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- AQ1 Conway et al., 2004 – a or b? Please give all names at first citation and use “et al.” thereafter
- AQ2 Should “exist” read “consist”?
- AQ3 Maddox et al., 2008 (submitted), not cited in text. Please add a citation or delete this entry. If included, please update if possible
- AQ4 Tromp et al., 1995 – these names are not the ones listed in the References

Does trauma memory play a role in the experience of reporting sexual assault during police interviews? An exploratory study

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A recent study indicated that 94.4% of reported sexual assault cases in the UK do not result in successful legal prosecution, also known as the rate of attrition (Kelly, Lovett, & Regan, 2005). Scant research has examined the role of trauma-related psychological processes in attrition. Victims of sexual assault ($N = 22$) completed questions about peri-traumatic dissociation, trauma memory fragmentation, account incoherence during police interview, and likelihood of proceeding with legal cases. Higher levels of dissociation during sexual assault were associated with participants reporting more fragmented trauma memories. Memory fragmentation was associated with participants indicating that they provided more incoherent accounts of trauma during police interview. Importantly, people who viewed themselves as providing more incoherent accounts predicted that they would be *less* likely to proceed with their legal cases. The findings suggest trauma impacts on memory, and these trauma-related disruptions to memory may paradoxically contribute to attrition.

Keywords: Sexual assault; Attrition; Memory; Trauma; Dissociation.

There is a high rate of attrition (i.e., loss) of sexual assault (e.g., rape) cases in the criminal justice system, particularly at the investigative stage. A recent study indicates that only 5.6% of reported cases result in conviction in the UK (Kelly et al., 2005). This has led the UK government to increase its efforts to address attrition in sexual assault (Office for Criminal Justice Reform, 2006). Within the criminal justice system

victims of sexual assault are expected to be able to provide accurate recollections of their trauma and their cases are less likely to be prosecuted if they cannot (Gregory & Lees, 1996; Jordan, 2004; Kelly et al., 2005; Office for Criminal Justice Reform, 2006).

It is well established that memory processing is disrupted during traumatic events, and that memory disruption plays a role in the development of

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post-traumatic psychological difficulties, such as post-traumatic stress disorder (PTSD) (Brewin, 2007; Brewin, Dalgleish & Joseph, 1996; Brewin & Holmes, 2003; British Psychological Society, 2008; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000). It is plausible that commonly occurring psychological reactions to trauma may impair victims' ability to recollect and talk about sexual assault. This in turn could potentially contribute to withdrawal from the criminal justice process. However, there is a scarcity of research investigating whether these trauma-related psychological processes impact upon attrition. This study aimed to examine victims' perception of the role played by trauma memory in their experience of being interviewed by the police when reporting sexual assault.

Individuals experience difficulty in recollecting traumatic events because of disruptions to cognitive processing that occur both during trauma memory formation and retrieval. During traumatic events, individuals experience peri-traumatic dissociation (i.e., transient changes in sensory-perceptual experience such as confusion and time distortion), distress, and physiological reactivity. These alter the encoding of memory such that the storage of sensory-perceptual details is prioritised over contextual information (Brewin et al., 1996; Ehlers & Clark, 2000; Foa & Hearst-Ikeda, 1996; Holmes et al., 2005a). Coherent autobiographical memory is dependent on information being organised within a context. Thus, the disruption to memory encoding during traumatic events results in fragmented yet vivid sensory-perceptual memories (or "flashbacks") being formed (Conway & Holmes, 2005; Conway et al., 2004; Conway & Pleydell-Pearce, 2000; Grey & Holmes, 2008; Holmes et al., 2005a). For example, following sexual assault, an individual may experience visual imagery of the perpetrator's face, sensations of pain, and feelings of shame and fear, but may have difficulty recalling an organised, coherent narrative of the event.

To date, we are not aware of any studies that have investigated the impact of trauma memory-related processes (i.e., peri-traumatic dissociation and memory fragmentation) on victims' experience of reporting sexual assault to the police. However, Bögner, Herhily, and Brewin (2007) found that, in a sample of 27 asylum seekers, PTSD symptoms (which arise due to disruptions in memory processing) had a detrimental impact on the reporting of events, as assessed by difficulty in disclosing trauma during Home Office

interviews. Further, considerable evidence demonstrates that trauma narratives are more fragmented (i.e., incoherent) than accounts of everyday events, and intrusive sensory-perceptual imagery ("flashbacks") can occur following trauma (Brewin, 2007; Brewin & Holmes, 2003; Conway, Meares, & Standart, 2004a; Conway & Pleydell-Pearce, 2000; Conway, Singer, & Tagini, 2004b; Ehlers, Hackmann, & Michael, 2004; Foa, Molnar, & Cashman, 1995; Hackmann & Holmes, 2004; Holmes, Grey, & Young, 2005b; Holmes & Hackmann, 2004; Tromp, Figueredo, Bell, Tharan, & Tromp, 1995; van der Kolk & Fisler, 1995).

