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RESEARCH ARTICLE

Investigative interviewing of alleged child abuse victims: an evaluation of a new training programme for investigative interviewers

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This evaluation focused on the developing interviewing skills of 104 active crime investigators in Sweden who participated in six different half-year courses between 2007 and 2010. The courses emphasised a combined model of the National Institute of Child Health and Human Development Protocol and the PEACE model of investigative interviewing. The teaching was interdisciplinary. The evaluation involved interviews of 208 children, most of whom were suspected victims of physical abuse. The investigators used two-thirds fewer option-posing questions and three times as many invitations after training as they did before training. These data show that the training was very effective in shaping the interviewers' behaviour into better compliance with internationally recognised guidelines.

Keywords: interviewers; investigative interviewing; child witnesses; effectiveness of training

Introduction

Research documenting the widespread failure of forensic interviewers to adopt best practices has underlined the need for training focused on the skills required to elicit high-quality information from young witnesses (Milne & Bull, 1999; Orbach & Lamb, 2000). In this study, we evaluated a new Swedish police course focusing on the developing interviewing skills of active crime investigators who were responsible for interviewing young alleged victims of abuse.

Best practice guidelines imply that police officers interviewing child witnesses are advised to use open questions because they encourage children to recall information from memory and do not specify the contents of the memories that are to be retrieved. Open questions elicit richer and more accurate reports than option-posing and suggestive prompts do. The completeness of responses to open questions also increases when interviewers use information already provided by children and ask for elaboration of previous responses (Lamb et al., 2003).

It is not recommended that interviewers ask option-posing or suggestive questions because they simply ask children to confirm or reject information provided by the interviewers (Lamb, LaRooy, Lindsay, Malloy, & Katz, 2011). These question types not only constrain but also shape children's responses, making them potentially less accurate than

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responses to open questions (Dale, Loftus, & Rathbun, 1978; Dent & Stephenson, 1979; Hutcheson, Baxter, Telfer, & Warden, 1995; Lamb et al., 1996; Lamb & Fauchier, 2001; Lamb, Orbach, Warren, Esplin & Hershkowitz, 2007; Orbach & Lamb, 2000). Contamination of reports also increases when option-posing and suggestive utterances are repeated (Bruck, Ceci, & Hembrook, 1998; Lyon, Malloy, Quas, & Talwar, 2008; Memon & Vartoukian, 1996). Long delays between the event and pre- or post-contamination can also decrease accuracy (Bruck & Ceci, 2004; London, Bruck, & Melnyk, 2009; Poole & Lindsey, 1995).

Because interviewers also interview children and youths with intellectual disabilities (IDs) they have to bear in mind that these eye witnesses can be informative when asked open questions (see, e.g. Cederborg & Lamb, 2008a), although they may provide less information in response to open questions than do chronological age-matched peers (Brown, Lewis, & Lamb, in press; Henry, Betteny, & Carney, 2011). The severity and specific nature of disability influences how children and youths with IDs perform, but the accuracy of their accounts is typically comparable to that of mental age-matched typically developing (TD) peers (Brown et al., in press; Henry & Gudjonsson, 1999; Michel, Gordon, Ornstein, & Simpson, 2000). As with TD children, option-posing and suggestive questions may reduce their accuracy (Henry & Gudjonsson, 2003; Kebbell, Hatton, & Johnson, 2004) and when such questions are repeated, children may change their responses (Cederborg, Danielsson, La Rooy, & Lamb, 2009). Such findings suggest that interview techniques recommended for TD children are also appropriate for children with IDs (see, e.g. Henry et al., 2011; Milne & Bull, 1999).

When police officers interview children, they have to realise that children as young as four years of age are able to provide relevant information in response to open questions; for example, there is no age difference in the proportion of details elicited using invitations (Lamb et al., 2003) even though factors such as developmental level influence the amount of information reported (Goodman & Reed, 1986; Lamb et al., 2003; Leippe, Romanczyk, & Manion, 1992). In addition, interviewers have to be sensitive to how children perceive their knowledge and status because children modify their reporting strategies to ensure that listeners understand (Lamb & Brown, 2006). Children may also tailor their reports if they infer that interviewers would prefer certain answers (Ceci & Bruck, 1993, 1995; Melnyk, Crossmann, & Scullin, 2007).

