



Dr. Scott: Which psychotic symptoms might predict aggressive behavior?

Evaluating psychotic patients' risk of violence:

A PRACTICAL GUIDE

Investigate persecutory delusions and command hallucinations

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When evaluating a patient's risk of violence, the presence of psychosis is a crucial concern. Douglas et al¹ found that psychosis was the most important predictor of violent behavior in an analysis of 204 studies examining the relationship between psychopathology and aggression. Clinicians need to be familiar with aspects of persecutory delusions and command auditory hallucinations that are associated with an increased risk of aggression because accurately assessing patients who are experiencing these 2 symptoms is an important part of a comprehensive violence risk assessment.

This article highlights the importance of investigating persecutory delusions and command auditory hallucinations when evaluating a psychotic patient's risk for violence. We provide specific questions to ask to help gauge risk associated with these 2 symptoms.

Evaluating persecutory delusions

Do persecutory delusions increase the risk that a person will behave violently? Research examining delusions' contribution to violent behavior does not provide a clear answer. Earlier studies suggested that persecutory delusions were associated with an increased risk of aggression.² Delusions noted to increase the risk of violence were characterized by threat/control-override (TCO) symptoms. TCO symptoms are beliefs that one is being threatened (eg, being followed or poisoned) or is losing control to an external source (eg, one's mind is dominated by forces beyond his or her control).³ Similarly, using data from the Epidemiologic Catchment Area surveys, Swanson et al⁴ found that patients who reported TCO symptoms were approximately twice as



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In 1 study, threat symptoms—but not control-override symptoms—made a significant contribution to aggressive behavior

Table 1

Evaluating persecutory delusions: 10 questions

1. Who or what do you believe wants to harm you?
2. How is this person attempting to harm you? (Ask about specific threat/control-override beliefs)
3. How certain are you that this is happening?
4. Is there anything that could convince you that this isn't true?
5. How does your belief make you feel (eg, unhappy, frightened, anxious, or angry)?
6. Have you thought about any actions to take as a result of these beliefs? If so, what?
7. Have you taken any action as a result of your beliefs? If so, what specific actions?
8. Has your concern about being harmed stopped you from doing any action that you would normally do? Have you changed your routine in any way?
9. How much time do you spend thinking about this each day?
10. In what ways have these beliefs impacted your life?

likely to engage in assaultive behavior compared with patients with other psychotic symptoms.

In contrast, the MacArthur Study of Mental Disorder and Violence^{5,6} showed that the presence of delusions did not predict higher rates of violence among recently discharged psychiatric patients. In particular, researchers did not find a relationship between the presence of TCO delusions and violent behavior. In a study comparing male criminal offenders with schizophrenia found not guilty by reason of insanity with matched non-offending schizophrenia patients, Stompe et al⁷ found no significant association between TCO symptoms and severity of violent behavior; prevalence of TCO symptoms did not differ between the 2 groups. However, nondelusional suspiciousness—such as misperceiving others' behavior as indicating hostile intent—was associated with subsequent violence.⁶

Nederlof et al⁸ conducted a cross-sectional multicenter study to further examine whether TCO symptoms are related to aggressive behavior. Their study included 124 patients

(88% men) who had paranoid schizophrenia (70%), "other forms" of schizophrenia (16%), schizoaffective disorder (3%), delusional disorder (1%), and psychosis not otherwise specified (10%). To measure TCO symptoms in a more detailed manner than in previous research, these researchers developed the Threat/Control-Override Questionnaire (TCOQ), a 14-item, self-report scale. The 7 threat items specific to the TCOQ are:⁸

- I am under the control of an external force that determines my actions.
- Other people have tried to poison me or to do me harm.
- Someone has deliberately tried to make me ill.
- Other people have been secretly plotting to ruin me.
- Someone has had evil intentions against me.
- I have the thought that I was being followed for a special reason.
- People have tried to drive me insane.

The 7 control-override items on the TCOQ are:⁸

- Other people control my way of movements.
- Other people can insert thoughts into my head.
- My thoughts are dominated by an external force.
- I have the feeling that other people can determine my thoughts.
- Other people can insert thoughts into my mind.
- I have the feeling that other people have control over me.
- My life is being determined by something or someone except for myself.

Nederlof et al⁸ determined that TCO symptoms were a significant correlate of aggression in their study sample. When the 2 domains of TCO symptoms were evaluated separately, only threat symptoms made a significant contribution to aggressive behavior. These researchers suggested that varying methods of measuring TCO symptoms may underlie previous studies' seemingly contradictory findings.⁸ These recent findings indicate that the debate regarding the contribution of TCO symptoms, particularly threat symptoms, to future violence remains active.



