



Investigating Whether There is a Difference in Victim Credibility Scores and Guilt Verdicts Provided by Mock Jurors When a Victim is High or Low in Neuroticism.

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ABSTRACT

This study aimed to investigate the impact of victim neuroticism (VN) on victim credibility and guilt verdict. Sixty-four undergraduate students watched a video of a mock victim either high or low in neuroticism providing testimony of a fictional offence. Participants completed two questionnaires: the adapted EPQR-S-N (Eysenck et al, 1985) to measure VN and the adapted Witness Credibility Scale (WCS; Brodsky et al, 2010) to measure victim credibility. Participants provided a verdict in relation to the defendant's guilt. EPQR-S-N scores were analysed using a Mann-Whitney U test. This revealed that scores in the high VN condition were significantly higher than scores in the low VN condition. WCS scores were analysed using an independent t-test. This revealed that scores in the high VN condition were significantly lower than scores in the low VN condition. Guilt verdicts were analysed using a chi-square test. This revealed no significant association between guilt verdicts in the high and low VN conditions. It is recommended that future research uses professional actors in a real mock court scenario and extends the study by testing participants in a simulated jury group decision-making scenario. Potential confounding factors such as ethnicity, age and participant neuroticism should be considered.

KEY WORDS:	NEUROTICISM	VICTIM CREDIBILITY	GUILT	COURT	JURY
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Introduction

The assessment of victim credibility is imperative because it has a substantial impact on the outcome of a court case and has a direct influence on jury decision-making (Voogt et al, 2016). In the absence of objective evidence during a court case, jurors tend to rely on victim testimony to make decisions (Klettke et al, 2016). The main aim of this research is to focus on victim credibility; however, a victim is also referred as a 'witness' of a crime (Voogt et al, 2016). The assessment of victim credibility is an unreliable and subjective process due to the notion that there are various factors, such as the age of a victim that can influence how credible they are perceived to be (Newcombe and Bransgrove, 2007). The 'moral character' of a victim is claimed to be important when evaluating credibility (Campbell et al, 2015). However, this may not be an accurate way of evaluating credibility because it is difficult to determine when a witness is displaying truthful or deceptive behaviour (DePaulo et al, 2003). The information that witnesses provide to juries can have a detrimental impact on the outcome of a court case, as this evidence can be misused to evaluate a defendant's guilt (Maeder and Hunt, 2011). This can be explained through the social judgement theory (Sherif and Covland, 1961), as persuasive messages from victims could influence juror attitudes towards the case. For example, members of a jury may receive messages from a victim, which could fall into their latitude of acceptance. Individuals in the jury could alter their anchor (preferred position on the matter) to accept the messages from the victim as truthful (Sherif and Covland, 1961).

Witness credibility is a critical determinant in how a court case proceeds, as if a jury evaluates a victim to be more negative rather than positive, the likelihood of case advancement will be reduced (Spohn and Holleran, 2001). This could be related to the notion that if a victim is perceived to be lower in credibility, then a defendant is perceived to be less guilty (Goodman-Delahunty et al, 2010). However, if a jury perceives a victim to be more positive rather than negative, the chances of convicting a defendant are increased (Beichner and Spohn, 2005; Pickel and Gentry, 2016). Further research argues that members of a jury tend to rely on stereotypical beliefs when evaluating victim credibility, rather than considering situational factors and individual differences, which can result in inaccurate judgements (Rose et al, 2006). For example, individuals tend to have a perception based on how a rape

victim 'should' behave, as they are expected to display signs of distress, crying and shaking (Winkel and Kopperlaar, 1991). Research claims that credibility is difficult to define due to its multidimensional nature (Voogt et al, 2016). This is because credibility is not a variable that is directly observed; it is a construct that jurors perceive based on the testimony that they are provided with (Voogt et al, 2016).

