

## Perceptions of bias and credibility of male and female clinical psychologist and psychiatrist expert witnesses presenting clinical information in the courtroom

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### ARTICLE INFO

#### Keywords:

Expert witness credibility  
Expert witness  
Psychologist  
Psychiatrist  
Gender  
Jury decision-making

### ABSTRACT

Expert witness credentials and gender have independently been shown to influence jurors' perceptions of expert witness credibility and legal decision-making. This study examined how manipulations of expert witness gender (Male/Female) and profession (Consultant Clinical Psychologist/Consultant Psychiatrist) together affected mock jurors' perceptions of expert witness credibility, judgements, and decision-making. Mock jurors ( $N = 182$ ; 80.9 % were White) were recruited from England and Wales and were randomly assigned to watch a video-recorded mock expert witness testimony. Participants rated the expert witness using the Witness Credibility Scale and reported the likelihood of assigning the defendant to a guilty verdict. Results showed significant interaction effects of expert witness gender and profession on jurors' perceptions of their likeability, trustworthiness, knowledge, and total credibility. Male psychiatrists, followed by female clinical psychologists, received the highest scores in most credibility variables. Varied main effects of expert witness gender and profession on credibility were also found. Overall, jurors' ratings of expert witness credibility, when controlled by the expert's gender and profession, predicted jurors' determination of guilt. This study provides evidence of a potential interaction effect between profession and gender in expert witness credibility and supports existing research linking credibility with ultimate decision-making. More research is needed to understand jurors' unconscious biases and cognitive processes in making legal decisions.

### 1. Introduction

Clinicians, including psychiatrists and clinical psychologists, are frequently asked to present opinions on clients with mental health needs as expert witnesses in the courtroom (Gudjonsson & Howard, 1998). Clinical expert witness testimony has been crucial in the trial process and decision-making (Krauss & Sales, 2001). An expert witness is "a person who, through specialist training, study, or experience, is able to provide a court, tribunal, or hearing with relevant scientific, technical, or professional information or opinion, based on skills, expertise, or knowledge, that is likely to be beyond the experience and knowledge of the representing lawyers, judge, jury or panel" (BPS, 2021, para. 1.1).

Courts often depend on expert witnesses to help jurors understand

and make decisions on complex cases, especially when the defendant's mental health is a factor to be considered (Gudjonsson, 2006; Gudjonsson & Howard, 1998). However, jurors often lack the knowledge or training to fully understand the expert's specialised technical and scientific language (Cooper, Bennett, & Sukel, 1996). Therefore, jurors may consider the expert witness's perceived credibility, demographics, expertise (e.g., credentials), or non-verbal communication ('source-mediated impressions') in addition to the facts of the case when making decisions (Boccaccini & Brodsky, 2002; Chaiken, 1980; Cooper et al., 1996; Cooper & Neuhaus, 2000; Flick, Smith, & Schweitzer, 2022; Hurwitz, Miron, & Johnson, 1992; LeVan, 1984; Petty & Cacioppo, 1986; Ruva & Bryant, 2004).

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<https://doi.org/10.1016/j.ijlp.2024.102016>

Received 8 December 2023; Received in revised form 29 July 2024; Accepted 22 August 2024

Available online 29 August 2024

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### 1.1. Information processing and source credibility

Historically, two dual information process models, the elaboration likelihood model (ELM; Petty & Cacioppo, 1986) and the heuristic-systemic model (HSM; Chaiken, 1980), have been widely used in research to understand how jurors receive and use persuasive messages. Both models imply that individuals process information either systematically (central route) or heuristically (peripheral route). Under systematic processing, a person engages in a careful, thoughtful, and comprehensive analytic consideration of all the information presented in the message. The recipient, in that case, relies heavily on the content of the message (e.g., facts of the case) to determine the validity of the message, typically requiring a considerable amount of cognition (Chaiken, 1980; Todorov, Chaiken, & Henderson, 2002). On the other hand, heuristic processing entails the use of simple rules to make decisions and, consequently, is less cognitively effortful. During this process, the validity of a message is judged and evaluated based on more accessible context-related cues (i.e., the source credibility or characteristics) as opposed to content-related information (Todorov et al., 2002). Systematic and heuristic processes can coincide complementarily or independently, highlighting the importance of both message-related and source-related factors (Chaiken, 1980).

A body of literature has investigated the role of source credibility in legal settings in the United States (US; Brodsky, Griffin, & Cramer, 2010). Several authors have highlighted the potential for the perceived credibility of an expert witness to influence judgements and legal decision-making (e.g., Bornstein, 2004; Cooper et al., 1996; Cramer et al., 2014; McAuliff, Kovera, & Nunez, 2009; Wechsler, Kehn, Wise, & Cramer, 2015). Together, this has indicated that jurors are more likely to agree with expert witnesses who are viewed as highly credible in their field. Research has been stimulated following the development of the Witness Credibility Scale (WCS; Brodsky et al., 2010), which is a reliable, objective, and quantified measure of expert witness credibility, understanding credibility as existing across four key factors: 'likeability', 'confidence', 'knowledge', and 'trustworthiness'. These are factors that jurors often consider when determining expert witness credibility according to theoretical frameworks (e.g., the likeability framework; Stone & Eswara, 1969) and professional observations (e.g., Brodsky, 2004). Of course, the issue is that perceived credibility is not necessarily the same thing as competence, and there is a risk that both high and low credibility – when paired with low or high competence – may mean that a juror is either too easily persuaded by, or too easily dismisses, the message of an expert witness. Understanding the extent to which perceptions of credibility may impact jurors' decision-making provides the first step to mitigating such biases (Flick et al., 2022).

Psychological research in the US has shown that perceptions of expert witness credibility and confidence could impact mock jurors' sentencing outcomes. For instance, Cramer, Brodsky, and DeCoster (2009); Cramer, DeCoster, Harris, Fletcher, and Brodsky (2011) manipulated male expert witnesses' confidence levels (low, medium and high) in a videotaped testimony in a murder trial where the expert supported the death penalty. The authors found that undergraduate psychology students from a Southeastern US university tended to agree more and assign the defendant to the death penalty if the expert was perceived as more confident and credible (Cramer et al., 2009, 2011). Positive correlations between mock jurors' perceptions of expert credibility and decision-making have also been reported for other sentencing outcomes such as liability (Bornstein, 2004) or capital (Krauss & Sales, 2001) verdicts. Regardless, the expert witness's credibility seems to pose a significant factor in jurors' decision-making.

### 1.2. Mental health expert witnesses

In mental health evidence, medical professions (primarily psychiatry) are more established in the courtroom than applied psychologists or related mental health professionals. Before the 1980s, psychological

evidence in courts was generally permitted only as part of medical evidence in a testimony (Bluglass, 1990; Fitzgerald, 1987; Greenberg & Wursten, 1988; Gudjonsson, 2003, 2006). While psychologists have been able to testify as independent expert witnesses across Western countries for the past four decades, the long-lasting acceptance and familiarity with medical evidence may mean that psychiatrists feel more confident in providing evidence in court than psychologists (Ormerod & Roberts, 2006). Moreover, previous research, primarily in the US, has shown that psychiatrists tended to be seen as more influential and reliable than psychologists (Dillon & Wildman, 1979; Dix & Poythress Jr., 1981; Greenberg & Wursten, 1988; Leslie, Young, Valentine, & Gudjonsson, 2007; Wechsler et al., 2015). For example, Greenberg and Wursten (1988) manipulated the expert witness's professional degree in an insanity defence case and found that this manipulation alone was enough to show differences in credibility between the experts, with psychiatrists (MD) being rated as more credible than psychologists (PhD). Similarly, criminal barristers in the United Kingdom (UK) were found to trust, favour, and instruct more psychiatrists than psychologists (Leslie et al., 2007), while only 2.7 % of the attorneys in a survey in the US found psychological evidence more valuable than other scientific evidence (Wechsler et al., 2015).

It is possible that legal professionals and jury members confuse the roles, training and expertise of psychologists and psychiatrists (Corder, Spalding, Whiteside, & Whiteside, 1990; Leslie et al., 2007; Shapiro, Mixon, Jackson, & Shook, 2015; Slobogin, 1999). Alternatively, broad generalisations about expertise may be made; for instance, a survey in the UK found criminal barristers to consider psychologists to deal with personality factors and functional deficits (e.g., personality disorders and IQ), whilst psychiatrists deal with diagnosis and treatment of mental illness (e.g., schizophrenia; Leslie et al., 2007). Such confusion between the two professions has led to several debates about the admissibility of psychological evidence in the legal field. Identified barriers to admitting psychological evidence in court have comprised the diverse and complex nature of the profession (O'Donohue, Beitz, & Levensky, 2004), complicated methodology (e.g., psychometric tests; Tunstall, Gudjonsson, Eysenck, & Haward, 1982), confusion around psychologists' expertise (Shapiro et al., 2015), 'psychological jargon' (Corder et al., 1990), unstructured evaluation methods (Neal & Brodsky, 2016), and the lack of objective and impartial opinion (Corder et al., 1990; Leslie et al., 2007; Neal & Grisso, 2014). Perhaps due to these factors, the psychologists' expertise in mental health and legal matters may be under-recognised (Edens et al., 2012; Redding & Reppucci, 1999; Shapiro et al., 2015).

