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False confessions to police and their relationship with conduct disorder, ADHD, and life adversity

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ABSTRACT

Attention deficit hyperactivity (ADHD) symptoms and life adversity have been associated with the reporting of false confessions to crime, but it is not known if these predict false confessions beyond conduct disorder. The participants were 11,388 students in further education in Iceland, who completed a questionnaire anonymously in class. Current ADHD symptoms were measured by the Barkley Current Symptom Scale. Conduct disorder was measured by the Oregon Adolescent Conduct Disorder Screen. Emotional lability was measured by items from the Symptom Check List-90. Negative life events and victimisation from group bullying were measured as indicators of life adversity. Out of 10,749 participants who provided information about interrogation and false confessions, 2104 (19.6%) reported having been interrogated at a police station as a suspect, and of those 261 (12.4%) reported having given a false confession to the police. Logistic regression showed that after controlling for gender, age and emotional lability both ADHD and negative life events predicted false confession above that of conduct disorder. The findings suggest that suspects' resilience to resist pressure from police and peers is weakened by their condition rather than their false confession representing irresponsible and delinquent behaviour associated with conduct disorder.

1. Introduction

In recent years we have developed greater understanding about factors that lead suspects to falsely confess to crimes during interrogation (Gudjonsson, 2003; Kassin et al., 2010). The emerging evidence is that the reasons for false confessions are multifaceted, but they usually involve two key factors: (a) custodial and interrogative pressure, and (b) psychological vulnerabilities (Gudjonsson & Pearse, 2011). With respect to psychological vulnerabilities, some groups of individuals are considered particularly vulnerable to giving a false confession during interrogation, including suspects with learning disabilities (Gudjonsson, 2010; Gudjonsson & MacKeith, 1994; Perske, 2008), Attention Deficit Hyperactivity Disorder symptoms (ADHD) (Gudjonsson, Sigurdsson, Einarsson, Bragason, & Newton, 2008), persons actively involved in delinquency and criminal offending (Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigfusdottir, 2006; Sigurdsson & Gudjonsson, 2001), a history of life adversity (Gudjonsson, Sigurdsson, Sigfusdottir, & Asgeirsdottir, 2008; Gudjonsson, Sigurdsson, & Sigfusdottir, 2009a,b, 2010) and emotional lability (Gudjonsson, Sigurdsson, Young, Newton, & Peersen, 2009).

What has not been established empirically from previous research is the potential interplay between these factors in predicting false confessions or the relationship between conduct disorder and false confession, yet this is likely to be an important mediating factor due to its strong association with offending and irresponsible behaviour in young persons (e.g. Lynam, 1996; Young, Misch, Collins, & Gudjonsson, 2011) and antisocial personality disorder (Gudjonsson, Sigurdsson, Bragason, Einarsson, & Valdimarsdottir, 2004). Persons with conduct/antisocial personality disorder are considered vulnerable to giving false confessions due to their disregard for telling the truth and delinquent lifestyle (Gudjonsson, 2003).

ADHD is associated with conduct disorder (Waschbusch, 2002) and both ADHD and conduct disorder are associated with bullying behaviour and mental health problems (Bacchini, Affuso, & Trotta, 2008). Do ADHD symptoms and history of life adversity predict false confessions among young persons being interrogated beyond that of conduct disorder? Gudjonsson, Sigurdsson, Einarsson, et al. (2008) found that 41% of prisoners with ADHD symptoms reported a history of false confession in comparison to 18% of non-ADHD

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prison controls. A further analysis of this data revealed that ADHD symptoms were a significant predictor of false confessions above antisocial personality disorder (Gudjonsson, Sigurdsson, Einarsson, Bragason, & Newton, 2010). This suggests that the high rate of false confessions reported among the ADHD group was not significantly mediated by their antisocial personality disorder. The same may hold true for conduct disorder among young persons who are symptomatic for ADHD.

The strong association previously reported between false confessions and life adversity suggests that life adversity may have an independent relationship with false confessions above that of conduct disorder and ADHD (Gudjonsson, Sigurdsson, Sigfusdottir, et al., 2008). Thus we also wished to examine whether life adversity predicts false confessions above the presence of conduct disorder and ADHD symptoms.

