Religious psychopathology: The prevalence of religious content of delusions and hallucinations in mental disorder

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Abstract

Background: Religious themes are commonly encountered in delusions and hallucinations associated with major mental disorders, and the form and content of presentation are significant in relation to both diagnosis and management.

Aims: This study aimed to establish what is known about the frequency of occurrence of religious delusions (RD) and religious hallucinations (RH) and their inter-relationship.

Methods: A review was undertaken of the quantitative empirical English literature on RD and RH.

Results: A total of 55 relevant publications were identified. The lack of critical criteria for defining and classifying RD and RH makes comparisons between studies difficult, but prevalence clearly varies with time and place, and probably also according to personal religiosity. In particular, little is known about the content and frequency of RH and the relationship between RH and RD.

Conclusion: Clearer research criteria are needed to facilitate future study of RD and RH, and more research is needed on the relationship between RD and RH.

Keywords

Spirituality, religion, delusions, hallucinations

Introduction

As a branch of medicine, psychiatry is concerned not only with trying to understand mental disorders but also with trying to find treatments to alleviate the suffering and stigma with which they are so notoriously associated. This concern with treatment underlies a concern for diagnosis, as it is through arriving at a diagnosis that prognosis can be predicted and the most appropriate treatment selected in any given case. Diagnosis in psychiatry is primarily based upon information gained from the history and from the mental state examination, both of which require a degree of trust between doctor and patient, and a sensitivity of the clinician to diagnostic clues which must be interpreted according to the culture and context in which the patient lives. An important component of this culture and context, even in a secular society, is contributed by religious traditions. Unfortunately, the relationship between psychiatry and religion has at times been fraught, and patients have not always felt that they could entrust their psychiatrist with a frank account of their religious experiences, for fear that such experiences might be used as evidence to make a diagnosis of mental illness. The situation has not been helped by crude attempts to employ psychiatric concepts for diagnosing saints and mystics as mentally ill (Allen, 1975; Cook, 2012).

In major mental disorder, the content of perceptual disorder and thought disorder has often assumed less diagnostic significance than the form of the disorder. Thus, it is the presence of a false perception that is understood as important, rather than whether the content of the perception is religious, political or scientific. Similarly, it is the falseness of unshakeable beliefs which are out of keeping with culture that renders them delusional, rather than that they are religious (or political or of another kind). This might be thought to assist in preventing normal religious or political beliefs from being used as a basis for diagnosis. However, it can also lead to a lack of interest of the clinician in religious or other significant themes which may be of central importance to the patient. This is despite evidence that religion may provide an important coping resource for people suffering from major mental disorder (Mohr et al., 2010).
and may significantly influence adherence to treatment (Borras et al., 2007).

Studies have generally found religious themes to be commonly identifiable within the content of delusional beliefs, and some helpful reviews have been published (Bhavsar & Bhagra, 2008; Gearing et al., 2011). Religious delusions (RD) may be associated with higher levels of grandiosity, but are also held with a degree of flexibility that may give reason to believe that they may be more amenable to cognitive behaviour therapy (Ilyassu et al., 2014). Delusion-like beliefs, including some with religious content, are held widely in the general population, and so RD might be considered as one end of a spectrum of belief, with ‘normal’ religious beliefs at the opposite end of the spectrum (Pechey & Halligan, 2011). It has been suggested that RD are becoming less common in the Western world as religion has declined in popularity (Stompe, Ortwein-Swoboda, Ritter, & Schanda, 2003). Widely varying figures have been quoted for the prevalence of RD, and few attempts appear to have been made to systematically review this literature (none of which have attempted to be comprehensive). A large number of such studies have now been published.

Much less attention has been given to the religious content of hallucinations, and little is known about the frequency of occurrence of religious content as a feature of such phenomena. However, at least one attempt has been made to conduct a systematic and comprehensive review (Gearing et al., 2011). Some attention has been given to the phenomenon of voice hearing occurring in the absence of diagnosable mental illness, including the occurrence of such phenomena in religious populations. In such a context, it appears that healthy individuals do report, at least sometimes, hearing the voice of God (Dein & Litlewood, 2007; Luhrmann, 2012b). Little is known about the frequency of occurrence of religious themes in hallucinations occurring in the course of mental disorder.

