The impact of investing in the good interviewers policy of practice (IGIpop) on police interviews with children

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Abstract

It is important to elicit the best evidence from children during investigative interviews. Many of recent improvements (such as extensive training) are costly to implement preventing police forces with small budgets from adopting them. A policy is needed that can benefit all forces irrespective of their financial resources. We assessed a new approach: *Investing in the Good Interviewers: Policy of Practice* (IGIpop). IGIpop suggests that all interviews should be conducted using 'good' interviewers. In 2016 we evaluated the performance of interviewers in a police force and identified the good interviewers. IGIpop was implemented in 2017 when five good interviewers were chosen to conduct all of the interviews with children alleging sexual abuse. We analysed 102 interviews and assessed how IGIpop impacted the quality of interviews. As expected, appropriate interviewing approaches increased and inappropriate interviewing approaches decreased after IGIpop. IGIpop achieved an important improvement in the quality of interviews with no additional training or costs.

Keywords: police interview; investigative interview; Cyprus; child sexual abuse; talent management

Introduction

The aim of police interviews is to gain as many reliable details from children as possible. Efforts to improve the quality of interviews have included research-based and updated police manuals, training courses, ongoing supervision and 'self-assessment of specialist interviews' (Akehurst & Cherryman, 2017; Hershkowitz et al. 2017). But such efforts are usually expensive; police forces with small budgets may be unable to implement them. We considered whether a new, and more economical approach called 'Investing in the Good Interviewers: Policy of Practice (IGIpop)' could improve the quality of investigative interviews.

We have assisted in the implementation of IGIpop by evaluating all active interviewers in Cyprus. This evaluation was employed during the decision process for choosing the final interviewers. As a matter of great importance for the police, we are describing here the early impact of IGIpop on the quality of interviews by comparing the approaches that interviewers' used prior to and after the IGIpop. Looking at any relative contributions of IGIpop will provide information of its possible practical value to practitioners and researchers. This will help police forces in different countries to begin to understand the influence of situational factors on their services.

Theoretical basis of IGIpop

IGIpop is based on the assumption that some interviewers may be better than others. This is the concept behind talent management in businesses. Economic challenges have turned talent management into a key strategic activity in businesses (Cheese, Gartside & Smith, 2009) but a similar approach has not yet been explored for police interviews with children. Different definitions of talent exist (Bolander, Werr & Asplund, 2017). Bolander et al (2017) summarized

some of the ambiguities in definitions of talent. Definitions might refer to performance or potential performance, to a few or to all employees, to natural or learned skills and to skills that are unchangeable or not. Building on other existing definitions (Meyers & Woerkom, 2014) we considered talented or 'good' police interviewers to be the ones who followed national police manuals and training guidelines when they conducted interviews.

Employees – or interviewers - can be divided into the ones who perform well or not (Axelrod, Handfield-Jones, & Michaels, 2002). Twenty percent of employees may be considered talented, 70 percent average and 10 percent weak (Grote, 2005; Ulrich & Smallwood, 2012; Welch & Welch, 2005). Identifying talented employees can be a source of sustained competitive advantage in business, helping to outperform competitors and establishing a leading market position (Schuler, Jackson, & Tarique, 2011). For example, talented software developers performed two to four times better than average developers, were in short supply in the labour market and were key to an organization's strategic process (Seleim, Ashour & Bontis, 2007). Talent management is the strategic allocation of talented employees by placing them in positions that they can perform at their best (McDonnell, 2011). Organizations often prefer to identify and use their own talented employees, instead of recruiting because recruiting can give the impression that current employees are incapable (Bolander et al. 2017). Regular talent management is a common practice and relies on formal and/or informal assessments of employees' performance (Bolander et al. 2017).

Why consider talent management in investigative interviews of children?

Some police forces fund long and extensive training for all of their interviewers. Such training programmes have been applied and researched in Australia, Canada, England, Estonia,

Israel, Norway and the United States of America, all of which are wealthy countries with extensive police budgets for child abuse investigations (Saied-Tessier, 2014). Long training, such as in England (Ministry of Justice, 2011), Israel (Hershkowitz et al. 2017) and Norway (Myklebust & Bjøklund, 2006) offer ample opportunities practising appropriate procedures.

In Norway police training is three years of programs that include modules about vulnerable witnesses, about children's cognitive abilities, about suggestibility, practical role-playing exercises, and feedback on trainees' performance (Myklebust & Bjøklund, 2006). Price and Roberts (2011) used an eight month training period in Canada with verbal and written feedback to trainees and found interviewers' approaches improved. Training spread over time (Hiedt, Arbuthbott & Price, 2016), or continuous supervision (Powell, Wright & Clarke, 2010) has also improved interviewers' approaches. The training of the revised National Institute of Child Health and Human Development (NICHD) protocol in Israel involves both supervisors and interviewers in different training programs which include, coding and conducting interviews, receiving individual and group feedback, analysing videos of interviews (Hershkowitz et al. 2017). The revised NICHD increased open-ended questions from an average of 0.36 to 0.43 and decreased closed-ended questions from an average of 0.39 to 0.36 in police interviews with children in Israel (Blasbalg et al. 2018).

