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Identifying psychological vulnerabilities: Studies on police suspects' mental health issues and police officers' views

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Abstract: Psychological vulnerabilities in police suspects may interfere with the demands of police interrogations, and thereby increase the risk of an unreliable statement, or even a false confession. This study examined: (1) the prevalence of a number of psychological vulnerabilities in police arrestees, and (2) the views of police officers on identifying vulnerable suspects. Both have not been studied previously in the Dutch context. Psychological assessments of a sample of police suspects ($N = 149$) showed that about 60% rated positive on a mental health screen, and, compared to the general Dutch population, levels of psychopathology, depression, anxiety, stress and interrogative suggestibility were significantly higher. In a second study in police detectives ($N = 103$), 55% stated that they had not interrogated a vulnerable suspect within the previous 12-month period, and again 55% mentioned that they did not take any special precautions when interrogating vulnerable suspects. Forty-two per cent of police detectives took precautions when interrogating vulnerable suspects, such as consulting their supervisor, a police psychologist, the public prosecutor or a specialised police interrogator. The two studies together indicate that police officers seriously underestimate the base rate of psychological vulnerabilities among suspects. Implications for police interrogation training and supervision are provided.

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PUBLIC INTEREST STATEMENT

If psychologically vulnerable suspects (due to psychological disorders, intellectual disabilities, abnormal mental state, or higher susceptibility to compliance or suggestibility) are not being interrogated adequately, police interrogators might end up with an unreliable statement or even a false confession. This study explored how often psychological vulnerabilities occur in police suspects, and whether police officers are able to identify these suspects. Psychological assessments of 149 police suspects showed that about 60% needed further examination on their mental health. Next, out of a sample of 103 police detectives, 55% stated that they had not interrogated a vulnerable suspect within the previous 12-month period, 55% mentioned that they did not take any special precautions when interrogating vulnerable suspects and only 42% took precautions when interrogating vulnerable suspects, such as consulting a police psychologist or a specialised police interrogator. It seems that police officers seriously underestimate the base rate of psychological vulnerabilities among suspects.

Subjects: Policing & Police Law; Criminal Behaviour and Forensic Psychology; Criminology and Law; Police

Keywords: police suspects; police custody; psychological vulnerabilities; vulnerable suspects; police

1. Introduction

In the last decades, there has been an increased interest in psychological vulnerabilities among police suspects. These vulnerabilities are “psychological characteristics or mental states which render a suspect prone, in certain circumstances, to providing information which is inaccurate, unreliable (or invalid) or misleading” (Gudjonsson, 2003, p. 316). Several studies have demonstrated that psychological vulnerabilities in police suspects could interfere with the demand characteristics of an interrogation, for example with understanding the consequences of answers, and with giving a reliable, accurate and coherent statement (Gudjonsson, 2010; Gudjonsson & Joyce, 2011; O’Mahony, Milne, & Grant, 2012). Gudjonsson (2003) divides psychological vulnerabilities into four categories: mental disorders, intellectual disabilities, abnormal mental states and personality characteristics. Mental disorders (e.g. schizophrenia, depression) and abnormal mental states (e.g. distress, alcohol or drug withdrawal) impact reality monitoring, perception, judgement, self-control, anxiety level and mood, which may affect the accuracy of statements of suspects (Gudjonsson, 2010; Kassin et al., 2010). Police suspects who suffer from intellectual disabilities have trouble understanding their legal rights and the questions of the interrogators, and to oversee the implications of their answers (Gudjonsson, 2010; Gudjonsson & Joyce, 2011). They also tend to confabulate more and face problems with memory capacity (Gudjonsson & Joyce, 2011). It has been demonstrated that in numerous cases suspects falsely confessed due to a failure of police officers to identify psychological vulnerabilities in suspects (Appleby, Hasel, & Kassin, 2013; Gudjonsson, 2010; Kassin, 2017; Kassin et al., 2010). Thus, it is important that police officers provide proper safeguards for a fair and effective police interview, for example, by adjusting interrogation methods, seeking assistance of a police psychologist, videotaping the interrogation or ensuring a lawyer is present during the interrogations (Herrington & Roberts, 2012; Kassin, 2017).

Yet, police officers have difficulty detecting vulnerabilities in police suspects (Gudjonsson, 2010; Kassin, 2012). This is partly because many people who suffer from mental disorders or intellectual disabilities are used to masking their vulnerabilities, because of social stigma (Herrington & Roberts, 2012). There are several screening tools suitable for use by non-clinicians, but police officers must have an idea when to assess a specific vulnerability in order to select an appropriate screener (Herrington & Roberts, 2012). Furthermore, police officers often lack time, skills and/or inclination to conduct a screening (Herrington & Roberts, 2012).

To the authors’ knowledge, no research has yet examined the prevalence of psychological vulnerabilities in police suspects in the Netherlands, and it is unknown to what extent Dutch police officers are able to identify vulnerable suspects as well. This paper addresses these issues. In line with the research by Gudjonsson (e.g. Gudjonsson, 2003; Gudjonsson, 2010; Gudjonsson, Clare, Rutter, & Pearce, 1993), Study 1 explores the prevalence of a number of important vulnerabilities in police suspects. For this purpose, 178 unselected police suspects, detained in six police detention centres across the Netherlands, were psychologically assessed. The rates of mental health problems, abnormal mental states, interrogative suggestibility and compliance in police suspects will be compared with rates found in previous studies of general Dutch population samples. Study 2 aims to explore to what extent police officers believe they are able to note psychological vulnerabilities in suspects. For Study 2, 103 Dutch police detectives completed an online questionnaire about their police experience and training, their views on identifying vulnerable suspects, and the precautions they take when interrogating these suspects.