In summary, the aim of the present study is to investigate the relative contribution of three types of psychological vulnerabilities to giving a false confession to police: conduct disorder, ADHD, and history of life adversity. In the present study we assessed life adversity using two measures; a measure of negative life events and a measure of victimisation from group bullying. In view of the comorbidity between ADHD symptoms and emotional lability, symptoms of anxiety and depression will be controlled for in the analyses. We test two hypotheses. Hypothesis 1 is that conduct disorder, ADHD and life adversity are all significant predictors of false confessions. Hypothesis 2 is that both ADHD symptoms and life adversity predict false confessions above that of conduct disorder after controlling for gender, age and emotional lability.

2. Method

2.1. Participants

The sample was comprised of 11,388 students in further education in Iceland (upper secondary school) and 95% of the sample fell in the age group 16–24 years (range 15–25; 3.6% did not indicate their age). All 40 colleges of further education in Iceland were represented and the current sample included 70.5% of all students registered in the colleges at the time of the data collection, which took place in November 2010, apart from one school where the data collection took place in January 2011. There were 5439 (47.8%) boys and 5837 (51.3%) girls (112 participants did not indicate their gender).

2.2. Measures

A questionnaire was developed to ask respondents about their family circumstances, education, mental health problems, antisocial behavior, constructive leisure activities and attitudes.

The key measures used in the current study were as follows:

2.2.1. The Oregon adolescent depression project conduct disorder screen (OADP-CDS; Lewinsohn, Rohde, & Farrington, 2000)

This is a six item self-report screen of adolescent conduct behaviours rated on a 4-point Likert scale ('never', 'sometimes', 'often', 'always') providing a total score ranging between 6 and 24. The OADP-CDS has been shown to have good internal consistency, test–retest reliability, and good screening efficiency for detecting lifetime conduct disorder (Lewinsohn et al., 2000). The authors of the scale recommend a cut-off score of 10 or higher as an indicator of the presence of conduct disorder. In the present study, the OADP-CDS was also used as a continuous measure.

2.2.2. Barkley current symptoms scale (Barkley, 1998)

This measure corresponds with DSM-IV criteria for ADHD symptoms. Each of the 18 items, nine items relating to inattention and nine items to hyperactivity/impulsivity, are scored on a 4-point rating scale for frequency of symptoms experienced during the previous six months. Scores ranged between 0 and 27 for each of the two subscales (inattention and hyperactivity/impulsivity) and 0–54 for the Total scale.

In the current study, a screening diagnosis for ADHD symptoms was obtained if six or more of the nine inattention or hyperactivity/impulsivity items were endorsed as either 'often' or 'very often'. In addition, the two subscales and the Total scale were used in the current study as continuous measures.

2.2.3. Questions about ADHD diagnosis and medication

The participants were specifically asked 'Have you been diagnosed with ADHD?' and 'Are you currently on medication for ADHD?' (Both answers endorsed as either 'Yes' or 'No').

2.2.4. Bully victim scale

This measure was developed by the Icelandic Institute for Educational Research and Icelandic Centre for Social Research and Analysis and used in previous research (Gudjonsson, Sigurdsson, & Sigfusdottir, 2010; Sigfusdottir, Gudjonsson, & Sigurdsson, 2010). It is comprised of three items, which were preceded by the following question: 'During the last 12 months, how often have you...?'.

(a) Been individually teased by a whole group of people.
(b) A group attacked you and hurt you when you were alone.
(c) Been in a group that was attacked by another group.

Each item was rated on a five-point scale ('Never', 'Once', 'Twice', '3–4 times', '5 times or more'). The possible range of scores falls between 0 and 12 providing a continuous measure. A score of 0 versus 1 or higher (a categorical score) was used to distinguish those with no history of being subjected to group bullying (i.e., 0 = 'Never' obtained with regard to a, b and c above) from those with a history of bullying (i.e., a score of 1 or above).

2.2.5. Negative life events scale (Gudjonsson et al., 2009b)

Participants were asked to endorse (yes/no) the following 12 items selected to represent stressful life events: You have experienced a serious accident, You have suffered serious illness, Your parents are divorced or separated, You have had serious arguments with your parents, You have witnessed a serious argument between your parents, You have witnessed physical abuse at home involving an adult, You have experienced physical abuse at home involving an adult, Your parent or sibling has died, Your friend has died, You have been rejected by friends or boyfriend/girlfriend and You have been expelled from school, and You have experienced sexual abuse. Scores ranged between 0–12.