But police forces with fewer resources may struggle to implement such training for all interviewers. In contrast to these extensive training programs IGIpop can help police forces with limited resources focus on those interviewers who are already the most talented ones.

The effectiveness of interviews can be measured by assessing the proportion of appropriate approaches in interviews. A potential benefit is that IGIpop may increase the

proportion of appropriate approaches in interviews. Appropriate approaches are approaches which are more likely to gain reliable details (Oxburgh et al. 2010). When analyzing the approaches used in interviews it has been shown that the percentage of inappropriate approaches is often higher than appropriate approaches when interviewing children in Australia (Hamilton, Brubacher & Powell, 2016), in Canada (Gagnon & Cyr, 2017), in Estonia (Kask, 2012), in Finland (e.g. Korkman, Santtila & Sandnabba, 2006), in New Zealand (e.g. Wolfman, Brown & Jose, 2016), in Norway (e.g. Thoresen, et al., 2006), and in Cyprus (Kyriakidou, 2011; 2016).

The implementation of IGIpop in Cyprus

Previous efforts to improve police interviews in Cyprus have included using national training manuals and training courses (Kyriakidou & Zalaf, 2016). In addition to these measures, police interviewers in Cyprus have been trained at different times with the Achieving Best Evidence (ABE), PEACE (which stands for Planning and preparation, Engage and explain, Account clarification and challenge, Closure, Evaluation) and NICHD procedures. Despite these initiatives the overall quality of police interviews in Cyprus has remained the same as in other countries (Kyriakidou, 2016). New approaches were considered necessary because one in five children in Cyprus is allegedly a victim of sexual abuse (Karayianni et al. 2017). One new approach was the introduction of *Investing in the Good Interviewers: Policy of Practice* (IGIpop). IGIpop involves identifying the best interviewers so that those interviewers can conduct all the interviews with children, with the expectation that the overall quality of interviews will improve. Training distributed over time and ongoing supervision have been difficult to implement due to their costs. Indeed, Cyprus is an example of a police force that requires an inexpensive, easy to maintain policy to improve the quality of interviews with children.

To identify the best interviewers, the performance of all interviewers of children was assessed in 2016. The assessment included eight criteria (Kyriakidou, 2016): a) reliance of appropriate approaches, b) extraction of central and peripheral forensic details from children (Cyr et al. 2012), c) use of straightforward language e.g. simple words or short sentences (Aldridge et al. 1997; Ministry of Justice, 2011), d) suitability of the anaphors used e.g. specific references, using peoples' names (Ministry of Justice, 2011), e) use of repetition e.g. using identical words when repeating children's words (Evans et al. 2010), f) topic relevance e.g. discussing topics irrelevant to the investigation at the beginning of an interview (Ministry of Justice, 2011), g) the number of topics mentioned in each question, h) conversational flow i.e. avoiding changing the topic suddenly or frequently which might confuse interviewees (Ministry of Justice, 2011), and h) avoiding introducing information not already mentioned by the interviewees, (which can be considered a leading approach, Goodman & Schaaf, 1997). On the basis of these criteria 13% of the interviewers were rated as poor interviewers, 65% were rated as medium interviewers and 22% were rated as good interviewers (Kyriakidou, 2016). This outcome was in agreement with literature on business were about 20% of employees are judged as talented, 70% as average and 10% as weak (Grote, 2005; Ulrich & Smallwood, 2012; Welch & Welch, 2005).

Kyriakidou's (2016) report was one of the criteria for identifying the best interviewers. Other criteria included the interviewers' qualifications as detectives and their years of experience in investigating child sexual abuse cases. After the evaluation, five interviewers were chosen to conduct all future interviews with children who alleged they were victims of sexual abuse.

Present study

The present study was conducted to measure the early impact of IGIpop on the quality of interviews, and focused on analysing interviewers' approaches. IGIpop is based on the assumption that some interviewers will be better than others, irrespective of which manual they used or their experience. It was predicted that IGIpop would increase the number of appropriate approaches, and decrease the number of inappropriate approaches. As a result we expected a notable increase of the overall quality of police interviews.

Method

Procedure

The police interviews were transcribed by the Cyprus Police as part of their usual procedures. Coders were given access to these written transcriptions. Coding was conducted in the Child Abuse and Domestic Violence (CA/DV) Office as police policy does not allow removal of transcriptions from the CA/DV Office.

Coding of transcriptions

Each approach the interviewers' used was coded as below. The term 'approaches' was used instead of 'questions' to capture the use of sentences and phrases as well as just the questions used by the interviewers.

