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Assessing the Capacity to Build Rapport in Investigative Interviews with the Rapport-Based Inventory – Short Form (RBI-SF) Scale

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Abstract

Introduction: Investigative interviewer training has increasingly focused on enhancing interviewers' ability to build rapport with subjects; however, trainers currently lack a consistent and efficient method to assess individuals' competence in using rapport-based skills. To address this, we have developed a self-report scale – the Rapport Based Inventory (RBI), which is a scenario-based assessment intended to measure interviewers' recognition of the correct use of rapport-based skills in interviewing contexts. The original scale consisted of four vignettes with 16 items requiring free text and multiple-choice responses in which core rapport concepts are tested. The current study aims to examine the scale's psychometric properties, underlying factor structure and construct validity.
Methods: To test the instrument's psychometric properties, the RBI was administered online to 225 participants (140 practitioners and 85 university students). To assess convergent (construct) validity, additional data was collected from a subsample of 60 practitioners taking part in interview training to examine whether RBI scores were associated with practitioners' interview performance during mock interviews. Performance was coded using the rapport skills scales from the Observing Rapport Based Techniques (ORBIT) coding framework (Alison & Alison, 2012).
Results: The final short form version of the RBI scale (RBI-SF) contains eight items across four investigative interviewing vignettes, comprised of two factors – reflective listening (six items) and developing discrepancies (two items) with good internal reliability. One item relating to adaptability was also

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retained as a separate item that should be administered alongside the RBI due to its theoretical and statistical significance. Correlational analyses revealed that the scale demonstrated convergent validity with behavioural measures of rapport-based skill, with RBI scores positively correlated with interviewers' effective use of rapport-based behaviours and negatively correlated with rapport-inconsistent behaviours during mock interviews.
Conclusions: We conclude that the newly developed instrument appears to be a promising tool to support the identification of interviewers' accurate comprehension of rapport-building skills in the context of law enforcement and intelligence interviewing.

Keywords: Investigative Interviewing, Rapport, Motivational Interviewing, Interview Training, Scale development, HUMINT, Interrogation

Introduction

Building rapport is widely considered to be a crucial component to securing information in investigative interviews/interrogations and in intelligence gathering contexts (Abbe & Brandon, 2014; Alison et al., 2013; Gabbert et al., 2021; Vanderhallen & Vervaeke, 2014; Nunan et al., 2022). Correct use of reflective listening skills, being non-judgmental and being adaptable appear to improve the chance of securing a suspect's engagement in interview, which in turn, increases the chances of evidentially useful information (Surmon-Böhr et al., 2020; Vanderhallen & Vervaeke, 2014). Based on this growing body of research, interviewer training has increasingly focused on developing interviewers' interpersonal and rapport-based communication skills. However, interpersonal skills are complex and subject to significant individual differences, making it difficult to consistently and correctly predict someone's aptitude (Salas, Bedwell, and Fiore, 2011). In the context of investigative interviewing, there is often a subjective decision about which officers are ready for attendance at resource-intensive face-to-face training programmes. There is currently no consistent, objective way to assess officers' level of interpersonal comprehension prior to them being in the training room, where time and resources are limited. The current study aims to assess the RBI scale's psychometric properties and usefulness as a measure to identify interviewers' baseline knowledge of rapport-based skills for the purposes of (i) identifying optimal candidates who are ready for face-to-face training and (ii) assessing further training and development needs for interviewers.

Rapport can be defined as the interpersonal relationship or connection between interviewer and interviewee established over the course of their interaction (Evans et al., 2010; Kelly et al., 2013). It is based on a reciprocal understanding of one another in terms of respect, empathy, and trust (O'Toole, 2016) and may be felt by one party but not the other at various points. Vanderhallen and Vervaeke (2014) noted that there are two key assumptions underlying the role rapport plays: (a) it enhances cooperation and (b) elicits more accurate information.

More recently, and under the auspices of the High-Value Detainee Interrogation Group (HIG), the positive impact of rapport has been repeatedly highlighted (e.g. Alison et al., 2013; Kelly et al., 2013; Russano et al., 2014). Arrigo and Wagner's (2007) interviews with senior military interrogators found that they placed the highest value on skills such as "the capacity to relate—on tolerance, sociability, flexible thinking, empathy, situational awareness, self-mastery, cultural knowledge, and linguistic skills" (p. 396).

In a unique study of 142 police interviews with individuals suspected of benefit fraud, Walsh and Bull (2012) found that opportunities to build rapport (defined as strategies such as active listening, calmness, empathy, summarizing, and explaining) in the initial stages of the interview were often missed and that where it had been established—it was not always maintained throughout the interview. Subsequently, interviewers who were able to establish and maintain rapport throughout the interview were five times more likely to obtain a satisfactory outcome (42% vs. 8%), shifting the interview from denial to providing relevant investigative information.

Though there is a consensus among interrogators/ interviewers, interpreters and analysts that rapport is fundamental to a successful interview (e.g. Goodman-Delahunty et al., 2014; Redlich et al., 2014; Russano et al., 2014; Vallano & Schreiber Compo, 2015), actually identifying what rapport is and how to build it has been heavily debated (see Gabbert et al., 2021 for an extensive review). Neequaye and Mac Giolla (2022) suggest that difficulties in defining rapport are due to it being a higher order concept that consists of many different traits. The challenge for researchers is to create an accurate system of measurement that can capture a concept that is often nuanced, dynamic and changes across an interaction. This has led to the development of several different methodologies to measure rapport and its component parts in investigative interviews. These measures can broadly be categorized as (i) self-report interviewee perceptions of rapport or (ii) observer ratings or coding of behavioural cues considered relevant to rapport.

One popular conceptualization of rapport in investigative interviews is based on Tickle-Degen & Rosenthal's (1990) tripartite theoretical framework. Their definition of rapport suggests it consists of three interrelating behavioural components: mutual attention, positivity and co-ordination. That is, rapport is thought to be established if the two individuals are interested and involved in the interaction, have positive feelings or attitudes towards one another and the interaction runs smoothly. Two investigative rapport scales have been developed based on this understanding of rapport. Duke et al. (2018) developed the Rapport Scales for Investigative Interviews and Interrogations (RS3i) which is a multidimensional self-report questionnaire intended to measure interviewees' experience of rapport in forensic and intelligence interviews. The questionnaire consists of 5 rapport scales – attentiveness (e.g. '*the interviewer really listened to what I had to say')* trust/respect (e.g. *'the interviewer is honest with me')* expertise (e.g. *'the interviewer acted like a*

professional'), cultural sensitivity (e.g. *'we have our culture in* common') and connected flow (e.g. *'Communication went smoothly').* The authors suggest that the questionnaire may be useful for giving feedback to interviewers in training about their effectiveness in building rapport during role playing interviews by getting the role player to complete it. A second, observer version of the RS3i was developed by Magee (2020) which allows observers to rate the rapport generated in investigative contexts.

Although Tickle-Degen & Rosenthal's (1990) conceptualisation of rapport provides a useful framework for considering the nature of rapport, it does not adequately inform individuals how to actually build it. The ORBIT model (Observing Rapport Based Interpersonal Skills; Alison & Alison, 2012) is a framework designed specifically for assessing rapport-based skills in the context of investigative interviewing, and focuses on interviewer behaviours that will either facilitate or damage communication with the subject. Successful use of the rapport-based skills in ORBIT is associated with increased engagement by the subject and increased investigative yield (e.g. evidential or intelligence related information) (Alison et al., 2013). Based on extensive analysis of investigative interviews with terrorism suspects, child sex offending suspects and victims of sexual assault (see Alison et al., 2013; Alison et al., 2014; Humann et al., 2023; Kim et al., 2020; Surmon-Böhr et al., 2020), ORBIT has evolved from a behavioral coding framework to an evidence-based investigative model of rapport and interpersonal communication that is now trained to a range of law enforcement and military agencies in the UK, North America and across Europe.

ORBIT draws on Humanistic therapeutic models of communication where the concept of rapport is well studied and a primacy is placed on a non-judgmental approach, authenticity and fluid and adaptive interaction, common in the work of Carl Rogers. At the forefront of Rogerian thinking is empathic listening (i.e., not imposing your view as the counsellor but, rather, seeking the client's own subjective experience) and reflective listening (i.e., the counsellor seeks meaning and understanding from the client by playing back what the client has said and seeking to evoke further values and beliefs) (Rogers, 1975). Emanating from this body of work are client centred approaches such as Motivational Interviewing (MI) theory (Miller & Moyers, 2017; Rollnick & Miller, 1995) – an approach, albeit in a therapeutic context rather than a law enforcement one that, focuses on objectivity, adaptability, and attentive listening. Motivational Interviewing has been applied in numerous contexts, both with willing and reluctant participants, as a method of non-confrontational challenge to address problematic behaviours such as substance misuse (Satre et al., 2011), offending behaviour (McMurran, 2011), and health problems (Brandberg et al., 2021). Its ability to facilitate challenging conversations whilst maintaining the therapeutic alliance between clinician and client make it well-suited to generating rapport, even in oppositional interactions (Moyers & Rollnick, 2002).

The ORBIT coding framework was developed based in part on methods for assessing clinical skill and proficiency in MI. For example, the MISC

(Manual for the MI Skills Code; Miller et al., 2008) and the MITI (Motivational Interviewing Treatment Integrity; Moyers et al., 2014) which are both reliable and well-validated measures that rely on coding audio/video recorded counselling sessions.

ORBIT contains a global measure of interviewer rapport-based behaviours drawn from the MI literature which includes rating an interviewer's ability to i) be objective and non-judgmental (Acceptance), ii) show accurate empathic understanding (Empathy), iii) identify a suspects' underlying core values and beliefs (Evocation), iv) be fluid and adaptable to what is brought up by the suspect (Adaptation) and v) respecting the suspect's right to choose to cooperate or not (Autonomy). It also includes measures of specific skills adapted from MI which include i) reflective listening, ii) use of balanced summaries, iii) ability to respond to resistance and iv) developing discrepancies. These skills have been shown to establish an interviewers' approach that is associated with increased suspect engagement (Surmon-Böhr et al., 2020).

The ORBIT coding framework has proven effective at measuring investigative interviewers' rapport-based skill in the field and shown the effectiveness of using these approaches in investigative interviewing (Alison et al., 2013; Alison et al., 2014; Humann et al., 2023; Kim et al., 2020; Surmon-Böhr et al., 2020). However, ORBIT relies on trained coders to score video-taped interviews and can take up to 70 minutes to code an interview (Alison et al., 2013). Therefore, although it offers a robust and comprehensive method to measure interviewers' rapport-based behaviours, it is also highly labour and resource intensive. Currently, no tool exists to assess an investigative interviewers' skill without relying on either observer or interviewee ratings of an actual interview.