2.2.6. Emotional lability

Twenty-two items, 12 somatisation/anxiety and 10 depression items, were chosen from the Symptom Check List-90 (SCL-90; Derogatis, Lipman, Covi, & Rickels, 1971). The items were rated on a four-point frequency scale ('never', 'seldom', 'sometimes' and 'often') to indicate severity of symptoms (Sigfusdottir, Farkas, & Silver, 2004). The items from the somatisation, anxiety and depression scales were combined into one scale in the current study (labelled 'emotional lability').

2.2.7. Police interrogation and confessions questionnaire (Gudjonsson, Sigurdsson, Sigfusdottir, et al., 2008)

Participants were asked about their experiences of police interrogation, confessions and false confessions as follows:

'How often have you been interrogated at a police station as a suspect in a criminal offence'? (Only tick one column in each category): 'Never', 'Once', 'Twice', '3–5 times', '6 or more times'.

Those participants who reported having been interrogated at a police station for a criminal offence were asked to indicate the kind of offence for which they were interrogated (if more than one occasion then they were asked to rate the most serious offence) from the following list: financial offence (theft, burglary, robbery), traffic violation, drug offence, sexual offence, criminal damage, violent offence, and other.

The participants were then asked: "Did you commit the offence?" (answered either 'Yes' or 'No'). With regard to false confession the participants were asked:

'Have you ever confessed during police interrogation to a criminal offence that you did not commit (i.e., you had nothing to do with the offence and are completely innocent)?' The reply was rated on the five-point scale: 'Never', 'Once', 'Twice', '3–5 times', '6 or more times'.

Participants who indicated that they had falsely confessed to a criminal offence were asked to indicate the type of offence to which they had falsely confessed using the above list of offences. They were also asked to categorise the reasons for the false confession ("What was the reason for you confessing to something you did not do?") from the following: to cover up for somebody else, had been threatened, due to pressure from police, wanted to get away from the police, was in alcohol/drug withdrawal, was taking revenge on the police, cannot remember the reason, and other.

2.3. Procedure

The students were approached by teachers in scheduled classes and invited to participate in the survey. The participants were told that their answers would be anonymous. The questionnaire took up to one hour to complete and upon completion the students sealed them in a blank envelope and left it by the exit of the class room.

3. Results

3.1. Interrogation and false confessions

Out of the 11,388 participants, 94% answered the question about whether or not they had been interrogated by police. Of the 10,749 participants, 20% reported having been interrogated at a police station, and of these 261 12% reported having given a false confession to the police. Males were significantly more likely to have been interrogated by police at a police station than females, 28% and 16%, respectively: X^2 ($df = 1$) = 461.0, $p < 0.001$. Among those interrogated, the false confession rate was significantly higher among males (14%) than females (9%): X^2 ($df = 1$) = 11.0, $p < 0.001$, odds ratio = 1.7. False confessions were significantly more common (18.1% versus 8.5%) among participants who were 17 years or younger (i.e., juveniles) than the older participants: X^2 ($df = 1$) = 40.2, $p < 0.001$, odds ratio = 2.4.

The most common offences confessed to falsely were: theft (21%), traffic violations (20%), violent offences (14%), drug related offences (14%), criminal damage (13%), sexual offences (9%), and other – unspecified (9%).

The main reasons given for the false confessions were: covering up for another person (29%), police pressure (17%), threats (12%), wanting to get out of custody (12%), substance use withdrawal (3%), taking revenge (3%), could not recall the reason (12%), and other – unspecified (12%).

Out of 252 cases of reported false confessions where data were available, 77 (31%) of the participants reported having been convicted of the offence to which they had falsely confessed.

3.2. False confessors and non-false confessors on the psychological measures

In order to test for differences on the five continuous measures (Barkley ADHD current symptom scale, Conduct disorder screen, Emotional lability scale, Negative life event scale, and Bully victim scale) between the false confessors and non-false confessors, Multivariate Analysis of Variance (MANOVA) was computed. False confession versus no false confession was the independent (fixed) variable and gender and age were used as covariates in the analysis due to their possible effect (there were significant gender and age effects). There was a significant main effect (false confession) after controlling for gender and age (Pillai's Trace = 0.142; $F = 61.3$, $p < 0.001$). There were significant univariate effects with respect to false confessors and non-false confessors on all five of the outcome measures. The results are shown in Table 1 where the t-values and effect sizes (Cohen's d) are provided. There were medium effect size differences between the false confessors and non-false confessors with regard to conduct disorder, negative life events and being a bully victim, and low effect sizes for ADHD symptoms and emotional lability. All the scales had high Cronbach's α (range 0.79–0.94).