2. Study 1

2.1. Introduction

Gudjonsson et al. (1993) were the first to explore psychological vulnerabilities in police suspects prior to police interrogations. They assessed 156 police suspects detained in two London police stations over a period of six months, and examined suspects' mental states, psychological distress, intellectual functioning, reading ability, interrogative suggestibility, anxiety proneness and understanding of legal rights. This was done by the use of a structured interview with questions about education, use of alcohol and drugs, medication, prior criminal convictions, mental disorders, detention circumstances and legal rights, and four additional psychometric tests, i.e. three subtests of the Wechsler Adult Intelligence Scale (WAIS-R; Wechsler, 1981), the Schonell Grades Word Reading Test (Schonell & Goodacre, 1974), the Gudjonsson Suggestibility Scale (GSS-2; Gudjonsson, 1984) and the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

The assessment battery used in Study 1 was not an exact copy of the Gudjonsson et al. (1993) instruments, but was adjusted in line with subsequent research on vulnerabilities in police suspects. Three instruments on vulnerabilities discovered in subsequent research (Gudjonsson, Hannesdottir, Petursson, & Bjornsson, 2002; Gudjonsson, Sigurdsson, Brynjólfssdóttir, & Hreinsdóttir, 2002; Gudjonsson, Sigurdsson, Sigfusdottir, & Young, 2012) were added to the assessment battery in order to explore depression, attention deficit hyperactivity disorder (ADHD) and compliance. In addition, a test for malingering was included, because we assumed that some suspects during interrogation could feign problems with their mental health in order to be released more quickly or to be interrogated less intensively (Merckelbach, Langeland, de Vries, & Draijer, 2014; Wildman & Wildman, 1999).

2.2. Method

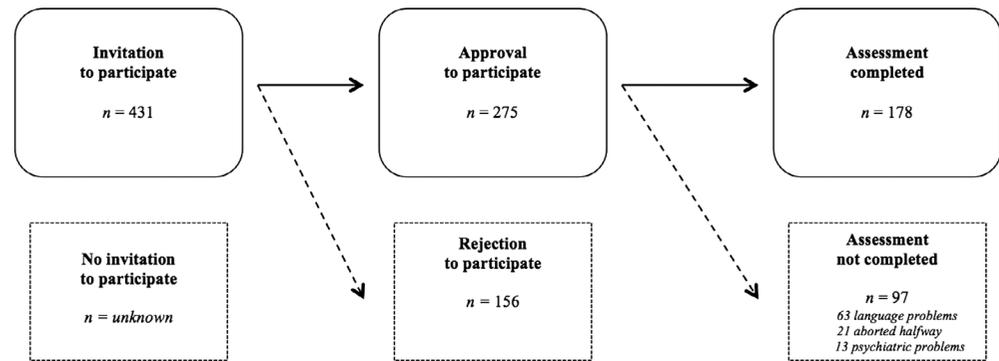
2.2.1. Participants

Between June 2014 and May 2015, 178 suspects placed in continued police custody participated in Study 1. The mean age of the participants was 31.7, $SD = 11.2$, $Mdn = 28.0$, range = 18–60. Participants were recruited in six different police detention centres across the Netherlands: Amsterdam ($n = 37$), Breda ($n = 35$), Eindhoven ($n = 31$), Heerlen ($n = 26$), Tilburg ($n = 8$) and Maastricht ($n = 41$). Demographic characteristics of the sample are shown in Table 1.

Table 1. Demographic data of the sample of Study 1 ($N = 149$)

	<i>n</i>	Percentage
<i>Gender</i>		
Female	13	8.7
Male	136	91.3
<i>Education</i>		
Elementary/Special education	49	32.9
Low/Intermediate level secondary school	83	55.7
High level secondary school/University degree	17	11.4
<i>Nationality</i>		
Dutch	136	91.3
Dutch and second nationality	25	16.8
Not the Dutch nationality	13	8.7
<i>Employment status</i>		
Unemployed	110	61.8
Employed or Self-Employed	68	38.2

Figure 1. Recruitment procedure of the participants for Study 1.



The recruiters invited available police suspects of at least 18 years of age to participate. Suspects who were about to be seen by a physician or psychiatrist because of urgent physical and/or psychiatric problems were excluded from participation. Figure 1 shows the recruitment procedure for Study 1. Over the course of Study 1, 21 assessments were interrupted and subsequently terminated due to unforeseen developments in the criminal investigation process (e.g. unexpected interrogations, visits of defence attorneys or immediate release of the suspect); 63 assessments were terminated early on because of a lack of proficiency in the Dutch language, which led to misunderstanding of instructions and questions; and, 13 participants stated or implied shortly after the start of the assessments that they were suffering from a serious mental disorder. Ultimately, 178 suspects completed the assessment procedure.

