Brief report: Perceived credibility of autistic witnesses and the effect of diagnostic information on credibility ratings

Katie Maras[1]
Laura Crane[2]
Ian Walker[1]
Amina Memon[3]

[1]Centre for Applied Autism Research, University of Bath, UK
[2]Centre for Research in Autism and Education, UCL Institute of Education, UK
[3]Department of Psychology, Royal Holloway, University of London, UK

Corresponding author: Katie L. Maras,
Centre for Applied Autism Research,
Department of Psychology,
University of Bath,
Claverton Down,
Bath BA2 7AY
Email: K.L.Maras@bath.ac.uk

To appear in: *Research in Autism Spectrum Disorders*

Running Head: Autistic witness credibility

Keywords: autism spectrum disorder; witness; credibility; interviewing; jurors; perceptions; criminal justice

Abstract

Background. People with autism spectrum disorder (henceforth, autism) exhibit a number of atypical behaviours that may be relied upon by jurors when making judgements about their credibility as witnesses. The current study aimed to: (1) examine whether autistic witnesses were perceived as less credible than typically developing (TD) witnesses, irrespective of the number of correct details they reported; and (2) determine whether mock jurors' credibility ratings of autistic witnesses improved if they were aware of their autism diagnoses and were provided with information about autism.

Method. One-hundred-and-twenty-five mock jurors rated the credibility of video testimony of 17 autistic and 17 TD witness participants recalling an event. Half of the juror participants were informed that some of the witnesses were autistic and were provided with information about autism; the other half received no information about witnesses' diagnoses.

Results. Contrary to predictions, autistic witnesses were seen to be as credible as TD witnesses when no information about their diagnosis was provided. However, when jurors were informed that a witness was autistic and were also provided with further information about autism, they were rated as slightly *more* credible than TD witnesses. Credibility ratings were only predicted by jurors' prior knowledge/experience of autism when they were explicitly informed of witnesses' autism diagnoses.

Conclusions. These results indicate that disclosing one's autism diagnosis (alongside further information about autism) may result in a positive bias in terms of witnesses' perceived credibility. Implications for jury instructions and future research directions are discussed.

Keywords: autism spectrum disorder; witness; credibility; diagnosis disclosure; interviewing; jurors; perceptions; criminal justice

Brief report: Perceived credibility of autistic witnesses and the effect of diagnostic information on credibility ratings

Autism spectrum disorder (henceforth, autism) is characterised by difficulties with social communication and interaction, as well as the presence of restricted and repetitive behaviours (American Psychiatric Association, 2013). As such, autistic[1] individuals may display a range of atypical behaviours that could affect how non-autistic people perceive them (Grossman, 2015; Grossman, Mertens, & Zane, 2018; Harnum, Duffy, & Ferguson, 2007). Previous research has shown that observers often form negative judgements of autistic individuals within seconds of seeing them in everyday contexts (Faso, Sasson, & Pinkham, 2015; Grossman, 2015; Sasson et al., 2017). This can have adverse consequences for a number of important real-life contexts, not least the Criminal Justice System (CJS), where autistic people may be disproportionally over-represented (e.g., Brown-Lavoie, Viecili, & Weiss, 2014; Heeramun et al., 2017; Rava, Shattuck, Rast, & Roux, 2017; Tint, Palucka, Bradley, Weiss, & Lunsky, 2017; Weiss & Fardella, 2018).

Jurors often base witness credibility assessments on a witness' verbal and non-verbal behaviours such as eye contact (Wright & Wheatcroft, 2017), twitchy and repetitive movements (e.g., Granhag, Andersson, Strömwall, & Hartwig, 2004), demeanor (Levine et al., 2011), surface features of speech such as pitch and intonation (Granhag et al., 2004; Ozuru & Hirst, 2006), and story-telling ability (DePaulo et al., 2003) – all of which can be atypical in autistic individuals (e.g., de Marchena & Eigsti, 2010; Loveland et al., 1994; Peppé, McCann, Gibbon, O'Hare, & Rutherford, 2007; Senju & Johnson, 2009). Critically, however, while first impressions of autistic adults are often less favourable, several studies have recently reported that informing observers of an individual's autism diagnosis results in observers attributing the individual's behaviours to their autism, instead of using the behaviours as a basis for making more negative judgements about them as individuals in everyday contexts. This may, however, depend on the observer's prior knowledge and understanding of autism and the degree of the individual's autism symptomology (Brosnan & Mills, 2016; Butler & Gilis, 2011; Matthews, Ly, & Goldberg, 2015; Morrison, DeBrabander, Faso, & Sasson, 2019; Sasson & Morrison, 2017).

[1] There is debate regarding the way autism is – and should be – described. In this article, we use both identity-first language (i.e., autistic adults) as well as person-first language (i.e., individuals with autism) to respect this diversity of views (see Kenny, Hattersley, Molins, Buckley, Povey, & Pellicano, 2016).