3.3. Correlations between the measures

There was a high correlation ($r = 0.77$) between inattention and hyperactivity/impulsivity items on the Barkley ADHD Current Symptom Scales and in view of this only the total score is presented in the results. Table 2 gives the correlations between the five outcome measures listed in Table 1. All the corrections are significant with small to large effect sizes. ADHD total symptoms were most strongly associated with emotional lability ($r = 0.50$), conduct disorder ($r = 0.48$) and negative life events ($r = 0.31$), representing medium to large effect sizes. Conduct disorder was significantly correlated with emotional lability, negative life events and being a bully victim, all representing medium effect sizes ($r = 0.34$–0.38). The correlation between negative life events and being a bully victim represented low effect ($r = 0.29$).

3.4. Predictors of false confessions: categorical variables

Table 3 shows the relationship between false confessors and non-false confessors on the three ADHD variables (Reported a diagnosis for ADHD; Currently on medication for ADHD; Currently meeting DSM-IV screen for total symptoms) and the four categorical predictors: conduct disorder (recommended cut-off score of 10 by the test authors used), being a bully victim (a score > 0); emotional lability and negative life events (a score one standard deviation above the mean for participants interrogated). All seven predictors significantly discriminated between those who reported having given a false confession and those who had not with small to medium effect sizes as determined by odds ratios (ORs). The OR was much larger for Currently on medication for ADHD (OR = 4.5) than the other two ADHD measures (OR = 2.6 and 2.5). For the non-ADHD predictors, being a bully victim, having experienced negative life events and conduct disorder were the three best predictors (ORs = 4.5, 3.6 and 3.0, respectively). Emotional lability was the weakest predictor (OR = 1.5).

3.5. Do ADHD and life adversity predict false confession beyond conduct disorder?

In order to test Hypothesis 2 relating to the incremental predictive power of ADHD and life adversity, whilst controlling for gender (females = 1, males = 2) and age ($\leqslant 17$ versus $\geqslant 18$), emotional lability and conduct disorder, sequential binary logistic

Table 1
The mean scores and standard deviations for the psychological measures, Cronbach's α, and differences between false confessors and non-false confessors on the measures (*t*-value and Cohen's *d*).

Measures	α	False confessors Mean (SD) (*N*)	Non-false confessors Mean (SD) (*N*)	*t*-value	Cohen's *d*
Current ADHD symptoms	0.92	18.0 (13.9) (246)	13.0 (9.6) (1779)	7.1*	0.42
Conduct disorder	0.80	11.7 (4.9) (248)	9.1 (2.7) (1792)	12.3*	0.66
Emotional lability	0.94	44.8 (17.6) (247)	41.2 (13.9) (1792)	3.7*	0.23
Negative life events	0.79	4.8 (4.0) (260)	2.9 (2.5) (1814)	10.2*	0.57
Being a bully victim	0.82	2.6 (3.8) (251)	0.5 (1.6) (1797)	15.3*	0.72

* $p < 0.001$ (two-tailed tests).

Table 2
Correlations between the psychological measures ($N = 2031–2073$).

	Conduct disorder	Emotional lability	Negative life events	Being a bully victim
1. Current ADHD symptoms	0.48*	0.50*	0.31*	0.24*
2. Conduct disorder		0.34*	0.38*	0.34*
3. Emotional lability			0.37*	0.19*
4. Negative life events				0.29*

* $p < 0.001$ (two-tailed tests).

Table 3
A comparison between false confessors and non-false confessors on three categorical measures of ADHD and the four other predictors.

