Observing Rapport-Based Interpersonal Techniques to Gather Information from Victims

Sunghwan Kim, Laurence Alison*, and Paul Christiansen

Department of Psychological Sciences, University of Liverpool, UK

*Correspondence should be addressed to Prof. Laurence Alison
Institute of Psychology, Society and Health, University of Liverpool,
Eleanor Rathbone Building, Bedford Street South, Liverpool L69 7ZA, United Kingdom
Phone: +44 (0) 151 794 6707 Fax: +44 (0) 151 794 2945 E-mail: l.j.alison@liverpool.ac.uk

Abstract

The Observing Rapport-Based Interpersonal Techniques (ORBIT) behavioural coding manual (Alison et al., 2013) was used to code 103 hours of investigative interviews with sexual offence victims - a sample of 86 single victim cases conducted by 26 police interviewers in South Korea. In all cases, there was a subsequent conviction. ORBIT is comprised of two key psychological approaches previously used most often in counselling but applied here to law enforcement. These are: (i) Humanistic approaches that are honest, empathic and non-judgmental and: (ii) an Interpersonal Behaviour Circle (IBC) of dyadic interaction between interviewer and victim based on power-submission and conflict-co-operation dimensions, which can be managed in a prosocial (adaptive) or antisocial (maladaptive) way by the interviewer. Information/evidence yield was coded as a dependent variable. Coding was conducted every 15 minutes, representing 316 coding units. Results showed that: (1) Humanistic approaches positively influence adaptive interactions between interviewer and victim whilst simultaneously reducing maladaptive ones, the consequence of which is an increase in yield; (2) Interviewer adaptive behaviours directly increase victim adaptive behaviour (with the same effect for maladaptive behaviour); (3) Victim adaptive behaviour is positively associated with interview yield, and victim maladaptive behaviour is negatively associated with it. These results suggest that interviews conducted in a humanistic-consistent fashion strongly positively influence adaptive victim behaviour, which, in turn, increases interview yield.

Keywords: Humanistic Counselling; Interpersonal Behaviour Circle; sexual crime; victim

Introduction

Interviewing victims is one of the most challenging aspects of sexual offence investigations. Victims can be unwilling to reveal information (Malloy, Lyon, & Quas, 2007), specifically within a formal interviewing setting (Hershkowitz, Horowitz, & Lamb, 2005) and it is crucial to obtain information since they are often the only source of information.

In the UK, the 'PEACE' model was introduced to ensure a non-accusatory, information-gathering approach to interviewing (Milne & Bull, 1999). PEACE (P: planning and preparation); E (engage and explain); A (account); C (closure); and E (evaluation) is a conceptual phased framework that places importance on objectivity and fairness to ensure successful interview with suspects, witnesses and victims. *Achieving Best Evidence in Criminal Proceedings* was published by the Ministry of Justice (2011) and, focusing on video-recorded interviews with vulnerable and intimidated victims/witnesses, it contained recommendations for skills to be employed to reduce victim/witness reluctance and encourage them to recall accurate information. Moreover, the National Institute of Child Health and Human Development (NICHD) interview protocol (Lamb, Brown, Hershkowitz, Orbach, & Esplin, 2018) has been widely used for child victims and has been well tested in Canada, the UK, Israel, and the US (Cyr & Lamb, 2009; Lamb, Orbach, Sternberg, Aldridge, Pearson, Stewart, Esplin, & Bowler, 2009; Orbach, Hershkowitz, Lamb, Sternberg, Esplin, & Horowitz, 2000; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001). The NICHD protocol provides a systematic approach, covering all phases of the interview, for interviewers to help child victims to generate accounts. It includes, for example, explaining basic rules, building rapport, providing a recollection exercise of previous experience, and focusing on open rather than closed questions.

The NICHD protocol was later revised to include enhanced emotional support (Hershkowitz, Lamb, Katz, & Malloy, 2015).

In South Korea, sexual offences are a serious social problem. According to recent official statistics, the total number of sexual crimes occurring per year rose 12% from 2014 to 2018 (Korean National Police Agency, KNPA, 2018). The KNPA has attempted to improve competences in investigating sex offences, with an emphasis on interviewing due to the limited amount of physical evidence that is often a hallmark of such cases. In 2004, the KNPA introduced the PEACE model and Cognitive Interview to spread the recent knowledge on investigative interviewing principles and techniques. The KNPA also executed nationwide video-recorded interview system to improve the admissibility of police interviews and to protect the human rights of interviewees in 2007. Further, the KNPA disseminated the NICHD protocol to assist officers interviewing child victims in 2010 (Ministry of Gender Equality & Family, 2010). To enhance and maintain the officers' expertise related to the guidelines introduced, the KPIA (Korean Police Investigation Academy), which is the professional training institution of the KNPA, provides relevant investigative interviewing courses composed of learning theories and simulation exercises. Interestingly, according to Yi, Lamb, and Jo (2016), the NICHD interview protocol was adopted for Korean officers who interview suspected child victims and was perceived as important and effective. However, their research also revealed that Korean officers often do not adopt the methods recommended by the NICHD in practice. Especially, NICHD urges interviewers to establish rapport and there is lots of instruction about this in its Revised Protocol (see Lamb et al., 2018). Other, earlier research also emphasized the significance of rapport-building when interviewing victims (Ruddock, 2006). Hardy, Young, and Holmes (2009) described that rapport can reduce psychological

sequelae for the victims as well as assist in the retrieval of memories regarding detailed information of the incident. Moreover, rapport-building is deemed central to the progress of a cooperative, information gathering interaction (Vallano & Compo, 2011) and for child victims, reports of traumatic experiences can be critically affected by interviewer behaviour and an appreciation of rapport (Lamb et al, 2018). Rapport-building offers a friendly atmosphere and consequently reduces the uneasiness that may exert a negative impact on information gathered (Robert, Lamb, & Sternberg, 2004). The revised NICHD protocol, emphasizing a rapport-building phase, was more effective than its previous standard version in facilitating disclosure by child victims (Hershkowitz, Lamb, & Katz, 2014). In summary, rapport-based interviewing can mitigate the negative feelings of child victims during police interviews (Hershkowitz, Orbach, Lamb, Sternberg, & Horowitz, 2006) and increase the amount of information generated (Fisher, Brennan, & McCauley, 2002; Ord, Shawn, & Green, 2008). Despite these findings, little is known about how to create an environment of rapport and, more specifically, there is very little known about the set of behaviours or approaches that underpin it.

Observing Rapport-Based Interviewing Techniques

The Observing Rapport-Based Interpersonal Techniques (ORBIT) coding framework was developed by Alison et al. (2013) to enable a systematic approach to classify, code and measure rapport-based interviewing. ORBIT is based on two major components that have been used in counselling domains: (i) Humanistic, 'Rogerian' approaches to counselling, with a specific focus on Motivational Interviewing (MI; Miller & Rollnick, 1992); and (ii) an Interpersonal Behaviour Circle model of the interactions between interviewer and interviewee (IBC; Birtchnell, 2002; Leary, 1995). Alison et al. (2013) considered, when constructing ORBIT, that

law enforcement interviews and counselling may have common features. Specifically, interviewers/counsellors seek to treat interviewees/clients with empathy, respect and support, whilst sustaining interpersonally adaptive, prosocial behaviours. Also, interviewers/counsellors should utilize flexible approaches to the responses of interviewees/clients whilst focusing on core agendas during the interaction. Furthermore, interviewees/clients are able to make their own choices concerning the level of engagement (as is enshrined for example in the right to silence with regards to suspects). Bull and Cherryman (1996) found that empathy, adaptability, open-mindedness, well-organized structure and a non-judgmental approach were especially effective in investigative interviewing. These qualities represent many of the hallmarks of Motivational Interviewing (see Rollnick & Miller, 1995).

