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Gender differences in the interplay between exposure to trauma and parental disturbances within the home, stress-sensitivity and reported false confessions in adolescents

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ABSTRACT

The principal aim of this study is to investigate the interplay between the reported experience of physical/psychological trauma and disturbances involving parents within the home, latent stress-sensitivity, and the likelihood of reporting false confessions in females. This study also investigates gender differences by fitting the hypothesised partial mediation model to the male data. A multiple group structural equation model was fitted to data obtained from both female ($N = 5426$) and male ($N = 5394$) further education students in Iceland. The direct effect from reported physical/psychological trauma to reported false confessions emerged as the only significant effect in females. In males, the direct effect of latent stress-sensitivity on false confessions is significant, but also the indirect effect from both reported experience of physical/psychological trauma and disturbances involving parents through latent stress-sensitivity to false confessions is significant. This study has solidified the notion that a history of physical violence in particular at home may be a critical susceptibility factor amongst females. In males, self-report stress-sensitivity may be the critical susceptibility factor, both explaining the effect of physical/psychological trauma in the home on false confessions, and increasing sensitivity to exogenous interview pressure.

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1. Introduction

False confessions amongst general population adolescents are a particularly serious problem, given their heightened vulnerability to suggestion, and being influenced by perceived authority figures (see Gudjonsson, 2003; Scott-Hayward, 2007). This necessitates the need to identify the critical predictors of susceptibility to false confessions within general population adolescents, such that their vulnerability may be more readily identified and managed.

Cross-sectional studies have documented significant associations between the reporting of negative life events and reported false confessions (e.g. Gudjonsson, Sigurdsson, & Sigfusdottir, 2009; Gudjonsson, Sigurdsson, Sigfusdottir, & Asgeirsdottir, 2008). Gudjonsson et al. (2009) reported that adolescents who had reported witnessing and/or experiencing physical violence within the home, where an adult was involved, and the death of a parent or sibling, were amongst the strongest predictors of false confessions, especially in boys. Drake, Sigfusdottir, Sigurdsson, and Gudjonsson (under review) also found this to be the

case: that reported levels of physical violence within the home and the death of a parent or sibling significantly increased the likelihood of reported false confessions in adolescent boys, but furthermore that this effect strengthened as latent levels of stress-sensitivity (indicated by reported levels of nervousness, fearfulness and tension) within adolescent boys also increased. Trait stress-sensitivity therefore appeared to increase adolescent boys' susceptibility to these negative external influences (the experience or witnessing physical violence in the home and/or the death of a parent or sibling) (Belsky, 2013), and was thus proposed as a critical factor in predicting the likelihood of false confessions in adolescent boys.

However, since these findings applied to males only, this has prompted further questions about the role of stress-sensitivity and the reported experience or witnessing of physical violence within the home, and other disturbances involving parents, in predicting false confessions in adolescent females. Although no gender differences in internalising problems are reported before mid-adolescence, after this period significant differences have been shown, with females being more likely to develop internalising problems (anxiety, depression, for example) as a consequence of disturbances within the home (Gault-Sherman, Silver, & Sigfusdottir, 2009). Adolescent females might therefore be more easily affected by parental punishment and negativity, and

more likely to develop a sensitivity to environmental influences (Belsky, 2013).

The brain also continues to mature throughout adolescence, with working memory and executive functioning, as well as response inhibition, increasing with age (Jack, Leov, & Zajac, 2013). Adolescent females, with a history of trauma, and who thus develop a sensitivity to environmental influences (i.e. the interview situation itself, as well as overt police coercion and/or threats from peers or family members), may find it more difficult providing relevant and inhibiting irrelevant information or false confessions (either as a product of police-coercion or to protect someone else, and/or as a result of compliance to deal with the increased fearfulness, nervousness and/or tension that they may experience [Gudjonsson, 1995]) when being questioned by a perceived authority figure.