Categorical variables (Yes = present, No = absent)	False confessors *N* (%)	Non-false confessors *N* (%)	X^2 ($df = 1$)	OR (95% CI)
Reported a dignosis for ADHD				
Yes	92 (38%)	335 (19%)	46.1**	2.6 (2.0–3.5)
No	153 (62%)	1455 (81%)		
Currently on medication for ADHD				
Yes	53 (22%)	104 (6%)	76.9**	4.5 (3.1–6.5)
No	190 (78%)	1687 (94%)		
ADHD (currently symptomatic)				
Yes	53 (20%)	169 (9%)	28.8**	2.5 (1.8–3.5)
No	208 (80%)	1645 (91%)		
Conduct Disorder				
Yes	73 (30%)	357 (20%)	13.21**	1.7 (1.3–2.3)
No	173 (70%)	1435 (80%)		
Being a bully victim				
Yes	123 (49%)	330 (18%)	120.0**	4.3 (3.2–5.6)
No	128 (51%)	1467 (82%)		
Negative life events				
Yes	90 (35%)	279 (15%)	57.5**	2.9 (2.2–3.9)
No	170 (65%)	1535 (85%)		
Emotional lability				
Yes	51 (21%)	260 (15%)	6.3*	1.5 (1.1–2.1)
No	196 (79%)	1532 (85%)		

* $p < 0.05$ (two-tailed tests).
** $p < 0.001$ (two-tailed tests).

regression analysis was performed using forced entry method. The data were entered into the logistic regression model in three blocks (Block 1: gender, age, emotional lability, and conduct disorder; Block 2: currently on medication for ADHD (this ADHD measure was used in view of its strongest association with false confessions); and Block 3: negative events and Bully victim scales. Table 4 gives the results and provides the beta values and their standard error, odds ratio (exp b), and for the overall model in each block the R^2 value (Nagelkerke adjusted value), and the Model Chi-square.

The Nagelkerke R^2 values in Table 4 showed a significant improvement in the amount of variance in the outcome (false confession) explained by each of the three models. The final model gave the best overall results with the predictor variables explaining 17.3% of the variance in false confession. The table shows that ADHD significantly predicts false confession above gender, age and conduct disorder by increasing the amount of variance explained by 3.3%. Adding the two life adversity measures in Model 3 increased the variance in false confession explained by the predictor variables by a further 7.6%. In the final model, the highest Wald statistics and ORs for the four key predictor variables were for being a bully victim (OR = 3.5), currently being on medication for ADHD (OR = 2.9), having negative life events (OR = 1.9) and conduct disorder (OR = 1.4, ns). Conduct disorder did not add significantly to the final model, but both gender (OR = 1.5) and age (OR = 2.0) did.

4. Discussion

Hypothesis 1 was supported by showing that the four outcome measures significantly predicted the reporting of false confession. Hypothesis 2 was supported by showing that the reported history of being currently prescribed medication for ADHD and both measures of life adversity predicted the reporting of false

Table 4
Summary of the binary logistic regressions with regard to contribution of the categorical psychological variables.

	B (SE)	Wald	Odds Ratio
Model 1			
Gender	0.74 (0.18)	16.8***	2.1
Age	−0.84 (0.15)	31.1***	2.3
Emotional lability	0.24 (0.30)	0.7	1.2
Conduct Disorder	0.88 (0.27)	10.8***	2.4
Nagelkerke R^2	0.064		
Chi^2	62.16 (df = 4)***		
Model 2			
Gender	0.69 (0.18)	14.4***	2.0
Age	−0.74 (0.15)	23.3***	2.1
Emotional lability	0.36 (0.31)	1.3	1.4
Conduct Disorder	0.81 (0.27)	8.9**	2.3
Currently on medication (ADHD)	1.26 (0.21)	36.5***	3.5
Nagelkerke R^2	0.097		
Chi^2	94.83 (df = 5)***		
Model 3			
Gender	0.43 (0.19)	5.0*	1.5
Age	−0.68 (0.16)	18.6***	2.0
Emotional lability	0.45 (0.33)	1.8	1.6
Conduct disorder	0.43 (0.29)	2.2	1.5
Currently on medication (ADHD)	1.07 (0.22)	22.9***	2.9
Being a bully victim	1.25 (0.16)	59.4***	3.5
Negative life events	0.56 (0.19)	9.1**	1.7
Nagelkerke R^2	0.173		
Chi^2	173.18 (df = 7)**		

* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.001$ (two-tailed tests).

confession beyond that of conduct disorder (i.e., ADHD and life adversity added a further 3.3% and 7.6%, respectively, to the variance in false confession). The final regression model explained 17.3% of the variance in false confession. These corroborate the previous findings showing a relationship between giving a false confession to police and ADHD (Gudjonsson, Sigurdsson, Einarsson, et al., 2008) and history of life adversity (Gudjonsson, Sigurdsson, & Sigfusdottir, 2010; Gudjonsson, Sigurdsson, Sigfusdottir, et al., 2008). Moreover these findings are the first to demonstrate that these have some direct effects that are independent of conduct disorder. Gudjonsson, Sigurdsson, and Sigfusdottir (2010) suggest that false confession during interrogation in individuals with a history of victimisation or life adversity is likely to be due to the maladaptive coping strategies during stress and tendency towards compliance. Compliance and the ability to cope with interrogative pressure may be exacerbated by life adversity (Drake, 2010).