The aims of the study were to understand the impact of trauma-related memory processes (i.e., peri-traumatic dissociation and memory fragmentation) on sexual assault victims' perceived experience of police interviews and likelihood of proceeding with legal cases. The hypotheses were:

1. Increased peri-traumatic dissociation will be associated with more fragmented memories of trauma.
2. Fragmented trauma memories will be associated with increasingly incoherent accounts of sexual assault being provided during police interviews.
3. More incoherent accounts will be associated with victims perceiving themselves to be less likely to proceed through the criminal justice system.

METHOD

Participants

Participants ($N = 22$) were eligible for the study if they had experienced sexual assault within the past 18 months and reported it to the police. The participants were initially recruited from a Sexual Assault Referral Centre (SARC) ($n = 7$) to complete paper questionnaires. However, recruitment was then modified due to the Crown Prosecution Service raising concerns that the information disclosed during the research assessment might jeopardise the likelihood of cases resulting in conviction. The remainder of the participants completed the research assessment as an online survey ($n = 15$), as this ensured anonymity and could not impact on the criminal justice process. The online survey and SARC sub-samples were

compared on demographic variables (sex, age, ethnicity, marital status, employment, and months since assault). There were no significant differences apart from the online survey participants being significantly older than the SARC subsample (online $M = 25.00$, $SD = 3.32$, SARC $M = 30.53$, $SD = 7.94$), $t(20) = 1.75$, $p = .03$. The sample consisted of 21 females and 1 male participant. The mean age was 28.77 ($SD = 7.22$) and the mean duration since assault was 7.09 months ($SD = 4.56$).

Procedure

Participants recruited from the SARC were introduced to the study through posters or by clinical staff. The study researchers then obtained informed consent and assisted the participants in completing the assessment. For the Internet survey, participants were recruited through posters (which contained the survey URL) displayed by sexual assault support services and on-line public notice boards. The Bristol Online Surveys (2007) software was used to design the Internet survey.

Measures

Peri-traumatic dissociation was assessed using the *Peri-traumatic Dissociative Experiences Questionnaire, Self-Report Version* (PDEQ; Marmar, Weiss, & Metzler, 1997). This assesses the degree of dissociative experience during trauma and in the immediate aftermath. For example, “I had moment of losing track of what was going on – I “blacked out” or “spaced out” or in some way felt that I was not part of what was going on” and “My sense of time changed – things seemed to be happening in slow motion”. It consists of 10 items rated on a continuous 5-point Likert scale

anchored at each point from (1) *not at all true*; (2) *slightly true*; (3) *somewhat true*; (4) *very true*; (5) *extremely true*. Items are summed with higher scores indicating more severe levels of peri-traumatic dissociation.

Memory fragmentation was assessed as in Engelhard, van den Hout, Kindt, and Shouten (2003). The question (“How much does your memory of the sexual assault exist of fragmented pieces as opposed to a whole entity?”) was rated on a continuous 7-point Likert scale anchored at each point from (0) *not at all*; (1) *a little bit*; (2) *somewhat*; (3) *moderately*; (4) *quite a lot*; (5) *a lot*; (6) *extremely*.

Account incoherence was assessed via an adaptation of Engelhard et al. (2003). The question (“How much did your *account* of the sexual assault exist of fragmented pieces as opposed to a whole entity?”) was rated on a continuous 7-point Likert scale, which was anchored at each point as in the memory fragmentation question.

Participants’ perceived likelihood of proceeding with the case was assessed using a purpose-designed rating. The question (“How likely is it that you will proceed with the case?”) was rated on a 6-point Likert scale anchored at each point from (0) *I will not proceed*; (1) *a small chance*; (2) *somewhat*; (3) *moderately*; (4) *very likely*; (5) *I will definitely proceed*.

RESULTS

The means and standard deviations (together with Pearson’s correlations) for memory fragmentation, peri-traumatic dissociation, account incoherence and likelihood of proceeding are presented in Table 1. The mean level of peri-traumatic dissociation in the sample was fairly high (Zoellner, Alvarez-Conrad, & Foa, 2002). Trauma memories were rated as being moderately fragmented during the police interview.

