Self-Reported Memory for Abuse Depends Upon Victim-Perpetrator Relationship

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ABSTRACT. We present preliminary results from the Betrayal Trauma Inventory (BTI) testing predictions from betrayal trauma theory (Freyd, 1994, 1996, in press) about the relationship between amnesia and betrayal by a caregiver. The BTI assesses trauma history using behaviorally defined events in the domains of sexual, physical, and emotional childhood abuse, as well as other lifetime traumatic events. When participants endorse an abuse experience, follow-up questions assess a variety of factors including memory impairment and perpetrator relationship. Preliminary results support our prediction that abuse perpetrated by a caregiver is related to less persistent memories of abuse. This relationship is significant for sexual and

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physical abuse. Regression analyses revealed that age was not a significant predictor of memory impairment and that duration of abuse could not account for the findings.

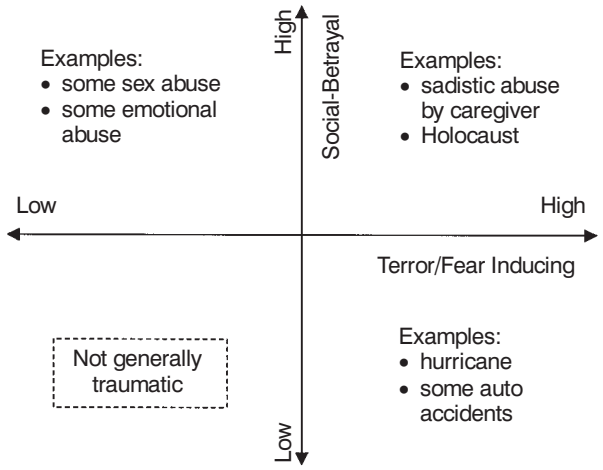
KEYWORDS. Memory, amnesia, childhood abuse, betrayal trauma

Traumatic experiences involving a betrayal of trust, particularly childhood abuse, can cause severe suffering, impair daily functioning, increase risk of further victimization and perpetration of abuse, and create diverse mental health and societal problems. A common psychological consequence of interpersonal violence is disruption to cognitive processing, especially memory–yet this common psychological reaction is poorly understood. Betrayal trauma theory (Freyd, 1994, 1996) offers a theoretical perspective for understanding the psychological processes that underlie impaired memory for abuse. Analysis of evolutionary pressures and developmental needs suggests that victims of abuse may remain unaware of the abuse, not to reduce suffering, but rather to maintain an attachment with a figure vital to survival, development, and thriving (Freyd, 1994, 1996; DePrince & Freyd, 1999; Freyd & DePrince, in press).

According to betrayal trauma theory (Freyd, 1999; in press) traumas leading to psychic disorders arise from two distinct dimensions of harm: life-threat and social-betrayal (see Figure 1). From this viewpoint, the symptom cluster known as post-traumatic stress disorder may better be understood as arising from two conceptually independent dimensions of trauma. The dimension of life-threat may be most salient for symptoms of anxiety, hyperarousal, and intrusive memories. The dimension of social-betrayal may be primary for symptoms of dissociation, numbness, and constricted or abusive relationships. High levels of both life-threat and social-betrayal characterize many of the most severe traumas; with both dimensions present we expect both classes of symptoms.

Betrayal trauma theory emphasizes the nature of the relationship between the victim and perpetrator (particularly whether or not the perpetrator is a caregiver) as highly relevant to whether forgetting is adaptive. Ideally this would be tested by gathering detailed information about that relationship and the degree of dependency. To date, however, few data sets have included both this information in detail, and whether the abuse has been forgotten. The closest proxy to high dependence in the relationship in published studies available appears to be whether the abuse was perpetrated by a relative. Freyd (1996) re-analyzed a number of data sets, including Feldman-Summers and Pope (1994), Williams (1994, 1995), and Cameron (1993), focusing on the relationship between amnesia and whether

FIGURE 1. A Two-Dimensional Model of Trauma. Figure Copyright Jennifer J. Freyd, 1996. Reprinted with permission.



the abuse was incestuous. In most cases this analysis indicated that memories for incest were more likely to be lost and recovered than were memories for other forms of abuse (see Freyd, 1996).