Motivational Interviewing

Developed by Miller (1983), Motivational Interviewing (MI) was used in a therapeutic arena as a goal-directed process for helping clients to search and solve their ambivalence about continuing with or abstaining from alcohol and substance misuse. Ambivalence describes the 'push and pull' factors that encourage clients to stop or continue their misuse. Clients in therapy often report not only a push towards change but also a pull away from it (Miller and Rollnick, 2012). MI skills such as active listening, open questions and summaries are effective means by which to produce an atmosphere of personal choice and to enable the expression of the client's thoughts and beliefs underlying the issue. In doing so, it has been established that there is a concomitant decrease in interviewees' resistance to behavioural change and greater openness and receptivity to taking responsibility for making changes (Thigpen, Beauclair, Brown, & Guevara, 2012). Using approaches that are antithetical to MI – including seeking to control,

cajole or ‘coerce’ the client ‘out of drinking’ can produce a psychological state of ‘reactance’. Reactance emerges where a client actively adopts the opposing position to that suggested by the therapist and thus ossifies their commitment to continued misuse. MI has demonstrated its efficacy on various matters in health maintenance, counselling, and psychological treatments (Arkowitz, Westra, Miller, & Rollnick, 2008; Erickson, Gerstle, & Feldstein, 2005; Miller & Rollnick, 2002). Likewise, in South Korea, there have been some MI studies (e.g., Cho & Lee, 2018; Lee, 2017), showing that MI is an effective way to deal with issues such as smoking cessation and mitigating the adverse effects of schizophrenia symptoms.

Interpersonal Behaviour Circle

The Interpersonal Behaviour Circle (IBC) is the second component of ORBIT. It deals with the interactions between interviewer and interviewee. There are a variety of IBCs that have been examined in different domains, but most IBC visual models rely on a two-dimensional structure with intimacy (‘love and hate’) on the horizontal axis, and power (‘dominance and submission’) on the vertical axis (Leary, 1955). Positively correlated terms such as “supportive” and “friendly” sit on contiguous sides of the circle and term such as “overbearing” and “modest” sit on opposite sides of the circumference and are negatively correlated. Birtchnell (2002) argued that IBC interactions can be adaptive or maladaptive (e.g., power can be positive or negative – with assertive (prosocial) behaviour on the one hand and demanding (antisocial) behaviour on the other. Birtchnell stressed that we should seek to employ adaptive rather than maladaptive interactions at all times irrespective of whatever interpersonal ‘mode’ we find ourselves in. Thus, being in charge, supportive and conversational should be a preferred style when in power/control mode rather than the maladaptive variants of this mode – demanding,

dogmatic and pedantic. There are various measures of IBC to evaluate interactions (Hatcher & Rogers, 2009) with good internal consistency and test-retest reliability (Ansell, Kurtz, & DeMoor, 2011). The interactions that emerge as a function of dominance-submission and conflict-co-operation have been uncovered in several forensic contexts and represent severe forms of the maladaptive variants of interpersonal modes. These include the interpersonal processes between perpetrators and victims in child sexual abuse (Bennell, Alison, Stein, Alison, & Canter, 2001), behavioural consistency in group sexual crimes (Porter & Alison, 2004), and hierarchies amongst gang robbery offenders (Porter & Alison, 2006).

The Present Study

Alison et al. (2013) researched terrorism suspect interviewing using ORBIT in the UK. They considered that MI and IBC are compatible as well as represent key concepts (e.g., global ethos, interpersonal competence) of rapport-based interviewing. The study showed that MI-consistent skills and the adoption of prosocial aspects of the IBC on the part of the interviewer were positively associated with adaptive suspect responding and interview yield. On the other hand, maladaptive interviewing resulted in increasing maladaptive suspect responding, which, in turn, reduced interview yield. ORBIT may also be useful for other contexts of investigative interviewing such as sex crime victim interviews, though prior to the current study this has not been evaluated. In addition, Alison's studies have thus far only been examined with respect to predominantly western interviewers (though interviewees have come from a very wide range of geographic areas). ORBIT skills and effects may, therefore, vary with respect to different geographic and cultural environments. According to Norenzayan, Choi, and Nisbett (2002), Koreans' values are more affected by circumstantial/contextual factors than those of Americans.

Furthermore, Hamanura, Heine, and Paulhus (2008) reported that Asians' responses tended to be more equivocal and moderate compared with those of Europeans. The consequences of these purported variations for rapport are unclear but they may create some variation in responses for both interviewer and interviewee. Hitherto, there have been no such attempts to observe rapport-based methods with respect to real-life forensic interviews with victims, specifically with regards to sexual offences, and in an Eastern hemisphere. For these reasons, it would be meaningful to explore the utility of ORBIT with sex crime victims from an Asian background. Thus, the objective of the current study is to examine the impact of rapport-based interpersonal techniques on disclosures by victims in South Korea. The paper will focus on the extent and combination of MI and IBC elements as well as the relationship (if any) between the adaptive and maladaptive behaviours of interviewers and victims. The study will analyse how those interactions affect the overall interview yield during the interview. Accordingly, the following were hypothesized:

Hypothesis 1: Interviewers who displayed MI-consistent strategies would also display adaptive interpersonal behaviour throughout the interviews; Interviewers who displayed MI-inconsistent strategies would display maladaptive interpersonal behaviour throughout the interviews.

Hypothesis 2: Interviewers who displayed adaptive interpersonal behaviour would be more likely to elicit adaptive interpersonal behaviour from victims; Interviewers who displayed maladaptive interpersonal behaviour would be more likely to elicit maladaptive interpersonal behaviour from victims.

Hypothesis 3: MI-consistent strategies, interviewer and victim adaptive interpersonal behaviour would be associated with increased interview yield; MI-inconsistent strategies, interviewer and victim maladaptive interpersonal behaviour would be associated with decreased interview yield.

Method

Data Set

This study received ethical approval from the Research Ethics Committee. The data set consisted of 103 hours of video recordings substitute of investigative interviews of 86 alleged victims of sexual assault in South Korea between 2011 and 2015 (with all cases later leading to a conviction). The cases involved rape (*N*=18), indecent assault (*N*=60), and indecent image crimes (*N*=8). In terms of the relationship between victims and suspects, they were classified as domestic (*N*=11), acquaintance (*N*=36), and stranger crimes (*N*=39). In total, 26 interviewers (Male=4, Female=22) interviewed 86 victims (Male=8, Female=78) of different age groups (*M*=14.90, *SD*=7.82; range 7-49). Each interviewer interviewed one or more victims (*M*=3.31, *SD*=0.68; range 1-4), and always completed the entire interview. The length of each interview ranged between 0.25 and 3.63 hours (*M*=1.20, *SD*=0.69). The interviewers worked at sexual crime investigation units across several police services and all had completed the relevant interviewing course (which covers the PEACE model, Cognitive Interview, and the NICHD protocol) through classroom-based learning and technique practice at the KPIA. None had received ORBIT training and thus we were looking at natural incidences of ORBIT related interviewer behaviour without training.