TABLE 1
Results

Variable (range)	M	SD	1	2	3
1. Peri-traumatic dissociation (0–50)	33.31	10.65	–	–	–
2. Memory fragmentation (0–6)	3.09	2.29	.58**	–	–
3. Account incoherence (0–6)	2.91	2.27	.49*	.54**	–
4. Likelihood of proceeding (0–5)	3.36	2.01	–.60**	–.55**	–.44*

Means, standard deviations, and correlations between trauma-related psychological processes, account incoherence and likelihood of proceeding with legal cases.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Participants reported that the accounts of sexual assault they provided to the police were moderately incoherent, suggesting that they had difficulty providing a consistent account of trauma. Participants were, on average, moderately likely to proceed with their cases in the criminal justice system.

The hypothesised associations between the study variables were examined using Pearson's correlations (see Table 1). As predicted, a significant positive correlation was found between peri-traumatic dissociation and memory fragmentation, consistent with hypothesis 1. Further, a significant positive relationship was identified between fragmented memory and account incoherence, in line with hypothesis 2. Finally, there was a significant negative relationship between account incoherence and likelihood of proceeding, which supported hypothesis 3. This indicated that people who provided the police with a more incoherent account of their sexual assault perceived themselves to be less likely to proceed with their legal case.

DISCUSSION

The study's three hypotheses were supported. First, participants who reported higher levels of peri-traumatic dissociation during sexual assault perceived their trauma memories to be more fragmented during police interview. Second, increased memory fragmentation was associated with participants' viewing themselves to have provided more incoherent accounts of sexual assault to the police. Finally, increased account incoherence was associated with victims' perceiving themselves to be *less* likely to proceed with legal cases. As far as we are aware this is the first study to demonstrate that, contrary to the expectations of the criminal justice system, victims of sexual assault apparently experience genuine difficulty coherently recollecting what happened during trauma. Furthermore, the findings suggest that trauma memory-related processes (peri-traumatic dissociation and memory fragmentation) may play a role in attrition (Office for Criminal Justice Reform, 2006).

The findings indicate that considering trauma memory-related processes may be useful in improving how the criminal justice system deals with sexual assault, and could potentially help to address the high rate of attrition. Assessment of trauma memory-related psychological reactions

may assist the interpretation of evidence provided by victims, particularly with regard to judgements of credibility, and should be integrated into decisions about whether cases should proceed to court.

The study did not assess the mechanisms by which fragmented memory is proposed to impact on account incoherence. We suggest that trauma memory fragmentation will result in victims having difficulty deliberately recalling traumatic events, experiencing intrusive imagery of trauma and engaging in avoidance strategies during police interviews; and these are likely to be particularly marked when people have more symptoms of PTSD (Brewin & Holmes, 2003; Conway & Pleydell-Pearce, 2000). Investigation of victims' experiences of these trauma-related psychological processes during police interview therefore presents a useful direction for future research.

The findings should be considered in light of several limitations. There were significant challenges to recruitment, which led to a modification in the study design. Greater collaboration between academic, health, and criminal justice services seems necessary to ensure progress can be made in addressing attrition of sexual assault cases without jeopardising conviction rates. This exploratory study relied mainly on self-report, single-item measures. There is a lack of psychometrically robust measures for assessing trauma memory and narratives, and developing more valid and reliable measures seems key to making progress in understanding attrition (O'Kearney & Perrott, 2006). Unfortunately, it was not possible to access victim statements or actual case outcomes, and objective assessment of criminal justice outcomes will be important in contributing to the argument that trauma-related processes contribute to attrition. Participants were also at different stages in the legal process, in that some cases were closed while others were in the investigative or judicial phase. In open cases, participants' perception of likelihood of proceeding may have been influenced by asking them to answer the trauma memory fragmentation and account incoherence questions.

In conclusion, to our knowledge this is the first study to demonstrate the impact of trauma memory-related processes on victims' experience of police interviews when reporting sexual assault. These exploratory findings suggest that, paradoxically, typical psychological reactions to trauma actually contribute to the attrition of

sexual assault cases, such that victims who are most affected by sexual assault may be the least likely to proceed with the criminal justice process. We hope this exploratory study will contribute to the growing impetus for addressing attrition, and focus research efforts on considering the role of trauma-related psychological processes in the low conviction rate. The findings suggest that traumatic memory impairs victims' ability to provide coherent accounts of sexual assault and may play a role in the attrition of their legal cases.

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