This study sought to review the empirical literature pertaining to the frequency of religious content of hallucinations and delusions as a feature of mental disorders.

Methodology

Attempts were made to ascertain relevant studies by searching bibliographic databases such as MEDLINE and PsycINFO. This was not found to be a helpful approach as large numbers of studies already known to the author were not identified by this means and it was difficult to identify any search terms which located other than very small numbers of relevant empirical studies. Accordingly, reliance was placed initially upon known review papers which referenced relevant articles on RD and/or religious hallucinations (RH). Further studies were identified by a variety of means, notably by following up references from journal articles and book chapters already identified, by careful attention to recent publications in the field and by searching the MEDLINE and PsycINFO databases with a variety of different free text terms. While it is impossible to be sure that all relevant studies have been identified, the active search for older publications was discontinued when no new articles were being located despite extensive efforts to search manually and by using available electronic databases.

Inclusion criteria for the articles that were identified included primarily that they were empirical studies which included at least some data on frequency of religious content of delusions and/or hallucinations in the population studied. Individual case reports, and case reports of very small numbers of subjects (n < 10), were not included. The study was restricted to articles published in English (with the exception of one paper in Korean, with results tables published in English). Qualitative and quantitative studies were included, but only where data allowed at least a basic quantitative calculation of the number of subjects with religious psychopathology. The primary focus was on studies providing data on RH and RD. Studies on religious rituals and obsessional ruminations, other anxiety disorders, non-psychotic affective disorder, eating disorders and religious addiction were not included.

Results

A total of 55 publications were identified as meeting inclusion criteria and were included in the study (see Table 1). Of these, 45 publications provided at least some quantitative information on numbers of subjects with RD (see Table 2) and 28 provided at least some information (qualitative or quantitative) on the occurrence and nature of RH (see Table 2). The two publications by Kala and Wig (1978, 1982), appearing in Tables 1 and 2, would appear to relate to the same study – although slightly different results are published in each paper.

Sample size for the studies included in the total group of 55 publications ranged between 50 and 5,275 for case record studies and between 10 and 1,379 for interview studies. Less than half of the total group of publications included provided any information on the ethnicity (n = 22) or religious affiliation (n = 24) of the subject sample. A wide range of diagnostic groups was included in some studies, and in others, the sample was restricted to schizophrenia. Only three studies explicitly included psychosis related to epilepsy.

Studies were undertaken in a wide range of countries, and 11 studies explicitly included international and/or ethnic comparisons. Notably, studies appear to have been undertaken in every populated continent in the world, albeit the two countries in which many more studies have been undertaken than in any other are the United Kingdom (n = 12) and the United States (n = 10). More than half the studies (n = 31) included subjects from Europe and/or...
Table 1. Overview of empirical studies of religious delusions and hallucinations.

<table>
<thead>
<tr>
<th>Publication</th>
<th>Country</th>
<th>Study subjects</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Religion</th>
<th>Diagnosis</th>
<th>Ascertainment</th>
<th>Methodology</th>
<th>RD Hallucinations</th>
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<td></td>
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<td>✓</td>
<td>P</td>
<td>IS</td>
<td>✓ [✓]</td>
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<td>Weinstein (1962)</td>
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<td>S</td>
<td>ip at least 1 year</td>
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<td>S, S-form, Aff, S-aff, Org, PD, N</td>
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<td>P</td>
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<td>McCabe, Fowler, Cadoret, and Winokur (1972)</td>
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<td>25 10 15 17–55 32.3</td>
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<td>IS</td>
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<td></td>
<td>112 59 53 &gt;14 27.7</td>
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<td>Andreasen (1987)</td>
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<td>✓</td>
<td>S</td>
<td>IP, 1933–1939</td>
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<td>Renvoize and Beveridge (1989)</td>
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<td>All psych</td>
<td>IP, 1st admission, 1880–1884</td>
<td>CR</td>
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<th>Hallucinations</th>
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<td>150</td>
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<td>IS</td>
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<td>ip, July–December 1984</td>
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<td>ip</td>
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<td>6</td>
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<td>ip, May 2006 CR</td>
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Refer Appendix I for abbreviations.
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Refer Appendix I for abbreviations.
North America, whereas only one study included subjects from South America (Colombia).