The final regression model suggests that the key combination of variables that best predict false confessions from the current data is being a young male, who has a history of life adversity and is currently symptomatic for ADHD. The finding that younger age is associated with false confessions confirms previous studies (Gudjonsson, 2003).

Currently being on medication for ADHD was more strongly related to history of false confession than either having been diagnosed with ADHD or current symptoms as measured by the Barkley Current Symptom Scale. This may reflect the likelihood that participants who were taking medication for ADHD have greater severity of symptoms and functional impairment and suggests that diagnosing and treating ADHD with medication may be insufficient to prevent persistent functional impairments.

The main reasons for false confessions were covering up for another person, threats, police pressure, and wanting to get out of custody, which are consistent with those previously reported by adolescents in Iceland (Gudjonsson, Sigurdsson, and Sigfusdottir et al., 2008). In addition, in the previous study 37% of those participants who claimed to have falsely confessed reported that they had been convicted of the offence for which they had falsely confessed. In the current study the corresponding percentage was 31%. Taken together these two studies indicate that false confessions, in about one-third of cases involving community samples, result in a wrongful conviction. This is particularly concerning when considering that convictions involving false confessions are significantly more likely to result in a prison sentence than true confessions (Redlich, Kulish, & Steadman, 2011). Redlich and her colleagues speculated that this may have been due to the false confessors more commonly recanting their "inculpatory statements, which in turn, afforded harsher sentences" (p. 413).

The strengths of the study are the large sample size and it being a representative sample for an entire country. The main limitations are the use of self-report of the constructs in the study and the cross-sectional nature of the data, which makes it difficult to comment on the mechanisms of the associations found. The duration of time between the false confession and participation in the study was not recorded, thus symptoms of both conduct disorder and ADHD may have been stronger at that time. The study did not include measures of learning disability or personality disorders which are also important vulnerabilities during detention and police questioning. None of the measures used in the current study were independently corroborated and the findings are based exclusively on the perspective of the participant and his or her insight and honesty when completing the questionnaires.

This study reports findings from a community survey of young people and future research should investigate more severely impaired groups such as clinically referred or prison samples and include collateral data. However, the findings provide the strongest effect to date about some of the most powerful predictors of false confessions during police questioning among young persons related to psychological vulnerabilities. The independent and incremental effects of both ADHD and life adversity suggest that suspects' resilience to resist pressure from police and peers to provide false confessions is weakened by their condition rather than this representing irresponsible and delinquent behaviour associated with conduct disorder.

References

Bacchini, D., Affuso, G., & Trotta, T. (2008). Temperament, ADHD and peer relations among schoolchildren: The mediating role of school bullying. *Aggressive Behavior, 34*, 447–459.

Barkley, R. A. (1998). *Attention deficit/hyperactivity disorder: A handbook for diagnosis and treatment* (2nd ed.). New York: Guilford Press.

Derogatis, L. R., Lipman, R. S., Covi, L., & Rickels, K. (1971). Neurotic symptoms dimensions: As perceived by psychiatrists and patients of various social classes. *Archives of General Psychiatry, 24*, 454–464.

Drake, K. E. (2010). Interrogative suggestibility: Life adversity, neuroticism and compliance. *Personality and Individual Differences, 48*, 493–498.

Gudjonsson, G. H. (2003). *The psychology of interrogations and confessions. A handbook*. Chichester: John Wiley and Sons.

Gudjonsson, G. H. (2010). Psychological vulnerabilities during police interviews. Why are they important? *Legal and Criminological Psychology, 15*, 161–175.

Gudjonsson, G., & MacKeith, J. (1994). Learning disability and the Police and Criminal Evidence Act 1984. Protection during investigative interviewing: A video-recorded false confession to double murder. *Journal of Forensic Psychiatry, 5*, 35–49.

Gudjonsson, G. H., & Pearse, J. (2011). Suspect interviews and false confessions. *Current Directions in Psychological Science, 20*, 33–37.

