Next, the first author scored another 12 (32.3%) interrogation transcripts, and the Master's student scored the last 9 (24.3%) interrogation transcripts. The inter-observer agreement of the first 16 interrogation transcripts was quantified using Cohen's kappa coefficient, which compares the agreement observed between two observers to the level of agreement expected if the two observers had made the classification randomly. The standard error of the coefficient was adjusted to account for the fact that several questions refer to the same interview (Yang & Zhou, 2014). The 16 interviews comprised between 8 and 64 questions. According to the GQM, question classification as described above, the quality of the question was further sub-classified as appropriate for categories 1, 2 and 3 (coded as 1) and inappropriate for the categories 4 through 8 (coded as 0). The two observers agreed on the classification of 403 (92.2%) questions and disagreed on 34 (7.8%) questions, leading to a Cohen's $\kappa = .88$; 95%, Confidence Interval = .82 - .94.

Data Analysis

Data analysis was performed using R v3.3.3. Before analyzing the data, the sample ($N = 37$) was examined for malingering using the WSC-SF. One subject of the sample was suspected of malingering, and the data from this subject were excluded from further analyses (Merckelbach et al., 2014). All analyses described below were thus performed with a sample of $N = 36$.

Results

First, we examined psychological vulnerabilities in our sample of police suspects ($N = 36$), based on three of the categories proposed by Gudjonsson (2003): mental disorder, intellectual disabilities, and abnormal mental states. The BJMHS indicated that 20 subjects (55.6%) scored above the cut-off score. The results of the WAIS-III-NL short form showed that 10 subjects (27.8%) obtained an IQ score lower than or equal to 70, which indicated intellectual disabilities. The MMSE indicated that four subjects (11.1%) were suffering from impaired cognitive functioning. Based on self-report, 9 subjects (25%) presented as abusing alcohol and/or drugs. Combining all three categories, 25 subjects (69.4%) in the sample could be labelled as vulnerable and 11 (30.6%) as non-vulnerable. Vulnerability scores summarized using means, standard deviations (SD), medians, and ranges on the WAIS-III-NL short form and MMSE are presented in Table 1.

Table 1

Mean, Median and Standard Deviation for the WAIS-III-NL and MMSE in the Sample ($N = 36$)

	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>
WAIS-III-NL	75.39	10.46	75.00	54-100
MMSE	27.25	2.37	28.00	19-30

Note. WAIS-III-NL: Dutch Short Form of the Wechsler Adult Intelligence Scale 3rd edition (Velthorst et al., 2013). MMSE: Dutch version of the Mini Mental State Exam (Kok & Verhey, 2002).

Second, interrogation transcripts ($N = 36$) were coded by means of Griffiths Question Map and subsequently labelled as either an appropriate or inappropriate interrogation (Shepherd & Griffiths, 2013). Figures 1 and 2 present examples of the GQM for two transcripts, classified as an appropriate interrogation (Figure 1) and an inappropriate interrogation (Figure 2). Only five (about 14%) of the interrogations met the criteria for an appropriate interrogation, as described by Shepherd and Griffiths (2013). These five interrogations consisted entirely of open, probing, and appropriately closed questions. Consequently, 31 (about 86%) interrogations did not meet these criteria and were labelled inappropriate interrogations. The inappropriate interrogations contained a minimum of 2.1% and a maximum of 23.1% inappropriate questions, all in combination with a lack of a coherent questioning pattern, which requires open questions to introduce a topic, followed by probing questions, and (possibly) ending a topic by an appropriately closed question.