The principal aim of this study is to investigate the interplay between the reported experience of physical violence and disturbances involving parents, within the home, latent stress-sensitivity and the likelihood of reporting false confessions in adolescent females. This study will also, however, investigate gender differences by fitting the hypothesised model to the male data as well. A partial mediation model is hypothesised, whereby the reported experience of physical violence and parental disturbances are correlated, and predict false confessions through those experiences affecting the cognitive mindset of the individual (Gudjonsson & Clarke, 1986), but also that these experiences predict latent stress-sensitivity levels, which in turn predict the likelihood of reported false confessions.

2. Method

2.1. Participants

The sample comprised of 5426 female (♀) and 5394 male (♂) further education students in Iceland. Age-wise: $N = 2$ (♀) and 4 (♂) were 12 years old, $N = 13$ (♀) and 5 (♂) were 13 years old, $N = 1786$ (♀) and 1793 (♂) were 14 years old, $N = 1773$ (♀) and 1791 (♂) were 15 years old, $N = 1815$ (♀) and 1755 (♂) were 16 years old, $N = 6$ (♀) and 13 (♂) were 17 years old, and $N = 4$ (♀) and 2 (♂) were 18 years old. $N = 27$ (♀) and 31 (♂) did not indicate their age.

The data used in the study come from a national *Youth in Iceland* programme of surveys that have been conducted, in Iceland, by the Icelandic Centre for Social Research and Analysis for the past 17 years. All students attending upper secondary school on the day of the survey were invited to take part in the survey. The participants had 80 min (two school lessons) to complete the questionnaires and seal them in blank envelopes. The data collection was conducted in accordance with the Privacy and Data Protection Authority in Iceland, including anonymity and participants' informed consent by and under the direction of the Icelandic Centre for Social Research and Analysis. Participation was voluntary and students were not paid.

2.2. Measures

2.2.1. False confessions (see Gudjonsson et al., 2008)

Participants were asked: (1) 'How often have you been interrogated at a police station as a suspect in a criminal offence' — Never, Once, Twice, 3–5 times, or 6 or more times? (Only tick one column in each category); (2): 'Did you commit the offence?' ('Yes' or 'No'); and (3) 'Have you ever confessed during police interrogation to a criminal offence that you did not commit?' The reply was rated on the five-point scale: 'Never', 'Once', 'Twice', '3–5 times', or '6 or more times'. Participants who indicated that they had falsely confessed were also asked to categorise the reasons for the false confession, by being asked: "What was the reason for you confessing to something you did not do?"; participants had to select from the following reasons: to cover up for somebody else, due to being threatened, due to police pressure, [they] wanted to get away from the police, [they were experiencing] alcohol/

drug withdrawal, [they were] taking revenge on the police, cannot remember the reason, and other.

2.2.2. Negative Life Events scale

The Negative Life Events scale (see Drake, Gudjonsson, Sigfusdottir, & Sigurdsson, 2015) was used to collect data on participants' reported history of: witnessing physical abuse at home involving an adult, experiencing physical abuse at home involving an adult, parental divorce, parental arguments, and serious arguments with parents: (a) over the past 30 days, (b) over the past 12 months, and (c) more than 12 months ago. Participants answered yes/no in response. Composite scores were then created, summing participants' responses. Scores therefore ranged between 0–3. The internal reliability of the scale (α) is .79.

2.2.3. Nerves, fearfulness and tension

Nerves, fearfulness and tension scores were derived from three items chosen from the Symptom Check List-90 (Derogatis, Lipman, Covi, & Rickels, 1971). Participants were asked how often, in the past 30 days, have you been feeling: (i) nervous/anxious; (ii) scared for no reason; and (iii) tense? The items were rated on a four-point frequency scale ('never', 'seldom', 'sometimes' and 'often') to indicate severity of symptoms.

3. Analytical strategy

A single-level, random intercept, multiple-group structural equation model (MSEM) was fitted to the data, using MPlus software. MSEMs simultaneously fit the SEM to both the male and female data, within a single model, precluding the need to split the data into groups, and thus to maximise statistical power. The maximum likelihood with robust standard errors (MLR) estimate was used to calculate parameter estimates and model fit indices. MLR is robust to any non-normality and non-independence of observations, and is recommended with general, random intercept models, where the outcome measure (reported false confessions, in this study) is either binary or ordinal in nature (Muthén & Muthén, 2012).