Other self-report measures for assessing clinician's MI skillfulness, which can be more easily administered, include the Helpful Responses Questionnaire (HRQ; Miller et al., 1991) and the VASE-R (Video Assessment of Simulated Encounters-Revised; Rosengren et al., 2005). The HRQ is a 6-item written questionnaire that asks respondents to generate written responses (e.g., 'what you would say next') to written clinical scenarios. The HRQ can be administered and scored relatively quickly; however, it solely focuses on the skill of reflective listening without assessing any other key MI skills (e.g., responding to resistance or developing discrepancies). As such, the VASE-R was developed to assess a wider variety of MI skill. The VASE-R is a video-based assessment tool that contains three clinical vignettes with professional actors playing the role of the client. After watching the video-based vignette, clinicians are prompted to either identify or generate a response to the client. The VASE-R assesses clinicians' knowledge of MI skill through responses that are scored against MI standards. This produces a total score and five subscale scores for: reflective listening, responding to resistance, summarizing, identifying change talk and developing discrepancies. This vignette-based method of assessment has been used in other domains to assess complex concepts such as effective

teamwork skills and conflict resolution (Stevens and Campion, 1999). Providing interviewers with investigative vignettes to see how they respond to a suspect may offer a novel and effective method of assessing interviewers' rapport-based skill without relying on costly and labor-intensive observational coding. A written vignette-based tool is preferable as it can be easily administered by practitioners in the field either using a pen and paper or electronically.

The current study seeks to develop and validate a written vignette-based rapport scale – the Rapport Based Inventory (RBI) for investigative interviewers. The RBI is designed to assess individuals' knowledge of the accurate use of rapport-based skills to assist in (i) identifying optimal candidates for training and (ii) assist the selection of interviewers in the field. Our main research objective is to explore whether we can develop a robust and psychometrically sound scale that is associated with observable behavioral measures of rapport-based skill. A secondary research objective is to explore whether two equivalent versions of the tool could be developed for use as pre/post measures of training efficacy.

Method

Participants

The RBI was designed to assess investigative interviewers' knowledge of rapport-based skills, so the target population was practitioners with interviewing experience, which is a unique and difficult to access population. To ensure sufficient sample size for factor analysis, it is suggested that a minimum of 10–15 observations per variable is needed to avoid computational difficulties (Comrey & Lee, 1992; Pett et al., 2003). Therefore, in addition to recruiting interviewing practitioners, recruitment was extended to a student population as a supplement to ensure a sufficient sample size was obtained for analysis. The full sample included 225 participants - a practitioner sample (n = 140; 91 male, 27 female, 22 unspecified) which included UK police interviewers (n = 110), UK military interviewers (n = 19), United States (US) intelligence interviewers (n = 8) and intelligence analysts (n = 3), as well as Psychology undergraduate and masters students from the University of Liverpool (n = 85; 67 female, 14 male, 4 unspecified; M age = 18; SD = 2.96). The police and military interviewers were from a range of regional units in the UK and the US interviewers were from the US High Value Detainee Interrogation Group (HIG). The practitioner sample had an average of 11.6 years of experience in interviewing (ranging from zero to 27 years).

To examine the construct (convergent) validity of the RBI, additional data was collected from a subsample of the practitioner sample. These were 60 UK police interviewers (42 males, 15 females, 3 unspecified) assigned to regional units across the UK, who attended a face to face 6-day Advanced Interviewer training course as part of their job roles during the data collection period. The training included immersive simulation interviews using experienced role actors. All interviewers

had undergone Serious and Complex Interviewing (PIP2) (previously 'Tier 3') training prior to attending this course. Participants had an average of 12.8 years of experience in interviewing (ranging from one to 27 years).

Materials

Development of the RBI Scale

The RBI was developed by the research team based on the VASE-R (Rosengren et al., 2005) - a clinical assessment tool for measuring different MI skills that have also been found useful in an investigative context (reflective listening, responding to resistance, summaries, developing discrepancies) (Surmon-Böhr et al., 2020). We drew on the VASE-R for its vignette-based structure and question style, but created investigative scenarios adapted from real police interview scenarios, drawn from a range of the research team's experience. The RBI also takes the form of a written vignette-based questionnaire rather than video-presentation so it can be easily administered in the field. It aims to test comprehension and recognition of rapport-based skills via multiple-choice questions and then the respondent's ability to apply those skills and explain their reasoning via free text responses.

Whilst developing the scale, we were interested to see whether two equivalent scales could be developed as pre and post measures of training efficacy whilst avoiding practice effects. As such, eight questions were initially developed, based around two interviewing vignettes (George/Marcus – version A; see Appendix for details of each vignette and accompanying questions), measuring six rapport-based skills that have been found to be effective in the field (Alison et al., 2013; Surmon-Böhr et al., 2020) (see Table 1 for definitions). We then developed an additional set of questions designed to match the original eight in intent but based around two different vignettes – Jason/Dylan (version B). The vignettes were based on real scenarios and real police interviews which included crimes related to animal cruelty, arson, murder and domestic assault. Multiple scenarios were developed to try and engage practitioners adequately in a difficult and cognitively consuming task – an attempt to balance psychological fidelity with experimental control.

All vignettes follow the same format – a brief description of why a named suspect has been arrested and what they have said so far in the interview, followed by an excerpt of speech from the suspect (see Appendix A for the RBI vignettes and questions). The first vignette in each of the two versions (A – George and B - Jason) is followed by two multiple choice questions (relating to 'reflective listening', and to 'rapport and resistance', respectively) followed by one free text response relating to 'empathic perspective taking'. The second vignette in each version (RBI A – Marcus and RBI B – Dylan) is followed by two sets of questions – each with two multiple choice questions (related to 'summarizing' and 'adaptation', respectively), and a free-text question for the

Table 1. Rapport based skills framework

Skill	Rapport Consistent Definition	Rapport-Inconsistent Techniques
Reflective Listening	**Accurate understanding:** demonstration that the interviewer has accurately heard and understood the suspect, using simple or complex reflections, without judgment.	**Assumptive questioning:** inaccurate or exaggerated interpretations of what the suspect has said, providing unsolicited advice; interrupting suspect; being dismissive, argumentative, or accusatorial.
Summaries	**Balanced summary without judgment:** information is summarized using suspect's own words and then clarification or further detail is sought; summaries that include both positive and negative content.	**Judgmental summary:** focus is on the negative aspects of the account; summaries that introduce the interviewer's view rather than suspect's; summaries with a tone of sarcasm or disbelief.
Rapport & Resistance	**Rolling with resistance:** use of evocative prompts; statements that reflect positive and negative content; using three prompts when met with resistance, then shifting to an area of less resistance.	**Fighting resistance:** use of tactics that inhibit rapport such as threatening, ordering, use of sarcasm or judgment; warning suspect of consequences; misleading or forced questions.
Developing Discrepancies	**Neutral challenge:** inconsistencies presented to the detainee for explanation without providing excuses or passing judgment; use of suspect 's own speech or specific details of forensic reports to ensure no misunderstanding; and inviting an explanation.	**Judgmental Challenge:** inconsistencies are presented in a confrontational, accusatory, or judgmental manner such as: demanding explanations, shaming, or blaming; focus on police/victim perspective rather than suspect.
Adaptation	**Adaptive:** ability to respond flexibly and direct the conversation forward in line with the information the suspect is revealing and wanting to discuss even if this deviates from interviewer's agenda.	**Rigid:** not wanting to deviate from the interviewer's agenda despite what is brought up by the suspect. Ignoring other spontaneous information of interest in a rigid adherence to a linear plan.
Cognitive Empathy	**Accurate empathy**: ability to understand the suspect's perspective, identify what they care about and how they perceive the situation.	**Inaccurate empathy:** unable to accurately identify the suspect's perspective and/or provides own view of the suspect rather than identifying what they care about.

Note. Adapted from Surmon-Böhr, F., Alison, L., Christiansen, P., & Alison, E. (2020a). The right to silence and the permission to talk: Motivational interviewing and high-value detainees. American Psychologist, 75(7), 1011–1021. https://doi.org/10.1037/amp0000588

respondent to explain why they selected their answer. These are followed by one final free-text question relating to 'developing discrepancies', a non-confrontational challenge technique

At a macro level, these scenarios require that the respondent accurately recognises the use of a non-judgmental approach that shows the interviewer is

listening and is actively trying to avoid increasing suspect resistance. In addition to these core skills, the RBI aims to assess adaptation (i.e., the extent to which respondents are able to adapt to responses by the suspect) and empathy (i.e., the extent to which the interviewer understands the detainee's perspective). The RBI vignettes were reviewed by three subject matter experts (police officers who run the National CT advanced interviewer training course) who reported that the questionnaire had good face validity and psychological fidelity.

RBI Scoring

All items are scored on a four-point scale that follows a general scoring rule in line with the ethos of building rapport in ORBIT and similar to the scoring of responses in the VASE-R. That is, 1 = rapport-inconsistent strategy (i.e. judgmental or confrontational or likely to engender resistance), 2 = neutral, procedural or fact driven response, 3 = attempt at rapport skills/principles but falls short in some way (i.e. accurate reflection but does not move the conversation forward), 4 = good demonstration and active use of rapport skills/ principles (i.e. non-judgmental, demonstration that they are listening to and are interested in what the suspect has to say and moves the conversation forward). Each multiple-choice item has an assigned score (1 – 4). In addition to the general scoring rule, the free text response questions have a specific scoring guide with more detailed information relating to the particular question (see table 2 for an example). High scores on the RBI indicate that the interviewer has accurate recognition of rapport-based interviewing techniques as indicated by their preference to choose a rapport-based response as opposed to a response

Table 2. Example free text response scoring guide

Score	Scoring guide
4	**Good demonstration of rapport skill** - Responses that highlight the need to accurately reflect back Marcus' perspective and/or the need to direct the conversation forward in line with information he is revealing/ wanting to discuss (e.g. the boyfriend).
3	**Attempt at rapport skill** - Responses that focus on reassurance, securing factual information or specific details, that are emotionally off-target or incongruent (e.g. focusing on fatherly aspect while knowing he was sleeping with the victim for money) or highlight the need to reflect back Marcus' perspective but not focused on the key information Marcus wants to talk about (i.e. the boyfriend).
2	**Procedural/ fact-focused** - Responses that are procedurally focused/ focus on securing factual information/ timeline only.
1	**Rapport inconsistent approach** - Responses that stay focused on the interviewer agenda (Marcus' relationship with Melanie) rather than the direction Marcus is taking (the boyfriend); responses that are too direct or judgemental and may shut down the interaction.

likely to engender resistance. All RBI questionnaires were scored by one member of the research team who was experienced in coding rapport-based behaviours.

