

Delusions and Symptom-Consistent Violence

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Objective: The study examined the extent to which delusions motivate violent behavior among psychiatric patients with a history of delusions. **Methods:** Fifty-four psychiatric inpatients identified by hospital staff as having delusions were interviewed about their history of delusions and incidents of violence that were concurrent with delusions. Raters used a 5-point scale to estimate the degree to which each reported incident of violence was motivated by a concurrent delusion. A second set of raters used a 5-point scale to estimate the severity of the violent incidents. **Results:** Raters' mean estimate indicated overall that violent incidents were probably not motivated by concurrent delusions. However, a significant minority of violent subjects (40 percent) reported at least one violent incident that was judged to be probably or definitely motivated by a concurrent delusion. A smaller subgroup of violent subjects (17.5 percent) reported at least one incident that was judged to be both extremely violent and definitely motivated by a concurrent delusion. **Conclusions:** Delusional motivation of violence is rare, but a moderate risk exists that delusions will motivate violence at some time during the course of a violent patient's illness. (*Psychiatric Services* 49:218-220, 1998)

A consensus appears to be developing that a moderate but reliable association exists between severe mental illness and violence (1,2). Although the nature of this association has not been firmly established, evidence exists for even more specific associations between psychosis and violence (3) and between psychosis and so-called "symptom-consistent" violence (4).

Junginger (4) argued that the violence committed by persons with psychotic symptoms is rarely random, but rather is consistent with the content and themes of concurrent delusions and hallucinations. An obvious example of symptom-consistent vio-

lence is compliance with command hallucinations. The potentially useful characteristic of symptom-consistent violence is that knowledge of the content and themes of a person's psychotic experience may allow some prediction of the form and target of subsequent violence. For example, a person who experiences the hallucinated command to "shoot your neighbor" could under some circumstances be at risk of actually shooting the neighbor (4).

Unlike the content of a command hallucination, the content or theme of a delusion often only implies or hints at a course of action. Persons do not comply with a delusion as much as

they behave in a manner consistent with its content or theme. From a methodological standpoint, determining compliance with a command hallucination is fairly straightforward—some measure is taken of the extent to which the person complied with the specific details of the command (5). On the other hand, reliably inferring that a person's violent behavior was motivated by a delusion is considerably more difficult (6).

To date, no study has investigated the specific influence of delusions on violence. This oversight seems particularly glaring in light of the highly suggestive findings of several studies and case reports (7-10). The challenge of this type of research is to develop a reliable method of indicating the extent to which delusions motivate violent behavior. The study reported here was a preliminary effort toward that goal.

Methods

Subjects

Fifty-four subjects were recruited from three short-term psychiatric wards in hospitals in southern Louisiana within the previous five years. Patients with delusions were initially identified by ward personnel and then were asked by researchers to participate in "a study of the experiences and behaviors of psychiatric patients." Written informed consent was obtained from each subject after the study procedure was fully explained.

The 54 subjects represented about 80 percent of the patients we approached. No attempt was made to formally characterize patients who refused to participate in the study. However, patients who refused were

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often described by ward personnel as "uncooperative," and several appeared to be suffering from persecutory delusions.

The mean \pm SD age of the subjects was 38.7 ± 14 years, with a range from 20 to 88 years. They had a mean of 11.4 ± 3 years of education, with a range from five to 18 years. The majority of the subjects were male (32 subjects, or 59.3 percent) and white (35 subjects, or 64.8 percent). Just over half—28 subjects, or 51.9 percent—were assigned a diagnosis of schizophrenia by the researchers based on information obtained using the Structured Clinical Interview for DSM-III-R—Patient Edition (SCID-P) (11). Subjects had a mean \pm SD of 8.5 ± 7.3 psychiatric hospitalizations, with a range from one to 28; the median number of hospitalizations was six. The hospitalization data indicated that the sample was composed of patients with a chronic illness course.

