

Planting False Memories for Childhood Sexual Abuse Only Happens to Emotionally Disturbed People. . . Not Me or My Friends

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SUMMARY

Pezdek et al. (2006) reported that although imagining a plausible event increased people's belief in the event, imagining an implausible event did not. In response, Rubin and Berntsen (2007) conducted a survey and reported that only 17.8% considered it implausible that someone 'with longstanding emotional problems and a need for psychotherapy' could be a victim of childhood sexual abuse and forget the abuse. We replicated but qualified their findings; perceptions of the plausibility of this event for (a) respondents themselves and (b) other people in their cohort were substantially lower than the perceived *general plausibility* reported by Rubin and Berntsen. These findings limit the generalizability of Rubin and Berntsen's results to perceptions of personal plausibility and cohort plausibility, even for individuals indicating that they are likely to seek psychotherapy. Consequently, the risk of inducing false memories in psychotherapy may *not* be a 'substantial danger' as Rubin and Berntsen suggest. Copyright © 2008 John Wiley & Sons, Ltd.

Pezdek, Blandon-Gitlin, Lam, Ellis, and Schooler (2007), Pezdek, Finger, and Hodge (1997), Pezdek and Hodge (1999) and others have reported that false memories are significantly less likely to be suggestively planted for events that are relatively implausible. More recently, Pezdek, Blandon-Gitlin, and Gabbay (2006) reported that although imagining a plausible event can increase people's belief that the event occurred to them, imagining an implausible event is not likely to produce this effect. In this research, the operational definition of an implausible event is one that is perceived as having a low probability of occurrence for individuals in the cohort tested. From this finding it was suggested that much of the cognitive research on false memories may not generalize in planting false memories for childhood sexual abuse, presumably a relatively implausible event for most people and thus for most cohorts. There are many possible contexts in which false memories for childhood sexual abuse might be suggested—from friends, from self-help books, from an over-zealous psychotherapist.

In response to the above-published work, Rubin and Berntsen (2007) focused on the possibility of planting false memories of childhood sexual abuse in the psychotherapy

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context. They further chose to focus on perceptions of the plausibility of forgotten childhood sexual abuse among people who, according to the lay population, had 'longstanding emotional problems and a need for psychotherapy'. That is, they asked a sample of the general population of Denmark how likely they thought it was that a person with 'longstanding emotional problems and a need for psychotherapy' could be a victim of childhood sexual abuse even though he or she was unable to remember the abuse. And, the answer that they got was that only 17.8% of their respondents considered this as an implausible or very implausible event. Based on this finding, they concluded that, 'our results are important in their own right because they document a widespread belief in the general population of a Western Society that an event as memorable as childhood sexual abuse can be forgotten and still have marked effects on current behaviour' (p. 777). They further stated that, 'there is a substantial danger of inducing false memories of childhood sexual abuse through imagination in psychotherapy' (p. 776).

We think that these conclusions—based on the response to one survey question—are premature for two reasons. First, the way Rubin and Bernstein (2007) framed their question may have led to an over-estimation of the 'general plausibility' of recovered memories. For example, we do not know what individuals in the general population consider to be 'long standing emotional problems'. According to the general population that they sampled, it is possible that 'long standing emotional problems' could have implied quite severe neurosis or even psychosis, thus constraining respondents' plausibility estimates to a small proportion of the general population. This is important because perceptions of general plausibility are not likely to affect perceptions of personal plausibility if the general plausibility perceptions are restricted to a cohort with which a particular individual is not self-identified, in this case, people with 'longstanding emotional problems'.

Second, in addition to ask individuals about the perceived plausibility of non-remembered childhood sexual abuse in other people, it is useful to know about the perceived plausibility of such an event in the people *themselves*. Certainly, it is the client's own beliefs about the plausibility of the event being suggested—and not what most people think the client's beliefs are—that affect whether the event is likely to be planted in memory. Using a metaphor, even if most people think that public speaking is highly anxiety-arousing in general, if I do not hold this belief about myself, it is not likely to cause me to avoid public speaking.