1. Tell, explain, describe (TED): These were approaches including the words '*tell*', '*explain*' and '*describe*' e.g. '*Tell me more about her*'.
2. Echo-statement: These were statements that repeated the exact same words of the child. These statements were not phrased as questions. E.g. child: '*He disappear*', interviewer: '*Disappear*'.
3. Facilitators: These were sounds (e.g. vague sounds) or words that encouraged the child to talk further like, '*ok*', '*go on*'.

4. How/what/who/why: These were approaches including the words '*how*', '*what*', '*who*' and '*why*' e.g. '*Tell me what happened*'.
5. Echo-wh: These were approaches repeating the exact same words of the child but accompanying the words with a wh-approach e.g. child: '*He disappear*', interviewer: '*What do you mean he disappeared?*'
6. Wh-approaches: These were approaches including the words 'when', 'where' or 'which' e.g. '*When did this happen?*'
7. Yes/no –TED: These were approaches which included the 'TED' words phrased as a yes/no question, e.g. '*Can you tell me about him?*'
8. Yes/no-wh-approaches: These were approaches which included wh-approaches phrased as a yes/no question, e.g. '*Can you tell me what she did?*'
9. Choice: These were any questions offering a choice to the child e.g. '*was he taller or shorter than me?*'
10. Echo-Choice: These were repetitions of children's words in the form of choice questions e.g. child: '*He disappear*', interviewer: '*He disappeared or left the room?*'
11. Echo-Yes/no: These were repetitions of children's words in the form of yes/no questions e.g. child: '*He disappear*', interviewer: '*He disappeared?'*
12. Leading or suggestive: These were questions or statements which implied that a specific response was expected.
13. Yes/no: These were approaches asking children to reply with a yes or no response, e.g. '*was he tall?*'

TED and facilitators are more likely to elicit reliable details from children compared with other approaches (Agnew, Powell & Snow, 2006; Leander, Granhag & Christianson, 2009;

Powell & Hughes-Scholes, 2009) and such approaches have been both labelled as appropriate by Oxburgh et al. (2010). Depending on how echo approaches are phrased (e.g. as yes/no or statements), they can be considered either appropriate or inappropriate approaches; echo approaches phrased as statements (or simple paraphrasing) are considered appropriate (Evans et al. 2010). Oxburgh et al's (2010) review study on how question types are defined by different research teams concluded that both the phrasing and function of question types need to be considered when coding police interviews. Based on Oxburgh et al., how/what/who/why were also considered appropriate approaches.

When/where/which approaches as well as echo/wh approaches are not clearly categorised as open or specific by police manuals (Ministry of Justice, 2011) or in reviews (Oxburgh et al. 2010). Also, yes/no-TED approaches along with yes/no-wh approaches are described by some researchers as open (Korkman, Santtila & Sandnabba, 2006), and by other researchers as specific (Rischke, Roberts & Price, 2011). Given these disagreements in the literature we labelled these approaches as neutral..

Choice, echo-choice, echo-yes/no, leading and yes/no approaches were considered inappropriate as they may have limited the details given by the children (as in the case of an approach like echo-yes/no), or generated unreliable details (as in the case of yes/no questions) (Goodman & Schaaf, 1997; Guadagno & Powell, 2014; Oxburgh, Ost & Cherryman, 2010; Waterman, Blades & Spencer, 2004).

Initially, each approach was noted as present or not. Then, the sum of each approach was calculated to produce the total number of each approach in an interview, for example the total number of TED approaches in an interview. This generated numeric variables that enabled us to conduct descriptive and inferential analyses.

Inter-rater reliability

Two coders, blind to the study's aim and the first author practiced coding on a mock police interview until 100% agreement was obtained for all the approaches coded. Then one coder (blind to the study's aim) coded 60% all the interviews, a second coder (blind to the study's aim) coded 40% of all the interviews and the third coder (the first author) coded 10% of the interviews already coded. Inter-rater reliability was calculated as agreements between the coders and Cohen's kappa ranged from .83 to .94 for the approaches coded. Disagreements were resolved through discussion.

Normality tests and data transformation

A Kolmogorov-Smirnov test showed that appropriate (p <.001), neutral (p = .002) and inappropriate (p < .001) approaches were not normally distributed. To normalize their distributions logarithmic transformations were performed on the dependent variables.
From the interviews conducted prior to the application of IGIpop, nine of them belonged to the five interviewers chosen for the IGIpop. They were 42 interviews conducted after the application of IGIpop by the five interviewers. It was not possible to conduct repeated measure ANOVA with such unequal sample (9 versus 42), because it can affect the homogeneity of variance assumption. To determine any differences between the two groups (prior and after IGIpop), these nine interviews were ignored. We have compared the 42 interviews conducted after the application of IGIpop with the 60 interviews conducted prior the application of the IGIpop. These 60 interviews did not include the nine interviews of the five interviewers chosen for the IGIpop. So this study was not a repeated measures design, but a between subjects design.**Sample**

There was a total of 102 interviews. Sixty (58.8%) interviews were conducted before IGIpop. The mean age of the children in these interviews was 12.28 years, *SD*=2.9. There were

42 (41.2%) interviews conducted after IGIpop and the mean age of the children in the latter interviews was 12.17 years, *SD*=3.1.