Interrater reliability of RBI scoring. The free text response questions from 23 participants (10% of the sample; consisting of 184 questions in total) were randomly selected from the dataset and scored by a second coder (a psychology student not part of the research team but was trained in the scoring guidance) to check the reliability of scoring. Krippendorff's alpha was used, due to it not being bound by number of observers, levels of measurement, sample size, or missing data, and is considered appropriate with ordinal data (Hayes & Krippendorff, 2007). Perfect agreement is indicated by $\alpha = 1.00$ but $\alpha > .80$ is considered to show strong reliability (Krippendorff, 2004). Scores on the RBI were found to have strong reliability between coders ($\alpha = 0.89$).

Coding of Interview Performance

Two measures were used to score interviewer performance from the ORBIT coding framework (Alison et al., 2013; Surmon-Böhr et al., 2020). The first measure - Global Rapport Based Score (GRBSC) - is comprised of five global rapport-based strategies: acceptance, empathy, adaptation, evocation, and autonomy, which are scored on a seven-point scale where one indicates poor skill, four indicates neutral skill and seven indicates excellent skill. All participants were scored on all five behaviours, so total scores could range from five to 35. The second measure - Motivational Interviewing of Detainees Assessment of Skills (MIDAS) - is comprised of two scales assessing Rapport Consistent (RC) skills (reflective listening, rapport and resistance, summaries, developing discrepancies); and Rapport Inconsistent (RI) behaviours (assumptive questioning, provoking resistance, judgmental summaries, accusatory challenges). MIDAS is scored on a three-point scale, where zero indicates the behaviour is not present, one indicates minimal use of the behaviour, and three indicates consistent use of the behaviour. Mean scores of RC and RI behaviours were used for analysis, as not all four skills/behaviours would be expected to be present in all interviews. The psychometric properties of the GRBSC and MIDAS scales have previously been reported by Surmon-Böhr et al. (2020) who examined 804 field interviews that had been coded using ORBIT. A three-factor solution for the rapport-based variables was reported with good sampling adequacy (KMO = .90) and Bartlett's test of sphericity showed sufficient correlations between items (χ^2 (78) = 6438.56, $p < .001$). The Eigenvalues of the 3 factors were 5.96, 1.99 and 1.31 and accounted for 71% of the variance. Factor 1 comprised of the 5 global rapport-based variables, factor 2 comprised of the four Rapport-Consistent skills and factor 3 comprised of the four Rapport-inconsistent behaviours. All three scales showed good to excellent internal reliability ($\alpha = .73 – .93$).

Alison et al. (2014) found that the use of adaptive communication and motivational interviewing skills, measured using ORBIT, were far more effective at reducing suspects' use of specific counter interrogation tactics (e.g., remaining silent, monosyllabic responses, scripted or known responses, claiming lack of memory, retraction of previous statements, or no comment) than maladaptive communication or strategies counter to rapport approaches (e.g., using aggression, intimidation, sarcasm, appearing judgmental, hesitant, or overfamiliar). In addition, correct use of these approaches, was associated with significant increase in investigative yield (Alison et al., 2013; Surmon-Böhr et al., 2020). Alison et al. (2022) and Humann et al. (2023) replicated these findings with individuals suspected of child sex offences. Similarly, research by Kim et al. (2020) found that ORBIT rapport-based approaches positively influenced adaptive communication and amount of information obtained with victims of sexual offenses in South Korea.

Interrater Reliability of Coding Interview Performance. Coding of interviewer performance was conducted by an experienced member of the research team who has previously coded hundreds of hours of field police interviews (Surmon-Böhr et al., 2020). For this study, 6 tapes (10% of the sample) from the dataset were randomly selected and each tape was coded by a post-graduate researcher who had received basic ORBIT coding training to check interrater reliability (IRR). It has been suggested that a minimum of 10% of data must be coded to establish intercoder agreement (Geisler & Swarts, 2019). Interrater reliability of the five Global MI scores (acceptance, empathy, adaptation, evocation, autonomy) was found to be good (Krippendorff's $\alpha = 0.89$). Similarly, reliability for RC skills was excellent ($\alpha = .94$) as was the reliability of RI behaviours ($\alpha = .90$).

Procedure

The practitioner sample were recruited through contacts the research team had within the UK Police, military and the HIG and were invited to participate in the study via email, which contained a link to the study. The student sample were all psychology (undergraduate and masters) students at the University of Liverpool who were invited to participate in the study in return for course credits.

The study was conducted online via Qualtrics, LLC (Provo, Utah) software. First, an information sheet was displayed, followed by a consent form. If consent was provided, participants were presented with the four vignettes from RBI A and RBI B (based on 'George'/ 'Marcus'/ 'Jason'/ 'Dylan') and their accompanying questions. Each vignette was randomly presented to avoid any order or fatigue effects. Finally, participants were provided with a debrief sheet explaining the purpose of the study. The study took ~ 70 minutes to complete.

A subsample of the practitioner sample ($n = 60$) - police interviewers who were due to take part in an in-person interviewer training course as part of

their job role – were invited to take part in the study via email prior to attending training. If they agreed to take part, participants completed the RBI on Qualtrics (as described above) in the week prior to them attending the course. These participants were then asked if they consented to having a mock interview (that they would complete as part of their training course) coded by a member of the research team. The course is a comprehensive, six-day, specialist interviewer training course for police in the UK. On the first day of the course, prior to any training, all interviewers conducted a simulated interview with a professional actor playing the role of a suspect involved in a serious crime for trainers to assess baseline levels of skill. Interviews took place in a room at a police training facility and were downstream monitored by four colleagues and a trainer in another room. Total duration was ~ 20 minutes. These were highly immersive and high-fidelity interactions simulating a real investigative interview. Video recordings of these interviews were then coded by a member of the research team using the ORBIT coding manual. The rationale for coding participants' interview behaviours on the first day of the training course was to examine whether RBI scores were associated with their current level of interviewing skill prior to any training.

Results

To develop the RBI into an effective scale, analyses were conducted to first determine the latent structure of the scale along with internal reliability in the full sample (N = 225; 85 students, 140 police officers), before testing its convergent (and thereby construct) validity with an already-established observational measure of rapport skill (ORBIT interview performance) which was tested using the latent components within a subsample (n = 60 practitioners) for whom we had both RBI and ORBIT interview performance data.

To assess the associations between RBI version A and RBI version B scores, an intraclass correlation (ICC) was conducted as a measure of test re-test reliability. ICC was assessed using a two-way mixed, absolute agreement, single-measure ICC (Koo & Li, 2016). Agreement for ICC was categorized into poor (<0.40), fair (0.40–0.59), good (0.60–0.74), and excellent (>0.75; Cicchetti, 1994). The ICC revealed fair agreement between RBI A and RBI B scores (ICC = .52, 95% CI = .42, .61). This indicated that the two versions are not sufficiently similar enough to be used as equivalent pre/post measures at this stage. Therefore, we analysed all items across the four vignettes to identify which items should be retained in a single scale.

Exploratory Factor Analysis

The initial full scale (k = 16) consisted of four vignette scenarios, containing both multiple choice and free response questions. Before analysis, it was decided that the empathy-based items A1.2 and B1.2 should be removed

because very few participants scored either a '1' or '2' (< 6%), raising doubts on the discriminating power of these two questions. Additionally, given the parallel development of an empathy-based scale by the same authors which will work alongside the RBI, removal of these items was deemed the best course of action.

Next, since some items consisted of multiple-choice questions and associated free-text responses to explain their reasoning – two formats of the same question – these item pairs were correlated to assess their measurement distinction (or lack thereof). All item pair correlations were $rs > .91$, $ps < .001$, suggesting an extremely high degree of similarity in measurement. Therefore, items A2.2, A2.4, B2.2, and B2.4 were removed, and only the multiple-choice items were retained ($k = 10$), which streamlines both administration and scoring of the tool.

An exploratory factor analysis using Principle-Axis Factoring (PAF) was then conducted to explore the scale's underlying factor structure. Given the scale's novelty, both Oblimin (oblique) and Varimax (orthogonal) rotations were used in succession to compare and choose the most appropriate final method (Akhtar-Danesh, 2023; Field, 2009). Both procedures returned identical factor structures, along with virtually identical values for factor loadings. Correlation matrices suggest that factors are orthogonal (Field, 2017) and so Varimax results are given in full below.

An R-Matrix determinant of .142 suggested multicollinearity is not a problem given it is greater than Haitovsky's statistic (.00001; Field, 2017). The Kaiser-Meyer-Olkin test revealed middling-good sampling adequacy (KMO = .702), while Bartlett's test of sphericity showed that items are related enough for data reduction techniques to be applied ($p < .001$). Further measures of sampling adequacy (MSA) from anti-image correlations were assessed: item A2.1 (adaptability) returned $r < .5$, suggesting the scale may benefit from its removal. However, given the item's theoretical importance and high correlation to the convergent validity measures, it is retained for now. Residuals from reproduced correlations show that 11% are nonredundant, well within the acceptable cut-off of 50%. Overall, the PAF suggested a three-factor solution which explains 54.21% of cumulative variance. However, Factor 3 (adaptability) – consisting of items A2.1 and B2.1 – shows a very weak factor loading for B2.1 (.191), suggesting the scale would benefit from its removal. Rerunning the PAF leaves Factor 3 with a single item (A2.1: adaptability), which given that it is a single-item factor and given its poor MSA, A2.1 was also removed. A final ($k = 8$) PAF was then conducted.