Two studies have recently examined the impact of disclosure of an individual's autism diagnosis on perceptions of them within the CJS. Maras, Marshall, and Sands (2019) presented mock jurors with a written vignette about a hypothetical defendant who was described as displaying autistic-like behaviours. Mock jurors who were informed that the defendant had autism, and were provided background information about autism, rated him as significantly more honest and likeable, and less culpable for his actions, relative to mock jurors who received no diagnostic information about him. This study was, however, limited in that it only described hypothetical autistic behaviours in a vignette; thus, judgements were made on the basis of written descriptions rather than observable real-time behaviours. Crane et al. (2018), in contrast, examined mock juror perceptions of two autistic child witnesses who were videoed providing testimony in an empirical eyewitness study. They found that providing a diagnostic label alongside information about autism resulted in more positive credibility ratings of only one of the autistic child witnesses (not the autistic child witness who displayed fewer atypical behaviours). However, Crane et al (2018) did not sample typically developing (TD) witnesses, leaving open the question of whether witnesses with autism are perceived as *less* credible than TD witnesses. Moreover, as Crane et al. utilised videos of *child* witnesses, it is not possible to generalise the findings to autistic *adults*, who may be viewed differently (Newcombe & Bransgrove, 2007).

The current study aimed to examine whether autistic adult witnesses are judged as less credible than TD witnesses, and to determine whether providing diagnostic information to mock jurors (i.e., informing them that a witness is autistic and providing background information about autism) affects their credibility judgements. We also examined the role of observers' perceived prior knowledge/experience of autism and conducted a subsidiary qualitative exploration of mock jurors' perceptions of witness credibility and accounts.

Pre-recorded videos of 17 autistic adult witnesses and 17 TD adult witnesses (of similar levels of intellectual ability) were used as stimuli; all of whom had provided 'testimony' for a simulated live event as part of a previous study that they had participated in (see Maras, Memon, Lambrechts & Bowler, 2013). We predicted that when observers were unaware that a witness was autistic, behavioural characteristics associated with autism would result in autistic witnesses being perceived as less credible than TD witnesses, but that providing information about their autism diagnosis and its associated characteristics might counterpoise this to diminish differences between groups.

Method

Mock juror participants

A power analysis using G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that, to detect a small-medium effect size (see, e.g., Crane et al., 2018, who also utilised videos of autistic witnsses), a minimum sample size of 110 was necessary to achieve Cohen's (1992) recommended power of .80. Thus, 125 first year undergraduate psychology students (102 females, 23 males; mean age = 19.19 years, SD = 3.38) were recruited to take part in the study. All participants took part in return for course credits. Full ethical approval was obtained from the Research Ethics Committee at Royal Holloway, University of London.

Materials and procedure

Witness Videos. Videos of autistic and TD witnesses were taken from a previous experiment (Maras et al., 2013). Here, the experimenter and witness participant each performed several actions on a road traffic accident mannequin and were subsequently interviewed for their memory of the event. Interviews comprised two aspects: free recall and subsequent questioning (as per *Achieving Best Evidence* guidelines, Home Office, 2011). As is typical in an Achieving Best Evidence interview, the information witnesses provided in their free recall accounts (before questioning) formed the foundation of the interview. To ensure some standardisation, juror participants only viewed the free recall segments of the videos (i.e., without questioning).

The final sample of witness participants comprised 17 autistic witnesses and 17 TD witnesses.[2] The sample did not differ on age (autism M = 41.06 years, SD = 13.52; TD M = 46.12 years, SD = 12.33), $t(32) = 1.14$, $p = .263$, $d = 0.39$, or verbal IQ (autism M = 110.35, SD = 11.21; *TD* M = 109.76, SD = 12.06), $t(32) = 0.15$, $p = .884$, $d = 0.05$. There were also no differences in the number of correct details they freely recalled in their videos, $t(32) = 0.81$, $p = .422$, $d = 0.28$, thus allowing an examination of credibility perceptions based on the way autistic witnesses provided their testimony, irrespective of the completeness of their memory for the event *per se*. Autistic and TD witness videos were further individually paired in terms of the number of details reported. Three pairs of videos were randomly selected to be viewed by each juror participant, with the constraint that each video pair was viewed an equal number of times across the experiment. Thus, each juror participant viewed and rated a total

[2] The original sample reported in Maras et al. (2013) comprised 18 autistic and 18 TD participants, however one autistic participant subsequently withdrew consent for their video data to be used in this manner and so their matched TD pair was also excluded.

of six videos (three autistic and three TD witness pairs). The order in which autism and TD videos were shown was counterbalanced within each pair, and the order of presentation of videos was also rotated so that each video was shown a roughly equal number of times in each position between presentations. Videos lasted an average of 6 mins and 2 seconds (*SD* = 2 mins 28 seconds) and did not differ in duration between autistic and TD witnesses, $t(32) = 0.60$, $p = .554$, $d = 0.21$.

Instructions and information about autism. Juror participants were tested in groups of up to eight but seated at individual computers with dividing screens between them. They were randomly allocated to one of two conditions: '*AUT+info*' (in which juror participants were told that three of the six witnesses in the videos they were to view had an autism diagnoses and were given information about autism) and '*No info*' (in which juror participants were not given any diagnostic or additional information about any of the six witness participants' videos they viewed); with the constraint that all participants were in the same information condition in any one testing session. All juror participants were instructed that they were about to view six video clips of witness interviews taken in a previous experiment whereby witnesses had participated in a first aid event and the videos showed them recalling what had happened. They received written instructions explaining that their task was to view the witness' testimony as if they were a jury member before completing a questionnaire concerning their impressions of credibility and the quality of the witness' account. In the *AUT+info* condition (at the start of the experiment), participants were also provided with a written summary about autism including descriptions of some of the behavioural features often associated with the condition (see Appendix A). Juror participants were informed at the start that some of the videos would be of autistic witnesses and they were instructed whether or not the witness was autistic prior to viewing each video.