Procedures

Recordings were broken down into 316 interview units (mean time per unit was 19.58 ± 11.62) using a 15-minute proposed cut-off point. Remaining recordings of more than 7.5 minutes were coded as a unit, with those of less than 7.5 minutes to be included in a previous unit. The rationale for the 15-minute cut-off is based on multiple iterations of coders working on previous interview segments, where 5, 10, 15, 30 and 45-minute segments were coded (with the same subset of 10 interviews). Coders recognised the considerable variation in both topic areas, coding across the interpersonal and MI elements across both the 30 and 45-minute segments. As such, the three original coders agreed more granularity was required to capture these variations. When another set of 2 interviews were coded at the 5 and 10-minute levels of granularity and then compared to 15-minute segments there was no conferred advantage from a 5 or 10-minute coding compared to a 15-minute one (i.e., 5 and 10-minutes did not add any granularity advantage). Coders agreed that 15-minute segments were most amenable to capturing topic shifts and any shifts in MI and IBC sequences. However, coders were able to adjust up or down within a 5-minute window (15 + or - 5 minutes) if there was an obvious intersection point on a topic. This maximised the benefits of a reliable average time segment to be coded whilst not compromising on the flexibility of topic shifts or interpersonal shifts. In MI literature, it is recognised that the spirit of MI can be captured within relatively short segments. The 15-minute cut-off is also consistent with this literature (Wolraich, Droter, Dworkin, & Perrin, 2008).

Inter-coder agreement. Thirty interview units were randomly selected to establish inter-coder agreement before actual coding. Differences between the two coders were resolved by discussion for each unit. Both Kappa Index and percentage agreements were used to check

coder-agreement levels. The calculated outcomes provided the level of agreement for the elements of the ORBIT coding manual. The Kappa values were categorized as poor (.00 ~ .20), fair (.21 ~ .40), moderate (.41 ~ .60), strong (.61 ~ .80), and near-complete agreement (.80 <; Fleiss, 1981; Landis & Koch, 1977). Kappas for the 25 categories of the coding framework indicated fair to strong agreement between the coders, ranging from .22 to .71. Percentage agreements for all ranged between 47% and 83% with an average of 69% (± 11.75).

Materials

The ORBIT coding framework was used to systematically assess the interactions between interviewers and victims. This research was focused on measuring interviewers' motivational interviewing strategies and interpersonal behaviour and their impact on victims' interpersonal behaviour and interview yield within police interviews. Accordingly, interviewer and victim behaviour were coded into six components assessing the following:

Global Motivational Interviewing Strategy (GMIS; see Table 1). GMIS was created to measure the global 'atmosphere' established by an interviewer. This was derived from MI literature and a relevant coding guideline (MISC-1.1). GMIS consisted of five central elements: acceptance, empathy, adaptation, evocation, and autonomy. Each element was measured on a 7-point scale. For example, the score of 'adaptation' ranged from 1 ('*wrestling': trying to control and rigidly direct the agenda*) to 7 ('*dancing': working together and responding flexibly to the interviewee's agenda*).

Interpersonal Behaviour Circle (IBC; see Figure 1). The circle consisted of four scales: 1) IBC-Interviewer: Adaptive, 2) IBC-Interviewer: Maladaptive, 3) IBC-Victim: Adaptive, and 4) IBC-Victim: Maladaptive. Each scale contains the four modes of interpersonal relating: control,

cooperate, capitulate, and confront. They were used to measure interviewer interpersonal behaviour of relating to the victim as well as victim interpersonal behaviour of relating to the interviewer. A 4-point scale was adopted, ranging from 0 (a*ssociated behaviours not observed*) to 3 (*frequent and consistent use of associated behaviours*).

Interview Yield Assessment (IYA). IYA was used to score the amount of useful information/intelligence obtained during interviews. Victim statements were coded according to their details about 'people, locations, actions, and times' which may be associated with the crime. A 4-point scale was adopted, ranging from 0 (*absent: no information of relevance*) to 3 (*high: much significant information disclosed*) in terms of evidential significance and intelligence value.

Data Analysis

All variables were log-transformed before analyses of the measurement and structural models of the data. Maximum likelihood estimation was adopted to test the hypothesized models. To confirm that the model was a good fit of the data, various indices of model fit were computed. For the model fit, the standard X^2 test was not employed, as it is excessively sensitive to kurtosis and distribution. Therefore, a normed X^2 value (χ^2/df) was calculated as well, of which the values from 1 to 5 are indicative of an acceptable model fit (Schumacker & Lomax, 2004). Also, the standardized root mean residual (SRMR) absolute fit index was computed to evaluate model fit, as this value is less affected by sample size, distribution and kurtosis. Values of 0 represent a perfect fit and values under 0.08 mean a good model fit for this measure. The normed fit index (NFI) was calculated to estimate the model fit, which is good for larger sample sizes. Tucker-Lewis index (TLI) was utilized as the NFI measure is overly sensitive to the

number of parameters in the model; NFI and TLI values of above 0.9 are considered as acceptable fit and those of above 0.95 as good fits (Ullman, 2001). Furthermore, non-centrality-based indices such as comparative fit index (CFI) and root mean square error of approximation (RMSEA; Bentler, 2007) were calculated. CFI values of 0.95 or more and RMSEA values of 0.08 or lower were used as benchmarks for good and acceptable fit (Hu & Bentler, 1999).

Standardized regression coefficients are given for specific relationships between variables within the model. For the standardized regression coefficients, confidence intervals (95% CI) using bias-corrected bootstrapping as well as related *p* values were reported. In addition, bias-corrected bootstrapping was applied to acquire bias-corrected confidence intervals for the indirect effects in the structural model. Further, PROCESS was adopted to identify a confidence interval for each mediator in the model (Hayes, 2013) as the former indirect effects calculated using bootstrapping provide an entire indirect effect of exogenous variable *X* on endogenous variable *Y* through multiple mediators.

Following this initial analysis, a multi-level structural equation model was run using *gsem* in STATA. The overarching structure of the models differs from the above model in one way, instead of latent variables for yield and MI we computed mean scores. This is due to computational limitations in estimating multiple latent variables and their associations with each other and other, observed, variables across multiple levels (e.g., 3 levels for cases). To control for nesting in the data we added ‘case’ nested in ‘interviewer’ as random intercepts. Model fit indices described above cannot be computed for MLSEM, so, AIC and BIC comparative fit values were used to compare the comparative fit of the MLSEM models to the single-level model (with mean scores instead of latent variables for consistency). Differences

between regression slopes were calculated using Z statistics to test the extent to which controlling for data levels influenced associations reported.

Results

Descriptive Analysis

Descriptive statistics relating to interviewer behaviour (GMIS & IBC-I) and victim behaviour (IBC-V & IYA) are shown in Tables 2 and 3. There was an overall pattern of more adaptive than maladaptive behaviour for interviewers, t (315) = 61.29, $p < .001$, $d = 5.11$. Similarly, victims showed more adaptive than maladaptive behaviour, t (315) = 20.55, $p < .001$, $d = 2.35$. In addition, the interviewers employed more adaptive, t (315) = 11.38, $p < .001$, $d = .75$, and less maladaptive behaviour, t (315) = - 5.37, $p < .001$, $d = .32$, than the victims.