An R-Matrix determinant of .162 suggested multicollinearity is not a problem given it's greater than Haitovsky's statistic (.00001; Field, 2017). The Kaiser-Meyer-Olkin test revealed a middling-good sampling adequacy (KMO = .722), while Bartlett's test of sphericity showed that items are related enough for data reduction techniques to be applied ($p < .001$). Further measures of sampling adequacy (MSA) from anti-image correlations showed all items with $r > .5$, suggesting adequate sampling. Residuals from reproduced correlations

Table 3. Rotated Factor loadings for the final two-factor solution

	Factors	
	Reflection	**Developing Discrepancies**
A1.3 – George – Rapport & resistance	.635	
A1.1 – George – Reflective listening	.630	
A2.3 – Marcus – Summaries	.503	
B1.1 – Jason – Reflective listening	.458	
B2.3 – Dylan – Summaries	.438	
B1.3 – Jason – Rapport & resistance	.383	
B2.5 – Dylan – Develop discrepancies		.887
A2.5 – Marcus – Develop discrepancies		.816

Values < .30 not shown; values are for Varimax rotation.

Table 4. Reliability analyses using Cronbach's alpha (α) and McDonald's Omega (ω)

	Median (± IQR)	***α***	***ω***
Reflection	20.00 (4.00)	.69	.70
Developing Discrepancies	6.50 (4.00)	.85	N/A
Total	26.00 (7.00)	.73	.71

N/A = factors with $k \leq 2$ meaning omega could not be computed.

show that 7% are nonredundant, well within the acceptable cut-off of 50%. Overall, PAF suggested a two-factor solution which explains 52.55% of cumulative variance (see Table 3).

Reliability Analyses

Table 4 shows results from reliability analyses for the subscales and the total scale using Cronbach's Alpha and McDonald's Omega, as well as median scores for each subscale.

Convergent Validity

A subsample of police officers (n = 60) from the wider sample completed both the RBI and a mock interview which was scored using the ORBIT coding framework (an alternative behavioral indicator of rapport-based skill). Spearman's rho correlations were performed to assess the convergent validity of the RBI's two factors against ORBIT outcome measures

Table 5. Spearman's rho correlations between RBI and ORBIT subscales

	Mdn (±IQR)	**1**	**2**	**3**	**4**	**5**	**6**
1. Reflection	20.00 (4.00)						
2. Developing Discrepancies	6.50 (4.00)	r_s = .25 p = .054					
3. RBI Total	26.00 (7.00)	**r_s = .81 p < .001**	**r_s = .75 p < .001**				
4. Adaptability	2.00 (2.75)	*rs* = .16 *p* = .24	*rs* = .06 *p* = .67	*rs* = .12 *p* = .35			
5. Rapport-Consistent Behavior	0.88 (0.87)	*rs* = .18 *p* = .18	**r_s = .32 p = .01**	**r_s = .31 p = .02**	*rs* = .07 *p* = .62		
6. Rapport-Inconsistent Behavior	0.25 (0.63)	*rs* = −.24 *p* = .07	*rs* = −.22 *p* = .10	**r_s = −.29 p = .02**	*rs* = −.24 *p* = .07	*rs* = −.17 *p* = .20	
7. Global Rapport	22.00 (5.63)	**r_s = .36 p = .004**	**r_s = .36 p = .005**	**r_s = .45 p < .001**	**r_s = .37 p = .004**	**r_s = .52 p < .001**	**r_s = −.74 p < .001**

1–3 = RBI scales; 4 = Adaptability item; 5–7 = ORBIT scales; **Bold** values = Statistically significant (p < .05).

(see Table 5). Item A2.1 (*Adaptability*) was also included as a related but stand-alone item due to its theoretical importance. Note that while all correlations are reported for completeness (i.e., within-scale correlations as well as between-scale correlations), the key focus for assessing convergent validity are those which assess the association between variables 1–3 (RBI scale), 4 (Adaptability item), and 5–7 (ORBIT scale). *Developing Discrepancies* and *RBI Total* are positively correlated with *Rapport-Consistent Behavior*, with *RBI Total* being negatively associated with *Rapport-Inconsistent Behavior. Global Rapport* is positively correlated with all RBI measures, as well as with the *Adaptability* item.

Discussion

This article describes the development and initial validation of the RBI short-form scale for assessing investigative/intelligence interviewers' accurate recognition of rapport-based skills. The objective of this exploratory research was to see whether a self-report vignette-based rapport scale could be developed that was both psychometrically sound and a valid predictor of interviewers' performance in training. A series of exploratory analyses revealed that eight items across the four investigative vignettes performed optimally as a scale. The scale had good internal reliability and scores were found to positively

correlate with behavioural measures of rapport among a sample of 60 practitioners in an immersive interview simulation task. This suggests the RBI is a promising new tool that may assist in assessing interviewers' existing knowledge of the correct use of rapport-based skills.

Reliability and Structure of the Scale

The original scale consisted of 16 items across four vignettes that were designed to measure several rapport-based skills shown to be useful in investigative interviews – reflective listening, responding to resistance, summaries, developing discrepancies, empathy and adaptation (Alison et al., 2013; Surmon-Böhr et al., 2020). We initially designed two versions of the scale - RBI version A and RBI version B - that each consisted of two interviewing vignettes and eight accompanying questions.

The items on each version were designed to be equivalent in meaning but used different vignettes to avoid any practice effects if they were to be used as pre/post measures of training efficacy. Results indicated the two versions only achieved fair test-retest reliability despite being administered concurrently. This suggested that they are not equivalent versions in terms of difficulty and could not be used in their current form as pre/post training measures of rapport skill. Consequently, we examined all items across the four vignettes as a single scale to identify which vignettes/items should be retained based on the simplest but most theoretically meaningful structure of rapport-based skills (e.g. reflective listening, use of summaries, responding to resistance, developing discrepancies, and adaptability).

The scale initially contained both multiple choice (to test recognition of rapport-based skills) and free text response questions (to test an individual's ability to apply the skill or explain their reasoning for their choice). Interestingly, the results revealed that there was an extremely high degree of concurrence between the scores on the corresponding MC and free text responses. As a result, a short form version was retained in which only the multiple-choice questions were included to make the scale more efficient for practitioners to complete and score (see example below).

Interviewing Segment:

When asked what they were arguing about he says:

> *'You know, like most couples who are off and on - just trying to work it out and get back together. She said there was nobody else when we were split up- that she wanted to work it out with me but it was just difficult 'cos of stuff that had happened in the past, you know....'*

3.1 Please select the response that you think would be most useful:

a) You say stuff that had happened between you - had Sophie ever cheated on you in the past?

b) Tell me more about that night when you went round. How did the conversation start off?

c) **So you were trying to work things out, about stuff that had happened in the past. What sorts of problems had you two had in the past?**

d) Would it have mattered if she'd been with somebody else while you were split up?

e) So if she wanted to be with you, what was the problem?

3.2 Please explain why you think your chosen response would be the most useful:

_____

_____

Following a series of exploratory analyses of the structure and reliability of all items, eight items based on the four interviewing vignettes (George/Marcus/Jason/Dylan) were found to perform optimally and were retained in the final scale. This included six multiple choice items related to reflection and two free text response items related to developing discrepancies. The scale as a whole and its subscales were found to have good internal reliability.

The items related to reflective listening, rapport and resistance and summaries were found to load on the same factor labelled - 'reflection', as they all measure some form of reflection of what the suspect has said. High scores on the items relating to this factor reflect an open minded and non-judgmental approach in which the interviewer reflected what the suspect had said and choose to move the conversation forward ('You said you were very close to Melanie, explain what you mean by that'). Low scores indicated a judgmental or accusatory approach likely to increase argument and resistance from the suspect ('If you were so worried about her, Dylan, why didn't you call an ambulance?'). Interestingly items from different scenarios loaded differently within the factor (e.g., 'George' – rapport and resistance = .635, whereas the item related to 'Jason' = .383). This may be a result of the emotive nature of the vignettes (i.e. animal cruelty, racially aggravated arson, murder) which individuals are likely to have their own value-based responses to. It would be interesting to explore individual differences to emotional and value triggering situations in future research.

In MI, developing discrepancies is a key skill that requires reflection of the discrepancy for a client between their current situation and where they would

like to be (Hall et al., 2012). Accurate use of developing discrepancies in ORBIT involves presenting inconsistencies for explanation without providing excuses or passing judgment and inviting an explanation. It requires both reflection but also challenge. Therefore, it is not surprising that the developing discrepancy items were found to form a separate factor to the reflective listening items. It may be that some individuals are skilled in reflection but when they need to challenge a suspect, they do so judgmentally. Interestingly, Surmon-Böhr et al. (2020) reported that although the MI-Consistent skills scale (comprised of reflective listening, rapport and resistance, summaries and develop discrepancies) had good psychometric properties, the internal reliability of the scale would be slightly improved with the removal of the develop discrepancies item, again indicating it may be a distinct skill.

High scores on the developing discrepancy items indicate a willingness to present inconsistencies in an objective and balanced manner, without providing excuses or passing judgment and invite an explanation from the suspect ('So you said that she kept asking you to leave, can you explain to me why you stayed?'). Low scores indicate a preference to present inconsistencies in a confrontational, accusatory, or judgmental manner ('If she was alive when you left her like you are claiming, why would she still have your spit on her face when she was found? Explain that.). We suggest that future research explore whether the developing discrepancy items can be administered in a MCQ format to align with the other six items. This would make the scale even easier for practitioners to administer in the field, with the possibility of automated scoring.

Overall, the results indicate that the RBI has sound psychometric properties and is internally reliable. However, development of a new scale is an iterative process and further research is needed to confirm the hypothesized factor structure and check the scale's internal reliability.

Validity of the Scale

Being able to recognize rapport-based responses at a particular moment in an interview is not the same as engaging in a dynamic conversation over time and maintaining rapport through consistent use of rapport-based behaviours. Therefore, it was crucial to examine whether RBI scores were associated with interviewers' actual interviewing skill. To do this, we examined a subsample of 60 practitioners who completed the RBI and were observed conducting a mock interview as part of a training course they were taking part in as part of their job role. The findings revealed moderate positive correlations between total RBI scores (based on the eight items retained in the final scale) and (i) interviewers' global rapport-based approach and ii) the use of specific rapport consistent skills, providing initial evidence of convergent validity with behavioral measures of rapport skill. There was also a small negative correlation between Total MI score and use of rapport-inconsistent behaviours suggesting that an increase in RBI total score was associated with a decrease in the

presence of behaviours antithetical to rapport (e.g., being judgmental or accusatory). The findings suggests that the RBI may assist trainers to assess an interviewer's current knowledge of, and general approach to interviewing (i.e., their mindset and willingness to listen and try to understand the suspect's version of events, or not).