Over the past two decades, there have been significant worldwide efforts to develop policies and campaigns to spread awareness of the impact of psychosocial, economic, political, and cultural factors on people's mental health and unhealthy behaviour (Cummins, 2018; Hussain, Hui, Timmons, & Nkhoma, 2022; Murray, 2017; World Health Organization, 2014). Researchers have also highlighted the importance of the intersection and overlap of law enforcement and public health (Bellis, Hughes, Perkins, & Bennett, 2012; Punch & James, 2017; Van Dijk et al., 2019). As a result, it has been suggested that the criminal justice system and mental health sector could work together to provide joined-up interventions and guidelines to address social, health, and security issues (Van Dijk et al., 2019). This means that unconscious biases and beliefs around mental health and unhealthy behaviour might have shifted across the criminal justice systems internationally. Hence, more recent research is needed to help understand the shift of such beliefs and the impact of mental health evidence on people who come across the criminal justice system.

### 1.3. Gender in the courtroom

Another factor that seems highly relevant in witness credibility seems to be gender (McKimmie, Newton, Terry, & Schuller, 2004; Neal, Guadagno, Eno, & Brodsky, 2012). Professional women, including

clinicians, may experience gender-based discrimination (Kaempf, Baxter, Packer, & Pinals, 2015; Price, Recuperero, Strong, & Gutheil, 2004; Riger, Foster-Fishman, Nelson-Kuna, & Curran, 1995). Research has shown a tendency for participants to assign greater credibility ratings to male than female experts if females did not meet stereotypical gender expectations (Memon & Shuman, 1998; Nagle, Brodsky, & Weeter, 2014; Neal, 2014; Neal et al., 2012), including in complex testimonies (Schuller, Terry, & McKimmie, 2005), or during cross-examination with gender-intrusive questions (Larson & Brodsky, 2010). In the US, attorneys have expressed a marked preference for retaining male over female expert witnesses (83 % vs 17 %), with one survey reporting that male experts received more than double the testifying fees than female experts (Kaufman, 2017). Similar underrepresentation of women has also been observed in the UK, with only 11 % of the expert witnesses appointed in medical fitness to practice cases being females (Medical Protection Society, 2022).

Gender research in forensic and legal settings has highlighted the traditional differences in normative gender expectations and communication styles based on the social role theory (Eagly, Makhijani, & Klonsky, 1992; Ednie, 1996). It has been argued that men may appear more competent, confident, assertive, influential, direct, and able to manage their stress in court than women. Comparatively, women may come across as more likeable, emotionally expressive, warm, compassionate, understanding, and communal than men (Brodsky & Gutheil, 2016; Cuddy, Fiske, & Glick, 2004; Eagly et al., 1992; Helgeson, 2009; Kaempf et al., 2015; Larson & Brodsky, 2010; McKimmie et al., 2004; Nagle et al., 2014; Neal, 2014; Neal et al., 2012; Strasburger, Miller, Commons, Gutheil, & Lallave, 2003). Despite the feminist movements and campaigns against gender inequalities over the past two decades, recent reviews of the literature suggest that gender stereotypes and gendered expectations still exist in different contexts (Ellemers, 2018). For example, women, in general, are seen as more caring, warm, or family-oriented but less competent, professionally achieving or confident in performing tasks than men (Ellemers, 2018). Such stereotypes and inequalities might have a significant impact on professional women's well-being and careers (Love, Nikolaev, & Dhakal, 2024). Concerning the courtroom, the nature and gender role expectations of the case can arguably diminish gender-based differences (Neal, 2014).

Gender differences may have a more determining role when the expert's gender is perceived to be consistent with the characteristics of the party they have been instructed to assess (McKimmie et al., 2004; Neal, 2014). For instance, female experts have been viewed as having more credibility and expertise on child custody or sexual harassment cases as opposed to 'male-oriented domain cases', such as homicide or vehicle service business issues (Adshead, 2005; Helgeson, 2009; McKimmie et al., 2004; Memon & Shuman, 1998; Price et al., 2004; Schuller & Cripps, 1998; Schuller, Terry, & McKimmie, 2001; Swenson, Nash, & Roos, 1984). According to the role incongruity theory, prejudices against gender are more profound when there is an incongruity between normative gender stereotypical behaviours and social role expectations (Eagly & Koenig, 2008). For example, female experts may be perceived as less reliable if they present with more stereotypical masculine (e.g., confidence) than feminine (e.g., likeability) traits within male-dominated positions (Brodsky, Neal, Cramer, & Ziemke, 2009; Eagly et al., 1992; Neal et al., 2012). Thus, advocates may be motivated to consider gender characteristics in their instructions to an expert witness depending on the nature and the context of the case domain (Eagly & Diekmann, 2005).

#### 1.4. The present study

The above review lays a broad rationale for the potential relevance of gender and professional identity to jurors' perceptions of expert witness credibility and, subsequently, their decision-making process. While previous studies have examined the independent effects of gender and mental health professions, predominately psychology and psychiatry, on

jurors' perceptions of credibility, it is important to explore the interaction effect of these two variables. It has been argued that the independent effects of such variables are not enough to explain jurors' perceptions of credibility and decision-making, and several variables often interact with each other to influence decision-making (Cooper et al., 1996; Flick et al., 2022; Neal, 2014; Thomas, 2010).

Furthermore, research on mental health expert witness credibility has been mainly conducted in the US with limited research even in other Western societies with different legal and mental health systems (e.g., Corder et al., 1990; Flick et al., 2022; Greenberg & Wursten, 1988; Kaempf et al., 2015; Nagle et al., 2014; Shapiro et al., 2015). Yet significant differences in the perception of roles may exist between countries. For example, in England and Wales, where this study is located, clinical psychologists are often registered with a professional body requiring the completion of a well-established clinical doctoral degree. Most clinical psychologists and psychiatrists are employed within the National Health Service, a well-recognised and respected organization. Regarding gender, this is also of specific relevance; there is a significant gender imbalance within clinical psychology, with 80 % of the registered psychologists in the UK being females (Health and Care Professions Council, 2019; Johnson, Madill, Koutsopoulou, Brown, & Harris, 2020), which is not reflected in psychiatry (48.2 % of the consultant psychiatrists and 55.5 % of the speciality doctors being females; Royal College of Psychiatrists, 2021).

More importantly, most authors have primarily used survey- or attitude-based methods to assess mental health and legal professionals' experiences of testimony (e.g., Corder et al., 1990; Kaempf et al., 2015; Leslie et al., 2007; Neal & Brodsky, 2016; Wechsler et al., 2015), non-validated measurements of expert credibility (e.g., Cooper & Neuhaus, 2000; Hurwitz et al., 1992; Klettke, Graesser, & Powell, 2010) or student samples which may be unrepresentative of an actual jury panel (e.g., Greenberg & Wursten, 1988; Neal et al., 2012). Hence, the current study employed an experimental simulation design to investigate the main and interaction effects of the expert's gender and profession (psychologist/psychiatrist) on mock jurors' perceptions of credibility, judgement, and decision-making. Given the existing evidence, we hypothesised that there would be differences in credibility between expert witnesses of different genders and professions. However, the literature is not well enough established to specify clear directional hypotheses in relation to each of these factors. Secondly, we hypothesised that jurors would be more likely to make decisions in line with highly credible expert witnesses.

## 2. Method

### 2.1. Design

The current study employed a 2 (Male versus Female expert) X 2 (Consultant Psychiatrist versus Consultant Clinical Psychologist) between-subjects cross-sectional factorial design. We video-recorded two actors (one male, one female) testifying as expert witnesses in a mock court trial in line with previous expert witness credibility studies (e.g., Cramer et al., 2014; Neal et al., 2012). To ensure both professionals were identified as senior within their profession, we used the terms 'Consultant Clinical Psychologist' and 'Consultant Psychiatrist' for the profession manipulation. For brevity, these professions will be referred to as 'psychologist' and 'psychiatrist'.

### 2.2. Participants and recruitment

A priori power analyses, using G\*Power Version 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007), indicated that 158 participants would be sufficient to perform a two-way ANOVA and achieve medium effects (0.25) with 0.8 power and  $\alpha = 0.05$ . Similarly, 92 participants would be sufficient for a regression model with medium effect (0.15) and at least five predictors.