Data Modelling

Measurement models. Confirmatory factor analysis was used to test the construct validity of the latent variables created for GMIS and interview yield. Importantly, all factor loadings for GMIS were significant ($p < .001$). The overall fit of the GMIS model was good on all measures ($\chi^2/df = 1.27$, SRMR = .01, NFI = .99, TLI = .99, CFI = .99, RMSEA = .03, 90% CI [.01 to .09]). Likewise, factor loadings for the latent variable of interview yield were also all significant ($p < .001$). The overall fit of the model was good to acceptable ($\chi^2/df = 3.22$, SRMR = .01, NFI = .99, TLI = .98, CFI = .99, RMSEA = .08, 90% CI [.02 to .16]).

Structural model (see Figure 2; Table 4). The dependent variable for the hypothesized structural model was the latent variable of interview yield. The hypothesized structural model examined the direct effects of adaptive and maladaptive interviewing on interview yield. The

model also assessed whether these variables had indirect effects on interview yield through adaptive and maladaptive victim responding. Further, the hypothesized structural model investigated the direct effect of GMIS on interview yield and adaptive and maladaptive behaviour of interviewers and victims as well as the indirect effect of GMIS on interview yield through adaptive and maladaptive interpersonal behaviour of interviewers and victims. The hypothesized structural model proved to be a good fit for the data (χ^2/df = 2.04, SRMR = .04, NFI = .95, TLI = .96, CFI = .97, RMSEA = .06, 90% CI [.04 to .07]), and a superior fit to the alternative models.

Associations between variables (see Table 5). There was a positive relationship between adaptive victim responding and interview yield (β = .44, *p* = .004; 95% CI [.34 to .55]) as well as a negative relationship between maladaptive victim responding and interview yield (β = - .20, *p* = .007; 95% CI [- .34 to - .09]). Adaptive interviewing (β = .06, *p* = .273; 95% CI [- .06 to .18]) and maladaptive interviewing (β = - .01, *p* = .797; 95% CI [- .11 to .11]) did not directly affect interview yield. Adaptive interviewing was positively associated with adaptive victim responding (β = .16, *p* = .022; 95% CI [.03 to .27]), and maladaptive interviewing was positively associated with maladaptive victim responding (β = .48, *p* = .019; 95% CI [.36 to .59]). This is in accord with the hypothesized principle of mutual influence. The reverse patterns were also observed - maladaptive interviewing was negatively associated with adaptive victim responding (β = - .15, *p* = .011; 95% CI [- .25 to - .04]). However, there was an unexpected positive association between adaptive interviewing and maladaptive victim responding (β = .16, *p* = .016; 95% CI [.02 to .27]). Further, maladaptive interviewing had an indirect effect on interview yield via adaptive and maladaptive victim responding (95% CI [- .24 to - .09], *p* = .012). On the other hand, adaptive interviewing had no indirect effect on

interview yield via adaptive and maladaptive victim responding (95% CI [- .03 to .13], p = .316). PROCESS found that the indirect effect of maladaptive interviewing on interview yield was significant via adaptive victim responding (β = - .19, 95% CI [- .27 to - .13]) and maladaptive victim responding (β = - .21, 95% CI [- .27 to - .16]) separately.

GMIS was directly associated with increased adaptive interviewing (β = .53, p = .016; 95% CI [.44 to .59]) and interview yield (β = .25, p = .007; 95% CI [.14 to .40]) as well as decreased maladaptive interviewing (β = - .38, p = .020; 95% CI [- .47 to - .28]). GMIS was directly associated with increased adaptive victim responding (β = .37, p = .010; 95% CI [.24 to .48]), although it was not directly associated with decreased maladaptive victim responding (β = - .09, p = .287; 95% CI [- .20 to .07]). GMIS was associated with increased adaptive victim responding via adaptive and maladaptive interviewing (95% CI [.08 to .22], p = .012). However, there was no indirect effect of GMIS on maladaptive victim responding via adaptive and maladaptive interviewing (95% CI [- .20 to .01], p = .079). PROCESS found the indirect effect of GMIS on adaptive victim responding via adaptive (β = .08, 95% CI [.03 to .14]) and maladaptive interviewing (β = .06, 95% CI [.02 to .10]) individually. Further, GMIS was associated with increased interview yield via adaptive and maladaptive interpersonal behaviour of interviewers and victims (95% CI [.23 to .39], p = .016). PROCESS revealed that GMIS was associated with increased interview yield via adaptive interpersonal behaviour of interviewers and victims in serial (β = .05, 95% CI [.02 to .08]) as well as maladaptive interpersonal behavior of interviewers and victims in serial (β = .08, 95% CI [.05 to .11]).

Multi-level structural model controlling for case nested in interviewer (see Table 6). The multi-level model (AIC =6212.69, BIC = 6332.87) was not a better fit than the single-level model (AIC = 5334.95, BIC = 5425.08). The pattern of results after controlling for the case

and interviewer remains almost identical. The only notable differences between the single-level and multi-level model were that the negative association between GMIS and victim maladaptive behaviour became significant after controlling for the case, although there was no significant difference between the regression slopes. Also, the association between interview adaptive and victim maladaptive behaviour was no longer significant after controlling for the case, again, the regression slopes did not significantly differ.

Discussion

This was the first empirical research on Korean police interviews with sex crime victims using the Observing Rapport-Based Interpersonal Techniques (ORBIT) coding framework. The model shows that the combination of MI and IBC is effective in reducing maladaptive victim responding and generating useful information from the victims. The atmosphere created by MI-consistent strategies had a profound impact on interviewer and victim interpersonal behaviour and interview yield. MI-consistent strategies increased adaptive interviewing and decreased maladaptive interviewing. The findings are consistent with those found in terrorism suspect interviewing research using ORBIT (Alison et al, 2013). As such, MI-consistent strategies are critically associated with interviewer interpersonal behaviour in both victim and suspect interviews. Further, the results indicate that an MI 'mindset' which emphasizes humanistic principles of empathy, honesty and providing choice for the victim provides a foundation for adaptive interviewer interpersonal behaviour. Thus, interviewers who are either naturally inclined towards this or who can be trained to approach victim interviews with these aspects in mind will likely have a positive interpersonal inclination towards victim interviewing.

In support of hypothesis two, adaptive interviewing increased adaptive victim responding and,

conversely, maladaptive interviewing increased maladaptive victim responding. In further exploration, maladaptive interviewing decreased adaptive victim responding, whereas adaptive interviewing increased maladaptive victim responding (although this effect was no longer significant after controlling for the case in the multi-level structural model). These results are similar to those established in suspect interviewing research (Alison et al., 2013). This suggests that adaptive interviewing needs to be adopted in victim interviewing with caution as maladaptive victim responding (increased by adaptive interviewing) was severely detrimental to interview yield. The non-trivial and seemingly counter-intuitive finding that certain elements of adaptive interviewing resulted in maladaptive victim responding may be a result of prosocial interviewer behaviours creating discomfort or embarrassment for victims on especially sensitive topic areas and thus generating embarrassment and shame. Therefore, the use of adaptive interviewing may need to consider victim reluctance and the concomitant maladaptive behaviours that may ensue as a result of discomfort but recognise that, as the interviewer, one must not mirror or be influenced by that maladaptive behaviour. Instead, interviewers must inhibit what may be a natural inclination to react maladaptively in response, but rather, 'stick' to the adaptive variants and 'weather' the discomfort.