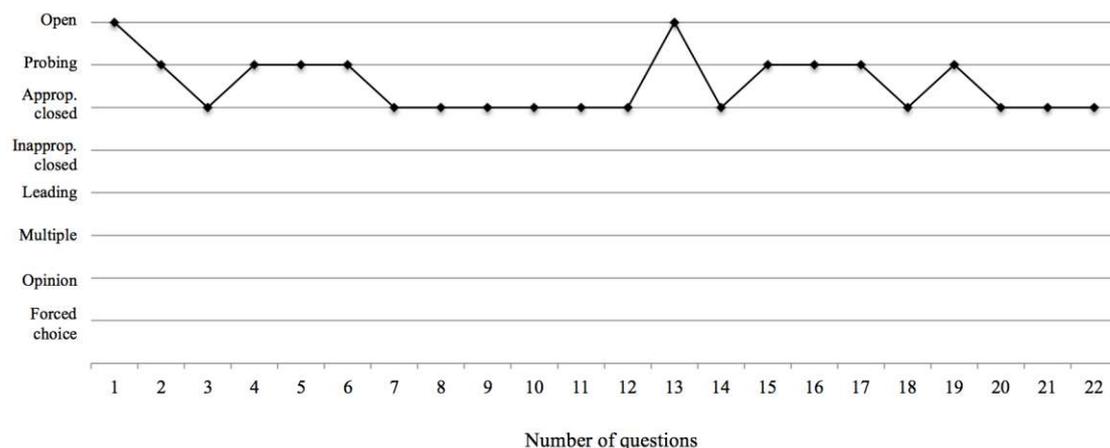


Figure 1. Typical representation of an appropriate police interrogation. Appropriate questions are represented at the top three lines (i.e., open, probing, and appropriate closed questions). Inappropriate questions are represented at the bottom five lines (i.e., inappropriate closed questions, leading questions, multiple questions, stating an opinion, and forced choice questions).

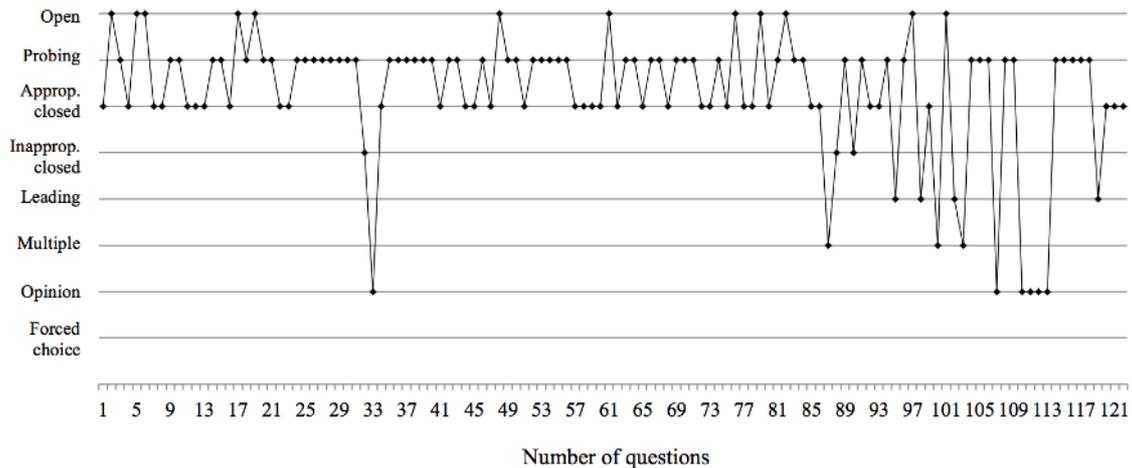


Figure 2. Typical representation of an inappropriate police interrogation. Appropriate questions are represented at the top three lines (i.e., open, probing, and appropriate closed questions). Inappropriate questions are represented at the bottom five lines (i.e., inappropriate closed questions, leading questions, multiple questions, stating an opinion, and forced choice questions).

Table 2 shows a cross tabulation of appropriate vs. inappropriate interrogations among vulnerable vs. non-vulnerable suspects. Twenty-one (84.0%) out of 25 vulnerable suspects were interrogated inappropriately, four vulnerable suspects (16.0%) were interrogated appropriately. Ten (90.9%) non-vulnerable suspects were interrogated inappropriately, one non-vulnerable suspect (9.1%) was interrogated appropriately. No significant difference was found between appropriate and inappropriate interrogations in vulnerable vs. non-vulnerable suspects, $OR = 1.90$, $p = 1$.