With these two concerns in mind, it is important to explore the answers to two additional questions before applying the finding of Rubin and Berntsen to inform the real-world implications of the results of Pezdek et al. (2006). What we need to know is for individuals in the general population, (a) how plausible do they think it is that *they themselves* were a victim of childhood sexual abuse even if they were unable to remember the abuse (i.e. personal plausibility), and (b) how plausible do they think it is that people in their cohort were victims of childhood sexual abuse even if these people were unable to remember the abuse (i.e. cohort plausibility). After all, the operational definition of an implausible event suggested by Pezdek et al. (2007) was 'one that is perceived as having a low probability of occurrence for individuals *in the cohort tested* (p. 764)'. Although Pezdek et al. (2006) suggested that 'childhood sexual abuse is a relatively implausible event for most children' (p. 765), in fact, no data are available regarding people's beliefs about the plausibility of forgetting having been sexually abused in childhood for themselves or for their cohort.

METHOD

Respondents

A sample of 159 individuals (70 females, 89 males) volunteered to participate from occupational education classes at Crafton Hills Community College and Mt. San Antonio Community College. They ranged in age from 18 to 70 years ($M = 26.4$ years; $SD = 9.7$). Although this was a convenience sample rather than a random sample of the population at large, it is not biased in any obvious way. Community college students in California (a) are racially and ethnically diverse, (b) include a large proportion of returning students who are older than traditional college students and (c) are academically restricted only by the State requirement of a minimum C average in High School. No psychology majors or students from psychology classes participated.

Procedure

Participants were contacted in their classes and asked to volunteer to complete the survey then and there and return it to the experimenter. In addition to three questions collecting demographic information (age, gender and major), the respondents answered the four questions which are included in Appendix 1. The first question is the question used by Rubin and Bernstein and was included to test the replicability of their results in our sample. The second question assessed the perceived plausibility of this same event, but for each participant's cohort, defined as 'most people you speak with in the course of a typical month'. The third question assessed the perceived plausibility of this event for each participant himself or herself. The fourth question asked each participant to assess the probability that he or she would seek psychotherapy themselves, at any point in life; we wanted to be able to conditionalize our results on the participants who were relatively more likely to anticipate seeking psychotherapy themselves.

RESULTS

The results are summarized in Appendix 1 in terms of the percentage of responses that resulted in each response category for each question. McNemar tests for differences between correlated proportions, Z tests for differences between independent proportions, and relevant 95% confidence intervals were calculated by using procedures specified by Richard Lowry at Vassar College, <http://faculty.vassar.edu/lowry/vassarstats.html>

The first issue concerns whether we obtained comparable results to those of Rubin and Bernstein for question 1, the one question that was repeated in the two studies. The distribution of responses to question 1 for both studies is included in Appendix 1. Rubin and Berntsen reported that 67% of respondents (79% of those who did not respond 'I don't know') thought that forgotten memory for childhood sexual abuse for a person with longstanding emotional problems and a need for psychotherapy was either plausible or very plausible. In the present study, the comparable percentage was 80% (85% of those who did not respond, 'I don't know'). The proportions obtained in this study were actually significantly higher than those reported by Rubin and Berntsen (comparing 67% versus 80%, $Z = 3.01$, $p < .01$; comparing 79% versus 85%, $Z = 1.68$, $p = .05$). The differences between these two studies could be accounted for by a number of factors including

differences in the sampling method, the nation sampled or the age and gender distribution of respondents. Nonetheless, in both studies, the perceived plausibility that a person with longstanding emotional problems and a need for psychotherapy could have forgotten having been sexually abused in childhood was high.