Within the MSEM (see Fig. 1), false confession was the outcome measure, latent stress-sensitivity (F1) was the mediator, and both the cumulative risk composites *parental disturbances* and *physical/psychological trauma* were the correlated predictors. *Parental disturbances* and *physical/psychological trauma* are cumulative risk factors, indicated by: (a) reported parental divorce, reported levels of parental conflict, and reported levels of serious arguments with parents; and (b) the reported experience of physical violence within the home, the reported experience of witnessing of physical violence within the home, and the death of a parent or sibling, respectively. Events rarely occur in isolation, so modelling cumulative risk, by creating composite variables can be advantageous over modelling life events independently, because they capture the natural co-variation between the contextual risk factors; they will also tend to be more stable across time, and have increased power to detect error effects see Flouri, Tzavidis, and Kallis (2010).

Prior to fitting the MSEM, confirmatory factor analysis (CFA) was used to evaluate the quality of the latent stress sensitivity measurement model, and cumulative risk composites before they were subsumed within the broader MSEM (Lei & Wu, 2007). To create the cumulative risk composites, a two-factor model was fitted to the six individual items: the reported experience of parental divorce, serious arguments with parents, and parental conflict were predicted to load onto one factor (*parental disturbances*), and the reported experience of witnessing physical violence within the home, experiencing physical violence within the home, and the death of a parent/sibling were proposed to load onto a second factor (*physical/psychological violence*). Given that results showed this to be the case, but also that the items measure an exogenous variable (the experience of external life events) rather than an endogenous characteristic, scores along each of the items loading onto the two factors were summed, creating cumulative risk composite
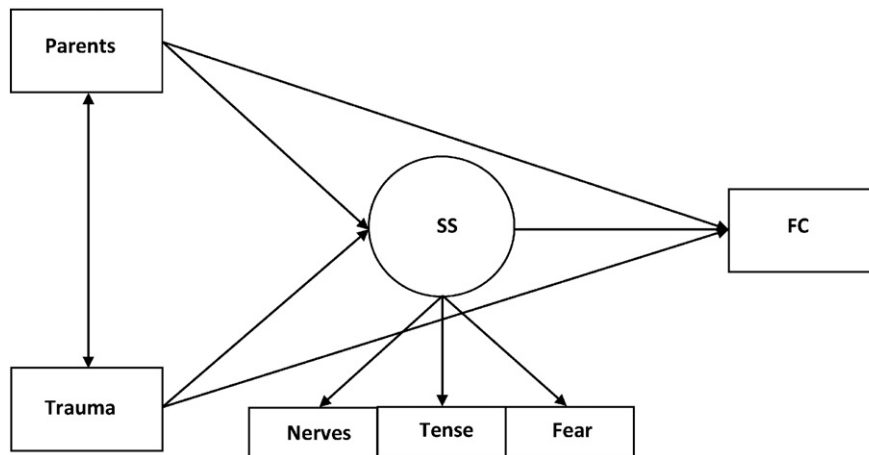
Fig. 1. MSEM1.

variables. CFA was also used to measure the quality of the stress-sensitivity latent variable, indicated by scores of nerves, tension and fearfulness. The factor loading of the indicator, nerves, onto the latent stress-sensitivity (SS) construct was fixed to 1, such that the latent construct acquired the scale of 1 to 4: 1 = nearly never; 2 = rarely–seldom; 3 = sometimes; and 4 = often.

3.1. Model fit

The quality of the measurement models was assessed using indices of absolute model fit (i.e. the Comparative Fit Index [CFI] and the Root Mean Square Error of Approximation [RMSEA]). CFI of values of .95 or above and RMSEA values of .05 or lower are considered to indicate a good model fit, from .05 to .08 is acceptable, and .08 to .10 is regarded as fairly average (Hu & Bentler, 1998). The structural models were also assessed using the chi-squared goodness-of-fit index, with smaller numbers indicating a better fit. However, the fact that the sample size in this study is also large, and that chi-squared tests tend to favour more constrained models, to adjust for differences in model size (when comparing the hypothesised partial mediation model with a full mediation model), normed chi-square values were calculated (normed χ^2 (NC) = χ^2 / df) in order to help decide between the two models. Bollen (1989) suggests that the minimum NC value should be 2.0, 3.0, or even 5.0 for the model to be considered a reasonable fit.