Despite well substantiated and professionally endorsed recommendations (e.g. American Professional Society on the Abuse of Children [APSAC], 2002; Home Office, 2007; Lamb, Hershkowitz, Orbach, & Esplin, 2008), researchers have shown that police officers seldom use open questions when interviewing child witnesses. Instead, they often rely heavily on recognition memory-based option-posing and suggestive questions that are more likely than recall-based questions to contaminate children's reports about their experiences (e.g. Cederborg, Orbach, Sternberg, & Lamb, 2000; Craig, Scheibe, Raskin, Kircher, & Dodd, 1999; Korkman, Santilla, & Sandnabba, 2006; Lamb et al., 2009; Sternberg et al., 1996) and thus yield information that is less valuable and may even be discounted in court proceedings. Even police officers specifically trained at the Swedish police academy have been shown to rely heavily on option-posing and suggestive prompts (Cederborg & Lamb, 2008b). Unnecessary use of such prompts may also affect the perceived credibility of interviewed children and youths (Cederborg & Lamb, 2006; Tubb, Wood, & Hosch, 1999).

Swedish police officers have been criticised for their inadequate interview practices (Cederborg et al., 2000; Cederborg & Lamb, 2008b; Diesen & Diesen, 2009). Police officers had also asked for further training on developmentally appropriate interviewing

and how to understand children with diagnoses because this topic was not covered during their basic training at the police academy.

Published research findings from a number of countries, including Sweden, may have influenced the Swedish government's desire to focus police training on forensic interviewing (e.g. Cederborg et al., 2000; Korkman et al., 2006; Lamb et al., 1996). In 2007, the National Swedish Police Board (NSPB) was instructed by the government to develop a training programme for police officers who conduct forensic interviews of suspected child witnesses and victims that enhanced the interviewers' knowledge of investigative interviewing principles. In turn, the NSPB asked the police academy in Stockholm to provide the appropriate academic training.

After completing six courses, the responsible examiner was encouraged by the police academy to evaluate the course outcomes. This study describes that evaluation and it is focused on the developing interviewing skills of 104 active crime investigators who were responsible for interviewing young alleged victims of abuse and participated in one of six different courses between 2007 and 2010. The evaluation focused specifically on the quality or types of questions they asked during their interviews.

Background information

Systematic training, recurrent feedback and supervision were not previously used as pedagogical tools in Swedish interviewer training courses, and this may explain why the officers so trained did not follow recommended practices (Cederborg et al., 2000; Cederborg & Lamb, 2008b). In addition, previous courses did not include potentially useful information about developmental psychology and the possible impact of IDs on children's behaviour and informativeness. Therefore, the new training programme emphasised these aspects and to make extensive use of open-ended rather than suggestive and option-posing questions.

The new Swedish training programme was inspired by the National Institute of Child Health and Human Development Protocol (NICHD) Protocol (Lamb et al., 2008) and the PEACE model (Milne & Bull, 1999). The NICHD protocol, which has been extensively evaluated in forensic interview contexts, is a fully structured and detailed interview guide which shows interviewers how to prepare children to be maximally informative witnesses by explaining ground rules, establishing rapport, providing practice narrative accounts of experienced events and making as much use as possible of open-ended prompts while avoiding questions that might contaminate children's accounts (see Lamb et al. (2008), for a fuller description and for a summary of the underlying research). The PEACE model is a conceptual approach to investigative interviewing which seeks to focus interviewers on key characteristics of good interviewing – Plan and Prepare, Engage and Explain, Account, clarify and challenge, Close and Evaluate – by providing an easily remembered mnemonic. The new training programme focused on key concepts rather than details of the published NICHD protocol. The key PEACE characteristic, self-evaluation, was incorporated into the training programme.

When developing the training programme, we were mindful of research showing that classroom-based training programmes for investigative interviewers, however intense, often impart knowledge about desirable practices but have little if any effect on the actual behaviour of forensic investigators (e.g. Aldridge & Cameron, 1999; Lamb, Sternberg, Orbach, Hershkowitz et al., 2002; Warren et al., 1999). However, improved interview behaviour can be reinforced when interviewers are systematically and extensively trained to follow a flexible interview protocol and are given continuing supervision and feedback

on simulated, as well as actual, forensic interviews. After such training, interviewers have been shown to employ fewer undesirable practices (e.g. using option-posing and suggestive prompts) and to employ more open-ended prompts (Cyr & Lamb, 2009; Lamb et al., 2009; Sternberg, Lamb, Davis, & Westcott, 2001).