Studies of RD (Table 2) have found between 1.1% and 80% of deluded subjects to report at least some religious content in their delusions. More typically, figures between 20% and 60% are reported. However, variable definitions of what counted as religious content were employed. In eight studies, no information at all was given concerning the definitions employed. Themes related to magic, death, spirit possession, witchcraft, the supernatural and so on were sometimes included and sometimes not included. Often it appears that it was taken for granted that what was ‘religious’ should be obvious to both the researcher and reader.

Skodlar et al. (2008) found that the frequency of delusions in Slovenia with religious and magical themes fluctuated during the study period 1881–2000, with low levels observed in the periods 1901–1920 and 1961–1980. Cannon and Kramer (2011) did not find variation in RD across the 20th century in the United States. There generally seems to be a positive relationship between religiosity and RD. Cothran and Harvey (1986) and Siddle, Haddock, Tarrier, and Faragher (2002) report higher religiosity in those with RD. Getz, Fleck, and Strakowski (2001) report that religious involvement prior to admission predicted severity of RD and that Protestants are significantly more likely to report than Roman Catholics. Suhail and Ghauri (2010) report that more religious patients were more likely to have RD. However, Rudaviečienė, Stompe, Narbekovas, Raškauskienė, and Bunevičius (2008) concluded from their multivariate analysis that religiosity does not directly influence the religious content of delusions.

Siddle et al. (2002) reported that patients with RD had higher symptom scores, were functioning less well and were prescribed more medication. Similarly, Raja, Azzoni, and Lubich (2000) found that patients with RD started neuroleptic treatment earlier, had worse global functioning and more severe psychopathology. However, Mohr et al. (2010) reported that RD were not associated with greater clinical severity, and McCabe, Fowler, Cadoret, and Winokur (1972) found that RD did not distinguish good and poor prognosis groups of patients. Similarly, in a subsequent publication, Siddle, Haddock, Tarrier, and Faragher (2004) reported that in the subjects included in their 2002 study, after 4 weeks of treatment there was no difference in response to treatment between patients who had RD and those who did not.

Studies of RH (Table 3) provide much less quantitative information. In some studies, content of delusions and hallucinations is not distinguished and it is noted only that there is religious content to delusions and/or hallucinations. Only a few studies distinguish between religious themes appearing within the content of auditory verbal hallucinations (AVH) and ascription of a religious identity to the perceived source of the AVH. Very few studies give any significant information on hallucinations in modalities other than the auditory. As with studies of RD, definitions of what counts as ‘religious’ content of hallucinations are variable and often imprecise.

Mott, Small, and Anderson (1965) observed spiritual themes in 18%–26% of AVH. Rennoize and Beveridge (1989) found that 28.6% of patients with hallucinations (which were ‘mainly auditory and visual’) had a religious theme. Atallah et al. (2001) found that only 135 (21.3%) out of 632 patients with religious symptoms had auditory RH. In the same study, 105 (16.2%) had visual RH and 12 (1.9%) had tactile RH. Kim et al. (2001) found religious/supernatural themes in 12.2% of the auditory hallucinations of their Chinese subjects and in 36% of their Korean subjects. Kent and Wahass (1996) found that religious themes were less common in hallucinations experienced by subjects in the United Kingdom than in Saudi Arabia and also less common in third-person voices than in second-person voices. Mitchell and Vierkant (1988) found that command hallucinations more often included religious content in the 1930s than in the 1980s.

Mott et al. (1965) found that 16%–20% of AVH were ascribed to religious personages. Scott (1967) found that 51.8% of AVH in a study in South Africa were ascribed to God. Kim et al. (2001) found that a religious/supernatural identity was ascribed to the source of the voices in 11.9% of their Chinese subjects and 28.5% of their Korean subjects. Suhail and Cochrane (2002) found that 10% (n = 5) of their White English subjects and 9% (n = 5) of their British-Pakistani subjects, but only 6% (n = 6) of their Pakistani subjects living in Pakistan, reported hearing voices which they identified as God. In a sample of 373 patients with schizophrenia in Turkey, Gecici et al. (2010) identified only 15 subjects who heard voices that they believed to be from God, 10 who heard the voice of the
Table 3. Empirical studies of religious hallucinations.