Participants were selected from an adult lay population in England and Wales using Prolific (Palan & Schitter, 2018). Prolific is a reliable online recruitment platform where diverse people worldwide can participate in paid online studies. A notable feature of this platform is the requirement for participants to prove their identity using government-approved IDs, thus reducing the likelihood of bots influencing outcomes. The survey was distributed based on UK census data (Office for National Statistics, ONS, 2022) and was cross-stratified on gender, age, and ethnicity using Prolific's recruitment screeners to gain representative samples. Inclusion criteria were developed to match the requirements of the Juries Act 1974, i.e., adults 18–76 years old who were fluent in English, had lived in England and Wales for at least five years, and did not have a criminal history. In addition, participants were excluded from the study if they self-identified as having served a term of imprisonment or detention of more than five years, had been subject to a community order or sentence over the past ten years, or were on bail in criminal proceedings.

### 2.3. Procedure

This study was conducted online using Qualtrics, an online survey software that allows the creation and sharing of online research using advanced surveying features. Participants accessed the advertised link through their unique Prolific account. Inclusion criteria and consent were checked before completing the survey. The online survey involved reading a vignette and watching a 7-min extract of a video-recorded expert witness testimony in a mock criminal trial. Participants were asked to imagine participating as jurors and deciding whether the defendant was guilty. Written information was given to participants about their role as jurors, the significance of their decisions, legal proceedings (i.e., determination of guilt), the defendant's background, and the role of the expert witness.

Participants were randomly assigned to one of the four video conditions. After watching the testimony, participants completed an attention and manipulation check of three multiple-choice questions asking them to recall the defendant's name, alleged offence, and the expert's profession. Participants' completion time was recorded. These checks ensured that participants attended the video and could provide a valid opinion on the case and credibility variables (Flick et al., 2022). Participants who failed the manipulation check by responding incorrectly to two out of three questions or failing the expert's profession alone were excluded. In the next phase, participants completed the WCS about the expert in the video and decided whether the defendant was 'guilty' or 'not guilty'. Participants were given written information on 'mens rea' and instructions which guided them through the questions jurors have to consider when deciding their verdict.

### 2.4. Pilot phase

Regional clinicians and university staff were approached to participate as actors. The first three male and three female participants of similar age, race, and ethnicity who consented to the study requirements were included as potential actors. All actors self-identified as White British and provided a passport-type photo (head and shoulders, smiling expression), which was shared individually with a focus group of 15 participants (Hosoda, Stone-Romero, & Coats, 2003; Neal et al., 2012). The focus group consisted of community members recruited via convenience sampling who did not know the actors and were asked to view the photos, rate the actors using the WCS, and rank them in order of these factors.

The two participant actors, one male and one female, with the middle rankings on these factors, were selected for the experimental phase. This process was adopted for two reasons. Firstly, previous juror research showed no significant differences between highly likeable male and female experts (Neal et al., 2012). Secondly, it provided some control for the impact of factors beyond gender on credibility ratings.

The WCS scores did not differ between the male and the female actors (Table 1).

The two actors attended the 'mock court' in the University's Law School, which intended to replicate a courtroom setting for generalizability and were video recorded presenting the same written case study script. Actors were also asked to dress formally in similar neutral clothing (e.g., a white shirt/blouse) and attend on the same day and time to minimise the confounding effect of background or appearance characteristics (e.g., light, place, dressing). Both actors had considerable experience in providing expert witness testimonies in real life.

### 2.5. Experimental manipulation

The only experimental manipulation in this study referred to whether the clinical information was presented by a 'Consultant Clinical Psychologist' or a 'Consultant Psychiatrist' of a different gender. This was achieved by developing two videos containing the same female actor and two videos containing the same male actor. The same actors were used to minimise the influence of possible confounders, such as distinctive face characteristics, haircut, skin colour, attitude, or non-verbal behaviours. For the profession manipulation, the two actors introduced themselves as a 'Consultant Clinical Psychologist' or a 'Consultant Psychiatrist', described their education and work experience, and provided their assessment using an identical script. All experts were portrayed as consultants specialising in neurodevelopmental disorders.

### 2.6. Case scenario and video script

The script for the case videos was adapted based on publicly reported criminal court cases in England and Wales (Elliott v C, 1983, R v G, 2004; R v Stephenson, 1979). The text of the vignette and jury instructions were reviewed by a lawyer and a clinical psychologist with significant experience of expert witness testimony. The final vignette was structured to replicate an expert opinion accompanying oral testimony (Appendix A). The defendant was accused of criminal damage by arson, an offence serious enough to be considered by a jury in a Crown Court. To make the study representative of a case that could, in practice, be readily assessed by either a clinical psychologist or a psychiatrist, as well as reflecting actual legal instances in which these issues have been debated in practice (e.g., Elliott v C, 1983; R v G, 2003; R v Stephenson, 1979), we described the primary conditions of the defendant as a moderate Learning Disability (LD) and an Attention Deficit Hyperactivity Disorder (ADHD). Firesetting behaviours are also frequently reported among individuals with neurodevelopmental conditions (Collins, Barnoux, & Langdon, 2021).

### 2.7. 'Mens Rea' recommendation

Before making their final decision, jurors were asked to consider the defendant's state of mind ('mens rea'): their level of criminal intent, recklessness, and negligence. In the present case, the relevant 'mens rea' was the defendant's ability to appreciate the risk and consequences associated with setting a fire, which may have been impacted by his conditions (LD and ADHD). The expert, therefore, recommended that the defendant's conditions interacted with the 'mens rea' of the offence,

**Table 1**  
Actors' Ratings on WCS Variables from the Focus's Group.

	Male Actor	Female Actor
Likeability	37.60	37.67
Trustworthiness	36.73	36.47
Confidence	36.87	36.87
Knowledge	37.47	38.20
Total Credibility	148.67	149.20

a recommendation that, if accepted by the jury, would be associated with a 'not guilty' verdict.

## 2.8. Measures

**Witness Credibility Scale.** Credibility rating scores were assessed using the WCS, a validated 10-point Likert-type scale (Brodsky et al., 2010). It consists of 20 adjective pairings (e.g., unkind to kind, each measured on a 10-point scale) rated by an observer. Scores are summed for the four subscales (ranging from 5 to 50) and total credibility (20–200). Internal consistency values have been reported for each subscale (0.88 – confidence, 0.87 – likeability, 0.90 – knowledge, and 0.94 – trustworthiness) by Brodsky et al. (2010). These were similarly high in the present sample (0.87 – likeability, 0.95 – trustworthiness, 0.92 – confidence, 0.91 – knowledge, and 0.96 – total credibility). This means that the measure was valid for measuring those variables in our sample.

**Jury decision-making (determination of guilt).** Participants were asked to report the likelihood of assigning the defendant to a guilty verdict using a continuous 10-item Likert scale, with higher scores indicating a greater likelihood of assigning the 'guilty' decision. The question read: "Bearing everything in mind, how appropriate do you think a guilty verdict would be in this case?". This method is consistent with previous research (Brodsky et al., 2009; Cramer et al., 2009, 2011; Neal et al., 2012). To add ecological validity to our findings and reflect real-world cases, participants were also asked to give a final dichotomous verdict ('guilty' vs 'non-guilty').

**Demographics.** Participants were asked to report non-identifiable demographic information such as gender, age, ethnicity, education, and employment.

## 2.9. Ethical considerations

Ethical approval was obtained through the University's Faculty of Medicine and Health Sciences Research. Only non-identifiable data was collected. Participants provided informed consent electronically, were informed of how to withdraw or seek further support if needed and received a token payment in line with Prolific recommendations.

## 2.10. Statistical analysis

All analyses were performed using IBM SPSS Statistics 24.0. Separate between-subjects two-way ANOVAs were conducted to investigate the interaction effects of the expert witness's gender and profession on jurors' perceptions of all aspects of credibility. A two-way ANCOVA also looked at the interaction effect of the expert's gender and profession on jurors' decision-making, controlled for jurors' perceptions of expert witness credibility. Simple main effects and Bonferroni-adjusted pairwise comparisons within each simple main effect were performed to follow up on significant interaction effects. Because there were four pairwise comparisons being conducted (male psychiatrist/female psychiatrist; male psychologist/female psychologist; male psychiatrist/female psychologist; female psychiatrist/male psychologist), Bonferroni adjustments meant that the observed/reported *p*-values for pairwise comparisons are four times greater than those which would have been obtained without such adjustment. We also examined whether participant characteristics moderated any of our effects. None made substantial changes ( $p < .05$ ) and were not included as covariates. Effect sizes are reported for each significant variable ( $p < .05$ ), with  $\eta^2$  (eta squared) values representing small ( $>0.01$ ), medium ( $>0.06$ ) and large ( $>0.14$ ) effects (Vacha-Haase & Thompson, 2004).

Relevant assumptions for almost all parametric analyses were met. Assumptions of normality for the two-way ANOVA were violated for some subscales. However, the ANOVA was considered appropriate given the relatively large sample size and with all groups being similarly negatively skewed (Maxwell & Delaney, 2004). Hierarchical multiple regression (for continuous guilt outcome) and binomial logistic

regression (for dichotomous verdict outcome) analyses were employed to examine if the expert's credibility ratings, controlled for the expert's gender and profession, predicted jurors' determination of guilt. A stepwise regression was also run to determine the most robust predictor credibility variables that accounted for the most variance in the jurors' decision-making.