Table 2
Appropriate and Inappropriate Interrogations in Vulnerable and Non-Vulnerable Suspects (N = 36)

Suspects	Interrogations ¹	
	Appropriate	Inappropriate
Non-vulnerable	1 (9.1%)	10 (90.9%)
Vulnerable	4 (16.0%)	21 (84.0%)
Total	5 (13.9%)	31 (86.1%)

¹ Appropriate interrogations contained open ended, probing, and appropriate closed questions, while inappropriate interrogations were performed with the use of inappropriate/ineffective questions, and showed disorganized questioning patterns as well (Shepherd & Griffiths, 2013).

There was no difference in the length of interrogations (number of questions) between vulnerable suspects ($Mdn = 27$) and non-vulnerable suspects ($Mdn = 30$), $p = 0.47$. We also examined the association between type of question and the outcome of each screening instrument separately, with the use of a multinomial-poisson model to acknowledge the fact that the length of the interrogation varies between suspects (Lang, 2004). The comparison between vulnerable and non-vulnerable suspects was adjusted for the length of the interrogation.

Table 3

Percentages of the Eight Types of Questions of the GQM Asked During Interrogations for an Interrogation of 27 Questions in Relation to Vulnerability, as Defined on WAIS-III-NL (IQ ≤ 70 vs. > 70), BJMHS (Further Mental Health Examination Needed: Yes vs. No), MMSE (Impaired Cognitive Functioning: Yes vs. No), and the Use of Drugs and/or Alcohol (Yes vs. No)

		Question Types ¹								
		<i>n</i>	Appropriate			Inappropriate				
			1	2	3	4	5	6	7	8
WAIS-III	≤ 70	10	8.2*	34.8*	42.2	2.0	5.6	6.2	1.1	.0
	> 70	26	3.1*	47.7*	35.9	0.8	3.0	7.8	1.8	.0
BJMHS	Y	20	4.2	44.6	37.5	1.3	4.4*	6.8	1.3	.0
	N	16	3.2	48.1	36.0	0.4	1.4*	8.6	2.4	.0
MMSE	Y	4	10.1*	43.3	40.6	0.0*	4.6	1.4*	0.0*	.0
	N	32	3.8*	45.6	36.7	1.0*	3.4	7.8*	1.7*	.0
Drugs / Alcohol	Y	9	7.5*	47.3	38.0	0.5	2.3	4.4*	0.0*	.0
	N	27	3.2*	45.2	36.6	1.1	3.7	8.3*	1.9*	.0

Note. Results in Table 3 are presented for an interrogation of 27 questions, which is the median length of the interrogations¹.

¹ (1) Open Ended, (2) Probing, (3) Appropriate Closed, (4) Inappropriate Closed, (5) Leading, (6) Multiple Questions, (7) Opinion Statements, (8) Forced Choice.

* Significant difference when 95% confidence interval for the percentage difference does not contain 0, based on a multinomial-poisson model.

¹ *Note:* the distribution of the length of the interrogations was skewed to the right, and the number of suspects was moderate ($N = 36$), therefore the median was used instead of the mean.

Discussion

The aim of this study was to investigate whether police officers in the Netherlands interrogate suspects – vulnerable suspects in particular – adequately, by the use of appropriate interrogation techniques. We expected that all suspects, but psychologically vulnerable suspects in particular, would be interrogated in an appropriate manner, with open and non-leading questions.