2.2.2. Procedure

The assessments were conducted by a MSc psychologist (first author), and three second-year master's students in Forensic Psychology of Maastricht University who had previously followed several assessment skills trainings and were closely supervised. To not harm suspects' legal rights, it was assured that (1) suspects would be staying in continued detention at the police detention centre for at least the next few hours, and (2) that the assessment would not interfere with any planned investigation procedures.

The assessors approached prospective participants in their cells and briefly introduced the purpose of the study. When he or she agreed to consider participation, the suspect was taken to another room, where the details of the study procedure and the informed consent were explained. Participation was anonymous and suspects were informed that the researchers were bound by professional confidentiality. Participants were free to stop the assessment at any moment. After the explanation, a brief moment was given to consider participating. All participants signed the informed consent before starting the assessment.

Permission for this study was granted by the Attorney General Office of the Netherlands, the Chief Constable of the National Police of the Netherlands, and by the standing Ethical Review Committee Psychology and Neuroscience of Maastricht University (ERCPN number 03_10_2014).

2.2.3. Measures

The instruments for Study 1 were part of a larger battery of tests to assess different psychological vulnerabilities in police suspects. First, the assessment contained four items to screen for malingering. Second, tests 2 to 6 assessed psychological vulnerabilities, namely serious mental health problems, the misuse of alcohol and drugs, ADHD, depression, anxiety, and stress, and symptoms of psychopathology. Third, tests 7 and 8 assessed two personality characteristics, namely interrogative suggestibility and compliance. Findings regarding intellectual disabilities are not presented in the current paper, because these are the topic of a separate paper (Geijsen, Kop, & De Ruiter, *in press*).

- (1) Four items of the Wildman Symptom Checklist (WSC; Merckelbach, Smeets, & Jelicic, 2008; Merckelbach et al., 2014; Wildman & Wildman, 1999), which addresses non-credible, disturbing, cognitive symptoms (e.g. “I have headaches that are so severe my feet hurt”, and “The buzzing in my ears keeps switching from the left to the right”). The total score of the WCS is the sum of the scores of all items (range = 0–16), and a score of 4 or higher serves as an indication for malingering (Merckelbach et al., 2014). The Cronbach’s alpha of the four items of the WCS in previous studies ranged from .56 to .73 (Deetman et al., 2011), in the present study the Cronbach’s alpha was .73.
- (2) Brief Jail Mental Health Screen (BJMHS; Steadman, Robbins, Islam, & Osher, 2007). The BJMHS was developed as a jail intake screen, which prison staff can use as a screening tool for inmates who need additional mental health evaluation. The BJMHS contains eight questions (e.g. “Do you currently believe that someone can control your mind by putting thoughts into your head or taking thoughts out of your head?”, “Are you currently taking any medication prescribed for you by a physician for any emotional or mental health problems?”, and “Have you ever been in a hospital for emotional or mental health problems?”). Further mental health evaluation is advised if at least two of the items 1 through 6 are answered positively, or items 7 and/or 8 (i.e. the latter two questions mentioned above) receive an affirmative response (Steadman et al., 2007). Previous validation studies compared the BJMHS and the Structural Clinical Interview for DSM-IV (SCID; First, Spitzer, Miriam & Williams, 2002), and showed that the BJMHS is a reliable and valid mental health screener in custody settings (Baksheev, Thomas, & Ogloff, 2012). For the purpose of this study, the BJMHS was translated into Dutch by the first and third author.
- (3) Self-report questions about the use of alcohol and drugs: “Do you use alcohol/drugs?”, if replied with “yes”, followed by a probing question about the frequency and amount of alcohol/drug use.
- (4) Ultra Brief Questionnaire for ADHD in Adults (Ultrakorte Vragenlijst voor ADHD bij Volwassenen; Kooij, 2009). This screener contains four questions, which consists of three questions about hyperactivity, impulsivity and problems with concentration and attention, and a fourth question about the persistence of these symptoms across the lifetime. The screener has proven to provide a good estimation of ADHD in clinical practice: 70–90% of the subjects with a positive screening score was diagnosed with ADHD upon further examination (Kooij, 2009).
- (5) Depression Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995). The DASS was over a period of 11 years, and discriminates between depression, stress and anxiety, concepts that show overlap in other instruments (De Beurs, van Dyck, Marquenie, Lange, & Blonk, 2001). For this study, the 21-items Dutch version (De Beurs et al., 2001) was used, which contains seven items on depression, seven items on anxiety and seven items on stress. The reliability of this 21-items DASS short form is similar to the original 42-items version (De Beurs et al., 2001).
- (6) Symptom Checklist (SCL-90; Derogatis, 1977; Dutch version SCL-90-NL, Arrindell & Ettema, 2005). The SCL-90 is widely used to screen for mental and physical problems related to psychopathology. The Dutch version contains 90 items, which refer to eight domains: Depression, Anxiety, Hostility, Agoraphobia, Interpersonal sensitivity, Somatisation, Obsessive-Compulsive and Sleeping Problems. Furthermore, the total score provides a global severity index of psychological distress (Psychoneuroticism).
- (7) A short form of the Gudjonsson Suggestibility Scale (GSS; Gudjonsson, 1997) including 20 items on interrogative suggestibility (Smeets, Leppink, Jelicic, & Merckelbach, 2009). This short form of the GSS starts with a story of a mock crime, followed by 15 misleading questions and 5 cued recall memory questions. After answering the 20 items, the participants are told they made quite a few errors and are asked to answer all 20 questions a second time. Four suggestibility parameters were calculated to measure interrogative suggestibility: (1) the tendency to go along with misleading questions immediately (Yield 1); (2) the tendency to accept misleading cues after negative feedback (Yield 2); (3) the tendency to change an answer after negative feedback (Shift), (4) and the total interrogative suggestibility score, which provides an

indication of susceptibility to suggestion (Gudjonsson, 1997; Smeets et al., 2009). Previous research showed that this GSS short form (without a retention interval) does not affect total or subscale scores of the original GSS (Smeets et al., 2009).