Research in the therapeutic domain has indicated that whilst MI can be successfully taught to therapists from other counselling backgrounds, it takes considerable effort for them to stop using MI-inconsistent behaviours well ingrained from years of use (Miller & Mount, 2001). The same is likely to be true of police interviewers who are used to interviewing in a specific way (i.e., see themselves as in charge of the interview and comfortable with being accusatory and confrontational). Whilst training 'out' maladaptive behaviors may be difficult, research has also found that counsellors with inadequate MI-performance were able to significantly improve after subsequent training, practice development workshops and appropriate supervision (Martino et al., 2011). Hence, it is important to identify interviewers who may perform inadequately (i.e., who utilize MI-inconsistent behaviours) to help them improve. The negative correlation between RBI scores and MI-inconsistent behaviours suggest it may help to identify interviewers that need additional training and support if they score very low.

Both RBI factors (reflection and developing discrepancies) were found to moderately correlate with global rapport skill levels. The developing discrepancy items also significantly correlated with the use of specific rapport-consistent behaviours (albeit a low correlation). Although total RBI scores were associated with lower MI-inconsistent behaviour, neither individual factor directly correlated with this scale. These findings may suggest that as in therapeutic contexts, expertise in rapport relies on a threshold of proficiency in a combination of skills, rather than the perfect execution of one particular aspect. In MI, expertise is a cumulative process that is characterized by the principles of collaboration, evocation and respect of client autonomy, as well as the combined proficiency in the use of specific therapeutic skills (e.g., use of open questions, affirmations, reflecting and summarizing, rolling with resistance and developing discrepancies) (Miller & Moyers, 2006). Prioritization of any single indicator would lead to these operational definitions being affected substantially by measurement error (Francis et al., 2005). The use of hybrid models that combine multiple indicators or criteria reduces the effects of measurement error (Wagner et al., 2011.) Interpersonal expertise is much better considered as a constellation of skills, in which a certain basic threshold of competence must be established.

Research has shown that in contexts outside of the traditional therapeutic arena (e.g., health care), individuals can gain proficiency in some skills but struggle to integrate all the required MI skills and principles in practice (Berger & Villaume, 2016). Similarly, some practitioners in this study may be able to recognize rapport-based responses that require reflection skills but will leak

judgment when challenging a suspect (i.e., they have knowledge of some but not all skills). However, individuals who can accurately identify rapport-based responses across both the reflection and developing discrepancy items (i.e. are willing to challenge non-judgmentally) may indicate more advanced rapport-skill level as indicated by the correlations between total RBI score and all behavioural measures of rapport.

Rapport is a complex and multifaceted concept that researchers have consistently struggled to define and measure (Neequaye & Mac Giolla, 2022). The ORBIT coding framework was developed as an investigative measure of rapport skill based in part on methods for assessing clinical skill and proficiency in MI (e.g., MISC; Miller at al., 2008). Although it is a robust and comprehensive method to measure interviewers' rapport-based behaviours, it is also highly labour and resource intensive. Although the correlations between RBI scores and the ORBIT measures are small-moderate in size, the findings suggest that the RBI may help trainers to build a picture of an interviewer's current rapport-based interviewing knowledge and mindset without the intensiveness of behavioural coding frameworks. The scale may be improved by developing additional items that measure other aspects of rapport (e.g., cognitive empathy).

One item relating to 'adaptability' was not found to be a good fit for inclusion in the RBI scale but was found to positively correlate with an interviewer's use of global rapport-based behaviors in the mock interviews. A high score indicated that the interviewer was willing to manage a fluid interview format (see response C below where the interviewer reflects Marcus' statement and follows the topic he has introduced), whereas low scores on these items indicate rigidity and a lack of adaptation (see response B below where the interviewer ignores the suspect's attempt to shift the conversation and tries to force the conversation back onto their agenda).

Interview Segment 1:

> *"We weren't in a relationship or anything; she could practically be my daughter. She has...had a boyfriend - real scummy drug dealer type, you know - I hope you're looking at him for this! He's a nasty piece of work - used to knock her about sometimes, take all her money- she said he was her pimp..."*

A2.1 Please select the response below that you think would be most useful: (MCQ - Adaptation)

A. Her pimp? So, was Melanie working as a prostitute then, Marcus?

B. We'll get to talking about her boyfriend, for now let's keep focused on your relationship with Melanie, Marcus. What did you and Melanie used to chat about?

C. It sounds like you felt rather protective over her Marcus and that you don't think much of this boyfriend of hers. What more can you tell me about him?

(See appendix for a full version of the question and all possible responses.)

Adaptation is a critically important skill in rapport-based interviewing. It can be conceptualized as the interviewer being prepared to follow the conversational thread of the interviewee rather than rigidly controlling the direction and topic of the conversation. This allows the interviewee some autonomy over the conversational direction and allows a more fluid and reflective style of interaction where suspects find it more difficult to predict the next question and often leak unintended information. Interviews that follow a rigid, predictable linear style also make it easier for interviewees to see the direction of the questioning and prepare their responses (see Vrij et al. 2009). Based on the finding that this one item was significantly positively correlated with interviewers global interviewing approach, we suggest this item should be administered alongside the RBI scale and further work should be done to develop similar questions that can demonstrate this as an associated factor within the RBI.

The RBI's relationship to interviewer performance in the simulated interviews provides some evidence of its potential to predict field performance in interview, though more research is needed to establish this. We have established through previous evaluation that interviewers who use approaches in line with ORBIT's rapport-based skills in immersive simulation interviews also show improved results in real-world interviews, using more rapport-based skills and generating greater yield than untrained officers (Alison et al., 2020). What must also be considered is whether the outcome of improved performance and yield is due to improved 'rapport'. We are drawing this conclusion based on the evaluation of the interviewer's use of rapport-based skills, but this does not include the subject's perception of rapport. The guilty subject's perception of their treatment by the interviewer has been found to be associated with increased cooperation and confession in interview (Holmberg & Christianson, 2002; Kebbell et al., 2010; Oxburgh et al., 2006). However, it is very difficult in the context of suspect interviewing to reliably determine i) what the subject's perception of the interviewer was post-interview and ii) whether their rapport-based rating is predictive of revealing more pertinent information.

However, this may be possible to establish in future studies by interviewing role actors in simulation/training environments or actual subjects post interview to determine if the subject's perception of rapport also correlates

with them revealing increased information. It does raise the question of whether the most useful criterion by which to judge the development of rapport is the perception of the subject toward the interviewer (e.g. *I felt we had a connection*) or if it is actually linked to the successful outcome of the interview (e.g. *the subject was engaged in the interview and provided more significant information*). We would argue the latter in this context is a useful criterion for investigative interviewers, regardless of the subject's post hoc evaluation of the interaction, which could prove difficult to accurately determine in this adversarial context. However, this is an area which would benefit from further exploration to empirically establish the relationship between perception of rapport and engagement in an interview and the amount of information revealed.

Taken together the findings suggest that the RBI scale may be useful as a measure of current rapport-skill to address cross-sectional performance in the field. Future research is needed to examine whether it can be used repeatedly at different time points to detect changes in skill level after training.

Limitations and Future Directions

Whilst the RBI shows promise as a method to evaluate interviewers' current comprehension of rapport-based knowledge, validation of a measure is an iterative process and additional research is needed to develop the RBI into a more robust scale (e.g. conducting confirmatory factor analysis and further tests of convergent and discriminant validity). There are also limitations to the present study that should be discussed as well as areas that future research should address. The first limitation is that only a small percentage of interviews were selected for interrater coding (10%) which could impact the reliability of these scores. Although the main coder was highly experienced in coding rapport-based behaviours using ORBIT and IRR between coders was found to be good, the fact that it is a small sample must be acknowledged and the IRR treated with caution. Confidence could be improved in future research by interrater coding a sample of at least 30%.

Secondly, it should be noted that our target population was practitioners with interviewing experience, however, because this is a unique and difficult to access population, students were recruited as a supplement to ensure a sufficient sample size for analysis. Additionally, a power analysis was not conducted for this research and sample size was determined based on suggested guidelines for conducting factor analysis (i.e. at least 10–15 participants per variable; Comrey & Lee, 1992; Pett et al., 2003). Future research would benefit from conducting a power analysis to determine a more accurate required sample size and ideally would include a full practitioner sample.

Thirdly, whilst the findings indicate that RBI scores are correlated with interviewers use of rapport-based behaviours during an interview, it is focused on rapport-based skills as measured in the ORBIT coding framework. ORBIT's

behavioral coding framework is based on well-established methods of measuring interpersonal skills in counseling, in particular the interpersonal circumplex (Freedman, Leary, Ossorio, & Coffey, 1951; Birtchnell, 2014) and motivational interviewing (Miller & Rollnick, 1992). ORBIT captures the interviewer's use of adaptive communication approaches and motivational interviewing skills, which have been found to increase suspect engagement and improve information yield, across multiple contexts, conducted on real-world interviews with suspects or victims of crime (Alison et al., 2013; Kim et al., 2020; Surmon-Böhr et al., 2020). Future research could examine the convergent validity of RBI scores alongside other measures of rapport – for example, the RS3i-O (Magee, 2020) as well as with interviewee ratings of rapport when interviewed (e.g. using the RS3i; Duke et al., 2018) to establish if the improved outcome is directly associated with the subject's perception of rapport.

Additionally, whilst many of the top scorers and lowest scorers on the RBI were also the top/lowest performers in the mock interviews, there were a small number of individuals who scored below the average score on the RBI, but performed well in interview, as well as a small number who scored above average on the RBI but performed poorly during the interview. This suggests that the RBI may be most effective at identifying highly skilled and less skilled interviewers, but average scorers vary more in their interview behaviours. This finding may also indicate a potential limitation of the study, which was that interviewers' performance was only measured once, on the first day of training. Further studies should extend the examination of the variation between interviewers' RBI scores and interview performance by conducting an interquartile analysis of the top and bottom scorers.

Examining participants performance on the first day of the course (before they received any training) provided a useful measure of interviewer behaviour soon after they had completed the RBI, however, it may not fully reflect an interviewer's performance in the field. For example, interviewers may have felt under pressure to perform in a training environment where they were being watched by their colleagues and potentially performed worse (or better) than usual. However, given that RBI scores were found to positively correlate with interviewer performance, we suggest this this is not a major issue. Future research should continue to evaluate the RBI with other samples of interviewers in the field (i.e., police/ military/intelligence officers) or indeed any other context in which rapport-based communication is key to success. It would also be beneficial to examine whether the RBI can be used repeatedly, at different time points, to detect changes in skill level post training. It may be useful for future research to test the efficacy of both the short-form RBI (i.e. MCQs retained in this study) as well as the corresponding free text responses for pre/post training evaluations that aim to measure skill development.