The 60 interviews conducted before IGIpop were chosen at random. The 42 interviews after IGIpop were all conducted by the five selected interviewers. All available interviews conducted after IGIpop in the CA/DV Office were coded.

All interviews were with children who alleged that they had been victims of sexual abuse. Interviews were conducted between 2005 and 2018. This was a national sample with interviews conducted in all districts of Cyprus. IGIpop started in January 2017 and the present study was carried out in June 2018 which meant that fewer post-IGIpop interviews were available. The mean duration of interviews was 32 minutes (*SD*=0:21).

Results

Preliminary analyses

To determine whether there were any associations between children's gender and interviewers' approaches (appropriate, neutral, inappropriate) we conducted a discriminant function analysis. The test shown no significant differences between girls and boys interviewees on any measure, for appropriate approaches, Wilks' λ =.93, $\chi^2(7)=6.598$, p=.472, for neutral approaches, Wilks' λ =.98, $\chi^2(3)=2.225$, p=.527, or for inappropriate approaches, Wilks' λ =.94, $\chi^2(6)=6.211$, p=.400. Thus, gender was not considered further.

To determine whether there were any associations between children's age and interviewers' approaches (appropriate, neutral, inappropriate) we carried out a discriminant function analysis. There were no significant associations on any measure, for appropriate approaches, Wilks' λ =.96, $\chi^2(7)=4.184$, p=.758, for neutral approaches Wilks' λ =.99,

$\chi^2(3)=.856$, $p=.836$, or for inappropriate approaches, Wilks' $\lambda=.90$, $\chi^2(6)=9.758$, $p=.135$. Thus, children's age was not included in any analyses.

Pre-IGIpop interviews were conducted from May 2005 to December 2016 and post-IGIpop interviews were conducted from January 2017 to June 2018. The broad timeframe of the pre-IGIpop interviews may have been confounded by advances in investigative interview practices. This may have led to violations of homogeneity of variances between the two groups (pre-IGIpop and post-IGIpop). To assess the equality of variance for each of the 13 dependent variables (e.g. TED) between the two groups (pre-IGIpop vs post-IGIpop) we conducted a Levene's test. Levene's test shown that the variance for each dependent variable in the two groups compared was equal except for How/What/Who/Why approaches (table 1). For the 12 variables that met the assumption of homogeneity of variances we conducted MANOVA. For the How/What/Who/Why variable which did not meet the assumption of homogeneity of variances we conducted a Brown-Forsythe test (Karagöz & Saraçbası, 2016; Moder, 2007; 2010).

Frequency of interviewers' approaches

The number of approaches totaled 15,387 (*M*=1183.61; *SD*=1443.59) and 11,306 (*M*=869.69; *SD*=1012.11) before and after the implementation of IGIpop respectively.. TED, facilitators, echo/statements and the sum of how/what/who/why approaches - all of which were considered to be appropriate approaches - consisted 46% and 63% of all approaches used prior to and after the implementation of IGIpop respectively. Echo/wh, yes/no-TED, yes/no-wh and the sum of what/where/which approaches –which were considered neutral approaches - consisted 15% and 12% of all approaches used before and after the implementation of IGIpop respectively. Echo/choice, echo/yes/no, choice, leading and yes/no approaches –which were all considered

inappropriate approaches - consisted of 39% and 25% of all approaches used prior to and after the implementation of IGIpop respectively.

Inferential tests: Comparison of interviewers' approaches prior to and after IGIpop

To test if IGIpop improved the overall quality of interviewers' approaches Multivariate Analysis of Variance (MANOVA) was conducted to assess whether interviewers' approaches changed after the implementation of IGIpop. All inferential tests outcomes are shown in table 3.

MANOVA was conducted to compare TED, facilitators and echo approaches before and after IGIpop. There were significant differences between the use of TED, facilitators and echo/statements before and after the implementation of IGIpop with a mean increase of 0.4, 0.41 and 0.18 of these approaches respectively (table 2). A Brown-Forsythe test was conducted to assess if the use of how/what/who/why approaches changed after IGIpop. There was no difference in the use of these approaches after IGIpop F (1,99.74)=.044, p=.835.

MANOVA was conducted to assess whether echo/wh, yes/no-TED, yes/no-wh and the total usage of when/where/which approaches altered after the implementation of iGIpop. The test indicated significant differences in the use of echo/wh approaches before and after IGIpop with an mean increase of 0.15 of these approaches after IGIpop (table 2). There were no significant differences on the total usage of how, what, who and why approaches, or yes/no-TED and yes/no-wh approaches.