Procedure

One of the authors (JL) and trained research assistants assessed subjects' history of delusional experience in interviews using questions about delusions from the SCID-P, the Diagnostic Interview Schedule (DIS) (12), and the Schedule for Affective Disorders and Schizophrenia (SADS) (13). Each question provided an example of a delusion with specific content and asked the subject whether he or she had ever experienced the delusion. A subject who responded "yes" to any of the questions was asked to describe the content of the delusion in more detail and was asked to approximate as closely as possible when it occurred and how long it lasted.

The interviewer recorded the subject's descriptions of delusions in written, third-person narratives for subsequent analysis. The narratives were devoid of any reference to the subject's age, sex, or race—for example, "Patient believes that his or her family is trying to kill him or her by poisoning his or her food." The narratives varied in length, mostly due to the complexities of the delusion, but generally were between 50 and 100 words.

Each subject's history of violence was assessed with a series of questions about specific types of violent behav-

ior since age 18. The questions addressed behavior that resulted in injury regardless of how subjects perceived their intention at the time of the incident and also behavior that was intended to cause injury regardless of the actual outcome. As with the delusions, subjects were asked to approximate the time frame of the incidents as closely as possible.

The interviewer prepared a written description of each reported incident of violence that coincided with any of the delusions previously identified by the subject. As with the narratives about delusions, the descriptions of violent incidents lacked any reference to the subject's age, sex, or race.

Information on delusional motivation of violence was obtained in two ways. Subjects first were asked to explain the motivation behind each reported incident of violence that coincided with a delusion. Then they were asked specifically whether each reported incident of violence was motivated by any of the types of delusions assessed in the questions taken from the SCID-P, the DIS, and the SADS—for example, "When you attacked your father in the kitchen that evening, was it because you believed that someone was going out of the way to give you a hard time, or trying to hurt you?"

Delusional motivation could be inferred when subjects referred to a delusion while explaining the motivation behind an incident of violence, or while explaining affirmative answers in response to the follow-up questions about delusions. More rarely, delusional motivation could be inferred in the absence of a delusional explanation when the violent behavior seemed consistent with a concurrent delusion. For example, one subject offered no explanation for throwing dishes and other items at her parents, but described in some detail the concurrent delusion that her father was an alien and her mother was trying to poison her.

The accounts of subjects' reported delusions, of violence that coincided with the delusions, and of the subjects' reported motivation for the violence were read by two raters (JJ and LMc) who had not been involved in the interview process. The raters received no special training in evaluating the written accounts. The raters used a 5-

point scale to estimate the probability that each reported incident of violence was motivated by a concurrent delusion. Scale anchor points were 0, definitely not motivated; 1, probably not; 2, possibly; 3, probably; and 4, definitely. A rating of 0 was assigned to delusions that were not accompanied by violence, which is important to remember in interpreting the analyses that follow.

A second group of two raters—doctoral students in clinical psychology who had not participated in interviewing subjects—rated the level of violence in each reported incident of violence that coincided with a delusion. Working independently, they used a 5-point scale to estimate the severity of violence of each incident. The scale ranged from 0, not at all harmful or destructive, to 4, extremely harmful or destructive; the midpoint of 2 represented a moderate level of severity.

Results

Interrater reliability was assessed using intraclass correlation coefficients (ICCs) (14). For estimates of delusional motivation among subjects who reported incidents of violence coinciding with a delusion, ICCs were .81 for the ratings by single raters and .89 for the mean ratings of the two raters. The ICCs for estimates of severity of violent incidents were .72 for the ratings by single raters and .84 for the mean ratings of the two raters. The ICCs indicated good reliability for both measures.

The 54 subjects described 117 delusions in response to the questions taken from the SCID-P, the DIS, and the SADS. Subjects' mean \pm SD number of delusions was 2.17 ± 1.49 , with a range from one to eight delusions.