Implications and Use in the Field

The RBI was designed as an efficient and concise means for interview trainers to assess individuals' baseline knowledge of the accurate use of rapport-based skills, and to identify optimal candidates for face-to-face training. The initial findings suggest that the scale shows promise as a measure of interviewers' baseline knowledge of rapport-based skills without relying on time consuming behavioral assessment methods (e.g., ORBIT) . However, due to its infancy, we suggest the RBI is used alongside other measures of performance (e.g., trainer/senior management opinion) for a more precise assessment of an interviewer's skill level, until it has undergone further development and validation.

It is important to distinguish between the RBI's assessment of the participant's ability to recognise the correct and effective use of rapport-based skills and their ability to accurately apply these skills themselves in real-world interviews. Researchers define competence as the integrated pieces of knowledge, skills and attitudes that can be used to carry out a professional task successfully (Eraut, 1994, Kaslow et al., 2007; Baartman & Bruijn, 2011). Therefore, our comparison of performance based on observed ORBIT rapport-based skill in training simulation interviews with performance on the RBI, does provide some evidence for knowledge being associated with accurate application of skill. This could be enhanced by retaining the long-form free-text response version of the RBI and conducting more extensive pre/post training evaluation.

The RBI has been administered to over 500 practitioners (including UK, US, Dutch, Norwegian and Indonesian police interviewers; UK, US, Dutch military interrogators; and UK Border Force Intelligence officers) as part of interviewer training programs. More recently, it has been administered to prospective source handlers as an additional consideration in the recruitment process. Similar scales may be useful to develop for other potentially oppositional contexts such as social care, probation, or parenting.

The scale may also be useful for other researchers examining rapport via vignette-based or observational studies. Since conducting the initial validation study, the RBI has been used in other research, providing further validation for the tool. For example, Morgan et al. (2022) used the RBI to measure rapport-based skill level as part of a study exploring the relationship between individual differences in intelligence and personality and performance in simulated interrogation scenarios (using a sample of 274 participants). Of the four characteristics they examined, rapport-based skill level (as measured by the RBI) and cognitive flexibility were the only two significant positive predictors of overall performance on the interrogation scenario tasks.

Conclusions

This paper details the development and initial validation of the self-report short-form RBI scale to assess investigative interviewers' knowledge of rapport-based communication skills. The findings suggest that the scale demonstrates good internal reliability and there is initial evidence of construct validity but this could be improved by establishing a consistent pre/post measure to assess improvements in skill. The current version is psychometrically sound and initial evidence suggests it can measure an individual's ability to recognise the accurate use of key rapport-building skills. Further, this study has established that the ability to recognise these skills is associated with the accurate use of rapport-building skills leading to improved interview performance, though further testing of the scale is required. Overall, the RBI shows promise as a tool to assist in assessing individuals' knowledge of rapport-based skills and proficiency in rapport-based interviewing to support training and skill development.

Ethics statement: Ethical approval for the development and validation of the RBI tool was obtained from the University of Liverpool Psychology, Health and Society Ethics Committee.

Conflicts of interest: The authors declare that they have no conflicts of interest.

References

Abbe, A., & Brandon, S. E. (2014). Building and maintaining rapport in investigative interviews. *Police practice and research*, *15*(3), 207–220.

Akhtar-Danesh, N. (2023). Impact of factor rotation on Q-methodology analysis. *Plos one*, *18*(9).

Alison, L. J. & Alison, E. (2012). *ORBIT: Observation of Rapport- Based Interview Techniques Coding manual*. University of Liverpool Internal Document.

Alison, L. J., Alison, E., Noone, G., Elntib, S., & Christiansen, P. (2013). Why tough tactics fail and rapport gets results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to generate useful information from terrorists. *Psychology, Public Policy, and Law*, *19*(4), 411–431. https://doi.org/10.1037/a0034564

Alison, L., Alison, E., Noone, G., Elntib, S., Waring, S., & Christiansen, P. (2014). The efficacy of rapport-based techniques for minimizing counter-interrogation tactics amongst a field sample of terrorists.*Psychology, Public Policy, and Law, 20*(4), 421–430. https://doi.org/10.1037/law0000021

Alison, L. J., Alison, E., Shortland, N., & Surmon-Böhr, F. (2020). ORBIT: The science of rapport-based interviewing for law enforcement, security, and military. Oxford University Press.

Alison, L.J., Barrett-Pink, C., Surmon-Böhr, F., Shortland, N., Alison, E., Christiansen, P. (2020). How to Build Rapport: Assessing the Effectiveness of ORBIT Training with Police interviewers. In L.J. Alison, E. Alison, N. Shortland & F. Surmon-Böhr (Eds.), *ORBIT: The Science of Rapport-Based Interviewing for Law Enforcement, Security, and Military* (pp. 166–181) https://doi.org/10.1093/med-psych/9780197545959.003.0008

Arrigo, J. M., & Wagner, R. V. (2007). Psychologists and military interrogators rethink the psychology of torture. *Peace and Conflict: Journal of Peace Psychology*, *13*(4), 393–398.

Baartman, L. K., & De Bruijn, E. (2011). Integrating knowledge, skills and attitudes: Conceptualising learning processes towards vocational competence. *Educational research review*, *6*(2), 125–134.

Berger, B. A., & Villaume, W. A. (2016). A new conceptualization and approach to learning and teaching motivational interviewing. *Innovations in pharmacy, 7*(1).

Brandberg, C., Ekstedt, M., & Flink, M. (2021). Self-management challenges following hospital discharge for patients with multimorbidity: a longitudinal qualitative study of a motivational interviewing intervention. *BMJ open*, *11*(7). http://dx.doi.org/10.1136/ bmjopen-2020-046896

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*(4), 284–290. https://doi.org/10.1037/1040-3590.6.4.284

Comrey, A., & Lee, H. (1992). *A First Course in Factor Analysis (2nd edn.).* Lawrence Earlbaum Associates. https://doi.org/10.4324/9781315827506

Duke, M. C., Wood, J. M., Bollin, B., Scullin, M., & LaBianca, J. (2018). Development of the Rapport Scales for Investigative Interviews and Interrogations (RS3i), Interviewee Version. *Psychology, Public Policy, and Law*, *24*(1), 64. http://dx.doi.org/10.1037/law0000147

Eraut, M. (1994). The acquisition and use of educational theory by beginning teachers. Action and reflection in teacher education, 69, 88.

Evans, J. R., Meissner, C. A., Brandon, S. E., Russano, M. B., & Kleinman, S. M. (2010). Criminal versus HUMINT interrogations: The importance of psychological science to improving interrogative practice. *The Journal of Psychiatry & Law*, *38*(1–2), 215–249.

Francis, D. J., Fletcher, J. M., Stuebing, K. K., Lyon, G. R., Shaywitz, B. A., & Shaywitz, S. E. (2005). Psychometric approaches to the identification of LD: IQ and achievement scores are not sufficient. Journal of Learning Disabilities, 38, 98–108. doi:10.1177/00222194050380020101

Gabbert, F., Hope, L., Luther, K., Wright, G., Ng, M., & Oxburgh, G. (2021). Exploring the use of rapport in professional information-gathering contexts by systematically mapping the evidence base. *Applied Cognitive Psychology*, *35*(2), 329–341. https://doi.org/10.1002/acp.3762

Geisler, C., & Swarts, J. (2019). Coding streams of language: Techniques for the systematic coding of text, talk, and other verbal data (p. 155–). Ft. Collins, CO: WAC Clearinghouse.

Goodman-Delahunty, J., Martschuk, N., & Dhami, M. K. (2014). Interviewing high value detainees: Securing cooperation and disclosures. *Applied cognitive psychology*, *28*(6), 883–897. https://doi.org/10.1002/acp.3087

Hall, K., Gibbie, T., & Lubman, D. I. (2012). Motivational interviewing techniques: facilitating behaviour change in the general practice setting. *Australian family physician*, *41*(9), 660–667.

Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication methods and measures*, *1*(1), 77–89. https://doi.org/10.1080/19312450709336664

Holmberg, U., & Christianson, S. Å. (2002). Murderers' and sexual offenders' experiences of police interviews and their inclination to admit or deny crimes. *Behavioral sciences & the law*, *20*(1-2), 31–45. https://doi.org/10.1002/bsl.470

Humann, M., Alison, E., Alison, L., Surmon-Böhr, F., Ratcliff, J., Christiansen, P., & Tejeiro, R. (2023). Motivational interviewing in child sexual abuse investigations: Approaches shown to increase suspect engagement and information gathering during police interviews. *International Journal of Police Science & Management, 0*(0). https://doi.org/10.1177/14613557231167695

Kaslow, N. J., Rubin, N. J., Bebeau, M. J., Leigh, I. W., Lichtenberg, J. W., Nelson, P. D., ... & Smith, I. L. (2007). Guiding principles and recommendations for the assessment of competence. Professional Psychology: Research and Practice, *38*(5), 441.

Kebbell, M., Alison, L., Hurren, E., & Mazerolle, P. (2010). How do sex offenders think the police should interview to elicit confessions from sex offenders?. *Psychology, crime & law*, *16*(7), 567–584. https://doi.org/10.1080/10683160902971055

Kelly, C. E., Miller, J. C., Redlich, A. D., & Kleinman, S. M. (2013). A taxonomy of interrogation methods. *Psychology, public policy, and law*, *19*(2), 165.

Kim, S., Alison, L., & Christiansen, P. (2020). Observing rapport-based interpersonal techniques to gather information from victims. *Psychology, Public Policy, and Law*, *26*(2), 166.

Koo, T. K. & Li, M. Y. (2016). A Guideline of Selecting and Reporting Intraclass Correlation Coefficients for Reliability Research. *Journal of Chiropractic Medicine, 15*(2), 155–163. https://doi.org/10.1016/j.jcm.2016.02.012

Krippendorff, K. (2004). Reliability in content analysis: Some common misconceptions and recommendations. *Human communication research*, *30*(3), 411–433. https://doi.org/10.1111/j.1468-2958.2004.tb00738.x

Magee, J. L. (2020). *The Development of the Rapport Scales for Investigative Interviews and Interrogations, Observer Version (RS3i-O)* (Doctoral dissertation, The University of Texas at El Paso).