What about the perceived *personal plausibility* that our respondents themselves could have been a victim of childhood sexual abuse even if they were unable to remember the abuse? This issue is addressed in the responses to question 3 in Appendix 1. The majority of our respondents (65%, CI: 57–72%) perceived that it was highly implausible (53%) or implausible (12%) that they themselves could have been a victim of childhood sexual abuse even if they were unable to remember the abuse. Only 25% (CI: 19–33%) of our respondents thought that this event was plausible (15%) or very plausible (11%). This represents a significant difference (difference = 40%, McNemar, $p < .001$). Most individuals in our sample considered it implausible or highly implausible that they themselves could have had this experience. Clearly, the perceived *personal plausibility* that individuals themselves could have forgotten memory for childhood sexual abuse (25%) is substantially lower than the perceived general plausibility of this same event by the same respondents (80%, CI: 73–86%; difference = 55%, McNemar, $p < .001$).

Question 2 assessed perceived *cohort plausibility*; that is how plausible individuals in the general population think it is that people in their own cohort were victims of childhood sexual abuse even if these people were unable to remember the abuse. The response scale for this question differed from that for questions 1 and 3. This was necessitated by results from pilot subjects. The earlier respondents were not sure which of the people with whom they spoke in the course of a typical month they were to think about in providing one response to represent cohort plausibility. After all, for some of the people in this cohort, the judged event was relatively more plausible than for others. Consequently, the question was reworded such that respondents could provide one response that represented the whole cohort. For respondents in this study, the estimated mean percentage of people in their cohort who could have been a victim of childhood sexual abuse even if he or she was unable to remember the abuse was 32%. The majority of our participants (52%) reported that 30% or less of their cohort could have been victims of childhood sexual abuse even if they were unable to remember the abuse. Only 24% of our participants responded that most of the people in their cohort (i.e. >50% of their cohort) could have had this experience and only 6% of our participants responded that 71% or more of their cohort might have had this experience. If one makes the conservative assumption that a response of 'plausible' to questions 1 or 3 reflects the perception that the probability of occurrence is simply greater than 50%, and a response of 'implausible' reflects the perception that the probability of occurrence is less than 50%, it is clear that the perceived *cohort plausibility* of forgotten memory for childhood sexual abuse is substantially lower than perceived *general plausibility* figures reported in this study as well as in the study by Rubin and Berntsen.

Does the perceived plausibility of having been a victim of childhood sexual abuse and forgotten the abuse differ for individuals who are more or less likely to pursue psychotherapy? To address this question, we examined the responses to question 4, 'How plausible is it that *you*, at any point in your life, might seek psychotherapy?'. We then divided the respondents into those who thought that seeking psychotherapy was relatively less likely (responses of 0–50%) versus those who thought that seeking psychotherapy was relatively more likely (responses of 51–100%). We then compared these two groups, the

seekers compared to the non-seekers, on plausible and implausible responses to question 3,¹ probing personal plausibility.

On question 3, the seekers (61%) were significantly more likely than the non-seekers (13%) to report that it was plausible or very plausible that they themselves could have forgotten memories of childhood sexual abuse (difference = 49%, CI = 32–63%, $Z = 5.95$, $p < .001$). Viewed another way, the seekers (38%) were significantly less likely than the non-seekers (87%) to report that it was implausible or very implausible that they themselves could have forgotten memories of childhood sexual abuse (difference = 49%, CI: 35–66%, $Z = 5.95$, $p < .001$). This is important because the seekers are the individuals who are probably more likely to end up in psychotherapy, and it is here that it has been suggested that there is a risk of inducing false childhood sexual abuse memories.

However, did the 48 individuals who thought that they were more likely to enter psychotherapy at some point in their life respond differently to question 1, regarding general plausibility of forgotten childhood sexual abuse, than question 3, regarding personal plausibility of forgotten childhood sexual abuse? Yes. In response to question 1, seekers were also significantly more likely to think that forgotten memories for childhood sexual abuse were plausible or very plausible (85%, CI: 73%, 94%) rather than implausible or very implausible (15%, CI: 6%, 27%) in a hypothetical other person with longstanding emotional problems and a need for psychotherapy (difference = 71%, McNemar, $p < .001$).² However, even among these individuals who are more likely to seek psychotherapy, their perceptions of the personal plausibility of forgotten memory for childhood sexual abuse for themselves (plausible response = 61%, CI: 47%, 74%) was significantly lower than their perceptions of the general plausibility of this event in a hypothetical other person with longstanding emotional problems and a need for psychotherapy (plausible response = 85%, CI: 73%, 94%; $p < .001$; difference = 24%, McNemar, $p < .001$).