Credibility questionnaires. After viewing the video, participants completed a pen and paper credibility questionnaire asking them to rate (on 7-point Likert scales) the following indicators of a witness' credibility: accuracy; convincingness of account; witness confidence in account; confidence in demeanour; competence of account; honesty; credibility; believability; completeness of account; level of cognitive functioning; and capability to testify (adapted from Crane et al., 2018; Henry, Ridley, Perry, & Crane, 2011; Maras et al., 2019; Mueller-Johnson, Toglia, Sweeney, & Ceci, 2007). Two open-ended questions at the end of each questionnaire asked if/how the witness' testimony and credibility might be improved (Appendix B). At the end of the experiment (before debriefing) participants in the *No info* condition were also asked whether they had guessed if any of the

witnesses were autistic[3]. Finally, all participants were asked to rate on a 7-point Likert scale how much knowledge/experience of autism they had prior to taking part in the study (1= none, 7 = extensive). There was no significant difference in perceived prior knowledge/experience of autism diagnosis between participants in either the *AUT+info* (M = 3.95, SD = 1.49) or the *No info* (M = 3.84, SD = 1.52) experimental conditions, $t(123) = 0.41$, $p = .682$, $d = 0.07$.

Results

Effect of witness group and information condition

Since every participant rated several video stimuli on several questions, there were potential correlations within each of these grouping variables that needed to be accounted for. Accordingly, data were analysed with linear mixed-effects models using the lmer function from the lme4 library in R (R Core Team, 2018). This approach does not assume scores are independent, and measures the extent to which factors that introduce non-independence into scores (such as taking multiple measurements from each rater or video) play a role in affecting the outcome variable.

Initially, the outcome variable of credibility rating score was predicted from Witness Group (autistic vs. TD), Information Condition (*AUT+info* vs. *No info*), Perceived Knowledge/Experience of Autism (7-point scale), and the Witness Group × Information Condition interaction. Random intercepts were fitted for the three grouping variables: Credibility Question ID, Juror Participant ID and Witness Video ID. Models were fit using the Restricted Maximum Likelihood (REML) procedure.

This initial analysis found a clear interaction between Witness Group and Information Condition, but follow-up analyses revealed that this was confounded by an order effect: the order in which each participant produced their ratings introduced systematic patterns into these data. Specifically, ratings were correlated $r = .07$, $p < .001$ with viewing order for the videos of the TD witnesses and $r = –.05$, $p = .003$ for the videos of the autistic witnesses. In other words, credibility ratings tended to show some systematic changes as each juror participant worked through their set of witness videos, possibly suggesting some sort of comparative effect. Because the primary aim of this study was to compare initial perceptions of autistic versus TD witnesses (together with the effect of diagnosis disclosure), rather than

[3] Twenty-four participants in the *No info* condition guessed that some of the witnesses they viewed were autistic. Analyses were re-run excluding these participants and findings remained the same.

how ratings changed over time (which would probably not be realistic in a genuine criminal setting where a juror is not likely to experience testimony from six consequtive witnesses in this way), the data set was simplified by removing all ratings except for those provided for the first autistic and first TD video observed by each participant, and the above analysis was repeated. Because the specific pair of videos each participant saw first was chosen randomly, each of the stimulus witness videos was still viewed repeatedly across participants within this reduced dataset and so inter-video variance could still be estimated.

Mixed-effect model pseudo-R^2 scores (Nakagawa & Shielzeth, 2013) suggested that 3.00% of variance in ratings could be explained by the model's fixed effects and 52.77% of variance could be explained by its random effects. As shown in Table 1, Witnesses Group and Information Condition were not significant predictors; however, perceived Knowledge/Experience of Autism and the Witness Group × Information Condition interaction were significant predictors of participants' rating scores. Ratings also varied considerably across the witness videos, juror participants, and questions (Table 1).

Table 1. Linear mixed effect model predicting ratings from fixed factors Witness Group, Information Condition and Perceived Knowledge/Experience of Autism plus random intercepts for juror participants, witness videos and questions

Fixed effects				
	Coefficient	Std. Error	*t*	*p*
Intercept	4.52	0.30	15.27	
Witness Group	–0.42	0.26	–1.65	.61
Information Condition	–0.48	0.14	–3.54	.11
Perceived Knowledge/Experience of Autism	0.12	0.05	2.60	.009
Witness Group × Information Condition	0.56	0.08	6.83	< .0001
Random effects				
	Variance	SD	Intraclass Correlation	

Juror Participant ID	0.46	0.67	.21
Witness Video ID	0.53	0.73	.24
Question ID	0.13	0.36	.06
Residual	1.07	1.03	

As can be seen in Figure 1, autistic witnesses were not rated as significantly less credible (mean = 4.52, SD = 1.53, range = 1-7) than TD witnesses (mean = 4.61, SD = 1.49, range = 1-7) when juror participants were not informed of their diagnosis. Yet, when they were told that witnesses were autistic and were given background information about the condition, their credibility ratings increased to the extent that they were viewed as slightly more credible (mean = 4.90, SD = 1.37, range = 1-7) than TD witnesses (mean = 4.63, SD = 1.42, range = 1-7). Breaking down the data by Information Condition and repeating the above analysis separately for the *AUT+info* and the *No info* conditions confirmed that Witness Group (t = 2.07, p = .04) as well as Perceived Knowledge/Experience of Autism (t = 3.08, p = .002) were predictors of ratings in the *AUT+info* condition, but that in the *No info* condition, both predictors were non-significant: Witness Group (t = 0.50, p = .62), and Perceived Knowledge/Experience of Autism (t = 0.77, p = .44).