## 3. Results

A total of 220 participants completed the online survey. However, 38 participants were excluded because they did not watch the whole video ( $N = 8$ ), failed the attention and manipulation check ( $N = 26$ ; fourteen failed the expert's profession alone, twelve failed two checks), or dropped out without completing the survey ( $N = 4$ ). Four participants answered the defendant's name wrong, and one participant answered the defendant's offence wrong but were included in the analysis. Overall, 182 participants (82.7 % of the total sample) were included in the final analysis (see Table 2). Of those, 80.9 % were identified as White, 50.5 % were females, and their mean age was 40.7 (range 20–73 years,  $SD = 14.4$ ), achieving a representative sample of the population in England and Wales (81.7 % identified as White, 51 % as females, median age of 40.7 years, ONS, 2022). There were no statistically significant demographic differences between the participants of the four groups.

### 3.1. Total credibility

The data supported our first hypothesis regarding credibility differences among the expert witnesses (Table 3). There was a statistically significant interaction between the expert witness's gender and profession on jurors' perceptions of total credibility with a medium effect size,  $F(1, 178) = 12.18, p = .001$ , partial  $\eta^2 = 0.064$  (Fig. 1). Simple main effect analyses revealed a significant main effect of the expert witness's profession on jurors' perceptions of total credibility with a small effect size,  $F(1, 178) = 4.86, p = .029$ , partial  $\eta^2 = 0.027$ . Psychiatrists ( $M = 168.61, SD = 21.38$ ) were rated significantly more credible than psychologists ( $M = 161.25, SD = 24.03$ ). However, a main effect of expert witness gender on the total credibility score was not found,  $F(1, 178) = 0.23, p = .635$ .

Pairwise comparisons showed that male psychiatrists ( $M = 174.96, SD = 18.93$ ) were significantly more credible than female psychiatrists with a small effect size ( $M = 161.98, SD = 21.97$ ),  $F(1, 178) = 8.13, p = .005$ , partial  $\eta^2 = 0.044$ , and male psychologists with a medium effect size ( $M = 156.32, SD = 22.66$ ),  $F(1, 178) = 16.39, p < .001$ , partial  $\eta^2 = 0.084$ . Whereas female psychologists ( $M = 166.18, SD = 24.59$ ) were significantly more credible than male psychologists with a small effect size ( $M = 156.32, SD = 22.66$ ),  $F(1, 178) = 4.40, p = .037$ , partial  $\eta^2 = 0.024$ , but did not differ from female psychiatrists ( $M = 161.98, SD = 21.97$ ),  $F(1, 178) = 0.82, p = .367$ .

### 3.2. Likeability subscale

There was a significant interaction between the expert witness's gender and profession on the likeability score with a medium effect size,  $F(1, 178) = 19.94, p < .001$ , partial  $\eta^2 = 0.101$  (Fig. 2). Female expert witnesses, regardless of profession, were significantly more likeable ( $M = 40.80, SD = 6.64$ ) than their male counterparts ( $M = 39.02, SD = 6.67$ ) with a small effect size,  $F(1, 178) = 4.23, p = .041$ , partial  $\eta^2 = 0.023$ . However, the expert witness's profession had no significant main effect on the likeability score,  $F(1, 178) = 1.33, p = .250$ . Female psychologists ( $M = 42.39, SD = 6.98$ ) were rated as more likeable than male psychologists ( $M = 36.27, SD = 6.07$ ),  $p < .001$ , and female psychiatrists ( $M = 39.28, SD = 5.97$ ),  $p = .021$ . On the other hand, male psychiatrists ( $M = 41.54, SD = 6.23$ ) were rated as more likeable than male psychologists ( $M = 36.27, SD = 6.07$ ),  $p < .001$ .

**Table 2**  
Participant Demographic Characteristics of the Total Sample and Subgroups.

	Male Psychologist (N = 44)	Female Psychologist (N = 44)	Male Psychiatrist (N = 48)	Female Psychiatrist (N = 46)	Total (N = 182)
Gender <i>n</i> (%)					
Male	26 (59.1)	19 (43.2)	25 (52.1)	20 (43.5)	90 (49.5)
Female	18 (40.9)	25 (56.8)	23 (47.9)	26 (56.5)	92 (50.5)
Age in years <i>M</i> (SD)	41.3 (13.5)	39.4 (13.5)	40.9 (15.1)	41 (15.7)	40.7 (14.4)
Ethnicity <i>n</i> (%)					
White	33 (75)	39 (88.6)	38 (79.2)	37 (80.4)	147 (80.9)
Black/African/Caribbean	3 (6.9)	1 (2.3)	4 (8.3)	4 (8.7)	12 (6.6)
Asian	6 (13.7)	4 (9.1)	3 (6.3)	1 (2.2)	14 (7.7)
Mixed ethnic groups	2 (4.6)	0 (0)	1 (2.1)	3 (6.6)	6 (3.2)
Other ethnic groups	0 (0)	0 (0)	2 (4.2)	1 (2.2)	3 (1.6)
National identity <i>n</i> (%)					
English	42 (95.4)	39 (88.6)	44 (91.7)	39 (84.8)	164 (90.1)
Welsh	1 (2.3)	1 (2.3)	1 (2.1)	2 (4.4)	5 (2.8)
Other	1 (2.3)	4 (9.1)	3 (6.3)	5 (10.8)	13 (7.1)
Education <i>n</i> (%)					
Secondary or higher education (A-levels, etc.)	17 (38.6)	10 (22.8)	9 (18.7)	12 (26.1)	48 (26.4)
Undergraduate studies	20 (45.4)	20 (45.4)	25 (52.1)	25 (54.3)	90 (49.4)
Postgraduate studies	7 (16)	14 (31.8)	14 (29.2)	9 (19.6)	44 (24.2)
Profession <i>n</i> (%)					
Student	3 (6.8)	4 (9.1)	4 (8.3)	3 (6.5)	14 (7.7)
Legal or mental health professional	2 (4.6)	2 (4.6)	2 (4.2)	3 (6.5)	9 (5)
Other	39 (88.6)	38 (86.3)	42 (87.5)	40 (87)	159 (87.3)
Employment <i>n</i> (%)					
Employed	32 (72.7)	30 (68.1)	35 (72.9)	31 (67.4)	128 (70.3)
Unemployed	9 (20.5)	10 (22.7)	9 (18.8)	7 (15.2)	35 (19.3)
Retired	2 (4.6)	2 (4.6)	4 (8.3)	7 (15.2)	15 (8.2)
I prefer not to say	1 (2.3)	2 (4.6)	0 (0)	1 (2.2)	4 (2.2)

**Table 3**  
Means (and Standard Deviations) of Credibility Factors Defined by Expert Gender and Profession.

WCS							
Gender	Profession	<i>N</i>	Likeability	Trustworthiness	Confidence	Knowledge	Total credibility
Male	Psychologist	44	36.27 (6.07)	38.45 (8.48)	40.61 (5.41)	40.98 (6.32)	156.32 (22.66)
	Psychiatrist	48	41.54 (6.23)	45.08 (4.69)	43.23 (6.42)	45.10 (3.84)	174.96 (18.93)
	Total	92	39.02 (6.67)	41.91 (7.51)	41.98 (6.07)	43.13 (5.55)	166.04 (22.70)
Female	Psychologist	44	42.39 (6.98)	42.5 (7.39)	37.55 (8.51)	43.75 (5.53)	166.18 (24.59)
	Psychiatrist	46	39.28 (5.98)	41.52 (6.55)	39.11 (6.6)	42.07 (6.58)	161.98 (21.97)
	Total	90	40.80 (6.64)	42.00 (6.95)	38.34 (7.59)	42.89 (6.11)	164.03 (23.25)
Total	Psychologist	88	39.33 (7.19)	40.48 (8.16)	39.04 (7.25)	42.36 (6.07)	161.25 (24.03)
	Psychiatrist	94	40.44 (6.18)	43.34 (5.92)	41.21 (6.78)	43.62 (5.54)	168.61 (21.38)
	Total	182	39.90 (6.69)	41.96 (7.22)	40.18 (7.08)	43.01 (5.82)	165.05 (22.93)

Means (and Standard Deviations) of Credibility Factors Defined by Expert Gender and Profession.  
Note. WCS = Witness Credibility Scale.