The course was university-based and involved instruction spread over about half a year with three full days of lessons each month. Between lessons, trainees were expected to read prescribed books and articles and to complete homework. The interdisciplinary teaching covered developmental psychology, IDs, investigative interviewing and law. Most lectures emphasised research findings and international recommendations about investigative interviewing, with emphasis on the needs for children to be interviewed as soon as possible after the alleged offences and for interviewers to intrude as little as possible while encouraging children to provide as much information as possible in the form of narratives elicited using open-ended prompts. During the course, trainees learned that, on average, free recall questions elicit more forensically relevant information than other types of questions (Lamb et al., 1996; Orbach & Lamb, 2000; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001).

When option-posing questions seemed necessary, interviewers were encouraged to use them sparingly and as late in the interview as possible. When the interviewers asked option-posing and suggestive questions in practice interviews, they were shown how they could change their questioning style to include more open questions.

Trainees were also taught that open questions do not specify the contents of the memories that are to be retrieved, and elicit richer (e.g. Lamb et al., 1996) and more accurate reports than recognition-based prompts (such as option-posing questions). This is especially true when younger children are interviewed (Brady, Poole, Warren, & Jones, 1999; Dent & Stephenson, 1979; Lamb & Fauchier, 2001; Orbach & Lamb, 2000). Trainees were also informed that they should give priority to open questions when interviewing child witnesses with IDs in order to help these witnesses give the most accurate and complete accounts. As early identification of the witnesses' abilities, capacities and behaviour allows interviewers to adapt their behaviour appropriately, trainees were instructed to focus on each child's specific conditions and to recognise that different interview strategies may sometimes be necessary (Cederborg & Lamb, 2008a; Milne, 1999; Westcott, 1993).

Inspired by previous research on effective training (Lamb et al., 2008), the participants were also taught how to structure their interviews. Before substantive issues were discussed, investigators were urged to explain their roles and the 'ground rules', including the need for the children to only recount events that had actually happened. They were trained to then elicit narrative information about recent neutral events before the focus switched to substantive issues, with narrative accounts sought using open-ended questions, before the interview was closed by returning the focus to neutral topics.

Previous research has shown that interviewers who are intensively trained in courses that involve repeated practice, feedback monitored simulations and systematic analysis of actual recorded forensic interviews are better able to follow international recommendations (Lamb, Sternberg, Orbach, Hershkowitz et al., 2002), so the trainees were given extensive supervision and feedback on simulated as well as actual forensic interviews. In the simulated interviews, trainees took turns in the roles of interviewer and child witness, and received feedback on how they could make greater use of open-ended questions.

All participants actively were involved in interviewing child witnesses while attending the course. Their interviewing skills were assessed at least three times: before the course began, in the middle of the course and at the end of the course. To help interviewers

learn how to evaluate their own interviews, as recommended by Milne & Bull (1999), the second and third interviews were also evaluated by the participants themselves after they had been shown how to distinguish among different types of questions, how to examine interview structure and how to judge the age-appropriateness of the language used.

Trainees were required to reach an acceptable interviewing standard before being awarded certificates of completion. A certification implied that the interviewers use free recall questions as much as possible, avoid option-posing questions and refrain from suggestive questions. The interviews conducted before the course began served as baselines with which the final interviews could be compared. Participants who did not reach an acceptable standard after three coded interviews did not receive any further training but were asked to conduct additional interviews for evaluation; until they had demonstrated an acceptable interview standard, participants could not be certified as trained interviewers.

Method

Participants

Between September 2007 and June 2010, 104 interviewers (82 women and 22 men) were given academic credit and certified as trained interviewers. All the participants were responsible for interviewing alleged child witnesses; 95 were police officers who had completed the three-year long basic police training earlier while nine were civilian crime investigators trained in social work, education or psychology. The participants came from 19 of the 21 police districts in Sweden with 26 from Stockholm.