MANOVA was conducted to assess if echo-choice, echo-yes/no, choice, leading and yes/no approaches changed after the implementation of IGIpop. The test indicated significant differences between choice, echo-yes/no, leading and yes/no approaches use before and after IGIpop. On average, choice approaches decreased 0.23, echo-yes/no approaches increased 0.31, leading approaches decreased 0.21 and yes/no approaches decreased 0.2 during the IGIpop (table

2). There were no differences in the use of echo-choice approaches, but the observed power for these approaches was weak due to the small number of such approaches in the transcriptions (*n*=20 or 0.1% of all approaches).

Discussion

This study assessed the impact of the IGIpop on the quality of the approaches interviewers used in police interviews with children who were alleged victims of sexual abuse in Cyprus. In line with expectations, interviews conducted after the IGIpop had a greater number of appropriate than inappropriate approaches. After implementation of the IGIpop the overall quality of police interviews was significantly improved. This supports the practice of selecting the best interviewers or talent management within police forces to improve the standard of interviews with child witnesses. This was a positive outcome and supports the argument that focusing on a small number of better interviewers (or talented employees) is a simple and effective way to improve the gathering of evidence from children (Seleim et al. 2007). IGIpop improved not only the overall quality of police interviews, but also generated interviews in which appropriate approaches were higher than inappropriate approaches.

In the present study IGIpop had the advantage of producing interviews that relied mostly on appropriate, rather than inappropriate approaches. Relying on appropriate approaches is an important improvement because children's testimonies are the primary evidence for prosecution and conviction of sexual assaults against children (Frasier & Makoroff, 2006) and such evidence needs to be obtained in the most appropriate ways possible. For example, after the long and intensive training of the revised NICHD, the average use of TED approaches or invitations (based on Lamb et al. 2018) have been increased from 0.36 to 0.43, an average increase of

0.07(Blasbalg et al. 2018), whilst, the implementation of IGIpop immediately increased the average use of TED approaches (or invitations) from 0.8 to 1.2, an average increase of 0.4..

Neutral approaches remained the same prior to and after implantation of IGIpop. Neutral approaches in this study were ones that were not clearly defined in the literature as open or specific (Oxburgh et al., 2010) or approaches that some researchers have judged as open and other researchers have judged as specific (Korkman et al., 2006; Rischke et al., 2011). The consistency of neutral approaches before and after the implementation of IGIpop may reflect the key position of these approaches for ascertaining where and when details regarding an alleged abuse (Milne & Bull, 2006). The key position they hold along with their neutral nature - not been labeled by manuals as absolutely open or specific - may have contributed to interviewers always relying on these approaches on to the same extent.

The present study found that inappropriate approaches were significantly reduced after the implementation of IGIpop. This was important in the Cyprus context because earlier studies in Cyprus had shown that inappropriate approaches were almost half of all the approaches used by interviewers (Kyriakidou, 2011), but inappropriate approaches have disadvantageous effects on forensic investigations (Goodman & Schaaf, 1997). Inappropriate approaches only decreased notably when IGIpop was applied, indicating that some interviewers (i.e. the ones not chosen for IGIpop) had had difficulties in reducing the use of such approaches. Therefore the decision to use only those interviewers who had a better and more appropriate style of interaction with children led to an overall improvement in the quality of interviews.

IGIpop can be applied alongside police manuals to improve further the quality of investigative interviews of children. The aim of any guidance or training is to increase the proportion of appropriate approaches and/or decrease the proportion of inappropriate approaches

in an interview. Most research based police manuals and training have provided suggestions for improving the overall quality of police interviews with children, for example, the ECI (Verkampt & Ginet, 2009), NET (Peterson, Warren & Hayes, 2012) and PEACE (Clarke & Milne, 2001) and improvements have been achieved in Cyprus, England, Estonia, Finland, Israel, Norway, Sweden and the USA (e.g. Korkman et al., 2006; Kask, 2012; Peterson et al., 2012; Verkampt & Ginet, 2009), but only up to a point. Even after the introduction of interviewing manuals, most interviews in most countries have still relied on inappropriate approaches to gain information from children (e.g. Hamilton et al. 2016;Wolfman, Brown & Jose, 2016). Implementing IGIpop alongside these manuals and training may help improve the quality of investigative interviews further.

Interviewers in Cyprus had been given ample opportunities to be trained on different police manuals including ABE, PEACE and NICHD. The IGIpop interviewers had received the same training as all other interviewers prior the implementation of IGIpop and they were not treated differently compare with other interviewers (DV/CA Office, personal communication, April 16, 2018). Thus the effect of IGIpop was observed over and above the previous training that the interviewers had received. Further studies may consider clarifying whether IGIpop benefits can be observed irrelevant of interviewers' training.

Interviews prior IGIpop were conducted from 2005 to 2016 covering a broard timeline. Interview after the IGIpop were conducted from 2017 to 2018. This may have been problematic as such a broard timeline included different police manuals and training programs which may have impacted the quality of police interviews across the years. Even if we have taken measures to reduce the effects this may have had on our analyses, a next step will be to compare the quality of interviews gained by the interviewers' chosen for the IGIpop and compare these with

interviews conducted the same years with interviewers in Cyprus not chosen for the IGIpop (e.g. in cybercrime).