3.2. Missing data

Missing data patterns were analysed, and it emerged that missingness was at random. As a result, the full information maximum likelihood

(FIML) method was used to estimate reliable and plausible values for missingness (Schafer & Graham, 2002).

4. Results

4.1. Descriptive statistics

Tables 1 (♂) and 1 (♀) report the means and standard deviations along with non-parametric correlation coefficients across the measures, given the skewed distribution and ranked nature of the negative life event measures.

Females made significantly fewer false confessions than males ($z = -6.96$; $p < .001$), though the effect size is very small; $r = -6.957$/square root of N, where $N =$ total number of cases (10,383) = .07 (Cohen, 1988).

4.1.1. Females

Out of the $N = 5340$ complete cases ($N = 86$ missing), $N = 5053$ had never been interrogated by the police, with $N = 287$ interrogated at least once. Within this sample, $N = 226$ reported never making a false confession, with $N = 41$ falsely confessing just once, $N = 12$ two times, $N = 4$ reported three to five false confessions and $N = 4$ reporting six or more false confessions. The main reasons given for the false confessions were: police threats and coercion ($N = 3$), pressure from someone else ($N = 5$), wanting to get rid of police ($N = 8$), covering for someone ($N = 8$), substance use withdrawal ($N = 6$), taking revenge ($N = 2$), could not recall the reason ($N = 7$), and other − unspecified ($N = 22$).

Table 1 (♂)
Descriptive statistics and non-parametric Spearman rank correlation coefficients for males.

	FC	Nerves	Tense	Fear	Par_div	Argue	Par_conf	par/sib death	wit violence	exp violence
FC	–	.011	.060[*]	.059[*]	.057[*]	.103[*]	.067[*]	.075[*]	.159[*]	.124[*]
Nerves		–	.516[*]	.527[*]	.062[*]	.150[*]	.124[*]	.050[*]	.075[*]	.084[*]
Tense			–	.501[*]	.082[*]	.187[*]	.125[*]	.077[*]	.095[*]	.098[*]
Fear				–	.088[*]	.158[*]	.128[*]	.102[*]	.118[*]	.148[*]
Par_div					–	.284[*]	.258[*]	.116[*]	.202[*]	.193[*]
Argue						–	.381[*]	.142[*]	.254[*]	.293[*]
Par_conf							–	.127[*]	.287[*]	.127[*]
death								–	.266[*]	.322[*]
wit _pv									–	.596[*]
exp _pv										–
M (SD)	–	1.72 (.91)	1.73 (.91)	1.45 (.80)	1.83 (.39)	.20 (.42)	.14 (.36)	.05 (.22)	.04 (.21)	.04 (.22)

Note:
[*] $p < .001$.

Table 1 (♀)
Descriptive statistics and non-parametric Spearman rank correlation coefficients for females.

	FC	Nerves	Tense	Fear	Par_div	Argue	Par_conf	Death	wit violence	exp violence
FC	–	.019	.060*	.068*	.033*	.093*	.049*	.087*	.086*	.141*
Nerves		–	.525*	.528*	.104*	.226*	.181*	.019	.126*	.108*
Tense			–	.528*	.110*	.236*	.174*	.043*	.137*	.121*
Fear				–	.115*	.232*	.174*	.038*	.156*	.144*
Par_div					–	.267*	.300*	.071*	.192*	.164*
Argue						–	.403*	.109*	.264*	.263*
Par_conf							–	.061*	.326*	.241*
death								–	.121*	.149*
wit _pv									–	.570*
exp _pv										–
M (SD)	–	1.95 (.99)	1.85 (.95)	1.61 (.91)	.22 (.42)	.27 (.48)	.27 (.42)	.04 (.20)	.05 (.24)	.05 (.22)

Note:
* $p < .001$.