In response to the questions about violence, subjects reported 103 incidents since the age of 18 that coincided with a delusion (mean \pm SD = 1.91 ± 1.94 per subject, with a range from zero to nine). Forty subjects, or 74.1 percent, reported at least one incident of violence that coincided with a delusion. Interestingly, nine subjects, or 16.7 percent, accounted for almost half (46.6 percent) of the incidents.

Most of the violent incidents occurred within the previous two or three years. However, a few subjects

described incidents that had occurred as many as ten years ago. The mean level of violence estimated by the raters for the 103 incidents was $2.9 \pm .67$, indicating that the incidents were serious. Other sources of information such as hospital charts were used to verify all but a few reports of the incidents that were judged to be extremely harmful or destructive.

The data on delusional motivation can be viewed from several perspectives. The first perspective focused on the two raters' estimates of delusional motivation for all 54 subjects, all 117 reported delusions, and all 103 reported incidents of violence. The mean \pm SD estimate of delusional motivation for all subjects was $1.04 \pm .94$ (95 percent confidence interval [CI] = .78 to 1.30). The mean estimate suggests that overall the violence was probably not motivated by concurrent delusions and thus that delusions generally exerted little direct influence on violence.

The second perspective considered the effect of delusions on violence among the 40 subjects who reported incidents of violence. The mean \pm SD rating of delusional motivation for this group was $1.40 \pm .82$ (95 percent CI = 1.14 to 1.67). This mean estimate represents the degree to which violence, when it occurred, was motivated by concurrent delusions. Although delusional motivation was more evident in this subgroup of violent subjects than in the overall sample, the mean probability was closest to 1, indicating that violence in this subgroup was probably not motivated by concurrent delusions.

The two perspectives discussed above provide a glimpse of the mean influence of delusions on violence, "mean" in the sense that each subject's delusions were included in the analysis. They included all delusions reported by a subject, regardless of whether they were associated with violence. Thus a delusion that was not accompanied by violence or that had no apparent influence on concurrent violence was given the same weight as one that may have strongly motivated violent behavior.

For another perspective on these data, we considered the incidents with the highest rating of delusional

motivation for each of the 40 violent subjects. This perspective provided information on the extent to which individual delusions can motivate violent behavior.

The mean \pm SD of the highest estimate of delusional motivation for each violent subject was 2.3 ± 1.22 (95 percent CI = 1.91 to 2.69). This mean represents the risk that violence would be motivated by delusions at least once during the course of a violent subject's illness. The raters' estimate indicated that at least one incident of a subject's violent behavior was more than possibly motivated by a concurrent delusion. The mean \pm SD level of violence for these incidents was $3.06 \pm .86$, indicating that the incidents were serious. Sixteen of the 40 violent subjects, or 40 percent, reported at least one incident of violent behavior that was judged to be either probably or definitely motivated by a concurrent delusion.

The final perspective examined estimates of delusional motivation for the incidents rated as having the highest level of violence for each of the 40 violent subjects. The purpose was to determine whether violent subjects' most violent behavior was motivated by delusions. The mean \pm SD rating of 2.1 ± 1.26 (95 percent CI = 1.70 to 2.50) indicated that delusional motivation of these incidents was a possibility. In fact, seven violent subjects, or 17.5 percent, reported at least one incident that was judged to be both extremely violent and definitely motivated by a concurrent delusion.

Discussion and conclusions

Do delusions motivate violence? It depends on the perspective. The study findings support the conclusion that delusional motivation of violence is rare. The mean influence of delusions on violent behavior appeared to be slight, even for chronically ill, violent subjects.

However, we found evidence for a moderate risk that delusions would motivate violence at some time during the course of a violent subject's illness. A significant minority of the violent subjects in the study (40 percent) reported at least one incident of violence that had at least probable delusional motivation. Perhaps even more unsettling, a smaller subgroup of violent

subjects (17.5 percent) reported that they had committed at least one act of extreme violence that had definite indications of delusional motivation.

Given the apparent reality of symptom-consistent violence for a subgroup of psychotic persons, the challenge now is to identify those persons who may be at risk for acting violently on their delusions. ♦

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