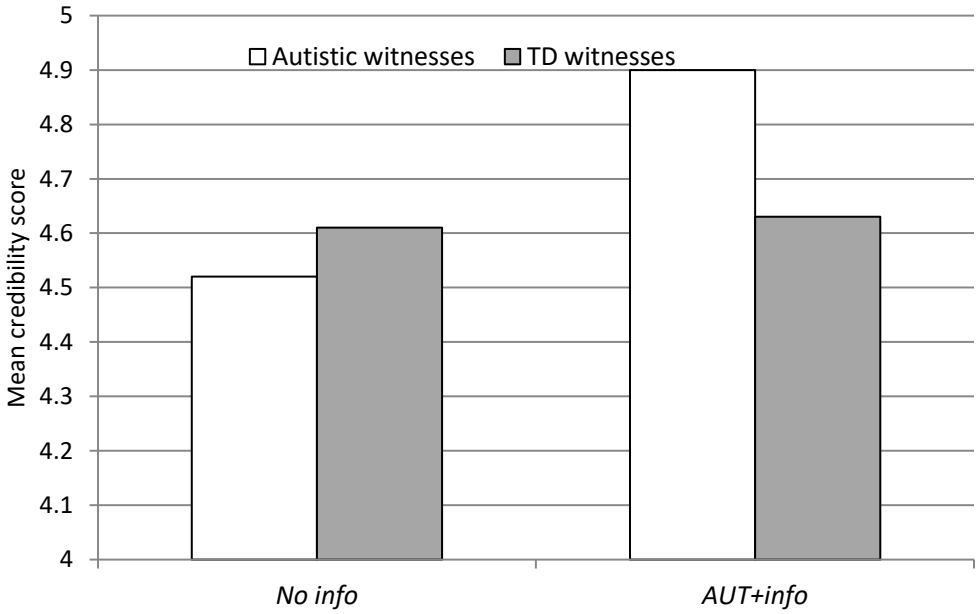

Figure 1. Mean credibility ratings by witness group and whether information about autism was provided prior to viewing testimony (*AUT+info* or *No info*). Error bars reflect the standard error of the means.

Qualitative responses

A subsidiary content analysis was conducted (across the whole sample) of participants' answers to the two open-ended questions asking how each witness' testimony and credibility might be improved. This involved classifying participants' responses into content categories (Mayring, 2015) and was carried out by an independent rater (who was blind to the experimental conditions) and reviewed by the first author. Both coders agreed on the final 16 classification categories, which broadly fell into one of three groupings: account, speech and language, and behaviour. As can be seen in Table 2, there were some subtle differences in the frequency of jurors' comments about each witness group. For example, autistic witnesses were perceived as going off topic, having unclear speech and lacking composure in interviews more frequently than TD witnesses.

Table 2. Summary of mock juror participants' qualitative responses to questions on autistic and TD witness credibility (note: some numbers are greater than the total sample size because each juror participant rated multiple videos).

	n times reported for autistic witnesses	**n times reported for TD witnesses**
Account		
Witness goes off-topic	72	10
Admitting mistakes	2	10
Making assumptions/ adding personal interpretations	24	7
Inconsistent account/ changing views	14	39
Lack of detail	163	181
Repetition/ difficulty keeping track of what was said	13	12
Disorganized	155	147
Speech and language		
Speech too fast and rushed / needs to speak slower	6	15
Unclear speech	47	19
Monotonous/ stilted speech	14	8
Inappropriate vocabulary/ informal/ joking and laughing	25	22
Events recalled too slowly/ pauses and hesitations	91	94

Behaviour		
Not enough eye contact/ blinking too much	26	62
Twitchy/ lack of composure	52	23
Lack of body language/ facial expression/ emotion	11	6
Lack of confidence/ uncertainty	120	155

Discussion

In contrast to predictions, autistic adult witnesses seen to be as credible as TD witnesses when mock jurors were unaware of their autism diagnosis, indicating that the credibility of autistic individuals may not always be negatively affected by behavioural characteristics of the condition. This is contrary to recent empirical observations that autistic individuals are perceived more negatively than TD individuals in everyday contexts (e.g., Faso et al., 2015; Grossman, 2015; Sasson et al., 2017). However, previous witness credibility research with other groups such as those with intellectual disability suggests that volume of recall is a key predictor of juror credibility (e.g., Henry et al., 2011). Thus, in the present study, in which witnesses with and without autism were matched on the number of correct details they recalled, similarities in the completeness of their accounts may have superceded any behavioural differences when jurors were rating their credibility. Since autistic people do often provide more impoverished recall (see Maras, in press), their credibility might be compromised in other such instances. It may also be pertinent that the testimony in the present study comprised only free recall, containing no social interaction and thus mock jurors may have had limited dynamic social-behavioural cues on which to base their credibility judgements.

Perceptions of autistic witnesses' credibility were, nevertheless, improved when mock jurors were given information about autism and informed that a witness was autistic, to the extent that they were then rated as slightly *more* credible than TD witnesses. Whether the small but significant difference observed in ratings is a) a desirable outcome and b) enough to influence the emphasis that is placed on their testimony in one direction or another is beyond the scope of this paper, but it is an important avenue for further inquiry.