(8) Gudjonsson Compliance Scale (GCS; Gudjonsson, 1989; Smeets, 2008). The concept of compliance is based on studies of Milgram (1974) on obedience. Some people act compliant when they are put under pressure by authority figures (Gudjonsson, Sigurdsson et al., 2002). The GCS has been found to discriminate between suspects who are able to resist pressure, and those who conform to requests during interrogations in order to avoid confrontation and conflict (Gudjonsson, Sigurdsson, et al., 2002). The GCS contains 20 items with true–false statements, which provide an indication of how suspects tend to cope with the demand characteristics of police interrogations (Gudjonsson, 1989). A higher score on the GCS reflects a higher level of compliance.

2.2.4. Statistical analyses

IBM SPSS v24 was used to analyse the data. The scores obtained in the present sample were compared to data from previous studies using one-way ANOVAs, and Tukey HSD post hoc tests.

2.3. Results

Before performing the analyses, participants were screened for possible malingering using a Dutch short form of the WCS (Merckelbach et al., 2008, 2014). Test results showed that 14 participants (7.9%) scored positive on possible feigning. In addition, 15 participants (8.4%) had missing WCS data. These participants were excluded from the analyses described below, resulting in a total sample of $N = 149$.

The BJMHS (Steadman et al., 2007) indicated that for 90 (60.4%) participants serious concerns were raised about their mental health, requiring further evaluation.

Six participants (4.0%) stated they drank alcohol on a daily basis, and 32 participants (21.5%) stated they used drugs (e.g. marijuana, cocaine, GHB) on a daily basis.

The ADHD screener (Kooij, 2009) indicated that for 57 participants (38.3%) further examination regarding possible ADHD was deemed necessary.

Mean scores on the Depression, Anxiety and Stress subscales of the DASS (De Beurs et al., 2001) are presented in Table 2, and compared to mean scores of a general population and a clinical sample (De Beurs et al., 2001). The general population sample comprised 289 undergraduate psychology students ($M_{age} = 23$, $SD_{age} = 5.6$, age range = 18–53; 65 male, 224 female). The clinical sample comprised 173 outpatients of a psychiatric hospital ($M_{age} = 39$, $SD_{age} = 9.1$, age range = 21–73; 63 male,

Table 2. Means and standard deviations of the DASS subscales found in this study, in a clinical population (outpatients of a psychiatric hospital, suffering from a variety of mental health problems), and in a general population (undergraduate students)

	Police suspects ^a	Clinical population ^b	General population ^b
	N = 149	N = 173	N = 289
	M (SD)	M (SD)	M (SD)
Depression	11.6 (9.4)	13.4 (11.9)	5.7 (7.7)
Anxiety	9.2 (7.4)	11.7 (10.1)	4.2 (5.9)
Stress	12.3 (7.9)	15.7 (10.2)	8.4 (8.0)

^aThis study.

^bDe Beurs et al. (2001).

Table 3. Means and standard deviations on the SCL-90-R-NL found in this study compared to previous research among Dutch police suspects, Dutch prisoners and the general population

Measure	Dutch police suspects ^a	Dutch prisoners ^b	Dutch general population ^b
	N = 149	N = 257	N = 2394
	M (SD)	M (SD)	M (SD)
Depression	30.4 (13.7)	31.7 (13.2)	21.6 (7.6)
Somatisation	20.3 (7.1)	20.3 (8.6)	16.7 (5.3)
Hostility	9.3 (3.4)	9.3 (4.0)	7.2 (2.1)
Anxiety	16.6 (6.3)	17.1 (7.7)	12.8 (4.4)
Agoraphobia	8.9 (2.8)	9.1 (3.4)	7.9 (2.3)
Obsessive-Compulsive	16.4 (6.2)	15.3 (5.9)	12.6 (4.3)
Interpersonal sensitivity	29.4 (10.3)	28.7 (11.4)	24.1 (7.6)
Sleeping problems	6.6 (3.0)	7.1 (3.8)	4.5 (2.2)
Psychoneuroticism	151.2 (47.2)	153.1 (52.0)	118.3 (32.4)

^aThis study.

^bArrindell and Ettema (2005) (i.e. the SCL-90-R-NL Manual).

110 female), suffering from a variety of psychiatric problems (e.g. panic disorder, obsessive compulsive disorder, depression). We found significant differences between groups for Depression, $F(2, 608) = 41.50, p = .000$, Anxiety, $F(2, 608) = 56.27, p = .000$ and Stress, $F(2, 608) = 39.50, p = .000$. Tukey post hoc tests showed that the means of the three subscales differed significantly between all three samples, all p 's < .01, except for the mean of the Depression scale found in this study, which did not differ significantly from the mean in a clinical sample ($p = .21$), but was significantly higher than the mean in a general sample ($p = .000$).