A substantial amount of research has been conducted around victim credibility and has considered various factors that can influence this construct. A highly prevalent area identified in the literature is the influence of victim emotion on mock jury decision-making (Ask and Landström, 2010; Vrij and Fischer, 1997; Hackett et al, 2008). During court proceedings, jurors may perceive the type and intensity of emotion displayed by the victim to make inferences about the other characteristics of that individual (e.g. traits; Hareli et al, 2009). Research has focused on the impact of victim emotion on mock jury decisions and has concluded that rape victims who appear more agitated and show more signs of discomfort are perceived as higher in credibility (Ask and Landström, 2010). Further research argues that rape victims who appear more sad and regretful, rather than aggressive, are more likely to be perceived as more credible by male members of a jury (Vrij and Fischer, 1997). However, these findings have been contradicted as Hackett et al (2008) manipulated non-verbal (e.g. crying) and paralinguistic language (tone of voice) to conclude that the emotional expression of a rape victim has no influence on their perceived credibility. This is because it could be that observer's perceptions of rape victim credibility is a result of expectancy violation (one individual's behaviour violates the expectation of another person's behaviour) rather than emotional expressiveness (Hackett et al, 2008). In addition, jurors perceive emotion differently as individuals compared to when in a jury, which suggests that credibility judgements may be influenced by group processes (Dahl et al, 2007).

Another area of the literature has considered how the physical characteristics of victims could influence their perceived credibility in court. Maeder and Hunt (2011) focused on the influence of racial stereotypes and found no significant effect of black and white victim race on jury decision making. This is not consistent with the idea that black individuals may be perceived as less credible and likeable than white individuals (Jones et al, 1998). Other research has looked at the age of child victims in CSA (child sexual assault) cases and has concluded that the younger the victim is

the more credible they are perceived to be (Rogers and Davies, 2007). This could be due to the notion that older children are perceived as more competent but less trustworthy (Tabak and Klettke, 2013), or that due to their sexual naivety, younger children are less likely to invent false accusations regarding victimization (Goodman et al, 1989). Further research has considered the impact of eye contact and has argued that maintaining eye contact increases credibility (Blackwell and Seymour, 2015). It is claimed that victims who avoid eye contact tend to be perceived as more deceitful and therefore less credible (Vrij, 2000). This is because eye contact is associated with increased honesty (Beebe, 1974). Despite this, the findings have been contradicted as research has claimed that those who avoid eye contact are perceived to be higher in credibility (Weir and Wrightsman, 1990).

Although much of the research in this area has considered factors such as race (Maeder and Hunt, 2011), age (Rogers and Davies, 2007) and emotion (Ask and Landström, 2010; Vrij and Fischer, 1997), no research has focused on the personality traits of victims and how these can influence jury verdicts and credibility in court. A high-recognised personality trait identified and validated in the five-factor model is neuroticism (Costa and McCrae, 1985). Neuroticism is commonly observed within the human population and has been defined as the tendency to experience frequent negative emotions and uncontrollability in response to stress (Lahey, 2009; Barlow et al, 2014). Individuals high in neuroticism appear to be more negative, are more emotionally sensitive and are more likely to worry and display emotional avoidance (Barlow et al, 2014; Barlow et al, 2013). They are also more likely to be depicted as more irritable, angry, sad, anxious and depressed (Barlow et al, 2013). Moreover, high neuroticism is associated with higher scores on guilt (Tong, 2010). Further research also claims that individuals low in neuroticism tend to be higher in emotional stability (Costa and McCrae, 1992). Neuroticism was originally measured using the Eysenck Personality Questionnaire (Eysenck and Eysenck, 1975); however, a more recent version of this questionnaire has been developed to increase the reliability and appropriateness for participants to complete (Eysenck et al, 1985; Francis et al, 2006; Francis et al, 1992). The influence of neuroticism in victims could have a substantial impact on juror verdicts because research argues that judgements are more influenced by negative than positive information (Rozin and Royzman, 2001). Individuals high in neuroticism tend to use maladaptive

strategies such as self-blame to cope with stressors, which could influence how credible a jury perceives them to be (Abraham et al, 2016). They are also perceived as less persuasive by an audience, possibly because they speak less fluently and are less decisive (Alpert et al, 2001). Furthermore, individuals high in neuroticism express themselves with lower degrees of confidence compared to individuals low in neuroticism (McCroskey et al, 2001). This is problematic because confident witnesses are perceived as more credible in a court scenario (Tenney et al, 2007).