In previous research with other training programs and policies it is not clear whether talent management or the best interviewers were purposively selected to interview children (Hershkowitz et al. 2017; Myklebust & Bjørklund, 2006). So it is unclear if IGIpop is adopted by other agencies.

IGIpop may be of particular help to police forces with limited resources, which are often police forces in small nations. The Cyprus Police were able to apply IGIpop in the context of a relatively small population. Similar small nations comprise almost half of all the member states of the United Nations (Súilleabháin, 2013). Such small nations are not often included in the research into police interviews with children, so little is known about how small nations handle investigative interviews with children. The present study offers a practical solution for those nations on how best to improve police interviews irrespective of budget constraints.

If only a small number of interviewers are involved in interviews with children then regular training, feedback, and ongoing supervision (Hiedt et al., 2016; Powell et al., 2010) can all be focused on those interviewers leading to financial savings. Cost-effective beneficial procedures are essential given the economical challenges faced by many police forces, especially in poorer nations.

Conclusions

Police forces across different countries share similar challenges in their efforts to improve investigative interviews with children (e.g. Gagnon & Cyr, 2017;Kask, 2012). The present study showed the promising benefits of talent management modified as IGIpop within investigative interviews of children. Future directions for this new proposition will be opportunities to study

its implementation in other countries, especially those countries with limited police budgets, There is ample flexibility for developing IGIpop in different forensic contexts as well as taking into consideration different definitions among researchers about the meaning of ‘good’ interviewers. The emerging benefits of IGIpop along with its easy and cost-effective application can be an opportunity to help improve investigative interviewing of vulnerable interviewees even when police forces have limited resources.

References

Agnew, S.E., Powell, M.B., & Snow, P.C. (2006). An examination of the questioning style of police officers and caregivers when interviewing children with intellectual disabilities. *Legal and Criminological Psychology, 11,* 35-53.

Akehurst, L., & Cherryman, J. (2017). *Self-assessment of specialist interviews (course)*. UK: University of Portsmouth.

Aldridge, M., Timmins, K., & Wood, J. (1997). Children's understanding of legal terminology: Judges get money at pet shows, don't they? *Child Abuse Review, 6* (2), 141-146.

Axelrod, B., Handfield-Jones, H., & Michaels, E. (2002). A new game plan for c players. *Harvard Business Review, 80,* 80–88.

Bolander, P., Werr, A., & Asplund, K. (2017). The practice of talent management: A framework and typology. *Emerald Insight, 46* (8), 1523-1551.

Blasbalg, U., Hershkowitz, I., Lamb, M. E., Karni-Visel, Y., & Ahern, E. C. (2018). Is interviewer support associated with the reduced reluctance and enhanced informativeness of alleged child abuse victims? *Law and Human Behavior*. Advance online publication.

Cheese, P., Gartside, D., & Smith, D. (2009). Managing talent in uncertain times: Talent Management actions that help companies navigate a difficult economy. Retrieved from https://www.hashdoc.com/documents/9094/managing-talent-in-uncertain-times

Clarke, C., & Milne, R. (2001). *National evaluation of the PEACE investigative interviewing course.* Home Office: London.

Cyr, M., Dion, J., McDuff, P., & Trotier-Sylvain, K. (2012). Transfer of skills in the context of non-suggestive investigative interviews: Impact of structured interview protocol and feedback. *Applied Cognitive Psychology, 26,* 516-524.

Evans, A.D., Roberts, K.P., Price, H.L., & Stefek, C.P. (2010). The use of paraphrasing in investigative interviews. *Children Abuse & Neglect, 34,* 585-592.

Frasier, L.D., & Makoroff, K.L. (2006). Medical evidence and expert testimony in child sexual abuse. *Juvenile and Family Court Journal, 57,* 41-50.

Hamilton, G., Brubacher, S.P., & Powell, M.B. (2016). Investigative interviewing of aboriginal children in cases of suspected sexual abuse. *Journal of Child Sexual Abuse, 25* (4), 363-381.

Hershkowitz, I., Ahern, B., Lamb, M. E., Blasbalg, U., Karni-Visel, Y., & Breitman, M. (2017). Changes in interviewers' use of supportive techniques during the Revised Protocol training. *Applied Cognitive Psychology, 31,* 340–350.

Hiedt, C.T., Arbuthnott, K.D., & Price, H.L. (2016). The effects of distributed learning on enhanced cognitive interview training. *Psychiatry, Psychology and Law, 23,* 47-61.

Gagnon, K., & Cyr, M. (2017). Sexual abuse and preschoolers: Forensic details in regard of question types. *Child Abuse & Neglect, 67,* 109-118.

Goodman, G. S., & Schaaf, J. M. (1997). Over a decade of research on children's eyewitness testimony: What have we learned? Where do we go from here? *Applied Cognitive Psychology, 11,* 5–20.