**3.3. Trustworthiness subscale**

There was a significant interaction between the expert witness's profession and gender on trustworthiness score with a medium effect size,  $F(1, 178) = 13.93, p < .001$ , partial  $\eta^2 = 0.073$ . Psychiatrists, regardless of gender, were rated as significantly more trustworthy ( $M = 43.34, SD = 5.92$ ) than psychologists ( $M = 40.48, SD = 8.16$ ) with a small effect size,  $F(1, 178) = 7.69, p = .006$ , partial  $\eta^2 = 0.041$ . However, there were no significant differences between male ( $M = 41.91, SD = 7.51$ ) and female ( $M = 42, SD = 6.95$ ) expert witnesses,  $p = .813$ . Male psychiatrists ( $M = 45.08, SD = 4.69$ ) were rated as more trustworthy than female psychiatrists ( $M = 41.52, SD = 6.55$ ),  $p = .013$ , and male psychologists ( $M = 38.45, SD = 8.48$ ),  $p < .001$ . Female psychologists ( $M = 42.50, SD = 7.39$ ) were rated as more trustworthy than male psychologists ( $M = 38.45, SD = 8.48$ ),  $p = .006$ , but did not differ from female psychiatrists ( $M = 41.52, SD = 6.55$ ),  $p = .50$ .

**3.4. Confidence subscale**

Male expert witnesses ( $M = 41.98, SD = 6.07$ ), regardless of profession, were rated as more confident than female expert witnesses with a medium effect size ( $M = 38.34, SD = 7.59$ ),  $F(1, 178) = 12.65, p < .001$ , partial  $\eta^2 = 0.066$ . Psychiatrists, regardless of gender ( $M = 41.2, SD = 6.79$ ), were also rated as more confident than psychologists with a small effect size ( $M = 39.08, SD = 7.25$ ),  $F(1, 178) = 4.27, p = .040$ , partial  $\eta^2 = 0.023$ . However, there was no significant gender and profession interaction in confidence,  $p = .603$ . Furthermore, male psychiatrists ( $M = 43.23, SD = 6.42$ ) were rated as more confident than female psychiatrists ( $M = 39.11, SD = 6.60$ ),  $p = .004$ , and male psychologists ( $M = 40.61, SD = 5.41$ ) were rated as more confident than female psychologists ( $M = 37.55, SD = 8.51$ ),  $p = .036$ . No significant differences were observed between male psychiatrists and psychologists,  $p = .068$ , or between female psychiatrists and psychologists,  $p = .278$ .

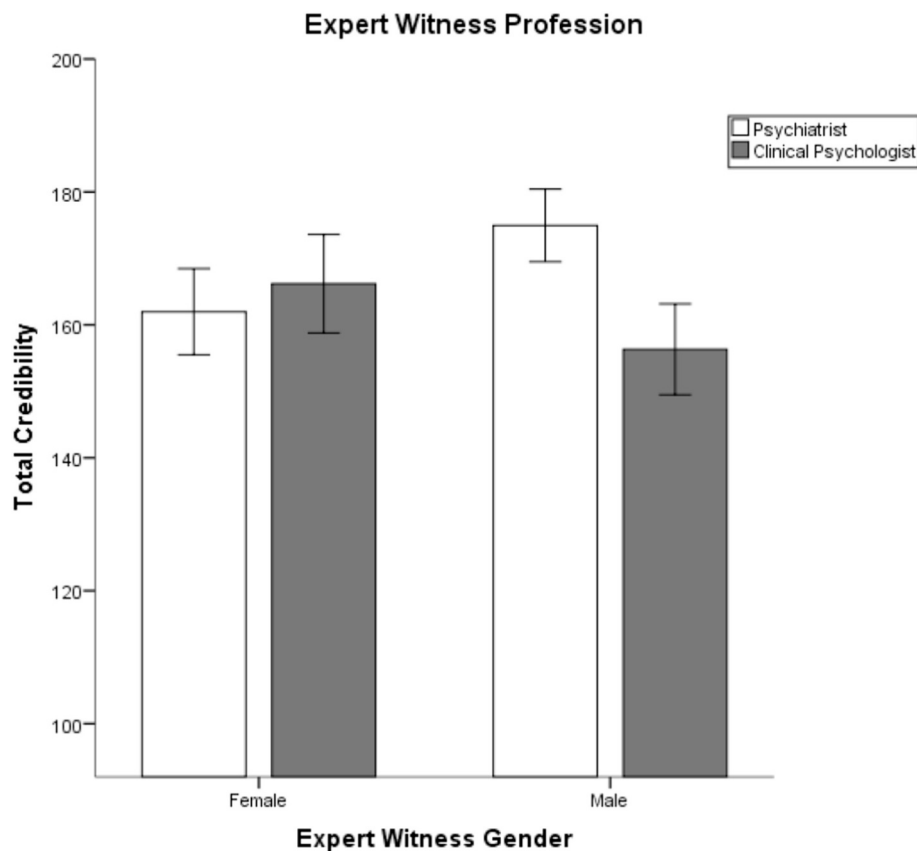


Fig. 1. Two-way Interaction (Expert Witness Gender X Profession) on Jurors' Perceptions of Total Credibility.

Note. Total credibility ratings are shown for male and female clinical psychologist and psychiatrist expert witnesses. Total credibility scores ranged from 92 to 200. Error bars show standard errors.

### 3.5. Knowledge subscale

There was a statistically significant interaction between the expert witness's gender and profession on the knowledge score with a medium effect size,  $F(1, 178) = 12.05, p = .001$ , partial  $\eta^2 = 0.063$ . Male psychiatrists ( $M = 45.10, SD = 3.83$ ) were rated as significantly more knowledgeable than female psychiatrists ( $M = 42.07, SD = 6.57$ ),  $p = .01$ , and male psychologists ( $M = 40.98, SD = 6.32$ ),  $p = .001$ . However, female psychologists ( $M = 43.75, SD = 5.53$ ) were rated significantly more knowledgeable than male psychologists ( $M = 40.98, SD = 6.32$ ),  $p = .022$ , and did not differ from female psychiatrists ( $M = 42.07, SD = 6.57$ ),  $p = .159$ . Overall, there were no significant main effects of expert gender ( $p = .874$ ) or profession ( $p = .146$ ) on the knowledge scores.

### 3.6. Determination of guilt

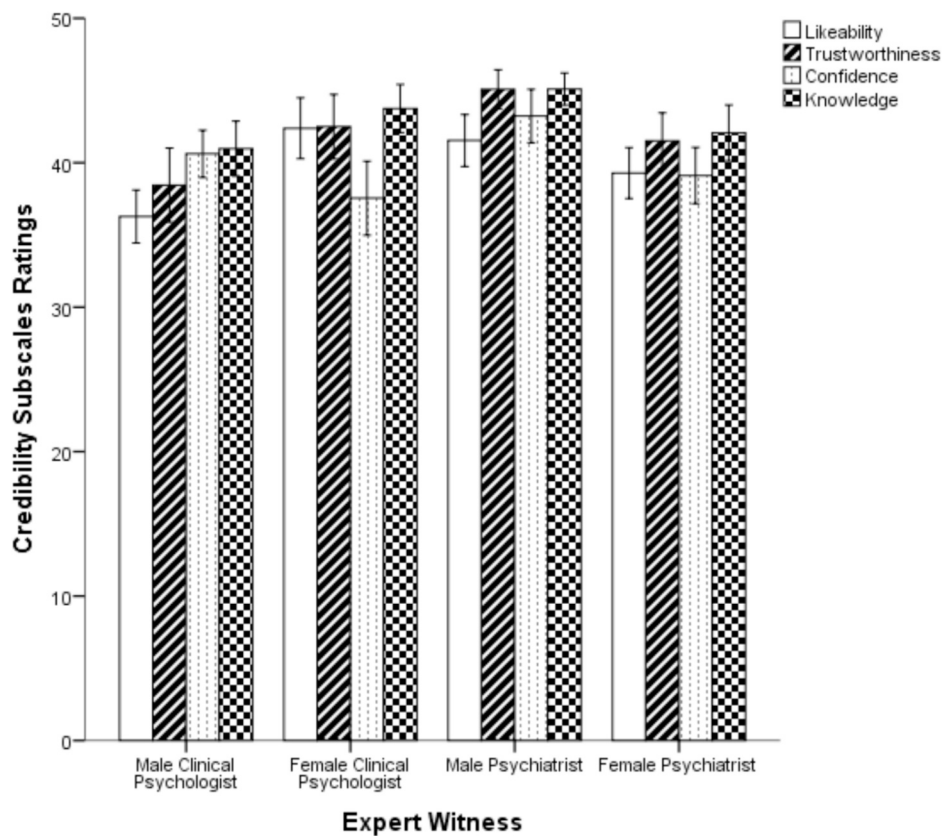
There were statistically significant moderate negative correlations between jurors' perceptions of expert witness credibility variables and their decisions (Table 4). Negative correlations indicate that high scores on each subscale were associated with lower guilt ratings, i.e., a "non-guilty verdict".