Martino, S., Canning-Ball, M., Carroll, K. M., & Rounsaville, B. J. (2011). A criterion-based stepwise approach for training counselors in motivational interviewing. *Journal of substance abuse treatment*, *40*(4), 357–365. https://doi.org/10.1016/j.jsat.2010.12.004

McMurran, M. (2009). Motivational interviewing with offenders: A systematic review. *Legal and Criminological Psychology*, *14*(1), 83–100. https://doi.org/10.1348/135532508X278326

Miller, W. R., Hedrick, K. E., & Orlofsky, D. R. (1991). The Helpful Responses Questionnaire: A procedure for measuring therapeutic empathy. *Journal of Clinical Psychology*, *47*(3), 444–448. https://doi.org/10.1002/1097-4679(199105)47:3<444::AID-JCLP2270470320>3.0.CO;2-U

Miller, W. R., & Mount, K. A. (2001). A small study of training in motivational interviewing: Does one workshop change clinician and client behavior?. *Behavioural and Cognitive Psychotherapy*, *29*(4), 457–471. https://doi.org/10.1017/S1352465801004064

Miller, W. R., & Moyers, T. B. (2006). Eight stages in learning motivational interviewing. *Journal of Teaching in the Addictions*, *5*(1), 3–17.

Miller, W. R., & Moyers, T. B. (2017). Motivational interviewing and the clinical science of Carl Rogers. *Journal of Consulting and Clinical Psychology*, *85*(8), 757–766. https://doi.org/10.1037/ccp0000179

Miller, W. R., Moyers, T. B., Ernst, D., & Amrhein, P. (2008). *Manual for the motivational interviewing skill code (MISC) v. 2.1.* Department of Psychology Faculty Scholarship and Creative Works. 27. https://digitalcommons.montclair.edu/psychology-facpubs/27

Morgan, R., Alison, L., Palace, M., Shortland, N., & Humann, M. (2022). The Effects of Intelligence and Personality on Performance in Simulated Interrogation Scenarios. *Journal of Police and Criminal Psychology, 37*, 271–278. https://doi.org/10.1007/s11896-020-09411-0

Moyers, T. B., Manuel, J. K., & Ernst, D. (2014). Motivational interviewing treatment integrity coding manual 4.1 (MITI 4.2.1). Unpublished manual. http://www.academiemg.nl/library/downloads/1536662018.1447.pdf

Moyers, T. B., & Rollnick, S. (2002). A motivational interviewing perspective on resistance in psychotherapy. *Journal of clinical psychology*, *58*(2), 185–193. Neequaye and Mac Giolla (2022)

Nunan, J., Stanier, I., Milne, R., Shawyer, A., Walsh, D., & May, B. (2022). The impact of rapport on intelligence yield: police source handler telephone interactions with covert human intelligence sources. *Psychiatry, Psychology and Law*, *29*(1), 1–19. https://doi.org/10.1080/13218719.2020.1784807

O'Toole, G. (2016). *Communication-eBook: Core Interpersonal Skills for Health Professionals*. Elsevier Health Sciences.

Oxburgh, G., Williamson, T., & Ost, J. (2006). Police officers' use of emotional language during child sexual abuse investigations. *Journal of Investigative Psychology and Offender Profiling*, *3*(1), 35–45.

Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research*. sage.

Redlich, A. D., Kelly, C. E., & Miller, J. C. (2014). The who, what, and why of human intelligence gathering: Self-reported measures of interrogation methods. *Applied Cognitive Psychology*, *28*(6), 817–828. DOI: 10.1002/acp.3040

Rogers, C. R. (1975). Empathic: An unappreciated way of being. *The counseling psychologist*, *5*(2), 2–10. https://doi.org/10.1177/001100007500500202

Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing?. *Behavioural and cognitive Psychotherapy*, *23*(4), 325–334.

Rosengren, D. B., Baer, J. S., Hartzler, B., Dunn, C. W., & Wells, E. A. (2005). The video assessment of simulated encounters (VASE): Development and validation of a group-administered method for evaluating clinician skills in motivational interviewing. *Drug and Alcohol Dependence*, *79*(3), 321–330. https://doi.org/10.1016/j.drugalcdep.2005.02.004

Russano, M. B., Narchet, F. M., Kleinman, S. M., & Meissner, C. A. (2014). Structured interviews of experienced HUMINT interrogators. *Applied Cognitive Psychology*, *28*(6), 847–859. DOI: 10.1002/acp.3069

Salas, E., Bedwell, W. L., and Fiore, S. M. (2011). Developing the 21st century (and beyond) workforce: A review of interpersonal skills and measurement strategies.

Satre, D. D., Delucchi, K., Lichtmacher, J., Sterling, S. A., & Weisner, C. (2013). Motivational interviewing to reduce hazardous drinking and drug use among depression patients. *Journal of substance abuse treatment*, *44*(3), 323–329. doi: 10.1016/j.jsat.2012.08.008

Stevens, M. J., & Campion, M. A. (1999). Staffing work teams: Development and validation of a selection test for teamwork settings. *Journal of management*, *25*(2), 207–228.

Surmon-Böhr, F., Alison, L., Christiansen, P., & Alison, E. (2020). The right to silence and the permission to talk: Motivational interviewing and high-value detainees. *American Psychologist, 75*(7), 1011–1021. https://doi.org/10.1037/amp0000588

Tickle-Degnen, L., & Rosenthal, R. (1990). The nature of rapport and its nonverbal correlates. *Psychological inquiry*, *1*(4), 285–293.

Vallano, J. P., & Schreiber Compo, N. (2015). Rapport-building with cooperative witnesses and criminal suspects: A theoretical and empirical review. *Psychology, Public Policy, and Law*, *21*(1), 85.

Vanderhallen, M., & Vervaeke, G. (2014). Between investigator and suspect: The role of the working alliance in investigative interviewing. In R. Bull (Ed.), *Investigative interviewing,* (pp. 63–90). Springer.

Vrij, A., Leal, S., Granhag, P. A., Mann, S., Fisher, R. P., Hillman, J., & Sperry, K. (2009). Outsmarting the liars: The benefit of asking unanticipated questions. *Law and human behavior*, *33*, 159–166.

Wagner, R. K., Waesche, J. B., Schatschneider, C., Maner, J. K., & Ahmed, Y. (2011). Using response to intervention for identification and classification. In P. McCardle, J. R. Lee, B. Miller, & O. Tzeng (Eds.), *Dyslexia across languages: Orthography and the brain-gene-behavior link* (pp. 202–213). Baltimore, MD: Brookes Publishing.

Walsh, D., & Bull, R. (2012). Examining rapport in investigative interviews with suspects: Does its building and maintenance work?. *Journal of police and criminal psychology*, *27*, 73–84. DOI 10.1007/s11896-011-9087-x

Appendix – The Rapport Based Inventory (RBI)

RBI A - Scenario 1: George

Instructions: Consider the following and then answer the related questions.

George Sampson (age 41) has a history of domestic abuse related police callouts with his partner Sally (age 32) - they have three children ranging in age from 5–13. Police were called to the family home in response to an incident involving the family's pet dog. George has been arrested on a charge of animal cruelty. He is alleged (by his wife) to have returned home from work to find that the dog had defecated on the lounge rug. She then alleges that he forced them to stand in the garage, where he hung the dog over the roof support beam by its lead and beat it to death with a cricket bat in front of them to 'teach the children a lesson'.

> When interviewed about what happened he states: *'Look - this has all come out wrong. That dog was dangerous - it must have been sick or something - it tried to bite my 5-year-old lad. I was only trying to get it under control, and it turned on me as well! That's why I grabbed the bat. My missus was soft over it- always spoiling it. That's why she's saying I did it on purpose which I never. It was self-defence….*

A1.1 Paying careful attention to the response given by George above, please indicate which of the statements below you would select to respond to George with if you were interviewing him: (MCQ - Reflective listening)

A. So, you're saying your wife is lying?
B. So, you're saying that you were trying to protect yourself and that the dog had already tried to bite your 5-year-old. Tell me some more about that.
C. Tell me more about the bat.
D. If you were trying to protect yourself George - how did you manage to get the dog on the lead?
E. It appears you have an aggression problem, don't you George? This isn't the first time the police have been out to your property.

A1.2 What is George leaking regarding how he would like you to view him, or regarding the ways in which he is trying to save face? (free text response – Empathic perspective taking)

4	Responses that indicate George is trying to portray himself as a 'good man/person', a 'concerned father', a 'protector'
3	Responses that focus on George portraying himself as a victim or as a hen-pecked husband (accurate but off-target); or imply he is avoiding the question or is ashamed of what he's done; focus on him shifting blame to wife
2	Neutral response; fact focused or not identified how he wants to be portrayed.
1	Responses that are based on personal opinion, type of offence, past history and do not reflect any of the direct information from the segment.

When asked about how the dog ended up over the support beam, George becomes vague:

George: "*Look, it all happened really fast. I was taking the dog out to the garage because it had shit on the rug and so of course I was giving it a telling off, but just verbal you know, and that's when it went for me and my lad. I just had to act quickly and get it away from us."*

After challenging George about his account, he offers this explanation:

George: "*You're trying to say I did it on purpose but that's just not the case. See how you'd feel if it was your kid who almost got bit- there's a protective instinct you know? I just saw red and it all got a bit out of hand - I never meant it to go so far".*

A1.3 What is your preferred response? (MCQ - Rapport & Resistance)

A. The evidence says otherwise, George - the evidence says you deliberately marched the dog out there with the intention of beating it - maybe not to death - but definitely giving it a beating.

B. So you're saying it was all just an accident?

C. Okay George, you've said you felt a protective instinct over your kid - tell me some more about that.

D. Did you not feel any sense of care toward the dog, George?

E. How did the dog die, George?

RBI B - Scenario 2: Jason

Jason Beech (age 18) has been arrested on suspicion of racially aggravated arson. He is alleged to have set a wheelie bin on fire, propped against the door of a terraced property where an elderly Pakistani woman lives (Mrs Bashwar), and she is now in a critical condition. He was witnessed on the

afternoon prior to the offence setting off fireworks in a local car park with a number of other young lads.