As mentioned above, the participants had to document their performance in at least three interviews with children, one before, one in the middle and one at the end of the course. For this study, the before and after course interviews by 104 participants were analysed: 81 passed after their third interview, 19 after four assessed interviews and four after five interviews. This means that the fourth or fifth interviews were analysed in this study for those 23 trainees who did not pass after the first three coded interviews, whereas the third interview was coded for the others.

Unfortunately, we only had access to the interviews (not the complete investigative files) for ethical reasons, which means that we did not know the ages of 120 of the children and the gender of three children. Of the 208 children interviewed in these investigations, we know that 79 were boys and 126 were girls. The 88 children whose ages were known were on average 10.31 years old ($SD = 3.42$). (One eyewitness was 19 years of age but had moderate IDs and so had the mental age of five years.) As shown in Table 1, most of the children were suspected victims of physical abuse by family members.

Procedure

The analyses reported here all involved interviews with child witnesses before the course started and the first interviews of passable quality conducted at the end of the course. Interviews were transcribed before trained coders categorised the types of questions used by the interviewers in the substantive portions of the interviews, during which the focus was on the children's alleged experiences of abuse. Because the use of open-ended questions is emphasised in the NICHD protocol, the evaluation focused on the types of questions used by the interviewers in the pre- and post-training interviews. Following the convention described by Lamb and his colleagues (1996, 2007, 2008), the coding distinguished between two types of questions: recall questions (i.e. *invitations* that encouraged

Table 1. Description of the sample.

Variable	Frequency	%
Interviewer gender		
Male	22	21.2
Female	82	78.8
Child gender		
Male	79	38.0
Female	126	60.6
Unknown	3	1.4
Age (88 children ^a)		
Males ($n = 39$)	$M = 9.25$ (SD = 2.45)	
Females ($n = 48$)	$M = 11.71$ (SD = 3.84)	
All 88 children	$M = 10.59$ (SD = 3.49)	
Type of suspected crime		
Physical abuse	124	59.6
Sexual abuse	59	28.4
Other	15	7.2
Not known	10	4.8
Relationship between child and suspect		
Family member	126	60.6
Close relationship	19	9.1
Acquaintance	35	16.8
Stranger	17	8.2
Other	1	0.5
Not known	10	4.8

^aFor ethical reasons we did not have access to some descriptive information about the alleged victims and thus did not know the ages of 120 children (39 boys and 78 girls).

free recall responses and *directive* questions refocusing the children's attention on details or aspects of the alleged incident that the children had already mentioned) and recognition-based questions (i.e. *option-posing* questions that focused attention on details or aspects of the alleged incident that the children have not previously mentioned and *suggestive* questions in which the interviewers strongly communicated what responses were expected).

Invitations

Utterances, including questions, statements or imperatives, prompting free recall responses from the child (for e.g. 'Tell me everything that happened' or 'You mentioned that he touched you. Tell me everything about the touching').

Directive utterances

These refocus the child's attention on details or aspects of the alleged incident that the child has already mentioned, providing a category for requesting additional information (e.g. 'What colour was that shirt?').

Option-posing utterances

These focused the witness's attention on details or aspects of the alleged incident that the witness had not previously mentioned, asking the witness to affirm, negate or select an investigator-given option using recognition memory processes (e.g. 'Were the clothes red or green?' or 'Was the shirt red?').

Suggestive prompts

These were utterances used in such a way that the interviewer strongly communicated what response was expected or assumed details that had not been revealed by the witness (e.g. 'He forced you to do that, didn't he?').

Inter-coder reliability

Question types were coded by either of two trained coders. The first author became a reliable coder when trained by experts at the USA. In NICHD until 1999, she reached 95% reliability. She has continued to refresh her skills by coding alongside other expert researchers since then and was the main coder of question types for interviews conducted between fall 2007 and spring 2009. The second coder was trained by the first author during spring 2009. Twenty transcripts were independently coded by both coders so that inter-coder reliability could be assessed; the coders reached a high level of agreement (95%) when distinguishing question types. Disagreement was resolved by discussion. Once reliability was established, the second coder coded transcripts of interviews for the course conducted between fall 2009 and spring 2010, discussing uncertainties with the first coder. At the time of training, neither of the coders knew that an evaluation was going to be performed.