There was a statistically significant interaction between the expert witness's gender and profession on jurors' determination of guilt, whilst controlling for jurors' perceptions of expert total credibility with a small effect size,  $F(1, 177) = 4.52, p = .035$ , partial  $\eta^2 = 0.025$ . However, there were no statistically significant main effects of expert witness gender ( $p = .848$ ) and profession ( $p = .519$ ) on jurors' determination of guilt. Pairwise comparisons showed that jurors were more likely to assign a non-guilty verdict in line with female psychologists' recommendations ( $M = 4.80, SD = 2.36$ ) than with female psychiatrists' recommendations

( $M = 5.93, SD = 2.53$ ) with a small effect size,  $F(1, 177) = 4.01, p = .047$ , partial  $\eta^2 = 0.022$ . No other statistically significant pairwise comparisons were found.

The complete model of WCS total score, controlled for the expert witness's gender and profession, to predict jurors' decision-making (Model 2) was significant,  $R^2 = 0.13, F(3, 178) = 8.74, p < .001$ ; adjusted  $R^2 = 0.11$  (Table 5). This meant jurors were more likely to assign a "non-guilty" verdict for the defendant when the expert was considered highly credible regardless of their gender or profession, thus supporting our second hypothesis. Adding the WCS total score to the prediction of jurors' decision-making led to a statistically significant increase in  $R^2$  of 0.13,  $F(1, 178) = 26.00, p < .001$ . Finally, a stepwise regression analysis revealed that knowledge was the only significant predictor variable among the credibility subscales, adding an  $R^2$  of 0.17,  $F(4, 175) = 8.56, p < .001$ , to the initial model of the expert witness's gender and profession.

The logistic regression model was also statistically significant,  $\chi^2(3) = 38.95, p < .001$ . The model explained 22.1 % (Nagelkerke  $R^2$ ) of the variance in the determination of guilt (verdict) and correctly classified 68.1 % of cases (58.3 % – sensitivity, 76.5 % – specificity, 68.1 % – positive predictive value, and 68.2 % – negative predictive value). The expert's total perceived credibility score was statistically significant, with increasing expert witness credibility being associated with a reduction in the likelihood of assigning a guilty verdict (Table 6). The interaction of the expert's gender and profession was also significant in predicting jurors' determination of guilt. Jurors were 3.72 more likely to find the defendant guilty if they listened to a male psychologist (Table 6).



**Fig. 2.** Jurors' Perceptions of Expert Witness Likeability, Trustworthiness, Confidence, and Knowledge based on the Expert Witness's Gender and Profession. Note. Scores ranged from 18 to 50 for likeability, 16–50 for trustworthiness, 12–50 for confidence, and 16–50 for knowledge. Error bars show standard errors.

**Table 4**  
Descriptive Statistics and Correlations for Study Variables (N = 182).

Variable	M	SD	1	2	3	4	5	6
1. Determination of Guilt	5.30	2.51	–	–	–	–	–	–
2. Likeability	39.90	6.69	–0.32*	–	–	–	–	–
3. Trustworthiness	41.96	7.22	–0.32*	0.78*	–	–	–	–
4. Confidence	40.18	7.08	–0.21*	0.51*	0.57*	–	–	–
5. Knowledge	43.01	5.82	–0.37*	0.61*	0.75*	0.64*	–	–
6. Total Credibility	165.05	22.93	–0.36*	0.85*	0.91*	0.80*	0.86*	–

\*  $p < .01$ .

**Table 5**  
Hierarchical Multiple Regression of Total Credibility Score Predicting Jurors' Decision Controlled for Expert Witness's Gender and Profession.

Variable	Jurors' Determination of Guilt			
	Model 1		Model 2	
	B	$\beta$	B	$\beta$
Constant	5.36**		12.00**	
Expert's gender	–0.16	–0.03	–0.08	–0.02
Expert's profession	0.04	0.01	–0.25	–0.05
Credibility total score			–0.04**	–0.36
$R^2$	0.001		0.13	
F	0.10		8.74*	
$\Delta R^2$	–0.01		0.11	
$\Delta F$	0.10		26.00*	

Note. N = 182; Model = "Enter" method in SPSS Statistics; B = unstandardised regression coefficient;  $\beta$  = standardised coefficient;  $R^2$  = coefficient of determination; F = F-distribution (F-test);  $\Delta R^2$  = adjusted  $R^2$ ;  $\Delta F$  = adjusted F-distribution (F-test).

\* $p < .05$ , \*\* $p < .001$ .

#### 4. Discussion

This study examined whether experimental manipulations of the expert witness's gender and profession (clinical psychologist/psychiatrist) affected mock jurors' perceptions of expert witness credibility and decision-making in England and Wales. We found a statistically significant interaction of the expert's gender and profession on mock jurors' perceptions of the expert's likeability, trustworthiness, knowledge, and total credibility. Apart from likeability, male psychiatrists received the highest scores in those variables, followed by female psychologists, female psychiatrists, and male psychologists.

##### 4.1. Credibility differences between clinical psychologists and psychiatrists

The overall results support the suggestion that psychiatrists are generally perceived as more confident, trustworthy, and credible than clinical psychologists. This aligns with the perceived medical bias reported in US studies and the importance of the expert's credentials on perceptions of credibility (e.g., Greenberg & Wursten, 1988; Wechsler



**Table 6**

Logistic Regression Predicting Likelihood of Guilt Verdict based on Expert's Gender, Expert's Profession, Expert's Gen X Profession, and Perceptions of Total Credibility.

	<i>B</i>	<i>SE</i>	<i>Wald</i>	<i>df</i>	<i>Sig.</i>	<i>Odds Ratio</i>	<i>95 % CI for Odds Ratio</i>	
							<i>Lower</i>	<i>Upper</i>
Expert's gender	−0.82	0.46	3.12	1	0.077	0.44	0.18	1.09
Expert's profession	−0.58	0.46	1.59	1	0.208	0.56	0.23	1.38
Expert's gender X expert's profession	1.32	0.66	3.98	1	0.046	3.72	1.02	13.55
Credibility total score	−0.036	0.01	17.98	1	0.000	0.97	0.95	0.98
Constant	6.14	1.44	18.27	1	0.000	464.24		

Note: Expert's gender is for males compared to females. Expert's profession is for clinical psychologists compared to psychiatrists. Expert's gender X expert's profession is for male clinical psychologist as opposed to other experts.

et al., 2015). Leslie et al. (2007) argued that legal professionals in the UK may still not recognise clinical psychologists' expertise, scientific principles, and methods as rigorous enough to answer mental health or legal questions compared to psychiatry. Previous researchers have proposed strategies to increase court bias awareness for clinicians, especially psychologists, including presenting more objective, transparent, and impartial evidence in court; receiving appropriate training and preparation from the case attorney; or using more structured evaluation methods to formulate their opinion (Corder et al., 1990; Neal & Brodsky, 2016). Furthermore, psychiatrists being instructed more frequently by barristers could lead to greater familiarity, which may, in turn, reinforce such attributes of confidence and trust (Leslie et al., 2007).

In almost all aspects of credibility, male psychologists were rated significantly lower than male psychiatrists. Interestingly, female experts only differed in perceptions of likeability, indicating that female psychologists were more likeable than female psychiatrists. These findings may be explained by the relative gender makeup of the professions irrespective of workforces, which may contribute towards unconscious profession-related stereotypes about the characteristics of a typical expert witness. For instance, the under-representation of males in clinical psychology may partially explain why male experts were the most affected by profession-related unconscious biases (Health and Care Professions Council, 2019; Johnson et al., 2020). On the contrary, gender is more balanced in psychiatry (Royal College of Psychiatrists, 2021); thus, such differences may not have been observed for female experts.

#### 4.2. Gender differences and credibility

The expert's gender alone did not significantly affect how mock jurors perceived the expert's credibility. This finding is consistent with reflections by Neal (2014), who argued that no linear relationship exists between these two variables and that credibility is a multifaceted and fluid quality that depends on the interactive effect of various variables. Literature on expert's gender credibility, predominately conducted in the US, indicates that male expert witnesses may be viewed as more credible than females if the female experts do not meet gender role expectations (e.g., being likeable) or specific standards of competence and trustworthiness (McKimmie et al., 2004; Nagle et al., 2014; Neal et al., 2012; Riger et al., 1995; Schuller et al., 2005). Arguably, the female experts in this study were rated as trustworthy, likeable, and knowledgeable, thus meeting these role expectations (Eagly & Koenig, 2008), which may have impacted perceived credibility. It can also be hypothesised that gender differences may be more subtle among mental health expert witnesses in England and Wales compared to other Western legal systems, such as the US (Larson & Brodsky, 2010; Schuller et al., 2005). However, more research is needed to support these statements.

Interestingly, gender differences emerged when we looked at their interactions with each profession separately. This may reflect the possible gender stereotypical or unconscious biases, with psychiatry being viewed as predominantly male-dominant and clinical psychology as predominantly female, as previously highlighted. Nevertheless, this

finding has broader importance in achieving equitable practice in the courtroom. Indeed, in medicine, recent data from the GMC showed that the overwhelming percentage of medical professionals who testify as expert witnesses (86 %) are males, and only 11 % of those are females (Medical Protection Society, 2022). With this in mind, it is essential to consider the implications of the relative underrepresentation of medical women as expert witnesses in court. Whilst equivalent figures for psychologists are unknown, the female-weighted gender balance in clinical psychology could mean more female than male psychologist expert witnesses, even if males are disproportionately represented as expert witnesses.