DISCUSSION

We know from the results of Pezdek et al. (1997, 2006, 2007), Pezdek and Hodge (1999) and others that false memories are significantly less likely to be suggestively planted for events that are perceived to be relatively implausible. How does this apply to the probability that a psychotherapist could plant a false memory for childhood sexual abuse? The answer to this question is informed by both the results of Rubin and Bernsten (2007) and the results of the present study; the results of Rubin and Bernsten tell only part of the story.

To the extent that this probability is based on the perceived plausibility of an individual in the general population, that they themselves may have been a victim of childhood sexual abuse and forgotten the abuse, the results of this study suggest that this event is clearly less than a 'substantial danger', as reported by Rubin and Bernsten. The majority of our respondents (65%) perceived that it was implausible or highly implausible that they themselves could have been a victim of childhood sexual abuse even if they were unable to remember the abuse. This is a compelling result in light of the fact that Rubin and Bernsten

¹Excluded from these analyses are 16 participants who responded, 'I do not know' to question 3.

²Excluded from this analysis are four of these participants who responded, 'I don't know' to question 3.

referred to a comparable percentage in their study (67%) as reflecting a 'widespread belief'.

One might argue that it is more relevant to examine the above responses just for individuals who consider it likely that they themselves might at some point in their life seek psychotherapy. In fact, as reported, the personal plausibility of forgotten memories of childhood sexual abuse was higher for individuals who were relatively more likely to seek psychotherapy; 61% reported this event to be plausible or very plausible for themselves. However, these same individuals considered it significantly less plausible that they would have a forgotten memory for childhood sexual abuse than some hypothetical other person with longstanding emotional problems and a need for psychotherapy. This finding is important because it suggests limitations in the generalizability of the results of Rubin and Berntsen, even for people who are likely to seek psychotherapy. Further, it is important to note that our respondents were asked to indicate in question 4 the plausibility that they might seek psychotherapy. They were not asked the more restricted question regarding whether they had 'longstanding emotional problems and a need for psychotherapy'.

The results of Rubin and Berntsen are constrained by the fact that the general population was questioned about the plausibility of forgotten memory for childhood sexual abuse in a hypothetical other population of people with 'long standing emotional problems and a need for psychotherapy'. One interpretation of the difference in results reported in this paper, compared to the results of Rubin and Berntsen, is that individuals in the general population may simply not be very accurate making inferences about the perceived plausibility of any beliefs held by a very different sub-population.

Pezdek (*cf.* Pezdek et al., 1997, 2006, 2007) and Rubin and Berntsen (2007) assume a similar model of how false autobiographical events might become implanted in memory. This model has also been adopted by Mazzoni and colleagues (*cf.* Scoboria, Mazzoni, Kirsch, & Relyea, 2004). According to this model, the probability of implanting a false event in memory is affected by the perceived personal plausibility of the event, and the perceived personal plausibility of the event is affected by the perceived general plausibility of the event. However, perceptions of general plausibility are not likely to affect perceptions of personal plausibility if the general plausibility perceptions are restricted to a cohort with which a particular individual is not self-identified. This is the reason why the operational definition of an implausible event suggested by Pezdek et al. (2007) was 'one that is perceived as having a low probability of occurrence for individuals *in the cohort tested* (p. 764)'. In fact, in the Pezdek et al. (2007) study, plausibility information was conveyed by telling subjects the proportion of people who had provided a particular response from a survey of '1000 college students like you'. Thus, cohort plausibility not general plausibility was manipulated.