Overall, there is insufficient research to aid the understanding on how victim credibility functions in court cases (Voogt et al, 2016). Most of the literature has aimed to focus on child rather than adult victim credibility (Szojka et al, 2017; Voogt et al, 2016; Wessel et al, 2013). There has also been a large focus on the victims of rape and sexual assault in oppose to victims of other crimes (Ask and Landström, 2010; Vrij and Fischer, 1997; Hackett et al, 2008). No research has been conducted on how the personality traits of victims influence their perceived credibility in court. Research claims that victims can be expected to act a particular way in court (Winkel and Kopperlaar, 1991). It could be that victims high in neuroticism are perceived as less credible, as they may appear to be shaken, crying or anxious, which could be perceived as displaying 'guilty behaviour'. Therefore, this research will aim to fill the literature gap by using undergraduate students in a mock court scenario to investigate if victim neuroticism (VN) has an influence on victim credibility and juror verdicts. The hypotheses will be:

H₁: Participants in the high VN condition will score significantly higher on the EPQR-S-N compared to participants in the low VN condition.

H₂: There will be a significant difference in victim credibility scores between the high VN condition and the low VN condition.

H₃: There will be a significant association between the level of VN and verdict of defendant's guilt.

Methodology

Study design

An experimental design using constructed questionnaires was used to conduct this study. An independent groups design was used to randomly allocate participants to one of two conditions. The independent variable was the neuroticism group (observing a victim high or low in neuroticism). The dependent variable was the neuroticism scores, the victim credibility scores and the juror verdicts.

Participants

Overall, 74 participants participated in the study. There were 10 participants removed from the study due to incomplete data. Therefore, the final sample included 64 participants. There were 34 participants in the low VN condition and 30 in the high VN condition. This meets the minimum required sample size as according to Cohen (1992), a minimum of 64 participants are required to participate in a study at a medium effect size and an alpha level of $< .05$.

Participants used in the sample were undergraduate students and were jury eligible. Participants were at or over the age of 18 and were collected using volunteer sampling which is the most convenient method of gaining participants quickly (McBride, 2012).

Materials

Case Summary

Participants were provided with a brief case summary before watching one of the videos as this put the scenario into more context (see *appendix 2*). The case summary was based on an assault offence and took approximately one minute to read. No graphic language or imagery was used as this could potentially put participants at risk of harm or distress.

Videos

Two videos were produced using amateur actors and a video recorder on a mobile phone (see *appendix 3*). Participants were required to watch one of two videos electronically through YouTube. Each video was around 2 minutes long.

Individuals who took part in acting provided informed consent before they took part (see *appendix 4*). Individuals who acted were provided with two transcripts to learn what they needed to say and how they needed to behave (see *appendix 5*). The same individuals acted the same role in each video. They had the same physical appearance in both videos (e.g. clothes, hairstyle).

High Neuroticism Video

The aim of this video was to portray the individual acting (mock victim) to be high in neuroticism (MMU Psychology, 2018b). The individual displayed behaviours that individuals high in neuroticism are expected to show. The individual appeared to be irritated, angry, sad, anxious and depressed (Barlow et al, 2013). The individual was less decisive, spoke less fluently and displayed lower levels of confidence (Alpert et al, 2001; McCroskey et al, 2001). The individual also displayed these behaviours through facial expression (such as avoiding eye-contact; Ward et al, 2017; Uusberg et al, 2015).