Table 1 (♀) shows that reported false confessions correlate significantly with both the negative life event items comprising the cumulative risk composites *parental disturbances* (parental divorce, arguing with parents and parental conflict) and *physical/psychological trauma* (witnessing and experiencing physical violence and the death of a parent or sibling) – the predictors in the subsequent SEM – and the items indicating the proposed mediator (tension and fear), but not with nerves. The items comprising the predictor cumulative risk constructs as well as the predicted mediator also correlate significantly.

4.1.2. Males

Out of the $N = 5146$ complete cases ($N = 248$ missing), $N = 4558$ had never been interrogated by the police, with $N = 588$ interrogated at least once. Within this sample, $N = 429$ reported never making a false confession, with $N = 104$ falsely confessing just once, $N = 23$ two times, $N = 13$ reported three to five false confessions and $N = 19$ reporting six or more false confessions. The main reasons given for the false confessions were: police threats and coercion ($N = 17$), pressure from someone else ($N = 7$), wanting to get rid of police ($N = 11$), covering for someone ($N = 23$), substance use withdrawal ($N = 6$), taking revenge ($N = 2$), could not recall the reason ($N = 30$), and other − unspecified ($N = 63$).

Table 1 (♂) shows that reported false confessions also correlate significantly with both the negative life event items comprising the cumulative risk composites *parental disturbances* (parental divorce, arguing with parents and parental conflict) and *physical/psychological trauma* (witnessing and experiencing physical violence and the death of a parent or sibling) − the predictors in the subsequent MSEM. Reported false confessions also correlate significantly with tension and fear scores, but not with nerves. The items comprising the predictor cumulative risk constructs as well as the predicted mediator also correlate significantly.

Table 2
Measurement model estimates and fit indices.

Pathways	Est.	SE	χ^2	df	CFI	RMSEA
F1						
par_div	.442*	.010				
Argue	.612*	.010				
par_conf	.649*	.010				
F2			171.58	8	.984	.043
wit_pv	.767*	.009				
exp_pv	.753*	.009				
Death	.284*	.010				
F3						
Nerves	.751*	.006				
Fear	.761*	.006	.000	.000	1.000	.000
Tense	.728*	.006				

Note:
* $p < .001$.

4.2. Confirmatory factor analysis (CFA)

Table 2 shows the measurement model estimates and fit indices.

Results confirm the quality of both the cumulative risk constructs and the latent stress-sensitivity factor, comprising the measurement model: the correlated cumulative risk constructs, parents (F1) and violence (F2) are a good fit to the data: CFI > .95; RMSEA < .05; the items also load significantly onto each of the factors, showing that they are good indicators of the underlying constructs. Stress-sensitivity (F3) is also a close fit to the data. The higher the scores on reported nerves, fear, tenseness and negative life events experienced the higher participants' underlying stress-sensitivity tendencies. Indicators: nerves, fear and tension load strongly onto the latent factor ($\beta > .7$).

4.3. Multiple-group structural equation modelling (MSEM)

4.3.1. MSEM1

Table 3 shows that the model is a good fit to the data (CFI > .95; RMSEA < .05). Chi-square values indicate that the model fit to the female data is relatively stronger than the model fit to the male data. This model shows that, for females, the only significant effect is the direct effect from physical/psychological trauma to reported false confessions ($p < .001$); for males, the direct effect from latent stress-sensitivity to false confessions is significant ($p < .001$), but also the indirect effects from both physical/psychological trauma and parental disturbances through latent stress-sensitivity to false confessions are statistically significant ($p < .001$).

4.3.2. MSEM2

Table 3 shows that this nested, more parsimonious model, is also a good fit to the data (CFI > .95; RMSEA < .05). Chi-square values indicate that, once again, the model fit to the female data is relatively stronger than the model fit to the male data. In this model, for females, the direct effect from parental disturbances to latent stress-sensitivity is significant, and also the indirect effect from parental disturbances through stress-sensitivity to false confessions is also significant ($p < .001$). When it comes to the males, the direct effects of latent stress-sensitivity on false confessions, and from parental disturbances to latent stress-sensitivity, are statistically significant ($p < .001$); the indirect effect from parental disturbances to latent stress-sensitivity to false confessions is also statistically significant ($p < .001$).