Autistic and TD witnesses did not differ in the number of correct details they reported; thus, juror participants in the *AUT+info* condition may have over-compensated for the presence of autism when making their judgements (see, e.g., Street, 2015). That is, their expectations may have been lowered after hearing information about the myriad of

difficulties associated with autism and they subsequently perceived witnesses labelled as autistic as highly credible and competent *despite* their diagnosis. Future research should seek to obtain qualitative feedback from participants regarding how they arrived at their credibility judgements. Credibility ratings in the presence of diagnostic information were driven in part by jurors' knowledge/experience of autism, such that those with more perceived knowledge and experience of autism rated autistic witnesses more positively, indicating that education may be key in driving and reinforcing perceptions (see Gillespie-Lynch et al., 2015; Morrison et al., 2019). This supports Crane et al.'s (2018) findings regarding autistic child witnesses.

Our research has clear positive implications for the autistic community regarding disclosure of their diagnosis. Previous research suggests that autistic people often choose not to disclose their diagnosis to police due to concerns about whether they would be viewed negatively as a result (Crane, Maras, Hawkyn, Mulcahy, & Memon, 2016). Indeed, Crane et al. (2016) found that 36% of autistic individuals who encountered the CJS did not disclose their diagnosis for fear of victimisation and discrimination, and Maras et al. (2017) reported that 92% of solicitors and barristers questioned had experienced cases where the defendant's diagnosis was not disclosed until trial. The present findings add to a small, but recently accumulating, body of literature indicating that, on the contrary, a diagnostic label *improves* perceptions (e.g., Brosnan & Mills, 2016; Butler & Gilis, 2011; Maras et al., 2019; Matthews et al., 2015; Sasson & Morrison, 2017). It may be pertinent, however, that in the present study the diagnostic label was also accompanied by background information about autism (see also Brewer, Zoanetti, & Young, 2017; Crane et al., 2018;).

It is important to draw attention to the limitations of this research. First, as noted earlier, jurors only viewed the free recall segment of witnesses' interviews. In court, jurors would watch the witness' video-recorded evidence (containing both free recall and questioning), and may see the witness be cross-examined on their evidence. Thus, mock jurors in the present study may have had fewer and less dynamic cues on which to base their credibility judgements than they would in court. Second, the mock jurors largely comprised young female university undergraduates, not representative of a broader jury population and whose gender and knowledge of psychology may have resulted in them placing less emphasis on behavioural differences in the *No info* condition. Indeed, previous research suggests that female mock jurors may view eyewitnesses as more credible than male mock jurors and may also be more sensitive to instructions (e.g., McCauley & Parker, 2001; Goodman et al., 2006; Rogers & Davies, 2007). Nevertheless, it is worth noting that auxiliary analyses indicated no differences between male and female mock juror ratings in the present study (adding sex as a

predictor in the model gave a coefficient of 0.04, $SE = 0.18$, $t = 0.21$, $p = .84$), and a review of research comparing different mock juror samples indicates that there is little or no difference between student and more diverse mock juror samples (Bornstein, 1999). Third, our sample of witnesses comprised intellectually and verbally-able autistic individuals. Although it is debatable whether autistic witnesses with co-occurring intellectual disabilities would be called to testify (Gudjonsson, Murphy, & Clare, 2000), especially without any external support (such as a Registered Intermediary), several factors may result in particularly diminished perceived credibility (e.g., behavioural manifestations of autism are more marked in individuals more severely affected by their autism; Gabriels, Cuccaro, Hill, Ivers, & Goldson, 2005). Finally, the type of event might also influence jurors' willingness to believe the details being reported. For example, Lainpelto, Isaksson, and Lindblad (2016) reported that law students rated a transcript of a mock police interview with a child witness of sexual abuse as less credible if they were told that she had received a diagnosis of attention deficit/hyperactivity disorder and Asperger syndrome (but see Bottoms, Nysse-Carris, Harris, & Tyda, 2003). It is important, therefore, to extend the present research to different types of events and witness/victim scenarios. Indeed, the finding that credibility ratings varied considerably between the current witness videos is reflective of the considerable heterogeneity along the autism spectrum.

To conclude, the present study indicates that autistic witnesses are not perceived as less credible than TD witnesses, but that the provision of diagnostic information improves perceptions to the extent that they are rated as more credible than TD witnesses. These results support the need for education and information to be given to judges, juries and magistrates regarding an individual's diagnosis and the emphasis they place on this when arriving at judgements of credibility (Allely & Cooper, 2017; Freckelton, 2013). The results also have implications for diagnosis disclosure in other areas in which people make high-stakes judgements about autistic people, such as in wider criminal justice settings (e.g., parole board decisions, sentencing), as well other areas such as healthcare and risk assessments. Extending these findings to capture how the credibility of autistic individuals is impacted by their responses to more dynamic questioning and gaining a better understanding of the mechanisms that impact credibility perceptions are critical next steps in order to determine the type of guidance that should be given to judges, juries and magistrates.

Acknowledgements

This work was completed under a Future Research Leaders award from the Economic and Social Research Council to Katie Maras (grant number ES/N001095/1). We are grateful to Federica Picariello for assistance with coding. The data reported in this study are available from the UK Data Service's online data repository ReShare (doi:10.5255/UKDA-SN-853737).