Low Neuroticism Video

The aim of this video was to portray the individual acting (mock victim) to be low in neuroticism (MMU Psychology, 2018a). The individual appeared to be emotionally stable and did not show signs of displaying behaviour that is associated with high neuroticism (Costa and McCrae, 1992). The individual appeared to be high in confidence (McCroskey et al, 2001). The individual did not avoid eye-contact and did not show signs of being irritated, sad, angry, anxious or depressed.

Measures

The Revised- Short-form of the Eysenck Personality Questionnaire Neuroticism Scale (EPQRS-N)

An adapted version of the neuroticism sub-scale in the short-form revised Eysenck Personality Questionnaire (EPQR-S-N; Eysenck et al, 1985) was used in electronic form to determine whether the manipulation of neuroticism in each condition was successful (see *appendix 6*). This consisted of six items to measure neuroticism. Six items were removed from the questionnaire, as participants were unable to answer these questions based on someone else's behaviour. For example,

participants could not determine whether the actor 'felt lonely'. The original questionnaire requires participants to answer questions based on their own behaviour; however, this was adapted so that individuals can measure the actors' (mock victim) behaviour. An example is: 'Does the individual appear to be worried?'. Participants had to select 'yes' or 'no' to answer each question. Each answer of 'yes' was equivalent to a score of '1'. Participants could score a maximum of '6' and a minimum of '0'. The full neuroticism sub-scale has previously reported a high reliability for measuring neuroticism in both genders ($\alpha=.84$ for males; $\alpha=.80$ for females; Francis et al, 1992).

The Witness Credibility Scale (WCS)

Victim-witness credibility was measured using an adapted version of the Witness Credibility Scale (WCS; Brodsky et al, 2010; see *appendix 7*). This consisted of 15 items and 3 sub-scales to represent three facets of credibility: likeability, trustworthiness and confidence. The 'knowledge' sub-scale was removed as it was an insufficient measure of victim credibility. This was delivered electronically and participants rated on a ten-point Likert scale that consisted of paired adjectives and antonyms. For example, a rating of '1' would be the closest representation of 'untruthful' and a rating of '10' would be the closest representation of truthful. Participants scored a maximum of 150 (indicating high credibility) or a minimum of 15 (indicating low credibility). The full scale has previously reported a very high reliability for measuring credibility ($\alpha=.95$; Brodsky et al, 2010).

Procedure

The study was delivered in electronic form through Qualtrics. An invitation was posted in an online group along with a link to Qualtrics (see *appendix 8*). This included the aims of the study. Participants were provided with the researcher's email address if they had any questions to ask prior to taking part in the study. Participants completed an informed consent and were told about their right to withdraw up until 28/02/2018 as after this date the data analysis will have commenced (see *appendix 9*). Participants were assured of their anonymity throughout. Participants were asked to read a case study to gain an outline of the scenario (see *appendix 2*) and were randomly allocated to one of two conditions. Participants were required to watch a short online video of a victim's account of a

fictional assault (delivered through YouTube; see *appendix 3*). Participants were then required to complete two questionnaires; the EPQRS-N (Eysenck et al, 1985; see *appendix 6*) to measure VN and the adapted WCS to measure victim credibility (Brodsky et al, 2010; see *appendix 7*). Participants provided a guilty or not guilty verdict (for the defendant) based on the victim's testimony in the video. Participants were then fully debriefed as they were provided with an anonymous code and MMU counselling details in the case of experiencing distress (see *appendix 10*). Questionnaires were gathered for analysis by 28/02/2018.

Ethical Considerations

Individuals were provided with an invitation letter (see *appendix 8*) and participants were provided with a participation information sheet (see *appendix 11*). Participants and actors were required to fill out an informed consent before they took part in the study (see *appendix 9* and *4*). Participants were told about their right to withdraw up until 28/02/2018 due to the commencement of data analysis. After the study participants completed a debrief sheet which allowed them to construct an anonymous code so they could be identified if they wanted to withdraw their data (see *appendix 10*). All of these materials were delivered in electronic form through Qualtrics.