Results

To determine whether interviews conducted before and after training differed systematically, a 2 (time [before, after] \times 4 (type of question [invitation, directive, option-posing, suggestive]) analysis of variance (ANOVA), with repeated measures on both independent variables was performed on the number of questions asked during each of the interviews. There was a significant effect for time, indicating that more questions were asked in the first interviews than in the later interviews ($F=38.75$, $df=1103$), $p<.0001$; see Table 2).

The ANOVA also revealed a significant main effect for type of question ($F=177.97$, $df=3309$, $p<0.001$). *Post hoc* Tukey tests showed that directive questions were used more often than other types of questions ($p<0.05$) and that option-posing questions were more common than invitations and suggestive prompts ($ps<0.05$). However, there was no significant difference between the numbers of invitations and suggestive prompts. More importantly, there was also a significant interaction between time and question type ($F=56.67$, $df=3309$, $p<0.001$). Tests of simple main effects and *post hoc* Tukey tests indicated that the number of directive, option-posing and suggestive questions decreased from before to after training, whereas the number of invitations increased.

Table 2 contains data on differences in the types of questions asked depending on whether physical or sexual abuse was suspected. Two separate 2 (type of suspected crime [physical and sexual abuse] \times 4 (type of question [invitation, directive, option-posing, suggestive]) ANOVAs, with repeated measures on the second factor, were computed on the number of questions posed before and after training. The interaction between type of suspected crime and type of question was significant before training ($F=2.79$, $df=3261$, $p<0.05$), but not after training ($F<1.0$, $df=3276$). Tests of simple main effects and *post hoc* Tukey tests showed that before training, more option-posing questions were posed when sexual rather than physical abuse was suspected, but there was no difference in the mean number of invitations and suggestive questions when these two types of suspected crimes were being investigated. After training, however, there was no association between the types of questions asked and the suspected crime.

Table 2. Types of questions asked of alleged victims before and after training.

	Type of question											
	Invitation		Directive		Option-posing		Suggestive		Total			
	M	SD	M	SD	M	SD	M	SD	M	SD		
Before training												
Total	5.49	4.89	51.39	32.31	39.73	26.95	12.66	14.07	27.31	29.19		
Physical abuse	5.90	4.87	49.95	28.79	36.39	21.52	11.10	11.82	25.84	24.39		
Sexual abuse	6.10	5.49	61.97	37.06	52.20	34.15	15.77	18.94	34.01	37.50		
After training												
Total	16.62	11.26	39.04	27.70	13.25	10.07	3.14	4.33	18.01	20.60		
Physical abuse	17.64	11.96	38.46	26.06	12.71	9.37	3.45	4.76	18.07	19.88		
Sexual abuse	15.69	10.45	41.48	34.09	14.97	12.13	3.03	3.86	18.79	23.11		
Total	11.04	10.29	45.22	30.66	26.49	24.25	7.90	11.43	22.66	25.67		

When exploring individual development across time, the numbers of each type of question posed after training were compared with the numbers posed before training, so that we could determine whether the trainee asked fewer, the same number or more questions of that type after training than before. There were 81 possible patterns of change over time and the data revealed that 47 trainees asked more invitations but fewer directive, option-posing and suggestive questions after training.

Chi square goodness of fit tests showed that: 95 (91%) of 104 interviewers increased their use of invitations over time ($\chi^2 = 157.52$, $df = 2$, $p < 0.001$), 40 asked more and 62 asked fewer directive questions after training ($\chi^2 = 53.15$, $df = 2$, $p < 0.001$), 96 decreased their use of option-posing prompts ($\chi^2 = 163.68$, $df = 2$, $p < 0.001$) and 81 decreased their use of suggestive prompts ($\chi^2 = 96.14$, $df = 2$, $p < 0.001$).