In this report we present preliminary results from our investigations into the motivational factors hypothesized to underlie the adaptiveness of forgetting abuse by testing predictions about the relationship between amnesia and betrayal by a caregiver. Evaluating experiences of betrayal with detailed analyses of the degree of dependency in the relationship is critical. We predict that among those who experienced childhood abuse, amnesia will be greater when the abuser is a trusted caregiver. The abuser/victim relationship and the persistence of memory for abuse will be measured using the BTI.

The Betrayal Trauma Inventory (BTI) is a measure under development in our laboratory. The BTI assesses physical, emotional, and sexual abuse in childhood and some adulthood traumas. It consists of many behaviorally defined events (e.g., "Before you were the age of 16, someone held your head under water or tried to drown you"). If a participant indicates "yes" to the event, he or she is asked to answer several follow-up questions. There are many factors probed in the follow-up questions, including age, relationship, severity of injuries, and memory for the event. One question assessed caretaker status: "Was the person responsible for caring for you (for example providing you with food or shelter)?"

We also will look at the impact of age of abuse and the role of abuse duration. If abuse occurs at a young age, forgetting may be expected due to "childhood amnesia." However, age of abuse is likely to be correlated with caretaking status of the

perpetrator. We predict that while age predicts forgetting, perpetrator status will have a larger effect.

Terr (1991) observed that repeated childhood traumas are more likely to produce denial, forgetting, and dissociation than are isolated events. In Terr's analysis, such traumas are more likely to be forgotten because repetition affords the opportunity to develop defenses. We favor an alternative explanation, that people forget repeated traumas because the traumas that are repeated are more likely to involve betrayal by a caregiver. We predict, based on Terr's work, that repeated traumas will be associated with greater amnesia, but that perpetrator status will have a larger effect than abuse duration.

METHOD

Participants

Two hundred and two students enrolled in an Introductory Psychology class at the University of Oregon participated for course credit. The mean age was 20 years and 121 participants were female (demographic data were missing for one participant). Participants were compensated through partial fulfillment of an Introductory Psychology class research requirement.

Procedure

Participants were tested in groups of 20-40. Participants were seated in a large lecture hall with adequate space to insure privacy. An experimenter was present during the survey period to answer questions. Participants were given one hour to complete the survey.

Instrument

The Betrayal Trauma Inventory (BTI) was developed by building upon existing measures, particularly the Abuse Perpetration Inventory, which has been shown to have good validity (API; Lisak, Conklin, Hopper, Miller, Altschuler, & Smith, 2000). The BTI includes four sections (only the first three sections are relevant to the current report). Within each section, the participant is asked to complete follow-up questions for any event endorsed. Follow-up questions elicit information such as age at time of event, frequency and duration, feelings about the experience past and present, when and how many times the event has been discussed, age and relationship to perpetrator (in particular, whether or not the perpetrator was a caregiver), memory persistence for the event, and use of alcohol during event. The Physical Punishment History (first section) contains 15 questions regarding physically abusive acts, ranging from being slapped to being attacked with a knife or gun. Follow-up questions also elicit information on level

of injury. The Sexual Experiences History (second section) contains 20 questions regarding sexually abusive experiences. Follow-up questions also include a checklist of levels of coercion used by the perpetrator. The Emotional Punishment History (third section) includes 12 items that relate to neglect and psychological abuse. The items used in the Physical Punishment and Sexual History Scales are based on those from Lisak's API. (The Perpetration History Section of the API was not incorporated into the BTI.) The items used in the Emotional Punishment History section of the BTI are new items, written for the BTI. Most of the follow-up questions for the items for all sections of the BTI are new for the BTI.

RESULTS

Prior to data analysis, responses to sexual abuse items were examined to remove events that might have been normative sexual experiences. Any event for which the sexual partner was less than five years older and for which there was no force reported were deleted from the sample. Within the physical abuse category, responses to the item "Before you were the age of 16, someone slapped you hard with an open hand on your bottom" were deleted.