Regardless of their profession, female experts were significantly more likeable but less confident than their male counterparts, which aligns with previous studies (Kaempff et al., 2015; Nagle et al., 2014; Neal et al., 2012) and the stereotypical gender characteristics suggested by the social role theory (Eagly et al., 1992; Ednie, 1996). Given the variation in each aspect of credibility, more research is needed to understand which components of credibility matter most in court.

#### 4.3. Jurors' decision-making

Our second hypothesis that mock jurors would be more likely to make decisions in line with a recommendation from a highly credible expert was also supported. Our results showed that expert witness credibility, accounting for the expert's gender and profession, can predict jury decision-making measured as either a research-friendly continuous scale or a more ecological dichotomous guilt outcome. In other words, the more credible the expert witness was, the more likely it was for jurors to assign a non-guilty verdict to the defendant. This aligns with US studies, which suggest that perceptions of credibility may predict legal outcomes (Brodsky et al., 2010; Cramer et al., 2014). The ELM (Petty & Cacioppo, 1986) and the HSM (Chaiken, 1980) models have implications for these findings. For example, the models suggest that the validity of a message may be influenced by source-related factors, such as the perceived credibility or characteristics of the expert, in addition to the actual content and facts of the case (Todorov et al., 2002). Participants were indeed influenced by the perceived credibility of the expert when their gender and profession were manipulated. An implication of this is that jurors may use more accessible (i.e., source-related) cues in their decision-making when processing a testimony instead of heavily relying on its content and factual information presented to them. It is important to note that researchers who looked at the effect of source credentials on decision-making without accounting for perceptions of credibility did not find such effects, indicating the mediating role of the concept of credibility in this relationship (Klettke et al., 2010; Klettke & Powell, 2011).

Our findings indicated that the expert's gender and profession, considered independently, did not affect jurors' decision-making, which supports arguments in the field (Brodsky et al., 2009; Neal, 2014; Neal et al., 2012). However, researchers who used a continuous guilty scale showed that gender alone influenced jurors' decision-making (Cramer et al., 2009, 2011). We also used a similar approach to Cramer et al.

(2009, 2011), but our results did not support their findings. This could be partially explained by the notable difference in the study samples; for example, such studies used undergraduate psychology students (average age almost 19 years old) from one US university, who could arguably have limited knowledge of real-world sentencing procedures (Cramer et al., 2009, 2011). Other differences to our study concerned the use of only male experts, the choice of the criminal offence (i.e., “arson” versus “murder”) and the nature of the task being asked of participants, that is, the sentencing outcome (“guilty” versus “death sentence”) in those studies (Cramer et al., 2009, 2011). It is important to note that those studies were conducted almost 15 years ago, and people’s beliefs about death sentencing and conviction might have shifted, considering the increase in mental health awareness of the past decade. Nevertheless, in our study, an interaction between the expert witness’s gender and profession influenced jurors’ decisions around guilt. Depending on how we measured guilt, our analyses showed jurors were more likely to find the defendant guilty if the information came from a male clinical psychologist or a female psychiatrist, highlighting again the importance of the gender stereotypical roles within each profession.

Additionally, looking at the role of each credibility component, knowledge was the only strong predictor of total credibility, meaning that jurors were more in agreement with highly knowledgeable experts. This is important because if an expert is not perceived as knowledgeable, this is likely to impact his perceived total credibility, which may influence the jurors’ judgement.

#### 4.4. Strengths and limitations

This study is the first to examine the interaction effects of the proposed variables using a UK representative sample, a robust video-based methodology, and a validated witness credibility measure with an ecological guilt outcome. With this in mind, some methodological limitations should be considered when interpreting these findings. Firstly, an online survey makes it difficult to determine whether participants attended the whole video or answered the questions alone. Secondly, some participants may not be fully aware of the expertise and roles of the two professions (Leslie et al., 2007). Hence, future research could explore whether a cross-examination or a more detailed explanation could help participants better understand each practitioner’s expertise (Flick et al., 2022).

Thirdly, recent attitude-based investigations with real serving jurors have argued that unconscious biases widely reported in mock jury research (e.g., sexual offences) might not always be translated into actual courtroom behaviours (Thomas, 2020). However, the research with real-serving jurors is still limited, and there are claims that mock juries may not significantly differ from real juries (Bornstein, 1999). While the presence of a focus group helped select the actors of the study to minimise potential selection bias (i.e., attributing the findings to idiosyncrasies of the actors rather than gender differences in general), we appreciate the limitations of using only one case with one pair of actors or only photos to select the two actors. Future researchers could use standardised videos or multiple cases and actors simultaneously (i.e., “stimulus sampling”), as long as videos of actors during the selection process of the actors, to control for other idiosyncratic characteristics that may contribute to credibility variations (e.g., voices, tone, non-verbal gestures, facial expressions while speaking, etc.). We further suggest increasing ecological validity by utilising cross-examination or jury group decision-making to reflect real-world procedures.

Furthermore, it is important to consider the case and expert characteristics, that is, the use of arson offence and neurodevelopmental conditions of the defendant, given previous suggestions of different professionals being perceived as having different expertise and credibility in different legal and mental health cases (e.g., Leslie et al., 2007; Swenson et al., 1984). Therefore, such investigations should be repeated using different types of crime or mental health difficulties (Maeder, Yamamoto, & McLaughlin, 2020). While our experts’ perceived

seniority derived from their credentials (i.e., ‘consultants’) would be expected to diminish gender- or profession-based biases, this was not the case. It is also possible that participants might have relied upon other factors in making their decision, including the expert’s age, race, ethnicity, culture, stigmatised beliefs, or other credentials (e.g., educational degree, institutional affiliations, pay, experience, or publications; Cooper et al., 1996; Cooper & Neuhaus, 2000; Flick et al., 2022), that were not investigated and warrant exploration. For example, Flick et al. (2022) found that the expert’s degree impacted jurors’ perceptions of credibility only in the “highly scientific quality testimony” when the content of the testimony was “unflawed”. Shaw, Lynch, Laguna, and Frenda (2021) argued that the race of the defendant, expert and juror may play a role in jurors’ judgements of credibility. The fact that both actors and the majority of participants in our study were White might not have allowed us to investigate this hypothesis. Future research could explore whether experts with lower credentials (e.g., newly qualified) or of a different race and ethnicity, a control condition (i.e., “mental health professional”), or exploration of mediating factors (e.g., the validity of the testimony, expert’s scientific language, or formulation) would be subject to other biases.

Importantly, we appreciate the limitations of the applicability of this study’s findings to an international context. As discussed, our study used a UK sample, which, although it contributes significantly to the limited international research on expert witness credibility outside the US, can also be limited to the unique legal systems, culture, norms and professional training routes of this country. More international studies are needed to repeat similar methodologies to enable comparisons between different countries and legal systems or to understand potential changes in unconscious biases and perceptions of credibility across time.

#### 4.5. Implications

The present study has clinical and legal applications concerning the role of the broader clinical psychology and psychiatry bodies in England and Wales. If clinicians are not perceived as credible, then the importance of their message may be lost in the decision-making process. Alternatively, high credibility may mean jurors or legal professionals do not pay enough attention to the content of the message. This research is equally relevant to the client as it can make a difference between guilty or not, how the jurors make legal decisions, and how mental health issues are addressed in court. Psychiatrists and clinical psychologists should be aware of unconscious biases of credibility that jury members may hold against them when preparing and delivering their testimony. This also applies to legal professionals involved in expert witness work. While US studies have indicated a tendency for psychiatrists to be perceived as more credible than psychologists, our findings, using a UK sample, support this claim predominantly in an interaction with the expert’s gender.

It is unclear whether training of expert witnesses and jurors could mitigate these biases. However, it is important for experts to take mitigating action against potential biases, e.g., by allowing time to explain their professional role and expertise. Accredited training in communicating clinical evidence in court, tailored to the individual expert’s strengths and weaknesses, and appropriate preparation could also be valuable in improving the credibility of their testimony (Leslie et al., 2007; Neal & Brodsky, 2016). This study highlights a need for mock and, arguably, real-serving jurors to participate in training to become more aware of potential unconscious biases and increase their familiarity with the expert evidence they are due to hear. Another option might be for English and Welsh courts (e.g., judges) to take action to mitigate such biases by explaining to the jury the role and expertise of the expert before evidence is heard. Finally, expert witnesses can provide a microcosm of how professionals influence society’s perceptions of cultural norms and mental health in the real world. Hence, expert witness testimonies need to be more diversified and representative.