<table>
<thead>
<tr>
<th>Publication</th>
<th>Country</th>
<th>Study subjects</th>
<th>Diagnosis</th>
<th>Prevalence of hallucinations</th>
<th>Definition of RH</th>
<th>Information given about hallucinations</th>
<th>RD (% of total sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rin et al. (1962)</td>
<td>Taiwan – Chinese</td>
<td>126</td>
<td>Male, n 52</td>
<td>Female, n 74</td>
<td>Content = 'religion and gods' — no distinction made between delusions and hallucinations</td>
<td>Symptom content 'not so fluently expressed in hallucinations as in delusions'</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>94</td>
<td>Male, n 45</td>
<td>Female, n 49</td>
<td></td>
<td></td>
<td>7.4</td>
</tr>
<tr>
<td>Weinstein (1962)</td>
<td>Virgin Islands</td>
<td>148</td>
<td>Male, n 83</td>
<td>Female, n 65</td>
<td>'Delusions and hallucinations concerning religion …'</td>
<td>Content of RD and RH not distinguished in this study</td>
<td>17.6</td>
</tr>
<tr>
<td>Kiev (1963)</td>
<td>England</td>
<td>10</td>
<td>NK</td>
<td>NK</td>
<td>'Most' RD accompanied by 'hallucinatory commands to preach and heal …'</td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Mott, Small, and Anderson (1965)</td>
<td>United States</td>
<td>50</td>
<td>Male, n 14</td>
<td>Female, n 36</td>
<td>Spiritual theme = 'seeing dead relatives, visions of spirits, etc'</td>
<td>n = 9 (18%) spirituality a major theme ascribed to religious personages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>Female, n 44</td>
<td>Medical, n 6</td>
<td>Ascribed identity or sources = 'religious personages'</td>
<td>n = 12 (24%) spirituality a major theme ascribed to religious personages</td>
<td></td>
</tr>
<tr>
<td>Gordon (1965)</td>
<td>England</td>
<td>112</td>
<td>Male, n 61</td>
<td>Female, n 51</td>
<td>'Religious content was usually associated in the schizophrenics with auditory, and often visual, hallucinations, the patients frequently seeing visions and receiving commands from God'</td>
<td></td>
<td>39.3</td>
</tr>
<tr>
<td>Scott (1967)</td>
<td>South Africa</td>
<td>100</td>
<td>Male, n 0</td>
<td>Female, n 100</td>
<td>No information given</td>
<td>44/85 = 51.8% ascribed to God</td>
<td></td>
</tr>
<tr>
<td>McCabe, Fowler, Cadoret, and Winokur (1972)</td>
<td>United States</td>
<td>28</td>
<td>Male, n 8</td>
<td>Female, n 20</td>
<td>No information given</td>
<td>More likely to have VH (p &lt; .01)</td>
<td>46</td>
</tr>
<tr>
<td>Publication</td>
<td>Country</td>
<td>Study subjects</td>
<td>Diagnosis</td>
<td>Prevalence of hallucinations</td>
<td>Definition of RH</td>
<td>Information given about hallucinations</td>
<td>RD (% of total sample)</td>
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<td><strong>Table 3. (Continued)</strong></td>
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<tr>
<td><strong>Publication</strong></td>
<td><strong>Country</strong></td>
<td><strong>Study subjects</strong></td>
<td><strong>Diagnosis</strong></td>
<td><strong>Prevalence of hallucinations</strong></td>
<td><strong>Definition of RH</strong></td>
<td><strong>Information given about hallucinations</strong></td>
<td><strong>RD (% of total sample)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total, n</strong></td>
<td><strong>Male, n</strong></td>
<td><strong>Female, n</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Littlewood and Lipsedge</td>
<td>England</td>
<td>25</td>
<td>10</td>
<td>15</td>
<td>Poor prognosis</td>
<td>More likely to have 'Special types' of AH and haptic hallucinations (p &lt; .05)</td>
<td>25</td>
</tr>
<tr>
<td>(1981)</td>
<td></td>
<td>NK</td>
<td>NK</td>
<td>NK</td>
<td></td>
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</tr>
<tr>
<td>Andreasen</td>
<td>United States</td>
<td>111</td>
<td>NK</td>
<td>NK</td>
<td>S</td>
<td>Voices commenting – 58% Voices conversing – 57% Perceived source of AVH include God (16), Holy Ghost/spirits (5), angels Perceived source of AVH include God (3), devils/demons (9), the 'Trinity', Matthew (of scriptures)</td>
<td>30.6</td>
</tr>
<tr>
<td>(1987)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Mitchell and Vierkant</td>
<td>United States</td>
<td>150</td>
<td>89</td>
<td>61</td>
<td>Delusions and hallucinations reported in files</td>
<td>NA</td>
<td>NK</td>
</tr>
<tr>
<td>(1988)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Renvoize and Beveridge</td>
<td>England</td>
<td>118</td>
<td>54</td>
<td>64</td>
<td>RDC: S, Aff, Other</td>
<td>28.6% of patients with hallucinations had 'a religious theme'</td>
<td>25.4</td>
</tr>
<tr>
<td>(1989)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brewerton</td>
<td>Hawaii</td>
<td>50</td>
<td>31</td>
<td>19</td>
<td>DSMIIIIR: S, S with temporal lobe EEG abnormalities, Aff, P secondary to CPS</td>
<td>AVH were typically of God (n = 14), devil/demons (n = 12) or spirits/saints (n = 4) RD and/or RH = 74% of total</td>
<td>25.4</td>
</tr>
<tr>
<td>(1994)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanemoto et al.</td>
<td>Japan</td>
<td>33</td>
<td>18</td>
<td>15</td>
<td>Intercital p</td>
<td>n = 9 voices commenting n = 12 other AH n = 6 somatic/tactile hallucinations n = 1 voices commenting n = 3 other AH n = 5 somatic/tactile hallucinations n = 8 voices commenting n = 11 other AH n = 3 somatic/tactile hallucinations</td>
<td>3</td>
</tr>
<tr>
<td>(1996)</td>
<td></td>
<td></td>
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</tbody>
</table>
Table 3. (Continued)