References

Allely, C. S. & Cooper, P. (2017). Jurors' and judges' evaluation of defendants with autism and the impact on sentencing: a systematic Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) review of autism spectrum disorder in the courtroom. *Journal of Law and Medicine, 25*(1).

American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders* (Fifth ed.). Arlington, VA: American Psychiatric Publishing. pp.5–25. ISBN 978-0-89042-555-8.

Bornstein, B. H. (1999). The ecological validity of jury simulations: Is the jury still out? *Law and Human Behavior, 23,* 75–91. http://doi.org/10.1023/A:1022326807441Bottoms, B. L., Nysse-Carris, K. L., Harris, T., & Tyda, K. (2003). Jurors' perceptions of adolescent sexual assault victims who have intellectual disabilities. *Law and Human Behavior, 27,* 205–227. http://doi.org/10.1023/A:1022551314668

Brewer, N., Zoanetti, J., & Young, R. L. (2017). The influence of media suggestions about links between criminality and autism spectrum disorder. *Autism, 21*, 117–121. http://doi.org/10.1177/1362361316632097

Brosnan, M., & Mills, E. (2016). The effect of diagnostic labels on the affective responses of college students towards peers with "Asperger's Syndrome" and "Autism Spectrum Disorder". *Autism, 20,* 388–94. http://doi.org/10.1177/1362361315586721

Butler, R. C., & Gillis, J. M. (2011). The impact of labels and behaviors on the stigmatization of adults with Asperger's disorder. *Journal of Autism & Developmental Disorders, 41*, 741–9. http://doi.org/10.1007/s10803-010-1093-9

Cea, C. N. (2014). Autism and the Criminal Defendant. *St. John's Law Review, 88*(2), 495.

Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155–159. doi:10.1037/0033-2909.112.1.155

Crane, L., Maras, K. L., Hawken, T., Mulcahy, S., & Memon, A. (2016). Experiences of Autism Spectrum Disorder and Policing in England and Wales: Surveying Police and the Autism Community. *Journal of Autism and Developmental Disorders, 46,* 2028–2041. http://doi.org/10.1007/s10803-016-2729-1

Crane, L., Wilcock, R., Maras, K. L., Chui, W., Marti-Sanchez, C., & Henry, L. A. (2018). Mock Juror Perceptions of Child Witnesses on the Autism Spectrum: The Impact of Providing Diagnostic Labels and Information About Autism. Journal of Autism and Developmental Disorders, 1–11. https://doi.org/10.1007/s10803-018-3700-0

de Marchena, A., & Eigsti, I.-M. (2010). Conversational gestures in autism spectrum disorders: asynchrony but not decreased frequency. *Autism Research*, *3*(6), 311–22. http://doi.org/10.1002/aur.159

DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin*, *129*, 74–118. http://doi.org/10.1037/0033-2909.129.1.74

Faso, D. J., Sasson, N. J., & Pinkham, A. E. (2015). Evaluating Posed and Evoked Facial Expressions of Emotion from Adults with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *45,* 75–89. http://doi.org/10.1007/s10803-014-2194-7

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175–191. doi: 10.3758/BF03193146

Freckelton, I. (2013). Forensic issues in autism spectrum disorder: learning from court decisions. In: Fitzgerald, M., (Ed*). Recent Advances in Autism Spectrum Disorders. Vol. II.* Intech Press; Zagreb: p. 157-74.

Gabriels, R. L., Cuccaro, M. L., Hill, D. E., Ivers, B. J., & Goldson, E. (2005). Repetitive behaviors in autism: relationships with associated clinical features. *Research in Developmental Disabilities*, *26*, 169–81. http://doi.org/10.1016/j.ridd.2004.05.003

Gillespie-Lynch, K., Brooks, P. J., Someki, F., Obeid, R., Shane-Simpson, C., Kapp, S. K., … Smith, D. S. (2015). Changing College Students' Conceptions of Autism: An Online Training to Increase Knowledge and Decrease Stigma. *Journal of Autism and Developmental Disorders*, *45*(8), 2553–2566. http://doi.org/10.1007/s10803-015-2422-9

Goodman, G. S., Myers, J. E. B., Qin, J., Quas, J. A., Castelli, P., Redlich, A. D., & Rogers, L. (2006). Hearsay Versus Children's Testimony: Effects of Truthful and Deceptive Statements on Jurors' Decisions. *Law and Human Behavior*, *30*, 363–401. http://doi.org/10.1007/s10979-006-9009-0

Gudjonsson, G. H., Murphy, G. H., & Clare, I. C. H. (2000). Assessing the capacity of people with intellectual disabilities to be witnesses in court. *Psychological Medicine*, *30*(2), 307–314.