4.3.3. Model comparison

Chi-square results indicate that MSEM1 is a significantly better fit to the data than the more parsimonious MSEM2 ($p < .005$). Even when it comes to adjusting for model complexity, NC values show that MSEM1 is a better fit than MSEM2.

Table 3
Multiple group structural model estimates and fit indices.

Pathways	β_σ	β_φ	SE_σ	SE_φ	χ^2	df	NC	CFI	RMSEA
MSEM1									
Direct									
F1 → FC	.105***	.017	.017	.017					
Parents → FC	.005	.019	.015	.015					
Trauma → FC	.161	.128***	.015	.015	257.13	16	16.07	.975	.053
					φ = 115.14				
					σ = 141.99				
Indirect									
Parents → F1 → FC	.023***	.005	.004	.005					
Trauma → F1 → FC	.025***	.004	.005	.004					
MSEM2									
Direct									
F1 → FC	.146***	.058	.017	.016					
Parents → F1	.290***	.405***	.029	.024					
Trauma → F1	.043	.034	.027	.023	943.38	76	12.41	.956	.046
					φ = 431.08				
					σ = 512.31				
Indirect									
Parents → F1 → FC	.042***	.023***	.006	.006					
Trauma → F1 → FC	.007	.002	.004	.001					

	$\Delta\chi^2$		Δdf	ΔNC	ΔCFI	$\Delta RMSEA$
MSEM2–MSEM1	686.25**		60	−3.66	−.019	−.007
	φ = 315.94**					
	σ = 370.32**					

Note: Parents = parental disturbances; Trauma = physical/psychological trauma.
  ** $p < .005$.
*** $p < .001$.

5. Discussion

Only the direct effect of physical/psychological trauma (including the experience of and witnessing physical violence) within the home, by an adult, significantly predicted false confessions in females. This supports the finding in Gudjonsson et al. (2009), and solidifies the notion that the effect of reported levels of physical violence within the home on false confessions may arise, not necessarily because such females develop increased levels of fearfulness, nervousness and/or tension, thus becoming more susceptible to external influences, but because the experience of physical violence within the home may directly impact upon females' cognitive mind set, and their ability to cope during police questioning (Gudjonsson & Clarke, 1986). Females with such a reported history may come to anticipate and expect negativity/difficulties from interactions with authority figures, with false confessions resulting. On the contrary, the indirect effects, which were predicted to emerge in females, were significant when the model was fitted to the male data. Males with a reported history of physical/psychological trauma within the home seem to develop greater levels of nerves, tension and fearfulness, which renders them more susceptible to external influences and thus more likely to falsely confess.

When it comes to explaining the indirect effects emerging from the male data: although some research suggests that females are more prone to developing internalising problems following adversities (Gault-Sherman et al., 2009), other work has shown males to suffer more severely (compared with females): for example, insecure-disorganised boys (with a history of negative parenting and the breakdown in the attachment system; Bowlby, 1988) also scoring high on shyness and fearfulness and/or withdrawal from unfamiliar situations or objects have been shown to exhibit higher levels of internalising problems, such as anxiety (including social anxiety) and depression, and to suffer greater levels of social rejection and peer-exclusion (see Lewis-Morrarty et al., 2015). Windfuhr et al. (2013) also found that young males were more vulnerable to mental health problems than females. Therefore, this study supports the view that, in males, a history of exposure to physical violence in particular and adversities involving parents may lead to an increased risk of false confessions, through

males being more likely to develop high levels of nerves, tension and fearfulness (indicating latent stress-sensitivity). High levels of nerves, tension and fearfulness may increase susceptibility to environmental influences (Belsky, 2013), leading to false confessions due to factors within and/or beyond the interview room.