When asked about setting off the fireworks, he says, *"Just a bit of a laugh, innit...no big deal. I didn't start it anyway - I just followed what they were doing. Anyway, I said to the other lads to cool it, you know, there was little kiddies around and stuff".*

B2.1 Paying careful attention to the response given by Jason above, please indicate with which of the statements below you would select to respond to Jason, if you were interviewing him: (MCQ - Reflective listening)

A. So, you're saying the others started it?

B. You were just looking to frighten people weren't you, Jason? That's the truth.

C. Tell me the names of the others that were there.

D. So, you were worried about the other younger children? Tell me more about that.

E. Did you ever stop to think about the consequences? It appears you didn't care about what might happen…

B2.2 What is Jason leaking regarding how he would like you to view him, or regarding the ways in which he is trying to save face? (free text response – Empathic perspective taking) free text response – Empathic perspective taking)

When Jason is asked to identify the other lads who were setting off fireworks, he replies, "No comment." When asked why he does not want to answer he says:

"Because, look where I fucking ended up - I'm not giving you their names so you can go drag them out of bed and question them, get their families all worked up, stir up a bunch of shit. It's dog eat dog on this estate. It's bad enough what happened on the estate without ruining a bunch of other people's lives over it - so 'no comment'".

And Some More Dialogue:

> Jason: "*Listen… what if the person who did it never meant for it to happen like that - if it was just an accident? Does that mean their whole life should be fucked because of one stupid thing they did as a kid? I mean, if something is accidental you lot have to accept that, don't you - like if there was no intention to hurt anybody."*

B2.3 What is your preferred response? (MCQ - Rapport & Resistance)

A. So, you *were* involved?

B. Tell me how things got out of hand, Jason.

C. We have evidence that this was a deliberate act, Jason- that the person poured petrol on it before they set it alight that means they had to go and buy the petrol beforehand that means they planned it, Jason.

D. Did you set the fire, Jason?

E. Yes, it is really important to be clear about what the person's intention was - you've said there was no intention to hurt anybody - tell me some more about that.

RBI A - Scenario 3: Marcus

Please consider the following scenario and answer the questions after each interview segment.

Marcus Tingwall (age 38) has been arrested on suspicion of murdering a young woman who resided in the same block of flats. Her body was discovered partially hidden behind an industrial dumpster under some rubbish bags. She had been sexually assaulted, beaten around the face and head and hit multiple times with a blunt object in the face.

The victim is 24-year-old, Melanie Platts, who was known to work as a prostitute out of her flat, was a heroin user, and had regular contact with local drug dealers in the area, one of whom was her part-time live-in boyfriend and pimp. DNA testing has eliminated the boyfriend and has implicated the neighbour, Marcus Tingwall, (whose DNA is on file from a previous conviction for aggravated burglary).

Interview Segment 1:

When asked what his relationship is to the victim, Mr. Tingwall states:

"I saw quite a bit of Melanie, around the building. We would always stop and have a chat, you know about the weather, stuff like that..just friendly."

"We weren't in a relationship or anything; she could practically be my daughter. She has...had a boyfriend - real scummy drug dealer type, you know - I hope you're looking at him for this! He's a nasty piece of work - used to knock her about sometimes, take all her money- she said he was her pimp..."

A2.1 Please select the response below that you think would be most useful: (MCQ - Adaptation)

A. Her pimp? So, was Melanie working as a prostitute then, Marcus?

B. We'll get to talking about her boyfriend, for now let's keep focused on your relationship with Melanie, Marcus. What did you and Melanie used to chat about?

C. It sounds like you felt rather protective over her Marcus and that you don't think much of this boyfriend of hers. What more can you tell me about him?

D. Rest assured, we're looking at all possible angles on this, Marcus. When was the last time you saw Melanie?

E. I'm sure she appreciated your *neighbourly* concern, Marcus… Can you tell me, did *you* ever have a sexual relationship with her?

A2.2 Please explain why you think your chosen response would be the most useful: (free text response Adaptation)

Interview Segment 2:

After significant questioning, Marcus admits to paying Melanie for sex in the past. When asked about the nature of their sexual relationship, he says:

"I really cared about Melanie you know. I'm just destroyed by what's happened...I really cared about her ... I was trying to look out for her...".

"OK, I was giving her money, but it wasn't always just for sex, it wasn't like that, you know. I would help her out with groceries and stuff...But she just wanted more and more, you know, because of the drugs I guess…".

A2.3 Please select the summary you would choose to respond to Marcus: (MCQ – Summaries)

A. Just to summarise, Marcus: you've said that you and Melanie were quite friendly and sometimes you'd give her money for sex but also to help out with things like groceries - but then she started asking for more and more money, you suspect to use for drugs. Is that correct?

B. So, you gave Melanie money, but she wanted more and more money 'because of the drugs'. Tell me more about these drugs.

C. So, you've said you cared about Melanie and you were trying to look out for her, but you also admit you were having sex with her for money? How often were you paying her for sex, Marcus?

D. It sounds like you had quite a complicated relationship with Melanie, but that basically you were giving her money to help her out because you cared about her. You said she just wanted 'more and more' from you - tell me some more about that.

E. On the one hand you describe it as if you were a concerned neighbour trying to help out a young woman who could have been your daughter and was having a tough life, but then you were also prepared to use her as a prostitute? How was that helping her, Marcus?

A2.4 Please indicate why you have selected your chosen response: (Free text response – Summaries)

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Interview Segment 3:

Forensic examination at the scene has recovered semen matched to Marcus's DNA. After significant questioning, Marcus admits to that he did have sex with Melanie the night she died but claims that she was alive when he left. During the interview he says:

'I've already told you I was having sex with her. I'd brought her the £500 she was asking for, so she had sex with me. That was it. It doesn't mean I

killed her! She was totally fine when I left her flat. Just because we had sex doesn't mean I killed her……'

You also have results from a saliva sample taken from the victim's body which also matches Marcus' DNA. Here is an excerpt from the forensic examiner's report:

The saliva has been recovered from the victim's right cheek and left thigh. The sample on the cheek in particular is a significant amount and is indicative of someone having deliberately spat on or at the victim. It is inconsistent with the amount that might be expected from either kissing or licking the skin or from involuntary spittle produced during conversation.

A2.5 You introduce this report to Marcus and read him the examiner's conclusions. How would you challenge Marcus about his account given this information? Please provide a description of exactly what you would say to him in interview. (Free text response – Developing discrepancies)

RBI B - Scenario 4 – Dylan

Dylan Parsons is being interviewed regarding the false imprisonment, rape, and assault of his ex-partner Sophie. According to a statement made by Sophie's brother, she phoned him and said that Parsons broke into her property via an unsecured window on the second floor, hid under the bed, and waited for her to return home. Sophie's brother also reports that she told him Parsons assaulted her and then had sex with her. He says it was the next evening by the time Sophie managed to phone him; he contacted police, who then attended the flat. When police arrived, Parsons was drunk and brandishing a knife, saying he wanted to kill himself. Parsons finally gave himself up after negotiators pleaded with him to allow them to take Sophie to hospital (Parsons had told them she was asleep and wouldn't wake up). The assault has left her with serious head injuries from which she may suffer permanent damage.

In interview, Parsons maintains that he had waited for Sophie to try and convince her to get back together. He says they had consensual sex to 'make-up', then she fell down the stairs when she went to get some water from the kitchen because she was still drunk from her night out. He says she hit her head on the radiator at the bottom of the steps. He then says he helped her back upstairs so she could go to bed and rest. The next day he says she regretted getting back with him and was insisting he leave, but he was worried about her, so he refused. He says he wouldn't let her leave because he was worried about her

and thought she just needed to rest. He admits that he was drinking throughout the day and that they argued several times but says he never laid a finger on her.

Interview Segement 1:

When asked what they were arguing about, he says:

> Dylan: *"You know, like most couples who are off and on, just trying to work it out and get back together. She said there was nobody else when we were split up, that she wanted to work it out with me, but it was just difficult 'cos of stuff that had happened in the past, you know..."*.

B2.1 Please select the response that you think would be most useful: (MCQ - Adaptation)

A. You say stuff that had happened between you - had Sophie ever cheated on you in the past?

B. Tell me more about that night when you went round. How did the conversation start off?

C. So, you were trying to work things out, about stuff that had happened in the past. What sorts of problems had you two had in the past?

D. Would it have mattered if she'd been with somebody else while you were split up?

E. So, if she wanted to be with you, what was the problem?

B2.2 Please explain why you think your chosen response would be the most useful: (free text response Adaptation)

Interview Segment 2:

As the interview progresses, Parsons discusses how Sophie became injured:

> *"So, we'd made up then, you know upstairs, and she went to get some water from the kitchen. Next thing I hear this almighty crash and she's in a heap at the bottom of the stairs. She'd hit her head on the corner of the radiator and there was blood, so I went and got a towel from the bathroom. She'd been drinking and was still pissed, so she must've just slipped. I*

brought her upstairs to bed and got a bag of peas, you know frozen peas, for her to put on it."

B2.3 Please select the summary with which you would choose to respond to Parsons to move the conversation forward:

A. So, she goes off to the kitchen and falls down the stairs, but you don't call an ambulance or take her to the hospital. Instead, you put her to bed with a bag of peas on her head. Is that what you're saying happened?

B. So, you said you argued upstairs at first, but then you made up and she went to get some water from the kitchen. At that point you heard a loud crash and when you went to check, she was at the bottom of the stairs. She'd hit her head on the radiator, and it was bleeding, so you got her a towel from the bathroom. You think she might have fallen because she'd been drinking. You brought her upstairs to bed and got her a bag of frozen peas to put on her head where she hit it. Is that correct?

C. So, Sophie has fallen down the stairs, she's bleeding from the head, and you put her to bed and got her some frozen peas? Do you really expect us to believe that, Dylan? What really happened? Be honest now - how did Sophie get these injuries to her face and head?

D. So, Dylan, you're saying that Sophie was injured when she slipped and fell down the stairs and was bleeding from the head. You tried to help her by getting a towel for the bleeding, taking her up to bed and getting her to put some frozen peas where she hit it. Was she saying anything to you at this point?

E. So, Sophie went to get some water, fell down the stairs, where she injured her head. She was bleeding so you helped her upstairs to bed. What happened next?

B2.4 Please indicate why you have selected your chosen response: (Free text response – Summaries)

Interview Segment 3:

Forensic examination of the scene indicates there is no evidence to support Sophie falling down the stairs. There is no fibre evidence on her clothing from

the carpet on the stairs, no contact evidence on the stairs or hall, and no blood or other indications on the radiator where Parsons claims she struck her head.

B2.5 How would you challenge Parsons about his account given this conflicting information? Please provide a description of exactly what you think you would say to him in interview. (Free text response – Developing discrepancies)

_____

_____