Granhag, P. A., Andersson, L. O., Strömwall, L. A., & Hartwig, M. (2004). Imprisoned knowledge: Criminals' beliefs about deception. *Legal and Criminological Psychology*, *9*, 103–119. http://doi.org/10.1348/135532504322776889

Grossman, R. B. (2015). Judgments of social awkwardness from brief exposure to children with and without high-functioning autism. *Autism, 19,* 580–587. http://doi.org/10.1177/1362361314536937

Grossman, R. B., Mertens, J., & Zane, E. (2018). Perceptions of self and other: Social judgments and gaze patterns to videos of adolescents with and without autism spectrum disorder. *Autism*. http://doi.org/10.1177/1362361318788071

Harnum, M., Duffy, J., & Ferguson, D. A. (2007). Adults' Versus Children's Perceptions of a Child with Autism or Attention Deficit Hyperactivity Disorder. *Journal of Autism and Developmental Disorders*, *37,* 1337–1343. http://doi.org/10.1007/s10803-006-0273-0

Heeramun, R., Magnusson, C., Gumpert, C. H., Granath, S., Lundberg, M., Dalman, C., & Rai, D. (2017). Autism and Convictions for Violent Crimes: Population-Based Cohort Study in Sweden. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*, 491–497.e2. http://doi.org/10.1016/j.jaac.2017.03.011

Henry, L., Ridley, A., Perry, J., & Crane, L. (2011). Perceived credibility and eyewitness testimony of children with intellectual disabilities. *Journal of Intellectual Disability Research, 55,* 385–391. https ://doi.org/10.1111/j.1365-2788.2011.01383 .x.

Home Office. (2011). *Achieving best evidence in criminal proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures* (3rd ed.). London: HMSO.

Kelley, H. H. (1971). *Attribution in social interaction*. New York: General Learning Press.

Kelley, H. H. (1972). *Causal schemata and the attribution process*. New York: General Learning Press

Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism, 20*, 442–462. https://doi.org/10.1177/1362361315588200 Lainpelto, K., Isaksson, J., & Lindblad, F. (2016). Does Information About Neuropsychiatric Diagnoses Influence Evaluation of Child Sexual Abuse Allegations? *Journal of Child Sexual Abuse, 25*, 276–292. http://doi.org/10.1080/10538712.2016.1145164

Levine, T. R., Serota, K. B., Shulman, H., Clare, D. D., Park, H. S., Shaw, A. S., … Lee, J. H. (2011). Sender Demeanor: Individual Differences in Sender Believability Have a Powerful Impact on Deception Detection Judgments. *Human Communication Research, 37*, 377–403. http://doi.org/10.1111/j.1468-2958.2011.01407.x

Loveland, K. A., Tunali-Kotoski, B., Pearson, D. A., Brelsford, K. A., Ortegon, J., & Chen, R. (1994). Imitation and expression of facial affect in autism. *Development and Psychopathology*, *6*, 433. http://doi.org/10.1017/S0954579400006039

Maras, K. L. (in press). Obtaining testimony from people with ASD. in F. Volkmar, R. Loftin, L. Westphal, & M. Woodbury-Smith (Eds.), *Handbook of Autism and the Law*. Springer.

Maras, K. L., Crane, L., Mulcahy, S., Hawken, T., Cooper, P., Wurtzel, D., & Memon, A. (2017). Brief Report: Autism in the Courtroom: Experiences of Legal Professionals and the Autism Community. *Journal of Autism and Developmental Disorders*, *47*, 2610–2620. http://doi.org/10.1007/s10803-017-3162-9

Maras, K., Marshall, I., & Sands, C. (2019). Mock Juror Perceptions of Credibility and Culpability in an Autistic Defendant. *Journal of autism and developmental disorders*, *49*, 996-1010. https://doi.org/10.1007/s10803-018-3803-7

Maras, K. L., Memon, A., Lambrechts, A., & Bowler, D. M. (2013). Recall of a live and personally experienced eyewitness event by adults with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, *43*. http://doi.org/10.1007/s10803-012-1729-z

Matthews, N. L., Ly, A. R., & Goldberg, W. A. (2015). College students' perceptions of peers with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, *45*, 90–9. http://doi.org/10.1007/s10803-014-2195-6

Mayring, P. (2015). Qualitative content analysis: Theoretical background and procedures. In *Approaches to qualitative research in mathematics education* (pp. 365-380). Springer, Dordrecht.McCauley, M. R., & Parker, J. F. (2001). When will a child be believed? The impact of the victim's age and juror's gender on children's credibility and verdict in a sexual-abuse case. *Child Abuse & Neglect*, *25*, 523–539. http://doi.org/10.1016/S0145-2134(01)00224-1

Morrison, K. E., DeBrabander, K. M., Faso, D. J., & Sasson, N. J. (2019). Variability in first impressions of autistic adults made by neurotypical raters is driven more by characteristics of the rater than by characteristics of autistic adults. *Autism*, https://doi.org/10.1177/1362361318824104

Mueller-Johnson, K., Toglia, M. P., Sweeney, C. D., & Ceci, S. J. (2007). The perceived credibility of older adults as witnesses and its relation to ageism. *Behavioral Sciences & the Law*, *25*, 355–75. http://doi.org/10.1002/bsl.765

Nakagawa, S., Schielzeth, H. (2013). A general and simple method for obtaining R^2 from generalized linear mixed-effects models. *Methods in Ecology and Evolution, 4,* 133-142. https://doi.org/10.1111/j.2041-210x.2012.00261.x

Newcombe, P. A., & Bransgrove, J. (2007). Perceptions of witness credibility: Variations across age. *Journal of Applied Developmental Psychology*, *28*, 318–331. http://doi.org/10.1016/J.APPDEV.2007.04.003

Ozuru, Y. & Hirst, W. (2006). Surface features of utterances, credibility judgments, and memory. *Memory & Cognition, 34,* 1512-1526. doi:10.3758/BF03195915

Peppé, S., McCann, J., Gibbon, F., O'Hare, A., & Rutherford, M. (2007). Receptive and Expressive Prosodic Ability in Children With High-Functioning Autism. *Journal of Speech Language and Hearing Research, 50,* 1015. http://doi.org/10.1044/1092-4388(2007/071)