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Appelbaum et al⁹ used the MacArthur-Maudsley Delusions Assessment Schedule to examine the contribution of non-content-related delusional material to violence in interviews with 328 delusional hospitalized psychiatric patients. The 7 dimensions of the MacArthur-Maudsley Delusions Assessment Schedule are:

- Conviction—the degree of certainty about the delusional belief
- Negative affect—whether the delusional belief makes the patient unhappy, frightened, anxious, or angry
- Action—the extent to which the patient’s actions are motivated by the delusional belief
- Inaction—whether the patient has refrained from any action as a result of the delusional belief
- Preoccupation—the extent to which the patient indicates his or her thoughts focus exclusively on the delusion
- Pervasiveness—the degree to which the delusional belief penetrates all aspects of the patient’s experiences
- Fluidity—the degree to which the delusional belief changed frequently during the interview.

Patients with persecutory delusions had significantly higher scores on “action” and “negative affect” dimensions, indicating that those with persecutory delusions may be more likely to react in response to the dysphoric aspects of their symptoms.⁹ Subsequent research has demonstrated that patients who suffer from persecutory delusions and negative affect are more likely to act on their delusions^{2,10} and to act violently¹¹ than patients without these symptoms.

When evaluating a patient who experiences persecutory delusions, inquire if he or she has employed “safety actions.” These are specific behaviors—such as avoiding a perceived persecutor or escaping a fearful situation—the individual has employed with the intention of minimizing a misperceived threat. In a study of 100 patients with persecutory delusions, 96% reported using safety behaviors in the past month.¹² In this study, individuals with a history of violence reported a greater use of safety behaviors.

Table 2

Evaluating command auditory hallucinations: 10 questions

1. What are the voices telling you to do?
2. Do you have any thoughts or beliefs that are associated with what you are hearing? If so, what are they?
3. Do you know the voice’s identity? If so, who is it?
4. How convinced are you that these voices are real?
5. Are these voices wishing you well or do you think that they wish you harm?
6. Have you done anything to help make the voices go away? If so, what?
7. Do you feel you have control of the voices or do you feel they control you?
8. Do you believe the voice is powerful?
9. How do the voices make you feel?
10. Have you ever done what the voice has told you to do? If so, describe what you did.

Table 1 lists 10 questions to ask patients to explore persecutory delusions and associated risk factors for aggression.

Assessing auditory hallucinations

A careful inquiry about hallucinations can help determine whether their presence increases a patient’s risk of committing a violent act. Command hallucinations provide some type of directive to the patient. Approximately 50% of hallucinating psychiatric patients experience command hallucinations.¹³ Most command hallucinations are nonviolent, and patients are more likely to obey nonviolent instructions than violent commands.¹⁴

Research on factors associated with a patient acting on harmful command hallucinations has been mixed. In a review of 7 controlled studies, no study demonstrated a positive relationship between command hallucinations and violence, and 1 found an inverse relationship.¹⁵ In contrast, in a study of 103 psychiatric inpatients, McNeil et al¹⁶ found 30% reported having command hallucinations to harm others during the past year and 22% reported they complied with such commands. These re-

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Patients may be more likely to act violently if they have persecutory delusions plus negative affect



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Patients may be more likely to act on command hallucinations if they know the voice and believe the voice is benevolent

Related Resources

- MacArthur Research Network on Mental Health and the Law. The MacArthur Violence Risk Assessment Study. <http://macarthur.virginia.edu/risk.html>.
- Witt K, van Dorn R, Fazel S. Risk factors for violence in psychosis: systematic review and meta-regression analysis of 110 studies [published online February 13, 2013]. *PLoS One*. 2013;8(2):e55942. doi: 10.1371/journal.pone.0055942.

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searchers concluded that compared with those without command hallucinations, patients in their study who experienced command hallucinations to harm others were more than twice as likely to be violent.

Much of the literature examining the relationship between a patient's actions and command hallucinations has examined the patient's response to all command hallucinations, without delineating factors specific to violent commands. Seven factors are associated with acting on command hallucinations:¹³

- the presence of coexisting delusions¹⁷
- having delusions that relate to the hallucination¹⁸
- knowing the voice's identity¹⁸
- believing the voices to be real¹⁹
- believing that the voices are benevolent²⁰
- having few coping strategies to deal with the voices¹⁷
- not feeling in control over the voices.²⁰

These factors also have been found to indicate increased compliance with acting on violent command hallucinations.^{18,20} Studies that have examined compliance specific to harmful command hallucina-

tions provide additional guidance when evaluating the patient's risk of harm. Aspects relevant to increased compliance to violent command hallucinations include a belief that the voice is powerful,^{13,21} a patient's sense of personal superiority,²¹ a belief that command hallucinations benefit the patient,¹³ delusions that were congruent with the action described,¹³ and hallucinations that generate negative emotions such as anger, anxiety, and sadness.¹¹

Table 2 (page 31) lists 10 questions to ask to further investigate general command auditory hallucinations and violent command auditory hallucinations.

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Bottom Line

Persecutory delusions and command hallucinations are 2 essential symptoms to investigate when evaluating a psychotic patient's risk of violence. Exploring the nature of such delusions and hallucinations can help identify factors that indicate a patient may be more likely to act violently.

Suicide, depression, and CYP2D6

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