Relation Between Command Hallucinations and Dangerous Behavior

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This article presents an updated review of studies on the relation between command hallucinations and dangerous behavior. The author reviewed all studies published between 1966 and 1997 according to MEDLINE and between 1974 and 1997 according to PSYCLIT. Forty-one studies were found, of which 82.9 percent dealt with the relation between command hallucinations and dangerous behavior. Of these studies, 32.3 percent were controlled, and they were grouped into three partially overlapping classes: those concerned with violent behavior, those concerned with suicidal behavior, and those concerned with mediating variables. Most of these studies agreed on the non-existence of an immediate relation between command hallucinations and dangerous (violent or suicidal) behavior. Even though the studies were divided about the existence of a relation between severity/dangerousness of command content and compliance with the commands, there was agreement about the existence of a direct relation between compliance with commands and both benevolence and familiarity of commanding voice. It seems that the research and knowledge available to date on this subject is both scant and methodologically weak. Future study should probably concentrate on mediating factors, such as appraisal and coping attitudes and behaviors.

Commanding (i.e., imperative) auditory hallucinations are commonly regarded as deserving of special attention in the management of mentally disordered persons. This is perhaps because these phenomena are quite common, with the available evidence suggesting that roughly one-third of hallucinating patients experience them.¹ Most probably, it is also due to the fact that command hallucinations are thought to carry a heightened risk of dangerousness, both to self and others; yet, it is not so clear what evidence supports this common clinical knowledge. Indeed, it is a historical fact that one of the first studies published on this matter suggested that command hallucinations did not bear any such risk, although admittedly this was supported merely by a case series.² A decade ago, a review of this subject within a forensic context stated that clinical literature on the role of command hallucinations in producing dangerous behavior is sparse and fragmented.³ It seems

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that this subject has not been systematically and comprehensively reviewed since that time. The objective of the present study is to provide an updated review of the clinical literature on the relation between command hallucinations and dangerous (i.e., suicidal and physically assaultive) behavior, concentrating on controlled studies of this possible relationship.

**Method**

A computerized literature search was conducted using the information compilations of MEDLINE, encompassing the years 1966 to (the end of) 1997, and PSYCLIT, encompassing the years 1974 to (the end of) 1997. Six combinations of key words were searched for: command hallucinations, commanding hallucinations, commanding voices, command voices, imperative hallucinations, imperative voices. Because of considerable differences among surveyed articles in methodology and parameters studied, a meta-analysis was not performed. In addition, it is acknowledged that even a thorough computerized journal search cannot be comprehensive, primarily because it misses pertinent work in books; yet, such work in the field of study surveyed here seems to consist of reviews rather than controlled studies and thus is not central to the concern of the present review.

**Results**

The MEDLINE and PSYCLIT search of all six combinations of key words, as mentioned above, produced 41 different articles, 33 (80.5%) of them dating from the last decade (1987 to 1997). The majority were concerned with mental disorders, mainly schizophrenia, with only five (12.2%) articles dealing exclusively with general medical conditions such as otosclerosis and hypothyroidism. Thirty-four (82.9%) articles dealt with the relation between command hallucinations and dangerous behavior toward self or others: of these, 11 (32.3%) were controlled, at least concerning the testing of this relation, and consisted of two case control and nine cross-sectional designs. Studies that did not deal directly with the relation between command hallucinations and dangerous behavior, even though indirectly touching on this issue and methodologically sound, are not reviewed in detail here.

The 11 controlled studies dealing with the relation between command hallucinations and dangerousness can be grouped into three partially overlapping classes: studies testing for a relation between command hallucinations and violent behavior, studies testing for a relation between command hallucinations and suicidal behavior, and studies testing other variables for their possible role in mediating a relation between command hallucinations and dangerous behavior (both violent and suicidal). These studies are presented individually in Table 1.

Of the seven studies testing for a relation between command hallucinations and violent behavior, one suggested the existence of an inverse relation and six supported the non-existence of any relation. All of the three studies testing for a relation between command hallucinations and suicidal behavior supported...
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Table 1
Eleven Controlled Studies Published Between 1966 and 1997 on the Relation Between Command Hallucinations and Dangerous Behavior