Previous work, using the same dataset, however, also shows that, in males, stress-sensitivity, indicated by nerves, tension and fearfulness, may also affect the strength of the effect of the reported history of physical violence on false confessions (that stress-sensitivity could be a moderator) (Drake et al., under review). Therefore, the data seems to support a model whereby stress-sensitivity simultaneously mediates and moderates the effect of reported violence on false confessions in males (see Fig. 2), but such a model is conceptually implausible: logical argument dictates that a mediator cannot simultaneously be a moderator (see Jacoby & Sassenberg, 2010, for a detailed discussion of SOC3 models).

A limitation with this research, and the previous papers, is the reliance on self-report measures of nerves, tension, fearfulness and negative events experienced, making it difficult to investigate (and distinguish) stress-sensitivity as a moderator, and the role that the shared variance between the self-reported experiences of physical/psychological trauma within the home and stress-sensitivity measure might play in predicting false confessions. The presence of an interaction between the reported experience of physical violence and stress-sensitivity (SS) (reported in Drake et al., under review)
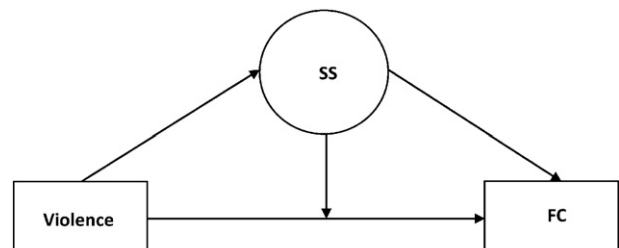

Fig. 2. A basic three variable second order constellation (SOC3) model.
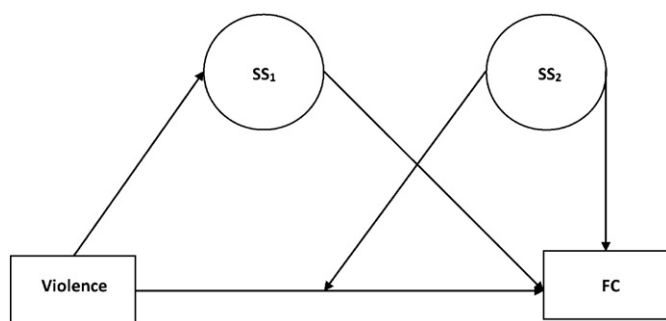
Fig. 3. The former SOC3 model after separating SS into SS_1 and SS_2.

highlights the presence of two independent portions of variance within SS: (a) one portion that is shared between the predictor (physical violence scores), SS, and the outcome variable (characterising SS as a mediator) SS_1; and (b) one which overlaps with the outcome variable, false confessions, but not the predictor, SS_2 — this is additional variance that SS and FC share (see Jacoby & Sassenberg, 2010). These two portions of variance are statistically independent, and so could be treated as two distinct variables — it could be the case that, in this study, the instrument used to assess nerves, tension and fearfulness may have tapped into both of these portions of variance in males, such that latent SS is shown to mediate but also moderate the basic effect. To clarify the role of stress-sensitivity in males, subsequent research needs ideally to fit a model that incorporates a fourth variable, which assesses SS_1 and SS_2 separately, and thus allows the variance shared between the mediator (SS) and false confessions to be modelled properly (see Fig. 3). More objective, exogenous, measure (of arousal/stress/threat sensitivity) that can be manipulated (i.e. manipulating the pressure associated with the interview) during an experimental false confessions paradigm, in addition to collecting self-report stress-sensitivity data, may help separate the SS_1 and SS_2 constructs.

Despite the limitations and need for further research, this study has helped to demonstrate that self-report latent stress-sensitivity seems not to be critical in predicting false confessions in females. This study has solidified the notion that a history of physical/psychological trauma within the home seems to have a direct impact on their cognitive mindset and level of vulnerability. In males, the mechanism leading to false confessions, appears more complex: a history of physical/psychological trauma within the home may lead to the development of increased tendencies towards fearfulness, tension and nervousness, which in turn may increase the risk of false confessions — this effect may be especially likely (and significantly stronger) under high levels of perceived interview pressure compared with when perceived interview pressure is low.

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