R Core Team (2018). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Rava, J., Shattuck, P., Rast, J., & Roux, A. (2017). The Prevalence and Correlates of Involvement in the Criminal Justice System Among Youth on the Autism Spectrum. *Journal of Autism and Developmental Disorders*, *47*, 340–346. http://doi.org/10.1007/s10803-016-2958-3

Rogers, P., & Davies, M. (2007). Perceptions of Victims and Perpetrators in a Depicted Child Sexual Abuse Case. *Journal of Interpersonal Violence*, *22*, 566–584. http://doi.org/10.1177/0886260506298827

Sasson, N. J., Faso, D. J., Nugent, J., Lovell, S., Kennedy, D. P., Grossman, R. B., … Obafemi-Ajayi, T. (2017). Neurotypical Peers are Less Willing to Interact with Those with Autism based on Thin Slice Judgments. *Scientific Reports*, *7*. http://doi.org/10.1038/srep40700

Sasson, N. J., & Morrison, K. E. (2017). First impressions of adults with autism improve with diagnostic disclosure and increased autism knowledge of peers. *Autism*, http://doi.org/10.1177/1362361317729526

Senju, A., & Johnson, M. H. (2009). Atypical eye contact in autism: models, mechanisms and development. *Neuroscience and Biobehavioral Reviews*, *33*, 1204–14. http://doi.org/10.1016/j.neubiorev.2009.06.001.

Street, C. N. (2015). ALIED: Humans as adaptive lie detectors. *Journal of Applied Research in Memory and Cognition*, *4*, 335–343. http://doi.org/10.1016/j.jarmac.2015.06.002

Tint, A., Palucka, A. M., Bradley, E., Weiss, J. A., & Lunsky, Y. (2017). Correlates of Police Involvement Among Adolescents and Adults with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, *47*, 2639–2647. http://doi.org/10.1007/s10803-017-3182-5

Weiss, J. A., & Fardella, M. A. (2018). Victimization and perpetration experiences of adults with autism. *Frontiers in Psychiatry*, *9*, 203. http://doi.org/10.3389/fpsyt.2018.00203

Wright, C., & Wheatcroft, J. M. (2017). Police officers' beliefs about, and use of, cues to deception. *Journal of Investigative Psychology and Offender Profiling*, *13*, 307–319. http://doi.org/10.1002/jip.1478

Appendix A. Participant instructions

Instructions in both conditions:

- You are about to view six short video clips of interviews with six different participant witnesses, taken from a previous experiment.
- In the experiment, participants took part in a live first aid scenario, where they assisted in the experimenter carry out some first aid on a manikin-victim (dummy) who had been involved in a car crash. The videos that you are about to see are of them recalling what had happened during the first aid event, and who did what to administer first aid.
- Your task is to view each witness' testimony and then complete a questionnaire concerning your impressions of the witness' credibility (i.e. how believable they are) in turn.

Additional instructions in *AUT+info* condition:

What is autism?

- Autism is a developmental disorder that affects how a person communicates with, and relates to, other people.
- For example, a person with autism may not understand the unwritten social rules that people without the disorder inherently pick up on.

Some of the behavioural features of autism often include:

- **Idiosyncratic speech and odd intonations.** For example, a person with autism's speech might be particularly flat or 'monotone'. It may also be high-pitched, or have unusual rhythm and loudness.
- **Literality.** People with autism can be very literal in what they say and can have difficulty understanding jokes, metaphor and sarcasm. For example "that's cool" might be taken to mean that it is cold.
- **Facial expressions and gestures.** People with autism may use unusual or a limited range of facial expressions. They can find it difficult to use expressive gestures appropriately and to convey the meaning of what they are saying.

- **Topics of conversation.** People with autism sometimes go off-topic in their story telling, and find it difficult to tell their story according to the listener's needs.
- **Repetitive, nervous and 'stimmming' behaviours.** People with autism often show unusual movements, which might include rocking, hand flapping, finger flicking, twitchy and repetitive movements.
- **Inappropriate eye contact.** People with autism sometimes make unusual eye contact, or avoid making eye contact altogether.

However, autism is a spectrum condition. This means that, while people with autism share certain difficulties, they are affected by it in different ways and not all people with autism will display the behaviours just described, or to the same degree. It is often referred to as a 'hidden' disability, because it is not always obvious that a person has autism.

Appendix B. Credibility questions

1) Please circle the number that you feel best represents how **accurate** the witness' account of the first aid scenario was
2) Please circle the number that you feel best represents how **convincing** the witness was in their account
3) Please circle the number that you feel best represents how **confident** the witness appeared **in what they said** in their account
4) Please circle the number that you feel best represents how **confident** the witness appeared in general **in their demeanour**
5) Please circle the number that you feel best represents how **competent** the witness appeared in their account
6) Please circle the number that you feel best represents how **honest** the witness appeared
7) Please circle the number that you feel best represents how **credible** the witness appeared
8) Please circle the number that you feel best represents how **believable** the witness appeared
9) Please circle the number that you feel best represents how **complete** the witness' account appeared
10) Please circle the number that you feel best represents the witness' overall **level of cognitive functioning** (i.e., their ability to think, reason and remember)
11) Please circle the number that you feel best represents the witness' **capability to testify**
12) How do you think the witness' **testimony (account)** might be improved?
13) How do you think the witness' **credibility (believability)** might be improved?