Participants' scores on the SCL-90-R-NL are shown in Table 3 and compared to scores of a Dutch prison sample and a general population sample (Arrindell & Ettema, 2005). The prison sample comprised 257 men (no women) detained in regular prisons ($M_{age} = 31.6, SD_{age} = 9.8$, range = 18–66), the general population sample comprised 2394 Dutch inhabitants (50% male, 50% female; $M_{age} = 41.1, SD_{age} = 14.5$, range = 17–88). Significant differences between groups were found for Depression, $F(2, 1432) = 146.24, p = .000$, Somatisation, $F(2, 1432) = 48.64, p = .000$, Hostility, $F(2, 1432) = 88.66, p = .000$, Anxiety, $F(2, 1432) = 86.20, p = .000$, Agoraphobia, $F(2, 1432) = 27.73, p = .000$, Obsessive-Compulsive, $F(2, 1432) = 62.00, p = .000$, Interpersonal sensitivity, $F(2, 1432) = 45.50, p = .000$, Sleep Problems, $F(2, 1432) = 122.56, p = .000$ and overall Psychological distress, $F(2, 1432) = 114.83, p = .000$. Tukey post hoc tests showed that the scores of the subscales did not significantly differ between our police suspects and prisoners, all p 's > .05, however, the scores of both police suspects and prisoners were significantly higher than those of the general population sample, all p 's = .000.

The mean scores on the GSS (short form) are shown in Table 4 and compared to scores obtained in two previous studies in Dutch general population samples who used the same GSS short form (Hansen, Smeets, & Jelacic, 2010; Smeets et al., 2009). Hansen et al. (2010) tested 90 undergraduate students ($M_{age} = 21, SD_{age} = 3.54$, range = 18–45; 29 male, 61 female), and Smeets et al. (2009) tested 80 undergraduate students ($M_{age} = 21, SD_{age} = 2.79$, range unspecified; 19 male, 61 female). There were significant differences between groups for Yield 1, $F(2, 191) = 7.67, p < .01$, Yield 2, $F(2, 191) = 28.96, p = .000$, Shift, $F(2, 191) = 22.31, p = .000$ and the Total score, $F(2, 191) = 26.37, p = .000$. Tukey post hoc tests revealed that the GSS scores of our sample were higher compared to scores obtained in the two previous studies, all p 's < .01, except for the score on Yield 1 found in our sample, which did not differ from the score found in a general population sample, $p > .05$ (Smeets et al., 2009).

Table 4. Means and standard deviations on the Gudjonsson Suggestibility Scale found in this study and two previous Dutch studies

	Police suspects this study	General population study Smeets et al. (2009) ^a	General population study Hansen et al. (2010) ^b
	N = 144	N = 20	N = 30
	M (SD)	M (SD)	M (SD)
Yield 1	6.42 (3.34)	4.80 (2.76)	4.17 (2.38)
Yield 2	9.42 (3.60)	5.40 (3.59)	4.93 (2.46)
Shift	5.65 (2.87)	3.65 (1.79)	2.33 (1.75)
Total	12.07 (4.44)	8.45 (3.32)	6.47 (2.93)

^aResults of the “no free recall/no delay” group ($n = 20$, $M_{age} = 19$, $SD_{age} = 1.84$, 4 male, 16 female); thus, the administration of the GSS of this group was the same as the administration of the GSS in the two other groups mentioned in this table.

^bResults of the group who received standard instructions for answering questions (no demographic data were provided by the authors).

Table 5. Means and standard deviations on the GCS found in this study and in two previous Dutch studies

	N	Mean	SD
Police suspects ^a	149	10.1	3.6
General population ^b	120	9.5	3.6
University students ^c	30	10.0	2.8

^aThis study.

^bSmeets (2008).

^cHansen et al. (2010).

The scores on the GCS are shown in Table 5 and compared to those from two previous studies (Hansen et al., 2010; Smeets, 2008), who used the same version of the GCS in the same Dutch general population samples. There were no significant differences found between the three samples, $F(2, 296) = .99$, $p = .37$.

2.4. Discussion

Study 1 examined a number of key psychological vulnerabilities in Dutch police suspects, that is, mental health problems, an abnormal mental state and the personality characteristics interrogative suggestibility and compliance.

We found that 60.4% of police suspects screened positively for further mental health examination, based on the BJMHS. Baksheev et al. (2012) assessed 150 suspects ($M_{age} = 30.4$, $SD_{age} = 9.0$; 90.7% male, 9.3% female) detained in two police stations in Melbourne, Australia, and found that 58.3% screened positively on the BJMHS. Dorn, Ceelen, Buster, and Das (2013) assessed 248 suspects ($M_{age} = 32.4$, $SD_{age} = 11.9$; 92% male, 8% female) in Amsterdam police detention centres, and found that the BJMHS screened 40% suspects as in need of further mental health examination. Both samples are fairly comparable to our sample in terms of age and gender composition.