Using a metaphor, consider the situation in which individuals in the general population are asked, 'Imagine a person who enjoys being suspended in air at very high elevations. How plausible do you think it is that this person would have taken a hot air balloon ride even if she is unable to remember the ride?' Even if 100% of respondents thought that this was plausible or very plausible, it is unlikely that this would affect a particular individual's perception of the personal plausibility that they themselves had taken a hot air balloon ride unless they enjoy being suspended in air at very high elevations. This is why ratings of cohort plausibility are important to consider.

Respondents of Rubin and Berntsen were asked to estimate a conditional probability. That is, given that a person had longstanding emotional problems and a need for psychotherapy, what is the plausible that this individual was a victim of childhood sexual

abuse even though the person was unable to remember the abuse? Thus, we would expect that the estimates of general plausibility derived from this statement of conditional probability would be more likely to affect personal plausibility for individuals who 'fit' the condition of having had longstanding emotional problems and a need for psychotherapy themselves. Rubin and Berntsen concluded that, 'our results are important in their own right because they document a widespread belief in the general population of a Western Society that an event as memorable as childhood sexual abuse can be forgotten and still have marked effects on current behaviour' (p. 777). For accuracy, we suggest that this conclusion be conditionalized by adding to the end of this sentence, '... for a person with longstanding emotional problems and a need for psychotherapy'.

There are caveats to consider. First, the obtained pattern of results may reflect an order effect in that the four questions were always presented in the same order, and having answered the first question regarding 'people with longstanding emotional problems and a need for psychotherapy', people may have inferred that their ratings should be successively less for each of the subsequent questions. Second, as we mentioned previously (Pezdek et al., 2006), certainly the types of situations that might arise in psychotherapy are likely to be significantly more intensive than those in our experiments, and thus, more likely to impact a change in memory. Nonetheless, the results of this study suggest that among individuals in the general population, the group assessed by Rubin and Berntsen, it is not a widespread belief (using Rubin and Berntsen's terminology) that they themselves and others in their cohort could have been victims of childhood sexual abuse and forgotten the abuse.

ACKNOWLEDGEMENTS

We are grateful to Susanne Pastuschek at Crafton Hills Community College for her assistance in collecting some of the data for this study. Kathy Pezdek, in the Department of Psychology at Claremont Graduate University, can be contacted by email at kathy.pezdek@cgu.edu

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APPENDIX 1

The Five Survey Questions with the Percentage of Responses in Each Response Category Indicated and the Comparable Results of Rubin and Bernsten (2007) Provided for Question 1.

Instructions: We are interested in whether sexual abuse experienced in childhood may influence a person's adult life. There is not a correct or incorrect answer to any question. It is your personal opinion that is important.

1. Imagine a person with longstanding emotional problems and a need for psychotherapy. How plausible do you think it is that this person was a victim of childhood sexual abuse, even though the person is unable to remember the abuse? Check one box below.

Results from Rubin and Bernsten (2007):

Very implausible	Implausible	Plausible	Very plausible	I do not know
5.1%	12.7%	54.7%	12.7%	14.7%

Results from this study:

Very implausible	Implausible	Plausible	Very plausible	I do not know
5.0%	8.8%	49.7%	30.2%	6.3%

2. Consider the cohort of 'most people you speak with in the course of a typical month'. What proportion of *these people* do you think could have been victims of childhood sexual abuse, even if they are unable to remember the abuse? Check one box below.

0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
20.1%	19.5%	12.6%	13.2%	10.7%	8.2%	10.1%	3.1%	1.9%	.6%

3. How plausible do you think it is that *you yourself* could have been a victim of childhood sexual abuse, even if you were unable to remember the abuse? Check one box below.

Very implausible	Implausible	Plausible	Very plausible	I do not know
52.8%	12.0%	14.5%	10.7%	10.1%

4. How plausible is it that *you*, at any point in your life, might seek psychotherapy?

0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
33.6%	18.2%	9.1%	4.2%	4.2%	7.0%	3.5%	4.2%	6.3%	9.8%