First, in our sample ($N = 36$) about 56% screened positively for further examination of their mental health, about 28% suffered from intellectual disabilities (IQ score below 70), 11% screened positively for an abnormal mental state, and 25% of the sample stated to be addicted to alcohol and/or drugs and/or to take alcohol or drugs on a daily basis. Only 31% of our sample could be labelled as non-vulnerable according to our criteria. These findings seem to be in line with previous research. Gudjonsson, Clare, Rutter, and Pearse (1993) reported the prevalence of psychological vulnerabilities in suspects at two police stations in London, United Kingdom. They found that of 173 police suspects, 33% were intellectually disadvantaged (IQ < 75), 20% experienced high levels of stress and anxiety, and 35% were in an abnormal mental state because of stress, mental disorder, or drug and/or alcohol abuse (Gudjonsson et al., 1993). A study conducted at Australian police stations ($N = 198$) showed that about 82% of male and 94% of female suspects exhibited high levels of psychological distress (Baksheev, Thomas & Ogloff, 2012). Another study ($N = 614$) showed that about one-third of Australian police suspects experienced psychiatric symptoms (Ogloff, Warren, Tye, Blaher, & Thomas, 2011). Blaauw, Kerkhof, and Vermunt (1998) found high levels of depression (89%), somatization (74%) and emotional problems, such as feeling very lonely (70%), tired (46%), angry (54%), and anxious (52%), among Dutch police suspects. Thus, we can safely conclude that police officers are highly likely to encounter a high percentage of vulnerable suspects during police interrogations.

Second, we hypothesized that police officers would perform interrogations appropriately as prescribed by the Dutch Interrogation Manual (Van Amelsvoort et al., 2015), especially with vulnerable suspects. Our study revealed that about 86% of all suspects, about 84% of all vulnerable suspects, and 91% of all non-vulnerable suspects were interrogated in an inappropriate manner. These inappropriate interrogations showed disorganized questioning patterns, and the use of inappropriate questions, which were mainly multiple questions, followed by leading questions, opinion statements and inappropriate closed questions. Importantly, no association was found between the type of suspect (vulnerable vs. non-vulnerable) and the way the interrogation was performed (appropriate vs. inappropriate).

Exploratory analyses on the use of the different types of questions in relation to psychological vulnerabilities showed a mixed picture of associations. First, leading questions were asked more often during interrogations of suspects who were positively screened for needing further mental health examination, compared to suspects who were not screened positively on this measure. Second, open ended questions were asked more often, yet probing questions less often, during interrogations of intellectually disabled suspects, compared to suspects without intellectual disabilities. Third, cognitively impaired suspects were less often confronted with inappropriate closed questions, opinion statements, and multiple questions, and more often with open ended questions, compared to suspects who were not cognitively impaired. In addition, suspects who stated to drink alcohol or use drugs on a daily basis were asked more open questions, and experienced less opinion statements and multiple questions, compared to suspects who did not drink alcohol or use drugs on a daily basis. However, these differences should be interpreted with some caution, because of small sample sizes. Something worth noting is police officers used open ended questions significantly more often when interrogating vulnerable suspects – at least with suspects who are suffering from intellectual disabilities and abnormal

mental states – yet, the overall percentage of open questions during all police interrogations was extremely low (about 5%).

In sum, it can be concluded that police officers often used inappropriate questions during their interrogations, and their interrogations were often disorganized, irrespective of the presence of psychological vulnerabilities in suspects. Moreover, if future studies confirm that police officers use more inappropriate questions during interrogations of suspects with putative mental health problems (i.e., those who screened positive on needing further mental health examination), this could mean these suspects are in double jeopardy, because their vulnerability increases the risk of inappropriate interrogation. One possibility is that suspects who suffer from mental disorders manifest problems with understanding questions, and with providing a detailed and accurate account of events. This may inadvertently ‘tempt’ interrogators to use more closed and leading questions in order to seek confirmation from more vulnerable suspects (Herrington & Roberts, 2012; Hill, Memon, & McGeorge, 2008; O’Mahony, Milne, & Grant, 2012). Obviously, this hypothesis needs to be tested by conducting sequential analyses of interrogations in larger samples of vulnerable and non-vulnerable suspects.