Of the 202 participants, 135 reported one or more instances of emotional abuse, 155 reported one or more instances of physical abuse and 78 reported one or more instances of sexual abuse. For each abuse item endorsed, the items were classified as caretaker or non-caretaker abuse based on responses to the item "Was the person responsible for caring for you (for example providing you with food or shelter)?". If participants did not respond to the caretaker question, data for that event were not included in the analysis. Sexual, physical, and emotional abuse were examined separately. If participants reported caretaker abuse, they were assigned a 1 for caretaker status. Participants who reported both caretaker and non-caretaker abuse were assigned 1, but only their responses related to caretaker abuse were included in the analyses to maintain the between groups design for analysis. Participants who reported only non-caretaker abuse received a 0 for caretaker status.

Within the three types of abuse (sexual, physical, and emotional), averages were computed across items (i.e., across the specific behaviors) for the age at which the abuse began, the duration of the abuse and the amount of memory impairment. Duration scores (1-4) and memory impairment scores (0-1) were calculated based on responses to follow-up questions. For duration, participants were asked to indicate "Over how long a period did it happen" for any event endorsed. Response options included days, weeks, months, and years; values of one, two, three and four were assigned respectively. A duration score was calculated by taking the average of duration responses. To determine the average memory impairment, participants received a 1 for each abuse item in which they

indicated any memory impairment and a 0 for each abuse item in which they indicated no memory impairment; thus, average memory impairment scores ranged from zero to one (see Table 1 for averages).

Pearson correlations were computed among the independent and dependent variables (see Table 2 and Figure 2). Within sexual and physical abuse, caretaker status was significantly related to average memory impairment in the predicted direction; higher levels of memory impairment were associated with caretaker abuse.

To control for the possible effects of age at first abuse and duration of abuse on memory impairment, three simultaneous multiple regression analyses were conducted (one for each type of abuse) with age, duration, and caretaker status as predictors of memory impairment. These results are presented in Table 3. For

TABLE 1. Descriptive Statistics for Independent and Dependent Variables.

Sexual Abuse				
		N	Mean	Std. Deviation
Memory impairment	Non-caretaker	64	.07	.22
	Caretaker	10	.40	.52
Age	Non-caretaker	63	11.85	4.16
	Caretaker	10	6.95	3.00
Abuse duration	Non-caretaker	53	2.37	1.10
	Caretaker	10	2.68	1.49
Physical Abuse				
		N	Mean	Std. Deviation
Memory impairment	Non-caretaker	61	.03	.16
	Caretaker	93	.16	.34
Age	Non-caretaker	59	11.53	2.51
	Caretaker	88	9.08	3.46
Abuse duration	Non-caretaker	46	1.95	1.11
	Caretaker	87	3.03	1.15
Emotional Abuse				
		N	Mean	Std. Deviation
Memory impairment	Non-caretaker	49	.10	.29
	Caretaker	71	.13	.31
Age	Non-caretaker	47	10.55	3.55
	Caretaker	66	9.90	4.01
Abuse duration	Non-caretaker	47	2.33	1.16
	Caretaker	70	3.16	1.08

Memory impairment could range from 0 (no impairment) to 1 (partial or complete impairment on every BTI item endorsed). Age = age in years at first abuse incident. Abuse duration = duration of abuse (1 = days, 2 = weeks, 3 = months, 4 = years). For all three, numbers represent average scores across BTI items representing abuse of this type.

TABLE 2. Correlations Among Independent and Dependent Variables.