## 5. Conclusion

This study provides the first empirical evidence for the main and interaction effects of the expert witness's gender and professional type (Clinical Psychologist/Psychiatrist) on mock jurors' perceptions of credibility in England and Wales. Research on expert witness credibility is scarce outside of the US. Thus, this study significantly contributes to this field internationally and highlights the need for tailored training and preparation for expert witnesses and jurors. More research is needed to understand the magnitude of any potential unconscious biases that jury members may hold for psychologists or psychiatrists of different genders testifying as expert witnesses. Understanding how jurors cognitively process and use information in the courtroom will help clinicians and legal professionals communicate evidence more effectively.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## CRedit authorship contribution statement

**Eleftherios Kipoulas:** Writing – review & editing, Writing – original draft, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Ian Edwards:** Conceptualization. **Ratko Radakovic:** Formal analysis. **Peter Ilmari Beazley:** Writing – review & editing, Supervision, Methodology, Conceptualization.

## Declaration of competing interest

None.

## Data availability

The data of this study can be available from the authors upon request.

## Appendix A. Video script

### A.1. Defence (written instructions at the beginning of the video – introductory paragraph)

“We, the defence, argue that Mr. Brown, aged 18, is not guilty of this offence. We argue that he did not intend to cause the damage to the hospital's property and was not aware that the damage would result from his behaviour. Our case is that due to his learning disability, Mr. Brown did not have the same ability to foresee or appreciate risk as somebody without a learning disability. We argue that he did not consider that his actions would result in damage to the hospital's property.

A Consultant Clinical Psychologist/Consultant Psychiatrist with a background in the assessment of mental health difficulties in a forensic context met with Mr. Brown before today's trial so that his mental health difficulties could be assessed. Dr. Davies interviewed Mr. Brown on the 14th of February for a 4-h assessment. Dr. Davies met Mr. Brown again individually on the 18th of February for a further individual assessment with Mr. Brown.

Dr. Davies, thank you for coming to the court today to provide evidence for Mr. Brown's mental state and state of recklessness. Before we ask you some questions, could you please introduce yourself to the court and summarise your opinion on Mr. Brown's mental health condition?”

### A.2. Expert witness (video recording – actors read their testimony on tape)

Thank you, Your Honour. My name is Dr. John Davies. I am a Consultant Clinical Psychologist/Consultant Psychiatrist with a speciality in learning disabilities and neurodevelopmental disorders. I completed my formal training in Clinical Psychology/Psychiatry in 2005 and I have worked as a Clinical Psychologist/Psychiatrist in several Specialist Learning Disabilities services across the National Health Service since then. My day-to-day duties involve assessment and treatment in an outpatient facility for adults with learning disability needs.

Mr. Brown is charged with arson with intent to endanger life and damage property. As part of my role, I have been instructed to assess Mr. Brown and provide an expert opinion for the court regarding his mental health condition in relation to his offence. I have been specifically instructed to address the issues of intent and recklessness in the defendant's case. I note that Mr. Brown received an assessment of his learning needs at the age of 12 and was given a diagnosis of Mild Learning Disability.

In terms of background information, Mr. Brown is 18 years old and goes regularly to a local college. He lives with his two biological parents and his 5-year younger adopted brother. Mr. Brown experienced a series of complications with infections at his birth and early childhood. He missed almost all of his developmental milestones, including sitting up, walking, and learning to talk. He attended a number of different special educational needs schools since he was 9 years old. Mr. Brown described experiencing bullying from an early age because of his weight and communication difficulties. He found it hard to concentrate and read at school and he received one-to-one personal assistance. Growing up, Mr. Brown also struggled to build and maintain friendships.

I note Mr. Brown was suspended from school on a number of occasions. In 2016, he absconded from a charity social event and was missing for eight hours. The police were contacted. Mr. Brown was suspended again in 2017 for being verbally abusive towards the cleaning staff. At this point, Mr. Brown began to present with challenging behaviours, which resulted in him being excluded from two schools in 2018 and 2019. In March 2020, a professionals meeting was held by local services, and concerns were raised about Mr. Brown's vulnerability. For example, it was reported that Mr. Brown was approaching strangers in cars asking for cigarettes.

Mr. Brown experiences increasing anxiety and distressing intrusive thoughts about harming others or himself, which are commonly reported in people with a learning disability. When distressed, Mr. Brown said that he would set fire to newspapers, books, or old clothes, which helped him to calm down. His parents reported that their son had been preoccupied with fire since he was young, but they don't know what caused it. Mr. Brown seems to get excited about the fire's ability to get out of control and burn everything. He appeared to have developed and maintained a belief that he is a dangerous person and needs to stay away from other people.

Mr. Brown is well supported by his parents, who have a good understanding of his needs and learning difficulties. In this assessment, there was not enough evidence to suggest that Mr. Brown experiences symptoms of a psychotic illness, for example, delusional thinking or hallucinatory phenomena.

Mr. Brown's performance on various neuropsychological tests showed evidence of some difficulties across a range of areas, including his memory and his ability to plan, as well as his visual and perceptual. Mr. Brown presented in a social sense as younger than his chronological age and, at times of the assessment, was rather socially disinhibited (i.e. asking inappropriate questions to the interviewer). Mr. Brown's cognitive abilities were found to range between borderline to low average across all domains, with a full-scale Intelligence Quotient (IQ) score of 61. Similarly, he struggles with understanding other people's intentions. This means that in day-to-day situations, he may experience problems with accurately recognising other people's intentions and understanding

how they may guide behaviours.

As my psychological/psychiatric assessment confirmed, Mr. Brown suffers from a Mild Learning Disability, a recognised condition affecting the brain's ability to send, receive, and process information. He also meets the criteria for a diagnosis of Attention and Deficit Hyperactivity Disorder (ADHD), having displayed features commonly seen in this disorder, including recklessness, impulsivity, disinhibition, problems in social understanding, and cognitive difficulties.

I note that when interviewed about the current alleged offence, Mr. Brown explained that he went camping with his younger brother in the hospital yard without their parents' permission. Mr. Brown admitted that during the night, he had set fire to newspapers in the yard at the back of the hospital. He explained that he brought matches with him because he wanted to show his little brother some fire tricks but did not understand that there was flammable material in the hospital. Mr. Brown admitted throwing the lit newspapers under a wheelie bin and leaving the yard without putting out the fire. He understood that the burning newspapers set fire to the bin and subsequently spread to the hospital property. This, in turn, caused over one million pounds worth of damage to the hospital property and adjoining buildings. Mr. Brown stated remorse for the incident for which he pleaded guilty but also insisted that he did not believe that his actions would result in such damage. In other words, he denied intending to cause injury to others or damage the hospital's property.

In my opinion, as Consultant Clinical Psychologist/Consultant Psychiatrist, his emotional and developmental immaturity, ADHD, and difficulties with his anxiety and learning needs will have likely impacted his ability to think through the consequences of his actions. His explanation that he set the fire without thinking through the consequences appears plausible and would be consistent with somebody with his level of impairment. In particular, I think it is plausible that he would not have appreciated the risk caused by setting a small fire so close to the tanks containing flammable material, and overall, this is, in my view, the most likely explanation.

However, I cannot exclude the possibility that Mr. Brown did indeed understand this risk or was, in fact, particularly excited by the prospect of setting fires within the hospital grounds. In this regard, I did notice that when Mr. Brown talked about the fires, he seemed to become somewhat animated and perhaps even excited about his actions during the alleged offence.

### A.3. Trial judge's direction to the jury (written instructions at the end of the video – closing paragraph)

“Members of the jury, in order to find Mr. Brown guilty of the offence of criminal damage, you must be sure, beyond reasonable doubt, of several things.

You must be sure that he did, in fact, damage property belonging to the hospital.

If you are sure that he did, in fact, damage property belonging to the hospital, you must also be sure that Mr. Brown intended to cause that damage or was reckless about causing that damage. You may be asking what I mean by “intention” or acting “recklessly”. In law, a person intends a result if he acts in order to bring it about. If you are sure that Mr. Brown acted in order to bring about the damage to the hospital's property, then your verdict will be ‘guilty’.

If you are not sure that he intended to cause the damage, you must ask yourselves whether he caused the damage recklessly. In law, a person has acted recklessly if, when he does the act or acts that cause the damage, he was aware of a risk that the damage would occur, and it was, in the circumstances known to him, unreasonable for him to take that risk.

If you are sure that Mr. Brown was aware of a risk that the damage would occur when he did the acts that caused the damage, your verdict will be ‘guilty’.

You have heard evidence concerning Mr. Brown's learning disability

and Attention and Deficit Hyperactivity Disorder (ADHD). These are factors you may want to consider when you are deciding whether Mr. Brown intended to cause the damage and whether he appreciated the risk of the damage resulting from his actions.

If you are not sure that he intended to cause the damage and you are not sure that he was reckless about causing the damage, then you must find Mr. Brown ‘not guilty’ of this charge.”

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