Discussion

The analyses reported above showed that almost all of the 104 participants learned to implement the strategies they had been taught during the course. This means, that the course was successful in improving the quality of the interviewers practices. This result is interesting because the Swedish training programme studied here, unlike the NICHD training programme (Lamb et al., 2008) did not focus on a detailed protocol that the interviewers were expected to follow. Instead, the focus was placed on interview structure and on the types of questions employed, with interviewers taught how to use open-ended questions wherever possible to elicit narrative accounts of the events under investigation. As in the NICHD training programme, the trainees received verbal and written feedback from the instructors and they were shown how to evaluate their own and other participants' questioning styles and their effects on children's responses. The new training programme clearly benefited the majority of the participants as most were certified as trained interviewers. After training, the interviewers needed to ask fewer questions overall. These investigators also came to use more invitations as well as fewer option-posing and suggestive questions, perhaps because they realised that invitations reliably elicited longer and more detailed responses than other types of prompts and also that responses to option-posing and suggestive questions are less accurate than responses to open-ended questions (Dale et al., 1978; Dent & Stephenson, 1979; Lamb et al., 1996; Lamb & Fauchier, 2001; Oates & Shrimpton, 1991). This means that interviewers who passed the course may have learned that the level of accuracy in children's responses is heavily reliant on the ways in which children are interviewed (Malloy, La Rooy, Lamb, & Katz, 2011).

Previous research has shown that police officers and social workers trained to use the structured NICHD protocol and given feedback on their interviews learn to ask fewer option-posing questions and more open-ended invitations (Lamb et al., 2008), but no previous study has involved such a large number of interviewers trained to adopt research-based interview techniques without following a detailed protocol. This successful training was also unique because it involved multiple meetings with the trainees over a six-month period, during which they were taught about recommended interview practices, the rules of evidence, child development and differential diagnosis, as well as how to evaluate their own interviews.

In Sweden, it is very important that interviewers are well qualified because alleged victims are not expected to testify in court until they reach 15 years of age. Likewise, older children with IDs can be interviewed outside court, with the recording used as testimony. Unfortunately, we did not know the ages and possible IDs of all the interviewed children and the characteristics of the children and severity of the cases may have

influenced the trainees' development. On the other hand, research shows how important it is for police officers to follow international best practice recommendations regardless of children's ages or diagnoses. The results convincingly showed substantial improvements on the part of most trainees regardless of possible differences in the characteristics of those they were interviewing. This is an important finding because the quality of the official interviews affects perceptions of the children's credibility; inadequate interviewing may deny justice to both suspects and victims (Cederborg & Lamb, 2006). We do not know how courts responded to the better quality interviews that the trainees conducted after completing the course, but hope that future research will examine this issue.

One other limitation of this training programme was the absence of continued assessments of interview quality after course completion. Prior studies have shown that both intense training and continued 'quality control' appear necessary to maintain improvements in interviewers' behaviour over time (Lamb, Sternberg, Orbach, Esplin et al., 2002). In the present study, we know that most of the participants performed better interviews after six months than at the beginning of the course but we do not know if these improvements were maintained over time. However, this new training programme involved evaluation training which was meant to increase the interviewers' ability to continuously evaluate their performances. Future research will examine interviews two months after the course is finished in order to determine whether interviewers trained in this way maintain the positive effects of training.

Further studies of interview training can also identify which components of the intensive training course were especially important in yielding improvements in interviewing practices. Notwithstanding these limitations, the results reported above document the value of this training programme.

Conclusion

This study shows that sound knowing of findings and training in best possible practice can increase police officers awareness of how to improve their skills. When starting the evaluation of the training programme, we expected that the interviewers would reduce their reliance on option-posing questions and suggestive questions and hoped that they would ask more open questions irrespective of the children's maturity. The training programme was successful in these respects. We thus showed that an emphasis on the reasons why certain types of questions were superior was sufficient to yield changes on the behaviour of interviewers.

Police officers have frequently expressed a desire to acquire these skills because they have been criticised for their incompetence when interviewing child witnesses. This study shows that it is possible to communicate research-based knowledge effectively, perhaps improving the quality of information available to courts.

The results of this study indicate that such courses should be compulsory for those police officers who interview young eye witnesses because they cannot be expected to teach themselves or learn from experienced colleagues. When interviewers are not appropriately trained there is a risk that children's reports will be contaminated, incoherent and lacking important legal details.

On the other hand, there is a gap between practice and research. Researchers can be expected to train police officers but when they are doing so they have to bear in mind that best possible practice will not be attained if they simply present research findings. They also have to give individual feedback and train interviewers to evaluate their own performance.

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