As hypothesized, MI-consistent strategies and adaptive victim responding increased interview yield, whilst MI-inconsistent strategies, maladaptive interviewing and maladaptive victim responding decreased interview yield. MI-consistent behaviours appeared to be especially central in helping victims to disclose information. This corresponds with the result of the suspect interviewing research (Alison et al., 2013). Further, the impact of MI-consistent strategies on interview yield was significantly mediated by the interviewer and victim interpersonal behaviour. This emphasizes the role of interviewer and victim interpersonal

behaviour in victim interviewing. Indeed, the indirect effect of MI-consistent skills on interview yield was greater than their direct effects. For this reason, it is essential to understand the joint impact of MI-consistent skills on interview yield with the interviewer and victim interpersonal behaviour in victim interviewing.

However, counter to hypothesis three, adaptive interviewing did not influence interview yield in victim interviewing. Some victims remained silent during the interview, even though interviewers consistently encouraged victims without force and through gentle support. This is not consistent with the result of suspect interviewing research (Alison et al., 2013), where adaptive interviewing had an indirect effect on interview yield via adaptive suspect responding (although it had no direct effect on it). Thus, in victim interviewing, adaptive interviewing appears to play a more limited role in moving victims from complete reluctance to some form of engagement.

Interviewers adopted more adaptive interpersonal behaviour than maladaptive interpersonal behaviour. This may be because interviewers were well trained and previously experienced interviewing sexual crime victims. Therefore, there were relatively fewer chances to observe maladaptive interviewing, compared to adaptive interviewing. However, where it did occur, maladaptive interviewing had an asymmetrically negative impact (its negative effect was far more powerful than adaptive behaviour's positive effect). This result corresponds with that of suspect interviewing research (Alison et al., 2013). So, minimizing or eradicating maladaptive interviewing is even more critical than introducing or training adaptive behaviours. This suggests that, from a training perspective, the first objective must be to remove or inhibit bad habits before introducing or adding positive new habits.

Concerning victim interpersonal behaviour, victim adaptive responding increased interview

yield, whereas victim maladaptive responding decreased interview yield. These outcomes are similar to the findings of terrorism suspect interviewing (Alison et al., 2013). This suggests that interviewee interpersonal behaviour is closely connected to the amount of evidential information obtained in the victim and suspect interviews. Importantly, through victim adaptive and maladaptive behaviour, MI-consistent tactics and interviewer interpersonal behaviour had indirect effects on interview yield. This highlights that theoretical models and training schemes in victim interviewing should put an increased onus on appreciating victim interpersonal behaviour since the success of an interview may be determined by it. Namely, victim adaptive and maladaptive responding is not only a predictor on interview yield but also a mediator on the associations between rapport-based interpersonal techniques and the outcomes.

Implications

This paper offers a framework for comprehending the associations between motivational interviewing, interpersonal behaviour of interviewers and victims and interview yield in Korean investigative interviews. These outcomes have theoretical and practical implications for the development of interviewing such victims in South Korea. The ORBIT coding framework suggested a new approach to defining, evaluating and understanding how to create rapport in police interviews as per NICHD recommendations. Previously, officers were asked to consider rapport but given very little to no detail as to how.

Limitations

The number of interviewers was small and interview recordings were collected from a limited number of investigation units. A larger number of interviewers from a wider range of geographical regions would be valuable for generalization of results and may facilitate more

in-depth explorations of relationships between the variables. Also, there was nothing the wide range of ages represented in the present sample. Therefore, it would be useful to investigate whether the effect of rapport-based interpersonal techniques on the outcomes is moderated by the victim's age.

Further, with increased sample size, future studies could compare different victim populations to identify whether the interpersonal associations are replicated with victims involved in different kinds of sex offences. It would be particularly interesting to compare samples of contact and non-contact sexual offence victims to thoroughly examine differences in their employ of adaptive and maladaptive interpersonal behaviour and its mediating role in rapport-based interviewing.

This research did not explore when is an effective stage for interviewers to use specific interviewing tactics. It would be valuable to examine transitions during the interview and the changes in investigators' capabilities in interviewing with victims across a series of interviews. This may enable the identification of optimal approaches at different stages of the interview process. There may be certain significant moments or arrangements to maximize the efficacy of each strategy of MI and IBC on interview yield throughout the interview.

It should be noted that inter-rater agreement in a small number of items (e.g., controlling style in adaptive victim behaviour) was low, although previous ORBIT research established high inter-rater reliability values (Alison et al., 2014). The lower agreement here was likely attributable to the reliance on a less experienced coder and smaller reliability samples. Thus, it would be beneficial to employ an experienced coder and large reliability samples to ensure high inter-rater reliability across all elements.

Conclusion

Overall, this study provides empirical evidence that the use of ORBIT is a useful measure of rapport-based interpersonal techniques within sex crime victim interviewing in South Korea. MI-consistent tactics are crucial in increasing adaptive interviewing and decreasing maladaptive interviewing as well as enhancing adaptive victim responding and interview yield. Adaptive interviewing increases adaptive and maladaptive victim responding. Maladaptive interviewing increases maladaptive victim responding and decreases adaptive victim responding. Adaptive and maladaptive victim responding are closely connected to interview yield. These results should be reflected in the policies of police interview training and assessment. By improving MI-consistent and adaptive interviewing and removing MI-inconsistent and maladaptive interviewing, interviewers can raise the possibility of eliciting useful information from the victims.

References

Alison, L., Alison, E., Elntib, S., & Noone, G. (2012). *Educing information through interpersonally competent interviewing: An assessment tool for coding interviews with high-value suspects. Coding manual*. Internal Document.

Alison, L., Alison, E., Noone, G., Eltnib, 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,* 411–431. doi:10.1037/a0034564

Alison, L. J., Alison, E., Noone, G., Elntib, S., Waring, S., Paul, C. (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.

Ansell, E. B., Kurtz, J. E., & De Moor, R. M. (2011). The validity of the PAI interpersonal scales for measuring the dimensions of the interpersonal circumplex. *Journal of Personality Assessment, 93,* 33–39. doi:10.1080/00223891.2011.529013

Arkowitz, H., Westra, H. A., Miller, W. R., & Rollnick, S. (2008). *Motivational interviewing in the treatment of psychological problems*. New York, NY: Guilford Press.

Bennell, C., Alison, L., Stein, K., Alison, E., & Canter, D. (2001). Sexual offences against children as the abusive exploitation of conventional adult-child relationships. *Journal of Social and Personal Relationships, 18,* 155–171. doi:10.1177/0265407501182001

Bentler, P. M. (2007). On tests and indices for evaluating structural models. *Personality and Individual Differences, 42,* 825−829. doi: 10.1016/j.paid.2006.09.024

Birtchnell, J. (2002). Psychotherapy and the interpersonal octagon. *Psychology & Psychotherapy: Theory, Research & Practice, 75,* 349–363.

Bull, R., & Cherryman, J. (1996). *Helping to identify skills gaps in specialist investigative interviewing: Enhancement of professional skills*. Great Britain, Home Office, Research, Development and Statistics Directorate.