Results showed that 21.5% of our police suspects used illegal drugs on a daily basis, which seems to be a lot higher than the general Dutch population (18–64 years) in which a lifetime prevalence of 3.8% and a 12-month prevalence of 0.9% was found (De Graaf, Ten Have, Van Gool, & Van Dorsselaer, 2012). Only 4% of police suspects reported they used alcohol on a daily basis, which seems to be comparable to the 12-month prevalence of 3.7% found in the Dutch population (De Graaf et al., 2012).

In our sample, 38.3% scored positive on a screener for ADHD. The prevalence of ADHD among Dutch police suspects has not been subject of previous research, yet compared to the prevalence of ADHD among adults from the Dutch general population, which is 2.1% (Tuithof, Ten Have, Van Dorsselaer, & De Graaf, 2014), ADHD seems to be (much) more common in police detainees.

On the DASS, police suspects scored significantly higher than a general population sample, and quite similar to a psychiatric outpatients sample, except for the Depression scale (De Beurs et al., 2001). The clinical sample was quite comparable with the present sample in terms of age.

The scores on the SCL-90-R-NL in our sample were also higher in comparison to a Dutch general population sample, but did not differ significantly from scores of a Dutch prison sample (both samples provided in the Dutch SCL-90-R-NL test manual; Arrindell & Ettema, 2005). Age and gender composition of our sample and the Dutch prison sample were fairly similar.

The scores on interrogative suggestibility were significantly higher compared to previous studies in general population samples (Hansen et al., 2010; Smeets et al., 2009), which could be due the fact that research (Gudjonsson, 2003) has revealed higher levels of interrogative suggestibility in individuals with intellectual disabilities and mental health problems (e.g. anxiety, personality disorders). In contrast, compliance scores did not differ significantly from Dutch general population samples (Hansen et al., 2010; Smeets, 2008). Again, it must be noted that these samples only included undergraduate students.

In sum, our findings indicate that 38.3% of police suspects needed further assessment for ADHD, and 60.4% needed a more comprehensive mental health examination. Levels of self-reported psychopathology, depression, anxiety, stress, drug use and interrogative suggestibility were significantly higher compared to general Dutch population samples. In line with previous studies (Dorn et al., 2013; Gudjonsson, 2003; Herrington & Roberts, 2012; Kassin et al., 2010), these findings demonstrate that police officers will frequently meet psychologically vulnerable suspects in their interrogation room – with the associated risks.

3. Study 2

3.1. Introduction

The findings of Study 1 confirm the high prevalence of psychological vulnerabilities among Dutch police suspects, echoing findings of previous studies (Baksheev et al., 2012; Blaauw, Kerkhof, & Vermunt, 1998; Gudjonsson et al., 1993). With such high base rates of psychological vulnerability, the question to what extent police detectives are able to identify vulnerable suspects becomes even more pertinent. We hypothesise that police officers who received specialised training in interrogation methods would have a more realistic view of the base rate of vulnerable suspects, compared to those who did not receive specialised training (Angermeyer & Dietrich, 2006; Herrington & Roberts, 2012; Lamb, Weinberger, & DeCuir, 2002; Ogloff et al., 2012). We are also interested in exploring what type of precautions police detectives take when they encounter vulnerable suspects in the interrogation room. To examine these research questions, we conducted an online survey among police detectives working at different divisions of the Dutch National Police.

3.2. Method

3.2.1. Participants and procedure

Police detectives of different subdivisions (e.g. departments of criminal investigation, sexual offences and financial crime) in seven different police regions of the Netherlands (i.e. Amsterdam, Limburg, Midden-Nederland, Oost-Brabant, Oost-Nederland, Rotterdam and Zeeland West-Brabant) were invited by email in May 2016. They were asked to participate anonymously in a study on vulnerable suspects by completing an online questionnaire. The invitation email was sent to the manager of the division, with the request to forward the email, after his or her approval, to his or her team members,

and to managers of other detective subdivisions. Repeated invitation requests were sent after three and five weeks. Because of a major reorganisation of the Dutch National Police at the time of Study 2, and the snowball method used, it was not feasible to keep a record of exactly how many police detectives were invited to participate. Eventually, 141 police detectives filled out the questionnaire.

3.2.2. Questionnaire

The questionnaire developed for Study 2 comprised 16 items. It started with a brief introduction to the study. Next, 10 questions were asked about demographic characteristics, such as age, gender, level of experience as a police officer/detective, education and enrolment in specialised criminal investigation/detective courses and advanced interrogation courses. Further, participants were asked with open-ended questions how many interrogations they usually perform during one week (item 11), how many vulnerable suspects they had encountered during the past year (item 12), how they had recognised these vulnerable suspects (item 13), if they took any precautions when interrogating these suspects (item 14), and if so, what type of precautions they took (item 15), or if not, why they did not take precautions (item 16). After completing the questionnaire, a short briefing about the study was provided.

3.2.3. Data analysis

Out of the total sample ($N = 141$), 38 questionnaires were incomplete and dropped from the analyses, which resulted in a total N of 103. The analyses for Study 2 were performed with IBM SPSS v24. First, means, standard deviations and percentages were calculated for the descriptive variables, and second, the effect of the number of completed advanced detective courses on the number of identified vulnerable suspects was explored with a Kruskal–Wallis test.