There was a risk that participants could have become distressed as some of the questions could have related to them, especially if they are high in neuroticism. Participants were made aware that the neuroticism questionnaire could contain some emotionally sensitive questions and were reminded of their right to withdraw from the study. At no point were participants put in a stressful or harmful situation. The videos did not contain any graphic material that could have put participants at harm. Participants were made aware that the videos produced were not based on true events. Using volunteer sampling to collect participants was ethical because individuals who wanted to take part in the study only took part in the study (McBride, 2012).

Participants were told not to take part in the study if they were vulnerable. Participants were at or over the age of 18. Although participants might have found the study interesting, no incentives were provided for participating in the study. Participants were informed that the study aimed to measure victim credibility,

however, measuring neuroticism was not initially mentioned due to the risk of participants displaying demand characteristics. Participants were told that the study measured neuroticism when they were debriefed. No personal information was collected from participants to maintain confidentiality.

The study was approved and conducted under the ethical guidelines and the rules set out by the MMU psychology department (see *appendix 1*) and adhered to the ethical guidelines outlined by the BPS (British Psychological Society, 2009). The ethics guidelines of internet-mediated research was followed when recruiting participants through a social media website (British Psychological Society, 2017).

Results

Participant responses were exported from Qualtrics into IBM® Statistical Package for the Social Science 23.0 (SPSS) for windows. Three statistical tests were performed on the data to determine whether there was a difference in WCS scores and an association of guilty verdicts between the high and low VN conditions.

Reliability analysis

An internal consistency analysis was conducted on the EPQR-S-N and the WCS (see *appendix 12*). This showed that the internal consistency for the EPQR-S-N was satisfactory, $\alpha = .70$. The internal consistency for the WCS was high, $\alpha = .85$. These values meet the accepted Cronbach's alpha value of .70 (Nunnally, 1978). Internal reliability was consistent for each questionnaire.

Manipulation of neuroticism

Participants scores from the EPQR-S-N in the high VN condition ($N = 30$) and low VN condition ($N = 34$) were calculated to see if participants in the high VN condition obtained significantly higher scores compared to participants in the low VN condition. *Table 2* illustrates the descriptive statistics for the data set.

Table 2

Means (*M*), standard deviations (*SD*) and medians (*Mdn*) of the EPQR-S-N scores in the high and low VN conditions

Condition	EPQR-S-N Scores (Mean, SD and Median)		
	M	SD	Mdn
Low VN	2.47	1.67	3
High VN	4.60**	1.25	5

Note. ** = $p < .001$.

The means in *Table 2* indicate that participants in the high VN condition scored higher ($M = 4.60$, $SD = 1.25$) on the EPQR-S-N compared to participants in the low VN condition ($M = 2.47$, $SD = 1.67$). The mean difference between both conditions was 2.13. Cohen's d was calculated as an effect size; a value of 1.44 was found which indicates a very large effect size ($d = 1.44$; Cohen, 1992).

Assumptions for normality were tested to determine whether a t-test could be conducted to see if there was a significant difference between the EPQR-S-N scores in the high VN condition and low VN condition (see *appendix 13*). A Kolmogorov-Smirnov test was conducted for each condition. Data in the high VN condition did not meet assumptions of normality, $D(30) = .17$, $p = .03$. Data in the low VN condition did not meet assumptions of normality, $D(34) = .21$, $p < 0.001$. A Levene's test found that the homogeneity of variance between the scores in each condition was met, $F(62) = 3.17$, $p = .08$. No outliers were identified.

Data did not meet requirements for a normal distribution so a non-parametric Mann-Whitney-U test was performed on the data (see *appendix 14*). A Mann-Whitney U test indicated participants in the high VN condition scored significantly higher ($Mdn = 5$) on the EPQR-S-N compared to participants in the low VN condition ($Mdn = 3$), $U = 157.50$, $Z = -4.82$, $p = < .001$. This supports the hypothesis (H_1) that participants in the high VN condition will score significantly higher on the EPQR-S-N compared to participants in the low VN condition.