<table>
<thead>
<tr>
<th>Study</th>
<th>Primary Research Question</th>
<th>Sample Size</th>
<th>Main Data Source</th>
<th>Principal Diagnosis</th>
<th>Major Confounders</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hellerstein et al., 1987 (6)</td>
<td>Outcome (violence and suicide)</td>
<td>58</td>
<td>Records</td>
<td>Varied</td>
<td>Hospital time</td>
<td>No relation</td>
</tr>
<tr>
<td>Shore et al., 1989 (7)</td>
<td>Outcome (violence)</td>
<td>31</td>
<td>Records</td>
<td>Varied</td>
<td>Gender</td>
<td>No relation</td>
</tr>
<tr>
<td>Junginger, 1990 (14)</td>
<td>Mediation</td>
<td>20</td>
<td>Interviews</td>
<td>Varied</td>
<td>Undetermined</td>
<td>Voice familiarity</td>
</tr>
<tr>
<td>Rogers et al., 1990 (8)</td>
<td>Outcome (violence)</td>
<td>25</td>
<td>Interviews</td>
<td>Psychosis</td>
<td>Gender, age</td>
<td>No relation</td>
</tr>
<tr>
<td>Thompson et al., 1992 (5)</td>
<td>Outcome (violence)</td>
<td>34</td>
<td>Records</td>
<td>Psychosis</td>
<td>Age</td>
<td>Inverse relation</td>
</tr>
<tr>
<td>Chadwick et al., 1994 (12)</td>
<td>Mediation</td>
<td>26</td>
<td>Interviews</td>
<td>Schizophrenia</td>
<td>Undetermined</td>
<td>Voice severity + benevolence</td>
</tr>
<tr>
<td>Junginger, 1995 (13)</td>
<td>Mediation</td>
<td>52</td>
<td>Interviews</td>
<td>Varied</td>
<td>Undetermined</td>
<td>Voice severity + familiarity</td>
</tr>
<tr>
<td>Zisook et al., 1995 (9)</td>
<td>Outcome (violence and suicide)</td>
<td>46</td>
<td>Interviews</td>
<td>Schizophrenia</td>
<td>None</td>
<td>No relation</td>
</tr>
<tr>
<td>Kasper et al., 1996 (10)</td>
<td>Outcome (violence and suicide)</td>
<td>27</td>
<td>Interviews</td>
<td>Varied</td>
<td>None</td>
<td>No relation</td>
</tr>
<tr>
<td>Cheung et al., 1997 (11)</td>
<td>Outcome (violence)</td>
<td>31</td>
<td>Interviews</td>
<td>Schizophrenia</td>
<td>None</td>
<td>No relation</td>
</tr>
</tbody>
</table>

Discussion

This updated review of the clinical literature on the relation between command hallucinations and dangerous behavior (to self or to others), using a computerized search, revealed a dearth of research on this subject, even in the last decade (which, admittedly, manifested a four-fold increase in such research as compared with all previous research). This is
especially true for controlled studies, of which 11 were found. Methodologically, all of these studies suffered from less than optimal designs, as not even one was prospective, samples were small (ranging from 20 to 58 subjects) and most (i.e., 7) were clinically heterogenous, and confounding was mostly blatantly present or undetermined. Most of these studies agreed on the non-existence of a relation between command hallucinations and dangerous behavior to self or to others, with one exception supporting an inverse relation between command hallucinations and violent behavior. The studies testing for variables mediating between command hallucinations and dangerous behavior were divided about the existence of a relation between perceived severity/dangerousness of command content and compliance with those commands, while there was agreement on the existence of a direct relation between compliance with commands and both benevolence and familiarity of commanding voice.

It seems that the research and knowledge available to date on the relation between command hallucinations and dangerous behavior is both scant and methodologically weak. One conjecture that is supported by the present review is that this relationship is complex, perhaps established mainly via certain mediating factors such as perceived benevolence and familiarity of the commanding voices. Research in the near future should probably concentrate on testing for such mediating variables, preferably within a theoretical framework such as the stress-appraisal transactional perspective, which provides a means for understanding individuals' behavior in accordance with their appraisal of their experience—such as a benevolence or familiarity appraisal of a command hallucination. This approach may especially advance the study of the cognitive and affective factors determining patients' attitudes and coping behaviors vis-à-vis their command hallucinations (and perhaps other symptoms).

A pertinent suggestion may be to test for the impact of chronicity of command hallucinations on compliance with the commands and consequently on dangerous behavior, depending on the (dangerous) content of the commands. A plausible conjecture within this line of inquiry would be that, other things being equal, chronic command hallucinations are less complied with than acute command hallucinations, which may thus be more dangerous (when consisting of dangerous content). The rationale for this idea is drawn from an analogy with vascular occlusions, because chronic vascular constrictions enable the gradual development of collateral vascularization, thus producing a mechanism that may cope adaptively with eventual complete occlusion. This mechanism usually attenuates the consequences of vascular events, which may harbor catastrophe, especially if they are the result of acute vascular occlusion. In the same spirit, chronic command hallucinations might enable the gradual development of attitudes and behaviors that reduce compliance with the commands, thus producing mechanisms that may cope adaptively with eventual dangerous command hallucinations. This process could attenuate the consequences of such
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hallucinations, which may harbor catastrophe, perhaps more so if they are the result of acute command hallucinations (which may, by the element of surprise, overwhelm and overpower adaptive appraisal and coping resources).

Further along the line, such coping behaviors may be elicited and studied, perhaps also implemented and even improved upon. This research program is in keeping with contemporary psychiatric research, which gives considerable weight to the study of variables mediating the relations between symptoms and outcome. Be that as it may, the relation between command hallucinations and dangerous behavior is in need of much further study.

References