Gudjonsson, G. H., Sigurdsson, J. F., Asgeirsdottir, B. B., & Sigfusdottir, I. D. (2006). Custodial interrogation, false confession and individual differences. A national study among Icelandic youth. *Personality and Individual Differences, 41*, 49–59.

Gudjonsson, G. H., Sigurdsson, J. F., Bragason, O. O., Einarsson, E., & Valdimarsdottir, E. B. (2004). Confessions and Denials and the relationship with personality. *Legal and Criminological Psychology, 9*, 121–133.

Gudjonsson, G. H., Sigurdsson, J. F., Einarsson, E., Bragason, O. O., & Newton, A. K. (2008). Interrogative suggestibility, compliance and false confessions among prisoners and their relationship with attention deficit hyperactivity disorder (ADHD) symptoms. *Psychological Medicine, 38*, 1037–1044.

Gudjonsson, G. H., Sigurdsson, J. F., Einarsson, E., Bragason, O. O., & Newton, A. K. (2010). Inattention, hyperactivity/impulsivity and antisocial personality disorder: Which is the best predictor of false confessions? *Personality and Individual Differences, 48*, 720–724.

Gudjonsson, G. H., Sigurdsson, J. F., & Sigfusdottir, I. D. (2009a). Interrogations and false confessions among adolescents in seven countries in Europe. What background and psychological factors best discriminate between false confessors and non-false confessors? *Psychology, Crime and Law, 15*, 711–728.

Gudjonsson, G. H., Sigurdsson, J. F., & Sigfusdottir, I. D. (2009b). False confessions among 15 and 16 year olds in compulsory education and their relationship with adverse life events. *Journal of Forensic Psychiatry and Psychology, 20*, 950–963.

Gudjonsson, G. H., Sigurdsson, J. F., & Sigfusdottir, I. D. (2010). Interrogation and false confessions among adolescents. Differences between bullies and victims. *Journal of Psychiatry and Law, 38*, 57–76.

Gudjonsson, G. H., Sigurdsson, J. F., Sigfusdottir, I. D., & Asgeirsdottir, B. B. (2008). False confessions and individual differences. The importance of victimisation among youth. *Personality and Individual Differences, 45*, 801–805.

Gudjonsson, G. H., Sigurdsson, J. F., Young, S., Newton, A. K., & Peersen, M. (2009). Attention Deficit Hyperactivity Disorder (ADHD). How do ADHD symptoms relate to personality among prisoners? *Personality and Individual Differences, 47*, 64–68.

Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. P. (2010). Police-induced confessions: Risk factors and recommendations. *Law and Human Behavior, 34*, 3–38.

Lewinsohn, P. M., Rohde, P., & Farrington, D. P. (2000). The OADP-CDS: A brief screener for adolescent conduct disorder. *Journal of the American Academy of Child and Adolescent Psychology, 39*, 888–895.

Lynam, D. R. (1996). Early identification of chronic offenders: Who is the fledgling psychopath? *Psychological Bulletin, 120*, 209–234.

Perske, R. (2008). False confessions from 53 persons with intellectual disabilities: The list keeps growing. *Intellectual and Developmental Disabilities, 46*, 468–479.

Redlich, A. D., Kulish, R., & Steadman, H. J. (2011). Comparing true and false confessions among persons with serious mental illness. *Psychology, Public Policy, and Law, 17*, 394–418.

Sigfusdottir, I. D., Farkas, G., & Silver, E. (2004). The role of depressed mood and anger in the relationship between family conflict and delinquent behavior. *Journal of Youth and Adolescence, 33*, 509–522.

Sigfusdottir, I. D., Gudjonsson, G. H., & Sigurdsson, J. F. (2010). Bullying and delinquency. The mediating role of anger. *Personality and Individual Difference, 48*, 391–396.

Sigurdsson, J. F., & Gudjonsson, G. H. (2001). False confessions: The relative importance of psychological, criminological and substance abuse variables. *Psychology. Crime and Law, 7*, 275–289.

Waschbusch, D. A. (2002). A meta-analytic examination of comorbid Hyperactive-Impulsive-Attention problems and conduct problems. *Psychological Bulletin, 128*, 118–150.

Young, S., Misch, P., Collins, P., & Gudjonsson, G. H. (2011). Predictors of institutional behavioural disturbance and offending in the community among young offenders. *The Journal of Forensic Psychiatry and Psychology, 22*, 72–86.