Further analysis was conducted to test whether there was a significant difference between the six items from the EPQR-S-N and the level of VN (see *appendix 18*). Mann-Whitney U tests revealed that scores on the item ‘Does the individual seem irritated?’ showed a significant difference between the high VN and low VN conditions, $U = 156.00$, $Z = -5.51$, $p < .001$. Scores on the item ‘Does the individual appear to be nervous?’ revealed a significant difference between the high VN and low VN conditions, $U = 293.00$, $Z = -3.51$, $p < .001$. Scores on the ‘Does the individual seem tense or ‘highly strung?’ revealed a significant difference between the high VN and low VN conditions, $U = 314.00$, $Z = -3.07$, $p = .002$. Scores on the item ‘Does the individual appear to be worried?’ revealed a significant difference between the high VN and low VN condition, $U = 362.00$, $Z = -2.95$, $p = .003$. However, scores on the item ‘Does the individual seem fed-up?’ showed no significant difference between the high VN condition and low VN condition, $U = 431.00$, $Z = -1.23$, $p = .22$. Scores on the item ‘Does the individual appear to be showing feelings of guilt?’ also showed no significant difference between the high VN condition and the low VN condition, $U = 418.00$, $Z = -1.44$, $p = .15$.

Victim Credibility

Participants in the high VN condition ($N = 30$) and low VN condition ($N = 34$) completed the WCS to observe if there was a difference in victim credibility scores between each condition. *Table 3* illustrates means, standard deviations and 95% confidence intervals of WCS scores in high and low VN conditions.

Table 3

Means (M) and standard deviations (SD) of WCS scores in high and low VN conditions

Condition	WCS Scores (Mean, SD and 95% CI)	
	<i>M</i>	<i>SD</i>
Low VN	5.34*	1.56
High VN	4.20	1.23

Note. * = $p < .05$.

The means in *Table 3* indicate that participants rated the victim higher in credibility in the low VN condition ($M = 5.34$, $SD = 1.56$) compared to the high VN condition ($M = 4.20$, $SD = 1.23$).

Assumptions for normality were tested to determine whether an independent t-test could be conducted to see if there was a significant difference between WCS scores in the high and low VN conditions (see *appendix 15*). A Kolmogorov-Smirnov test revealed that data in the high VN met the assumption of normality, $D(30) = .14$, $p = .16$. Data in the low VN met assumptions of normality, $D(34) = .11$, $p = .20$. A Levene's test found that the homogeneity of variance between the scores in each condition was met, $F(62) = 2.46$, $p = .002$. One outlier was identified; however, this did not have an effect large enough to make it sufficient for removal.

An independent samples t-test was performed on the data and a significant difference was observed between the means of each condition, $t(62) = -3.24$, $p = .002$ (see *appendix 16*). Cohen's d was calculated as an effect size; a value of 0.81 was found which indicates a large effect size ($d = 0.81$; Cohen, 1992). This supports the hypothesis (H_2) that there will be a significant difference in victim credibility scores between the high VN condition and low VN condition.

Guilt verdict

Participants in the high VN condition ($N = 30$) and low VN condition ($N = 34$) were asked to provide a guilty or not guilty verdict for the defendant based on witnessing the victims testimony. The participant verdicts in the high VN condition and low VN condition are illustrated in *Table 4*.

Table 4

Verdicts delivered from the high VN condition and low VN condition.

Verdict	Victim Neuroticism Condition	
	Low	High
Guilty	15	11
Not Guilty	19	19

Table 4 shows that participants in the low VN condition provided more 'guilty' verdicts compared to participants in the high VN condition. There was no difference in the amount of 'not guilty' verdicts provided between participants in the high VN condition and low VN condition.

A chi-square analysis was conducted to see if there was a significant association between the level of VN and the amount of guilty verdicts delivered (see *appendix 17*). There was no significant association observed between the high or low victim neuroticism condition and guilty verdicts, $\chi^2(1) = .37, p > .55$. This does not support the hypothesis (H_3) that there will be an association between the level of VN and verdict of defendant's guilt.