Our finding of disorganized questioning patterns and the ample use of inappropriate questions demonstrates that day-to-day police interrogation practice in the Netherlands differs greatly from the guidelines described in the Interrogation Manual, which has been reported by other researchers as well. For example, Siemerink and Van der Laan (2016) interviewed 16 police officers, a public prosecutor, and a judge, who were involved in five murder and manslaughter cases with juvenile suspects. They found that older police officers mostly relied on ‘old-school’ tactics, which were mainly based on gut feelings. Younger police officers were trained in modern interrogation techniques, which led to more proper preparation of interrogations. Duker and Stevens (2009) found that, after graduation from the Police Academy, young police officers’ initially trained interrogation techniques were reshaped by older colleagues in the field. Moreover, it was found that in most cases interrogators were selected on the basis of availability and not on the basis of their qualifications. Further, Dutch police officers believe that successful completion of specialised interrogation training has no bearing on the quality of the interrogation (Siemerink & Van der Laan, 2016). Thus, it is likely that Dutch police officers lack thorough theoretical knowledge of the importance of appropriate interrogation techniques and their effects on suspects (Duker & Stevens, 2009; Nierop & Van den Eshof, 2014; Odinet, Boon, & Wolters, 2015; Siemerink & Van der Laan, 2016).

It is of eminent importance that police officers undergo extensive training in appropriate interrogation techniques, grounded in empirical research, not only during their initial training, but throughout their career (Clark, Milne, & Bull, 2011; Farrugia & Milne, 2012; Odinet et al., 2015; Soukara et al., 2009). Research has clearly shown that skilled police interrogators ask more open-ended questions (Powell, Hughes-Scholes, Smith, & Sharman, 2014), and that peer feedback on the interrogators’ performance leads to an increase of appropriate questions and enhanced quality of police interrogations (Clarke et al., 2011; Cyr, Dion, McDuff, & Trotier-Sylvain, 2012; Lamb et al., 2012).

The present study was limited in two respects. First, the sample size was small ($N = 36$). Notably, the number of non-vulnerable suspects was small. Second, this study investigated interrogation techniques based on written interrogation transcripts, because audio or video recordings of the interrogations were not available. After we collected the data for this study, Malsch and her colleagues (2015) reported that most written Dutch police transcripts do not fully represent the actual interrogations. They analyzed 55 verbatim interrogation transcripts, and interviewed 24 experts within the criminal justice system (e.g., police detectives, public

prosecutors, judges, and lawyers). According to their results, at most 37% of all questions asked during interrogations are reproduced in official police transcripts, and circumstances, emotions, pressure, confrontations, and remarks of suspects that could exculpate them, are often left out of the transcripts. Dutch police interrogation transcripts are in fact summaries of the interrogation and are not accurate reproductions of reality (Malsch et al., 2015), hence, a replication of our study using audio or video recordings, in order to obtain a more accurate representation of what was actually said in the interrogation room, could provide more accurate data. However, considering that Malsch et al. (2015) found that less appropriate interrogation methods were often left out of the official police transcripts, we hypothesize that the current findings (which used the official transcripts) may actually underestimate the level of inappropriateness of the interrogations.

To conclude, based on our findings, police officers in the Netherlands appear to adhere to ineffective interrogation methods in a large proportion of interrogations. This is particularly problematic because psychologically vulnerable suspects appear to be at even higher risk to be subjected to inappropriate closed and leading questions compared to non-vulnerable suspects. We would encourage the Dutch National Police to open its interrogation rooms to empirical researchers to further examine to what extent Dutch interrogation methods are appropriate for interrogating suspects – in particular in relation to vulnerable suspects (Duker & Stevens, 2009; Farrugia & Milne, 2012; Herrington & Roberts, 2012; Kassin et al., 2010a; Soukara et al., 2009; Vrij, 2003). Furthermore, the possible increased vulnerability of police interrogators to revert to inappropriate questioning, in response to vulnerable suspects' behaviors during the interrogation, is in need of further investigation.

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