Grote, D. (2005). *Forced ranking: Making performance management work.* Boston: Harvard Business School Press.

Guadagno, B.L., & Powell, M.B. (2014). An examination of the prevalence of temporally leading questions in child witness interviews. *International Journal of Police Science & Management, 16,* 16-25.

Karagöz, D., & Saraçbası, T. (2016). Robust Brown-Forsythe and robust modified Brown-Forsythe ANOVA tests under heteroscedasticity for contaminated Weibull distribution. *Revista Colombiana de Estadística, 39* (1), 17-32.

Karayianni, E., Fanti, K.A., Diakidoy, I-A., Hadjicharalmbous, M-Z., & Katsimicha, E. (2017). Prevalence, contexts, and correlates of child sexual abuse in Cyprus. *Child Abuse & Neglect, 66,* 41-52.

Kask, K. (2012). Dynamics in using different question types in Estonia police interviews of children. *Applied Cognitive Psychology, 26,* 324-329.

Korkman, J., Santtila, P., & Sandnabba, N.K. (2006). Dynamics of verbal interaction between interviewer and child in interviews with alleged victims of child sexual abuse. *Scandinavian Journal of Psychology, 47,* 109-119.

Kyriakidou, M. (2011). *Evaluation of children's testimonies in the Republic of Cyprus: Implications for criminal and legal procedures.* University of Sheffield: PhD thesis.

Kyriakidou, M. (2016). *Evaluating police interviewers' performance.* Confidential report to the Head of the Domestic Violence and Child Abuse Office, Cyprus Police.

Kyriakidou, M., & Zalaf, A. (2016). Transcribing the first decade of children's videotaped testimonies in Cyprus: Tourist season times. *Journal of Investigative Psychology and Offender Profiling, 13,* 267-276.

Lamb, M. E., Brown, D. A., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2018). *Tell me what happened: Structured investigative interviews of child victims and witnesses* (2nd ed.). Chichester, United Kingdom: Wiley.

Leander, L., Granhag, P.A., & Christianson, A. (2009). Children's reports of verbal sexual abuse: Effects of police officers interviewing style. *Psychiatry, Psychology and Law, 16*, 340-354.

McDonnell, A. (2011). Still fighting the ''war for talent''? Bridging the science versus practice gap. *Journal of Business and Psychology*, *26*, 169-173.

Meyers, M.C., & Woerkom, M. (2014). The influence of underlying philosophies on talent management: Theory, implications for practice, and research agenda. *Journal of World Business, 49*, 192-203.

Milne, R., & Bull, R. (2006). Interviewing victims of crime, including children and people with intellectual difficulties. In M. R. Kebbell & G. M. Davies (Eds.), *Practical psychology for forensic investigations* (pp.7–23). Chichester: Wiley.

Ministry of Justice, (2011). *Achieving best evidence in criminal proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures*. London.

Moder, K. (2007). How to keep the type I error rate in ANOVA if variances are heteroscedastic. *Austrian Journal of Statistics, 36*(3), 179-188.

Moder, K. (2010). Alternatives to F-Test in One Way ANOVA in case of heterogeneity of variances (a simulation study). *Psychological Test and Assessment Modeling, 52* (4), 343-353.

Myklebust, T. & Bjørklund, R. A. (2006) The effect of long-term training on police officers' use of open and closed questions in field investigative interviews of children (FIIC) *International Journal of Investigative Psychology and Offender Profiling, 3*, 165–181.

Myklebust, T., & Bjørklund, R.A. (2010). Factors affecting the length of responses in field investigative interviews of children (FIIC) in child sexual abuse cases. *Psychiatry, Psychology and Law, 17,* 273-289.

Peterson, C., Warren, K.L., & Hayes, A.H. (2012). Revisiting narrative elaboration training with an ecologically relevant event. *Journal of Cognition and Development, 14,* 154-174.

Powell, M.B., & Hughes-Scholes, C.H. (2009). Evaluation of the questions used to elicit evidence about abuse from child witnesses: Australian study. *Psychiatry, Psychology and Law, 16,* 369-378.

Powell, M.B., Wright, R., & Clark, S. (2010). Improving the competency of police officers in conducting investigative interviews with children. *Police Practice & Research: An International Journal, 11,* 211-226.

Price, H.L., & Roberts, K.P. (2011). The effects of an intensive training and feedback program on police and social workers' investigative interviews of children. *Canadian Journal of Behavioural Science, 43,* 235-244.

Rischke, A.E., Roberts, K.P., & Price, H.L. (2011). Using spaced learning principles to translate knowledge into behaviour: Evidence form investigative interviews of alleged child abuse victims. *Journal of Police and Criminal Psychology, 26,* 58-67.

Saied-Tessier, A. (2014). *Estimating the costs of child sexual abuse in the UK.* NSPCC: London.

Seleim, A., Ashour, A., & Bontis, N. (2007). Human capital and organizational performance: A study of Egyptian software companies. *Management Decision, 45,* 789-801.