Cho, J. M., & Lee, K. (2018). Effects of motivation interviewing using a group art therapy program on negative symptoms of schizophrenia. *Archives of psychiatric nursing*, *32*(6), 878-884.

Cyr, M., & Lamb, M. E. (2009). Assessing the effectiveness of the NICHD investigative interview protocol when interviewing French-speaking alleged victims of child sexual abuse in Quebec. *Child Abuse & Neglect*, *33*(5), 257-268.

Erickson, S. J., Gerstle, M., & Feldstein, S. W. (2005). Brief interventions and motivational interviewing with children, adolescents, and their parents in pediatric health care settings. *Archives of Pediatrics & Adolescent Medicine, 159,* 1173–1180. doi:10.1001/archpedi.159.12.1173

Fisher, R. P., Brennan, K. H., & McCauley, M. R. (2002). The cognitive interview method to enhance eyewitness recall. In M. L. Eisen, J. A. Quas, & G. S. Goodman (Eds.), *Memory and suggestibility in the forensic interview* (pp. 265–286). Mahwah, NJ: Erlbaum.

Fleiss, J. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York, NY: Academic Press.

Hamamura, T., Heine, S. J., & Paulhus, D. L. (2008). Cultural differences in response styles: The role of dialectical thinking. *Personality and Individual Differences*, *44*(4), 932-942.

Hardy, A., Young, K., & Holmes, E. (2009). Does trauma memory play a role in the experience of reporting sexual assault during police interviews? *Memory*, 17, 783–788.

Hatcher, R. L., & Rogers, D. T. (2009). Development and validation of a measure of interpersonal strengths: The inventory of interpersonal strengths. *Psychological Assessment, 21,* 554 –569. doi:10.1037/a0017269

Hayes, Andrew F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis:* A Regression-Based Approach. New York, NY: The Guildford Press

Hershkowitz, I., Horowitz, D., & Lamb, M. E. (2005). Trends in children's disclosure of abuse in Israel: A national study. *Child Abuse & Neglect*, 29(11), 1203–1214.

Hershkowitz, I., Lamb, M. E., & Katz, C. (2014). Allegation rates in forensic child abuse investigations: Comparing the revised and standard NICHD protocols. *Psychology, Public Policy, and Law*, *20*(3), 336.

Hershkowitz, I., Lamb, M. E., Katz, C., & Malloy, L. C. (2015). Does enhanced rapport-building alter the dynamics of investigative interviews with suspected victims of intra-familial abuse? *Journal of Police and Criminal Psychology*, *30*(1), 6-14.

Hershkowitz, I., Orbach, Y., Lamb, M. E., Sternberg, K. J., & Horowitz, D. (2006). Dynamics of forensic interviews with suspected abuse victims who do not disclose abuse. Child Abuse & Neglect, 30(7), 753–769.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6,* 1–55. doi:10.1080/10705519909540118

KNPA (Korean National Police Agency). (2018). *Police Statistical Yearbook*. Retrieved September 2019 from http://www.police.go.kr/portal/main/contents.do?menuNo=200529

Lamb, M. E., Brown, D. A., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2018). *Tell me what happened: Questioning children about abuse*. John Wiley & Sons.

Lamb, M. E., Orbach, Y., Sternberg, K. J., Aldridge, J. A. N., Pearson, S., Stewart, H. L., ... & Bowler, L. (2009). Use of a structured investigative protocol enhances the quality of investigative interviews with alleged victims of child sexual abuse in Britain. *Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition*, *23*(4), 449-467.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33,* 159–174. doi:10.2307/2529310

Leary, T. (1955). The theory and measurement methodology of interpersonal communication. *Psychiatry: Journal for the Study of Interpersonal Processes, 18,* 147–161.

Lee, E. J. (2017). The effect of positive group psychotherapy and motivational interviewing on smoking cessation: a qualitative descriptive study. *Journal of addictions nursing*, *28*(2), 88-95.

Malloy, L.C., Lyon, T.D., Quas J.A., (2007). Filial Dependency and Recantation of Child Sexual Abuse Allegations. *Child & Adolescent Psychiatry*, 46(2), 162-170.

Martino, S., Ball, S. A., Nich, C., Canning-Ball, M., Rounsaville, B. J., & Carroll, K. M. (2011). Teaching community program clinicians motivational interviewing using expert and train-the-trainer strategies. *Addiction, 106,* 428–441. doi:10.1111/j.1360-0443. 2010.03135

Miller, W. R. (1983). Motivational Interviewing with Problem Drinkers. *Behavioural Psychotherapy, 11,* 147-172.

Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. Guilford Press.

Miller, W. R., & Rollnick, S. (1992). *Motivational interviewing: Preparing people for a change*. New York, NY: Guilford Press.

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for a change*. New York, NY: Guilford Press.

Milne, B., & Bull, R. (1999). *Investigative Interviewing: Psychology and practice*. Wiley.

Ministry of Gender Equality & Family (2010). *Guidelines on investigative interviewing of child victims.* Ministry of Gender Equality & Family, Republic Korea. 11-1383000-000026-01

Ministry of Justice (2011). *Achieving Best Evidence in Criminal Proceedings.*

Mitcheson, L., Bhavsar, K., & McCambridge, J. (2009). Randomized trial of training and supervision in motivational interviewing with adolescent drug treatment practitioners. *Journal of Substance Abuse Treatment, 37,* 73–78. doi: 10.1016/j.jsat.2008.11.001

Norenzayan, A., Choi, I., & Nisbett, R. E. (2002). Cultural similarities and differences in social inference: Evidence from behavioral predictions and lay theories of behavior. *Personality and Social Psychology Bulletin*, *28*(1), 109-120.

Orbach, Y., Hershkowitz, I., Lamb, M. E., Sternberg, K. J., Esplin, P. W., & Horowitz, D. (2000). Assessing the value of structured protocols for forensic interviews of alleged child abuse victims. *Child abuse & neglect*, *24*(6), 733-752.

Ord, B., Shaw, G., & Green, T. (2008). *Investigative interviewing explained*. Sydney, Australia: LexusNexus.

Porter, L. E., & Alison, L. J. (2004). Behavioural coherence in violent group activity: An interpersonal model of sexually violent gang behaviour. *Aggressive Behavior, 30,* 449–468. doi:10.1002/ab.20047

Porter, L. E., & Alison, L. J. (2006). Behavioural coherence in group robbery: A circumplex model of offender and victim interactions. *Aggressive Behavior, 32,* 330–342. doi:10.1002/ab.20132

Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychology,* 23, 325-334.

Ruddock, A. C. (2006). The relationship of interviewer rapport behaviours to the amount and type of disclosure form children during child abuse investigations. Ann Arbor: California School of Professional Psychology.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation*

modelling (2nd ed.). Mahwah, NJ: Erlbaum.

Sternberg, K. J., Lamb, M. E., Orbach, Y., Esplin, P. W., & Mitchell, S. (2001). Use of a structured investigative protocol enhances young children's responses to free-recall prompts in the course of forensic interviews. *Journal of Applied Psychology*, *86*(5), 997.

Thigpen, M.I., Beauclair, T.J., Brown, R., & Guevara, M. (2012). *Motivational Interviewing in Corrections. A Comprehensive Guide to Implementing MI in Corrections*. Washington DC: U.S. Department of Justice.