Discussion

Summary of findings

The results show that participants in the high VN group scored significantly higher on the EPQR-S-N than participants in the low VN group. This supports the hypothesis (H_1) that participants in the high VN condition will score higher on the EPQR-S-N compared to participants in the low VN condition and shows that the manipulation of neuroticism between each condition was successful. The findings also show that participants in the low VN condition scored higher on the WCS compared to participants in the high VN condition. This supports the hypothesis (H_2) that there will be a difference in victim credibility scores between the high VN condition and the low VN condition. Finally, no significant association was found between guilt verdicts and the level of VN observed by participants. This does not support the hypothesis (H_3) that there will be an association between the level of VN and verdict of defendant's guilt.

Findings on victim credibility

The findings suggest that the jurors may perceive victims to be lower in credibility when they display highly negative emotions and behaviours associated with neuroticism. This does not support the claim that victims who appear to be more agitated and uncomfortable are perceived as higher in credibility (Ask and

Landström, 2010). This difference in findings could explain why it is difficult to determine when a victim is being deceptive (DePaulo et al, 2003), as this could be accounted for through individual differences in juror attitudes and perceptions. The findings of this study suggest that jurors may wrongfully perceive a negative demeanour as a sign of deception during court proceedings. Furthermore, the claim that emotion has no impact on how credible a victim is perceived to be (Hackett et al, 2008) is not supported by the findings. The mock victim in the high VN condition displayed higher negative affect and behaviour, and was rated as significantly lower in credibility. This could be due to the notion that jurors had stereotypical beliefs (Rose et al, 2006), such as identifying a negative individual as guilty. Therefore the findings of this study suggest that emotion is an important factor that is taken into consideration by jurors when they evaluate victim credibility.

The mock victim in the low VN condition maintained eye contact and was significantly scored higher in credibility. This supports research that claims individuals who maintain eye contact are perceived to be more credible (Blackwell and Seymour, 2015), possibly because participants in the low VN condition deemed the mock victim to be more honest than participants did in the high VN condition (Beebe, 1974). Furthermore, the findings provide evidence to support the claim that low confidence is a characteristic of neuroticism that can significantly reduce victim credibility (McCroskey et al, 2001). Therefore, it could be that if a victim is displaying low confidence, such as blaming themselves (Abraham et al, 2016), they could be depicted as low in confidence and could be wrongfully deemed as lower in credibility by jurors.

Nevertheless, the findings cannot claim that all characteristics and behaviours associated with neuroticism have an influence on victim credibility. Scores on two items from the EPQR-S-N revealed no significant difference between the high and low VN conditions. These were: 'Does the individual seem fed-up?' and 'Does the individual appear to be showing feelings of guilt'? This could be because unprofessional actors were used and they may not have been able to accurately articulate all aspects of neuroticism. These findings do not support research that argues high neuroticism is associated with higher scores on guilt (Tong, 2010). It could be that jurors focus more on the physical behaviour of victims. For example,

being irritated or nervous may be expressed at higher rates through non-verbal communication in comparison to being 'fed-up' or 'guilty'.

Findings on guilt verdicts

No significant association was found between guilt verdicts in the high and low VN conditions. This does not support the notion that victim credibility has an influence on how guilty a defendant is perceived to be (Goodman-Delahunty et al, 2010), or that, if a victim is perceived to be more positive by a jury, the chances of convicting a defendant are increased (Beichner and Spohn, 2005). This could be because jurors may evaluate victim credibility based on a victims level of neuroticism, but may evaluate the guilt verdicts of the defendant based on how the defendant behaves rather than the victim. These findings could also be due to the notion that jurors provided verdicts independently. If jurors were in a jury, their perceptions on victims could be altered by group processes (Dahl et al, 2007). Therefore, it could be that jurors evaluate credibility based on an individual's level of neuroticism, but evaluate the guilt verdict based on the defendant separately.