Schuler, R. S., Jackson, S. E., & Tarique, I. (2011). Global talent management and global talent challenges: Strategic opportunities for IHRM. *Journal of World Business, 46,* 506-516.

Súilleabháin, A. (2013) *Small states bring big ideas to the United Nations. IPI Global Observation*. Retrieved from https://theglobalobservatory.org/2013/06/small-states-bringbigideas-to-the-un/

Thoresen, C., Lønnum, K., Melinder, A., Stridbeck, U., & Magnussen, S. (2006). Theory and practice in interviewing young children: A study of Norwegian police interviews 1985-2002. *Psychology, Crime & Law, 12*, 629-640.

Oxburgh, G.E., Myklebust, T., & Grant, T. (2010). The question of question types in police interviews: A review of the literature from a psychological and linguistic perspective. *Journal of Speech, Language and the Law*, *17*, 45-66.

Oxburgh, G.E., Ost, J., & Cherryman, J. (2010). Police interviews with suspected child sex offenders: does the use of empathy and question type influence the amount of investigation relevant information obtained? *Psychology, Crime & Law, 18,* 259-273.

Ulrich, D., & Smallwood, N. (2012). What is talent? *Leader to Leader, 2012*, 55–61.

Welch, J., & Welch, S. (2005). *Winning*. New York: Harper Business Publishers.

Waterman, A.H., Blades, M., & Spencer, C. (2004). Indicating when you do not know the answer: The effect of question format and interviewer knowledge on children's 'don't know' responses. *British Journal of Developmental Psychology, 22,* 335-348.

Wolfman, M., Brown, D., & Jose, P. (2016). Talking past each other: Interviewer and child verbal exchanges in forensic interviews. *Law and Human Behaviour, 40* (2), 107-117.

Verkampt, F., & Ginet, M. (2009). Variations of the cognitive interview: Which one is the most effective in enhancing children's testimonies. *Applied Cognitive Psychology, 24*, 1279-1296.

Table 1

Levene's test: Outcomes on the equality of variances for each dependent variable

Approaches	*df1*	*df2*	*F*	*p*
TED	1	99	2.65	.106
Facilitators	1	99	1.69	.196
Echo	1	100	2.19	.142
How/What/Who/Why	1	100	6.44	.013
Echo/Wh	1	77	.37	.546
When/Where/Which	1	100	2.04	.156
Yes/no –TED	1	82	.51	.478
Yes/no-Wh	1	49	.01	.928
Choice	1	100	1.59	.211
Echo-Choice	1	100	.310	.579
Echo-Yes/no	1	100	2.16	.145
Leading	1	100	.23	.635
Yes/no	1	100	.87	.353

Table 2

Mean (SD) of interviewers' approaches prior and after the implementation of IGIpop

		Prior IGIpop		After IGIpop	
Approaches	*n*	*M*	*SD*	*M*	*SD*
TED (appropriate)	1534	0.8	.45	1.2	.37
Facilitators (appropriate)	5651	1.41	.38	1.82	.28
Echo/Statements (appropriate)	3106	1.23	.44	1.41	.35
How/What/Who/Why (appropriate)	4002	1.49	.35	1.48	.26
Echo/Wh- (neutral)	292	.37	.34	.52	.32
When/Where/Which (neutral)	1493	.98	.39	1.09	.33
Yes/no –TED (neutral)	177	.28	.26	.18	.23
Yes/no-Wh (neutral)	115	.29	.28	.20	.25
Choice (inappropriate)	463	.64	.35	.41	.28
Echo-Choice (inappropriate)	20	.05	.12	.06	.14
Echo-Yes/no (inappropriate)	846	.58	.46	.89	.36
Leading (inappropriate)	461	.61	.4	.4	.44
Yes/no (inappropriate)	6948	1.8	.3	1.6	.26

Table 3

Inferential tests of interviewers' approach prior and after the implementation of IGIpop

Approaches	*SS*	*df*	*MM*	*F*	*p*	n^2	*Observed power*
TED	3.48	1	3.48	19.618	<.001	.16	.99
Facilitators	4.171	1	4.171	34.36	<.001	.26	1
Echo	.684	1	.684	4.089	=.046	.04	.52
How/What/Who/Why	.013	1	.013	.138	=.712	.001	.06
Echo/Wh	.546	1	.546	7.169	=.011	.17	.74
When/Where/Which	.153	1	.153	.799	=.378	.02	.14
Yes/no –TED	.072	1	.072	.992	=.326	.03	.16
Yes/no-Wh	.053	1	.053	.718	=.402	.02	.13
Choice	1.485	1	1.485	13.133	<.001	.12	.95
Echo-Choice	0	1	0	.077	=.782	.001	.059
Echo-Yes/no	2.193	1	2.193	11.08	=.001	.11	.91
Leading	.952	1	.952	5.168	=.025	.05	.61
Yes/no	.949	1	.949	11.410	=.001	.1	.92