Ullman, J. B. (2001). Structural equation modelling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (4th ed. pp. 653–771). Needham Heights, MA: Allyn & Bacon.

Vallano, J. P., & Schreiber Compo, N. (2011). A comfortable witness is a good witness: Rapport-building and susceptibility to misinformation in an investigative mock-crime interview. *Applied Cognitive Psychology, 25,* 960-970. doi: 10.1002/acp.1789

Wolraich, M., Droter, D., Dworkin, P., & Perrin, E. (2008). Developmental-behavioral pediatrics. *Evidence Practice*, *14*, 483-517.

Yi, M., Jo, E., Lamb, M. E. (2016). Effects of the NICHD protocol training on child investigative interview quality in Korean police officers. *Journal of Police and Criminal Psychology,* 2(31):155–163.

Yi, M., Lamb, M. E., Jo, E. (2014). The quality of Korean police officers' investigative interviews with alleged sexual abuse victims as revealed by self-report and observation. *Journal of Police and Criminal Psychology,* 1–8.

Table 1

GMIS Definitions (Alison et al., 2012)

Elements	Definitions
Acceptance	Unconditional positive regard
Empathy	The extent to which the interviewer understands the victim's perspective
Adaptation	An interviewer is able to adapt to responses by a victim and manage a fluid interview format (e.g. timeline jumps, deviation from interview plan)
Evocation	An interviewer is able to draw out the beliefs and views of the victim
Autonomy	Encouragement/support that it is the victim's right to choose to reveal information or not

Table 2

Mean and ±SD: GMIS and IYA Scores

Scale	Category	Mean	±SD
GMIS	Acceptance	5.34	.66
	Empathy	5.14	.60
	Adaptation	5.12	.56
	Evocation	5.36	.70
	Autonomy	4.93	.61
	Total	25.89	2.54
IYA	People	1.36	.67
	Location	1.36	.71
	Action	1.50	.69
	Time	1.22	.61
	Total	5.45	2.24

Table 3

Mean and ±SD: IBC-I and IBC-V Scores

Scale	Mean	±SD	Mean	±SD
IBC-I	Int. adaptive behaviour		Int. maladaptive behaviour	
Control	2.04	.56	.70	.66
Cooperate	1.80	.61	.45	.60
Capitulate	2.18	.60	.24	.47
Confront	1.46	.63	.11	.32
Total	7.48	1.35	1.50	.96
IBC-V	Vic. adaptive behaviour		Vic. maladaptive behaviour	
Control	1.61	.70	.19	.49
Cooperate	1.36	.64	.59	.78
Capitulate	1.66	.78	1.01	.87
Confront	1.43	.80	.14	.48
Total	6.06	2.32	1.93	1.65

Table 4
Model Fit for the Hypothesized Structural Models and Alternative Models

Model	x^2/df	SRMR	NFI	TLI	CFI	RMSEA
Hypothesized model	2.04	.04	.95	.96	.97	.06
Mediated model	2.40	.05	.94	.95	.96	.07
Direct effects model	7.44	.25	.78	.76	.80	.14
Independence model	27.24	.42	.00	.00	.00	.29

Note. SRMR = Standardized root mean residual; NFI = Normed fit index; TLI = Tucker-Lewis fit index; CFI = Comparative fit index; RMSEA = Root mean square error of approximation.

Table 5
Standardized Direct, Indirect, and Total effects between Variables

Relations	Direct Effects	Indirect Effects	Total Effects
GMIS → Int Ad	.526*	-	.526*
GMIS → Int Mal	-.384*	-	-.384*
GMIS → Vic Ad	.366*	.141*	.507*
GMIS → Vic Mal	-.086	-.102	-.188*
GMIS → Yield	.245**	.300*	.545*
Int Ad → Vic Ad	.155*	-	.155*
Int Ad → Vic Mal	.155*	-	.155*
Int Ad → Yield	.063	.038	.101
Int Mal →Vic Ad	-.154*	-	-.154*
Int Mal →Vic Mal	.478*	-	.478*
Int Mal → Yield	-.014	-.163*	-.177*
Vic Ad → Yield	.442**	-	.442**
Vic Mal → Yield	-.198**	-	-.198**

Note. GMIS = Global Motivational Interviewing Strategy, Int = Interviewer, Vic = Victim, Ad = Adaptive, Mal = Maladaptive

*$p < .05$, **$p < .01$.

Table 6

Comparison between Regression Slopes in the Single-level Model and 'Case' Nested in 'Interview' Random Intercept Multi-level Model

	Single-level				Multi-level				Difference	
Association	B	SE	p	95% CI	B	SE	p	95% CI	Z	p
GMIS → Int Ad	0.26	0.03	<.001	.21 to .32	0.19	0.03	<.001	.14 to .25	1.88	.069
GMIS → Int Mal	-0.14	0.02	<.001	.18 to .10	-0.18	0.21	<.001	-.20 to -.12	0.19	.392
GMIS → Vic Ad	0.29	0.05	<.001	.18 to .39	0.20	0.04	<.001	.12 to .29	1.30	.172
GMIS → Vic Mal	-0.05	0.04	.203	-.13 to .03	-0.07	0.03	.024	-.12 to -.01	0.41	.366
GMIS → Yield	0.17	0.05	<.001	.08 to .26	0.19	0.05	<.001	.10 to .29	-0.26	.386
Int Ad → Vic Ad	0.33	0.10	.001	.14 to .51	0.24	0.07	.001	.10 to .38	0.72	.308
Int Ad → Vic Mal	0.18	0.07	.009	.05 to .31	0.05	0.05	.273	-.04 to .15	1.53	.124
Int Ad → Yield	0.11	0.08	.201	-.06 to .27	0.12	0.08	.160	-.05 to .28	-0.13	.396
Int Mal → Vic Ad	-0.42	0.13	.001	-.67 to -.18	-0.35	0.10	<.001	-.55 to -.16	-0.47	.358
Int Mal → Vic Mal	0.82	0.09	<.001	.64 to .99	0.59	0.07	<.001	.45 to .72	2.00	.054
Int Mal → Yield	-0.09	0.11	.421	-.31 to .13	-0.03	0.12	.830	-.27 to .22	-0.37	.372
Vic Ad → Yield	0.41	0.06	<.001	.30 to .53	0.41	0.07	<.001	.28 to .54	0.02	.399
Vic Mal → Yield	-0.25	0.08	.002	-.41 to -.09	-0.35	0.10	.003	-.43 to -.08	0.78	.294

Note. GMIS = Global Motivational Interviewing Strategy, Int = Interviewer, Vic = Victim, Ad = Adaptive, Mal = Maladaptive