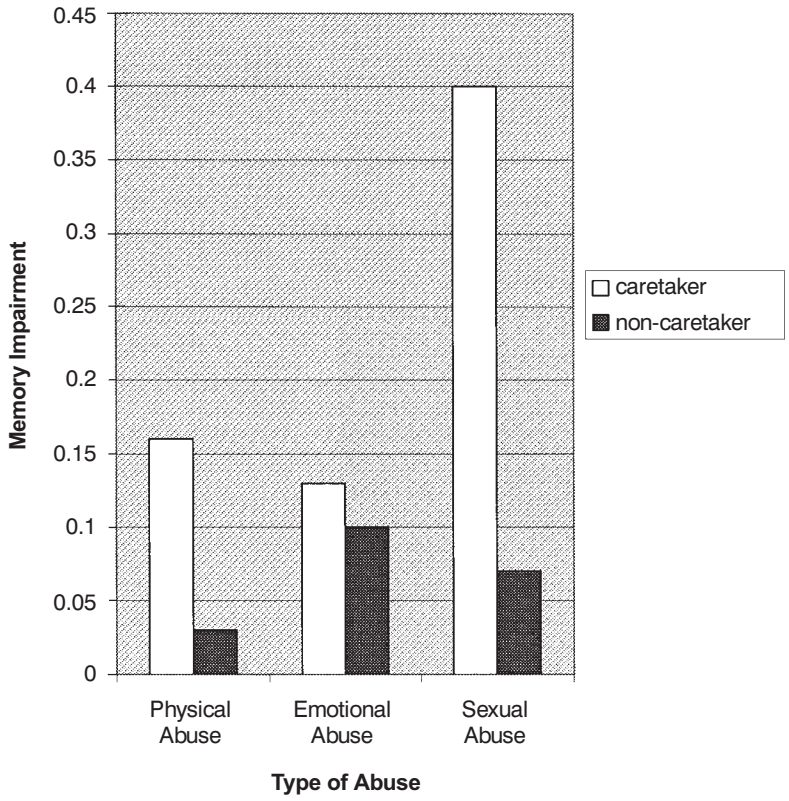
Sexual Abuse			
	Caretaker	Mem. Impmt.	Age
Caretaker	–		
Mem. Impmt.	.387***		
Age	−.391***	−.209^	
Duration	.100	.046	−.340**
Physical Abuse			
	Abuse Type	Mem. Impmt.	Age
Abuse Type	–		
Mem. Impmt.	.218**		
Age	−.362***	−.085	
Duration	.414***	.102	−.400***
Emotional Abuse			
	Abuse Type	Mem. Impmt.	Age
Abuse Type	–		
Mem. Impmt.	.040		
Age	−.084	−.187*	
Duration	.345***	.097	−.230*

^p < .10, *p < .05, **p < .01, ***p < .001
Caretaker = 1 if abuse was perpetrated by a caretaker, 0 otherwise. Memory impairment (Mem Impmt) could range from 0 (no impairment) to 1 (partial or complete impairment on every BTI item endorsed). Age = age in years at first abuse incident. Duration = duration of abuse (1 = days, 2 = weeks, 3 = months, 4 = years). For all three, numbers represent average scores across BTI items representing abuse of this type.

sexual and physical abuse, the effect of caretaker status was significant, even when age and duration of abuse were controlled. Abuse perpetrated by caretakers was associated with greater memory impairment. For emotional abuse, however, there was no effect of caretaker status. There was a marginally significant effect of abuse duration, with more memory impairment associated with abuse of longer duration.

Most participants reported no memory impairment. Only a few (11 for sexual abuse, 23 for physical abuse and 18 for emotional abuse) reported any amount of memory impairment. Thus, distributions for the three memory impairment variables were positively skewed, as were the distributions of the residuals from the multiple regression analyses presented in Table 3. We therefore ran additional regression analyses in which we first took the natural logarithms of the memory impairment variables, and then used the transformed variables as the outcomes to be predicted. In all three analyses, results were consistent with results obtained from the multiple regression analyses with the untransformed memory impairment variables. That is, memory impairment was more likely when physical or sexual

FIGURE 2. Average Memory Impairment for Caretaker and Non-Caretaker Sexual, Physical, and Emotional Abuse.



Memory impairment scores represent averge impairment across BTI items representing abuse of each type. Scores could range from 0.0 (for no impairment) to 1.0 (for partial or complete impairment on every BTI item endorsed).

abuse was perpetrated by a caretaker, even after controlling for possible effects of age and duration. For sexual abuse, age and duration did not predict memory impairment (both p's > .15), but caretaker status did: $\beta = .257$, $t(1,58) = 1.88$, $p = .06$. Similarly, age and duration were not significant predictors of memory impairment for physical abuse (both p's > .45) but caretaker status was: $\beta = .219$, $t(1,124) = 2.25$, $p = .03$. Caretaker status was unrelated to memory impairment for emotional abuse: $\beta = -.007$, $t(1,106) = -.065$, $p = .95$.

TABLE 3. Multiple Regression Analyses Predicting Memory Impairment for Abuse.