3.3. Results

The age of the police detectives ($N = 103$) ranged from 23 to 63 ($M_{age} = 44.74$; $SD_{age} = 11.95$). The sample was predominantly male ($n = 69$; 70%). They had worked an average of 21 years in the police force ($M = 21.39$; $SD = 12.92$), and about 11 years at an investigative unit ($M = 11.42$; $SD = 9.09$). About half of the police detectives ($n = 51$; 49.5%) had followed one or two advanced level investigative courses (e.g. courses on specific procedures or complex police investigations, for example in regard to severe, financial or sexual crimes), about one-third ($n = 29$; 28.3%) had followed three or more advanced level investigative courses, yet 23 (22.3%) police detectives had not completed any advanced training.

On average, police detectives performed 2.54 interrogations per week ($SD = 3.13$, range = 0–15). Their estimate of how many vulnerable suspects they saw during the past 12 months ranged from 0 to 90 ($M = 4.63$, $SD = 12.13$, $Mdn = .00$). Most police detectives ($n = 57$; 55.3%) answered they had not seen a vulnerable suspect during the past 12 months.

Moreover, 78 (75.7%) police detectives had not received any advanced interrogation training, 22 (21.4%) police detectives had completed one advanced interrogation training and only three (2.9%) police detectives received two or more advanced interrogation trainings (e.g. specific training on interrogating vulnerable witnesses and suspects). The three detectives who received two or more specialised interrogation trainings gave somewhat different answers. The first detective answered that he/she performed 152 interrogations in the past 12 months, and that he/she identified only five vulnerable suspects (3.3% of the interrogations)—without any further explanation. The second detective stated he/she interrogated 52 suspects, but was called in for assistance during only one interrogation (1.9%) of a vulnerable suspect a suspect with known mental illness. The third detective stated he/she had interrogated 52 suspects in the past 12 months, and to have seen 52 vulnerable suspects as well (100% of the interrogations).

Next, we explored whether police officers are able to identify vulnerable suspects. We did not provide a definition of a vulnerable suspect in order not to influence the answers of the detectives, yet we asked them: “How did you recognise a vulnerable suspect?” Only 46 police detectives

answered this question. Fifteen police detectives (14.6%) stated they knew beforehand they were going to interrogate a vulnerable suspect (because of a known mental illness or substance use disorder or because the suspect had previously been admitted to a psychiatric institution), and 17 police detectives (16.5%) observed abnormal behaviours during the interrogation (i.e. the suspect acted strangely, did not understand questions, or did not respond adequately to questions). A combination of the latter two situations was mentioned by 13 (12.6%) police detectives. One detective stated that all suspects are vulnerable.

In addition, police detectives were asked if they took any precautions when they thought a suspect might be a vulnerable suspect. About half ($n = 57$; 55.3%) stated they did not take any special precautions. A probing question to describe which precautions they took in case they met a vulnerable suspect during interrogation was answered by 43 police officers, who mentioned the following options: seeking the assistance of a police psychologist ($n = 17$; 39.5%), contacting the public prosecutor or their supervisor before they started the interrogation ($n = 4$; 9.3%), enlisting the help of a specialised police detective to perform the interrogation ($n = 3$; 7.0%), adjustment of interrogation techniques ($n = 2$; 4.7%), audio recording the interrogation ($n = 2$; 4.7%) or a combination of any of these ($n = 15$; 34.6%). Contrary to our hypothesis, we did not find a significant association between the number of specialised criminal investigation courses taken (none vs. 1–2 vs. ≥ 3) and the number of identified vulnerable suspects reported over a period of 12 months, $H(2) = 4.94$, $p = .09$, with a mean rank of 56.91 for none ($n = 23$), 52.40 for 1–2 ($n = 51$) and 47.40 for ≥ 3 ($n = 29$) specialised criminal investigation courses. We also did not find a significant association between the number of specific interrogation courses taken (none vs. 1 vs. ≥ 2) and the number of identified vulnerable suspects, $H(2) = 5.60$, $p = .06$, with a mean rank of 55.21 for none ($n = 78$), 40.50 for 1 ($n = 22$) and 53.00 for ≥ 2 ($n = 3$) specialised interrogation courses.

3.4. Discussion

Study 2 explored the views of police detectives on the identification of vulnerable suspects. We hypothesised that most police detectives do not recognise vulnerable suspects and therefore underestimate the base rate of vulnerability in suspects; we also hypothesised that specialised interrogation training would result in more realistic base rate estimations ability to detect vulnerable suspects (Angermeyer & Dietrich, 2006; Herrington & Roberts, 2012; Lamb et al., 2002). In addition, we asked police detectives about the precautions they take when they encounter vulnerable suspects.

Our participants ($N = 103$) had an average of 21 years' experience working in the police force, and 11 years as a police detective in a criminal investigation unit. Most police detectives (about 78%) had completed advanced criminal investigation courses, yet, despite the high number of years of police and detective experience, most of them (about 74%) had never taken an advanced interrogation course. Police detectives reported they had encountered an average of five vulnerable suspects during the past 12 months, while they reported an average of 2.5 interrogations per week. About 55% of detectives stated they had not interrogated any vulnerable suspects in the past 12 months.