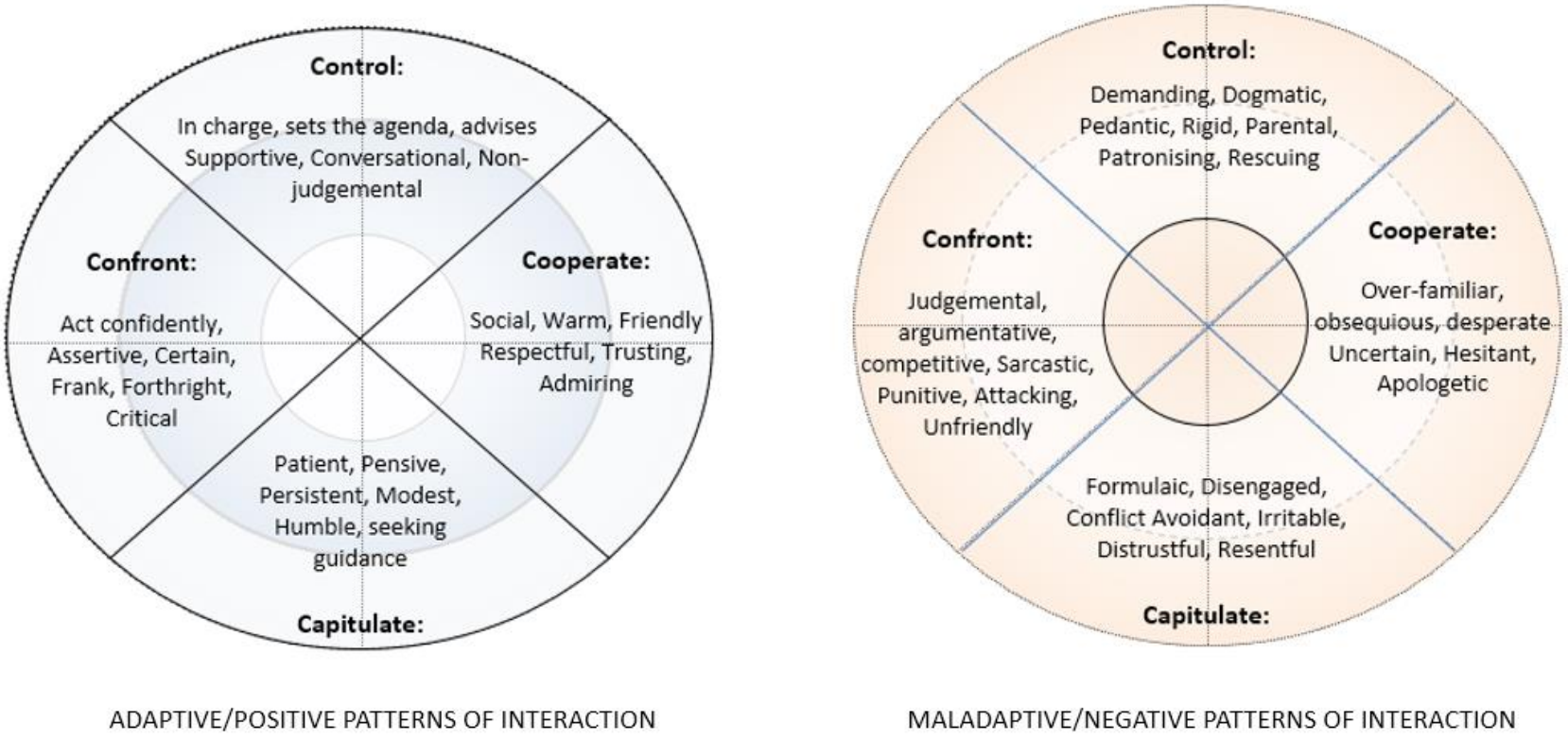

Figure 1. Adaptive and maladaptive variants of interpersonal behaviour (Alison et al., 2012).

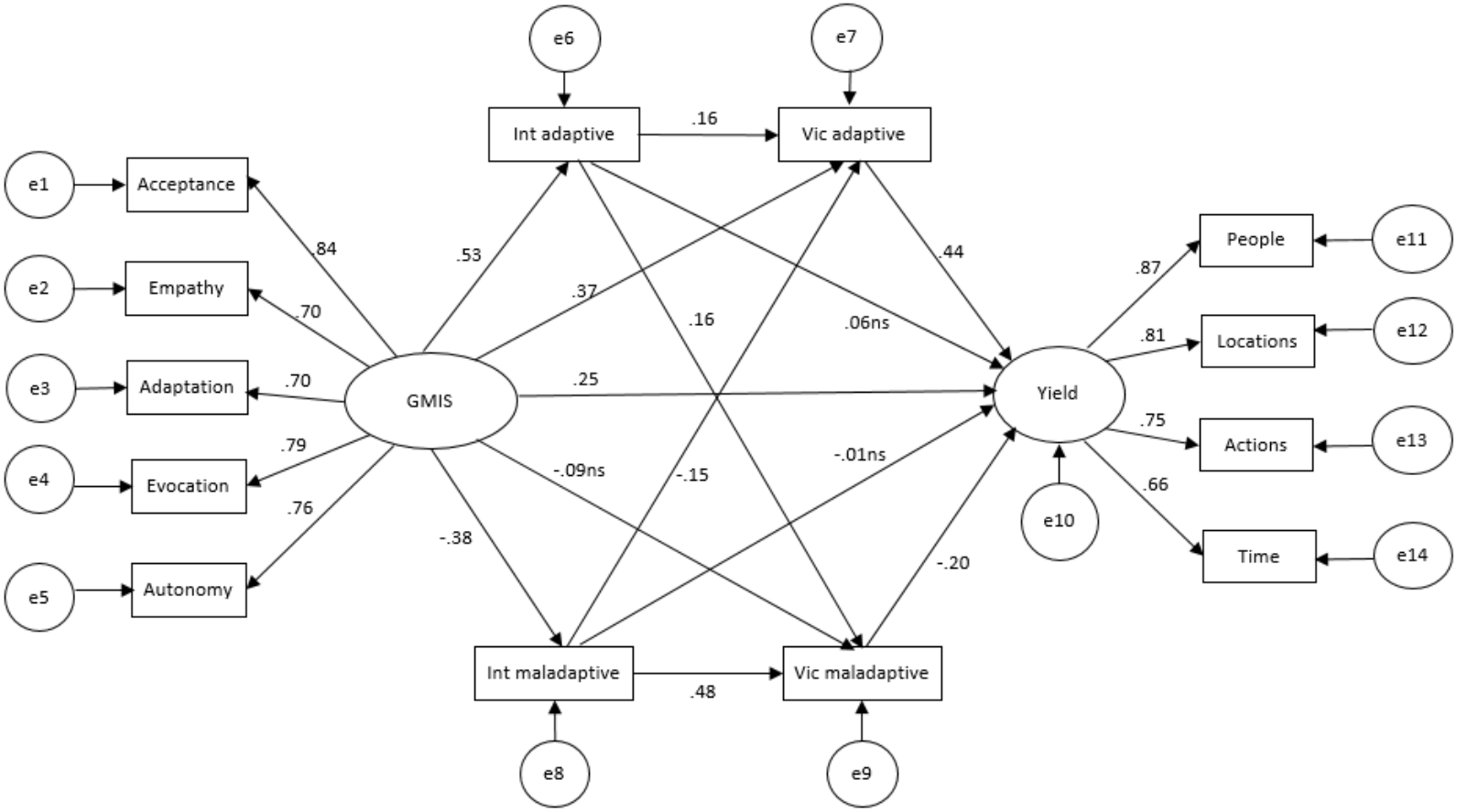

Figure 2. How motivational interviewing and interpersonal behaviour between interviewers and victims interact with one another and interview yield. Standardized parameter estimates are presented and are statistically significant at ($p < .05$) unless otherwise indicated (ns).