Limitations

Various limitations need to be addressed when considering the findings of the study. One limitation is that the sample contained only undergraduate students. This is an issue because the generalizability of the findings are limited as students have different judgements compared to individuals who are not students (Rogers and Davies, 2007). Therefore, it is difficult to extend the findings to broader populations, such as individuals who are not undergraduate students. Moreover, the findings of this study may lack ecological validity as it implemented hypothetical situations, such as using a fictional testimony and requiring participants to evaluate victim credibility by observing a video. The context that an individual is in can significantly have an impact on their behaviour (Lawrence and Ferguson, 2012). Therefore, it would be difficult to assume that participants would provide the same credibility ratings and guilt verdicts whilst in a real mock court scenario (Rogers and Davies, 2007).

Moreover, the actors in the videos were not professional. Although the manipulation of neuroticism was successful, this could potentially explain why scores on two items from the EPQR-S-N did not reveal a significant difference between the

high and low VN conditions. In addition, the videos that participants observed were short in length (1-2 minutes). Participants may not have been able to gain an accurate representation of the mock victim's behaviour during this time. A further limitation of this research is that the study required participants to observe the mock victim at an individual level. The study did not consider the notion that in a real courtroom scenario, various group processes are occurring and these can contribute to a final verdict (Newcombe and Bransgrove, 2007). Therefore, it is possible that group processes could influence participant judgements.

Practical Implications

Individuals high in neuroticism are more prone to display emotions that are related to mental illnesses such as anxiety and depression (Barlow et al, 2013). Individuals with mental illness are defined as 'vulnerable' individuals and are provided with the rights to special measures throughout court proceedings (Ministry of Justice, 2011). Ultimately, this could be beneficial to how their court case proceeds as they may receive more guidance. However, although individuals high in neuroticism are claimed to be vulnerable in the literature (Jacobs et al, 2011), neuroticism is a personality trait that is not defined as a mental illness and individuals high in neuroticism are not defined as 'vulnerable' according to the criminal justice system (Ministry of Justice, 2011). Therefore, as the findings of this study show that victims high in neuroticism are perceived as significantly lower in credibility, they can be utilized to increase awareness amongst jurors of how individuals should not be evaluated based on the characteristics that they display in court proceedings.

Directions for future research

The limitations of this study should be addressed to direct future research. Future research should aim to use a more diverse sample of participants so that the findings can be reflective of an actual juror population. It may also be useful to retrieve verdicts from a jury rather than a juror independently as this is more representational of a real-life court scenario. This may also provide the opportunity to analyse whether group processes have an influence on how credible victims are perceived to be. The neuroticism level of participants should also be measured to see if this has any impact on how credible a victim is perceived to be. Individuals high in neuroticism are more prone to compliance and could be more likely to accept

messages from the mock victim (Gudjonsson et al, 2004). This would be useful to test the social judgement theory as high neurotic individuals may be more likely to agree with and accept messages received from a high neurotic victim (Sherif and Covland, 1961).

Future research may also consider using professional actors in an actual mock court scenario as this may make the manipulation of neuroticism more robust and may increase the ecological validity of the design (Rogers and Davies, 2007). This may also encourage participants to take the study seriously and would provide a more realistic feeling of being a juror. It may also be useful to look at individual items on the WCS to test which credibility traits may be more affected by the level of neuroticism. As research has argued that ethnicity and age can affect victim credibility (Maeder and Hunt, 2011; Newcombe and Bransgrove, 2007), extended research should aim to measure these factors to see if they have a confounding effect on how neuroticism interacts with credibility.

Conclusion

This study found that victims high in neuroticism are perceived as significantly less credible compared to victims low in neuroticism. It also found no significant association between the level of neuroticism and verdict provided by jurors. It is recommended that future research uses professional actors in a real mock court scenario and extends the study by testing participants in a simulated jury group decision-making scenario. These findings can be utilized to increase the awareness amongst jurors on how high victim neuroticism can result in a victim being wrongly perceived as low in credibility.

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