The number of completed courses on criminal investigation was unrelated to the number of vulnerable suspects police detectives reported to have seen during the previous 12 months. Successfully completing a specialised interrogation course seemed unrelated to a more realistic base rate expectation regarding vulnerable suspects. Even the three detectives who received the most advanced training in interrogating vulnerable suspects currently available in the Netherlands (Politieacademie, 2017) gave quite different answers to the question how many vulnerable suspects they had seen during the past year (2, 34 and 100% of the interrogations, respectively). About half of all detectives (55%) stated they did not take special precautions when they knew they were interrogating a vulnerable suspect. About 42% responded they would request the assistance of a police psychologist, public prosecutor, supervisor or a specialised police interrogator, adjust their interrogation techniques, and/or audiotape the interview, when interrogating a vulnerable suspect.

4. General discussion

The findings of Study 1 indicate that a majority (around 60%) of police suspects ($N = 149$) has mental health problems, which concurs with previous studies (Blaauw et al., 1998; Ceelen et al., 2012; Ogloff et al., 2012). Study 2 reveals that police detectives ($N = 103$) on average reported 4.63 vulnerable suspects over the course of 132 interrogations in a year's time, resulting in an estimated prevalence of 3.5%, which is obviously a grave underestimation compared to the actual prevalence rate of 60% as determined by means of psychological assessment.

The combined findings of Study 1 and 2 suggest that base rate neglect, a form of selective attention to pertinent information whereby base rate information is ignored (Case, Fantino, & Goodie, 1999), regarding psychological vulnerabilities in suspects is a problem among police detectives. Many police detectives appear to hold inaccurate beliefs regarding vulnerabilities in suspects, and these beliefs may have implications for their professional conduct and decision-making, for instance, in terms of not taking precautions when interrogating vulnerable people. Without accurate knowledge of the high prevalence of psychological vulnerabilities in police suspects, detectives are less likely to notice these vulnerabilities and to take them into account, as the findings of Study 2 demonstrate.

Second, about three-quarters of our police detectives stated they had not received specialised interrogation training. This is worrisome, because interrogating suspects is core businesses of detective work (Farrugia & Milne, 2012; Gudjonsson, 2003). Previous research has shown that training and repeated feedback is pivotal for effective interrogation (Clarke, Milne, & Bull, 2011; Farrugia & Milne, 2012; Vrij, 2003). It has been previously shown that even after extensive, three-weeks interrogation training, interviewing skills deteriorate over time (Griffiths & Milne, 2006), suggesting that basic training alone is not enough. Continued coaching and supervision of interrogations is essential, because police officers find it difficult to maintain complex social and communication skills after basic training (Clarke et al., 2011).

5. Strengths and limitations

A strong point of Study 1 is that the assessments took place in the real-world environment of police detention centres, which not necessarily offer optimal conditions for mental health. Gudjonsson et al. (1993) and Baksheev et al. (2012) also conducted their studies in police detention centres and these conditions obviously increase the ecological validity of the findings. We used both self-report (e.g. SCL-90-R-NL, DASS) methods and an assessor-administered rating tool (BJMHS) to assess mental health problems, with both revealing high prevalence rates, adding to the robustness of our findings. Another strong point of Study 1, compared to prior ones on the same topic, is that we included a measure of positive malingering in our test battery and excluded suspects who screened positive on this measure. Thus, we made sure our (high) prevalence rate would not be due to over-reporting. An important limitation of Study 1—yet one which could not be prevented—is that an unknown number of suspects could not be included in the study, for different reasons (e.g. unwillingness to participate, being aggressive, poor language proficiency or alcohol or drug intoxication). Another limitation is that we were unable to control the exact circumstances in which the assessments took place. The rooms in the six police detention centres slightly differed in terms of colour, and the presence of a window and day light, which could be a subject for further research.

A strength of Study 2 is that it provides insight in the views of Dutch police officers about their ability to identify vulnerable suspects, and how they execute interrogations of these suspects. An important limitation of Study 2 is that we were unable to control the recruitment process, due to the extensive reorganisation of the Dutch police at the time of the study. An online questionnaire was chosen instead of another research method in order to invite as many police detectives as possible and because a qualitative research method would have taken a substantially longer time. In addition, we were not able to send an email to all Dutch police detectives because we did not have access to email addresses of all detective subdivisions of the (former) 26 police forces. Therefore, known contacts from different detective subdivisions in seven police forces were approached and

asked to forward the invitation email to members of their teams and other detective subdivisions. This snowball method to recruit the detectives may have resulted in selection bias. Because we only know in which police region (for reasons of anonymity) the detectives worked, it is unknown to what extent the 103 participants are representative for all Dutch police detectives. A second limitation is that the questionnaire did not contain a definition of a vulnerable suspect. This was done on purpose in order not to influence the answers of the police detectives about their knowledge of psychological vulnerabilities in police suspects, yet in hindsight a definition could perhaps have provided more insight.

6. Conclusion

Psychological vulnerabilities are highly prevalent among police suspects. Compounded by the serious underestimation of the base rate of psychological vulnerability by police detectives and their tendency to not take special precautions during interrogations, vulnerable suspects may face risks in Dutch interrogation rooms. Important first steps are raising awareness of the high base rate of different psychological vulnerabilities in suspects, and appealing to police officers to take precautions when interrogating vulnerable suspects. Subsequent steps need to include special training in advanced interrogation techniques, especially for detectives who are involved in more complex cases, as well as continued supervision and feedback regarding interrogation style.

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