Sexual Abuse: R^2 = .246, F(3,58) = 6.31, p = .001			
Variable	B	SE B	Beta
Caretaker status	.302	.097	.401**
Age at first abuse	−.011	.009	−.171
Abuse duration	−.012	.029	−.048
Physical Abuse: R^2 = .058, F(3,124) = 2.55, p = .059			
Variable	B	SE B	Beta
Caretaker status	.142	.060	.231*
Age at first abuse	.001	.009	.009
Abuse duration	.006	.024	.027
Emotional Abuse: R^2 = .039, F(3,106) = 1.45, p = .23			
Variable	B	SE B	Beta
Caretaker status	−.015	.063	−.025
Age at first abuse	−.013	.008	−.173^
Abuse duration	.018	.027	.071

^ p < .10 *p < .05 **p < .01

Memory impairment is a continuous variable ranging from 0 (no impairment) to 1 (partial or complete impairment on every BTI item endorsed). Caretaker = 1 if abuse was perpetrated by a caretaker, 0 otherwise. Age = average age in years (across all BTI items for abuse of that type) of first abuse incident. Duration = average duration (across all BTI items for abuse of that type) of abuse.

DISCUSSION

Results support our prediction that the greater the victim's dependence on the perpetrator, the more likely that memory for the abuse will be impaired or disrupted in cases of physical and sexual abuse. Multiple regression analyses revealed that age was not a significant predictor of memory impairment, while caretaker status was. These findings highlight the importance of obtaining information about specific aspects of the abuse experience, including details about the relationship between the victim and the perpetrator.

The items and content of the BTI overlap substantially with those of the API, which has been validated for use in research settings (Lisak et al., 2000). Because of this overlap, we can have some confidence in the construct validity of the BTI, in spite of its recent development. However, validation of the BTI is also desirable because of changes from the original API, including a new section on emotional abuse and new follow-up questions.

Results from the present study began that validation process. Meaningful relationships between perpetrator status and memory, as predicted by Betrayal Trauma theory, were found using the BTI as a measure of childhood abuse. In ad-

dition, expected intercorrelations among various aspects of abusive experiences were found. For example, caretaker abuse generally began at an earlier age than non-caretaker abuse and continued for a longer duration–a finding that makes sense, given that caretakers generally have greater access to their victims than do non-caretakers. Age of first abuse and duration of abuse were negatively correlated for all three types of abuse. Again, this finding makes sense because abuse of very long duration is simply not possible if it begins when the child is relatively old. Further studies using the BTI are in process and will provide additional information about validity.

The ideal form of validation of self-reports of traumatic experiences is independent corroboration of the events recalled. In this study, participants retrospectively recalled both abuse experiences and previous memory impairment, and external corroboration for these events was not obtained. It is therefore possible that some participants reported abuse that did not actually occur and (more likely, in our view) that some participants reported they had never been abused when, in fact, they had been. Future studies with either a prospective design and/or with independent corroboration of abuse would be useful to conduct; our results suggest that in such studies, it will be important to ask detailed questions about the caretaker status of the perpetrator. Because there should be less noise in data from prospective and corroborated samples, we would expect to see an even stronger effect of caretaker status on memory impairment in studies using such samples. Note, however, that although studies with corroborated samples minimize false positives (falsely remembering abuse that never actually occurred) they are less able to catch false negatives (believing that no abuse occurred, when in fact it did), especially false negatives involving abuse by a caretaker. This is because caretakers generally have a great deal of control over the day-to-day lives of their children; this control may enable them to keep the abuse completely secret, making corroboration literally impossible. Note, too, that the very action that makes corroboration possible (i.e., that someone beyond the victim-perpetrator pair acknowledges the abuse) may have an impact on later memory for the event. Thus, while prospective studies and studies with independent corroboration of abuse are clearly important to conduct, we do not believe that they are a complete panacea for all the difficulties inherent in the study of memory for traumatic events.

Our results have implications for several current controversies concerning memory for abuse. The argument that all childhood events (including childhood sexual abuse) may be forgotten at similar rates (Read & Lindsay, 2000) was not supported by our data. There was significantly less impairment for memory of abuse by a non-caretaker than for abuse by a caretaker. Terr's (1991) hypothesis that repetition is the direct cause of memory impairment for trauma received was not supported. It may be that caretaker status and abuse duration are both important factors leading to denial, forgetting and dissociation. These two factors may

interact with each other and with the type of abusive acts in interesting and complicated ways to affect cognitive coping strategies. Future work will be aimed at disentangling some of these complexities.

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