<table>
<thead>
<tr>
<th>Publication</th>
<th>Country</th>
<th>Study subjects</th>
<th>Diagnosis</th>
<th>Prevalence of hallucinations</th>
<th>Definition of RH</th>
<th>Information given about hallucinations</th>
<th>RD (% of total sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent and Wahass (1996)</td>
<td>Saudi Arabia</td>
<td>40 NK NK</td>
<td>ICD10: S</td>
<td>15</td>
<td>Religious themes = ‘relationship between the patient and his god, e.g., instructions to read a holy book, chastisement after death, or mention of paradise’ Superstitious content = ‘mention of demons, magic and spirits’</td>
<td>Second-person voices 53% religious Third-person voices 33% religious</td>
<td>NK</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>35 NK NK</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Kulhara et al. (2000)</td>
<td>North India</td>
<td>40 19 21</td>
<td>ICD10: S</td>
<td>28</td>
<td>No information given</td>
<td>70% hallucinated</td>
<td>10</td>
</tr>
<tr>
<td>Atallah, El-Dosoky, Coker, Nabil, and B-Islam (2001)</td>
<td>Egypt</td>
<td>5,275 NK NK NK</td>
<td>S, S-aff, Aff</td>
<td>28</td>
<td>‘Religious symptoms’ defined as all symptoms with religious content, including ‘everything from increased praying or reading religious books, increased religiosity, spending all one’s time in the church or mosque, to believing oneself to be (or be married to) a religious figure, on a religious mission to save the world, and so on. In addition, supernatural beliefs such as black magic (A’mal), demon possession, or the evil eye were included’</td>
<td>No information on content n = 135/632 patients with religious symptoms (21.3%) had auditory RHs, 105 (16.62%) had visual RHs and 12 (1.9%) had tactile RHs Hallucinations equally common among patients with and without religious symptoms</td>
<td></td>
</tr>
<tr>
<td>Getz, Fleck, and Strakowski (2001)</td>
<td>United States</td>
<td>71 42 29</td>
<td>DSMIV: P</td>
<td>29</td>
<td>No information given</td>
<td>SAPS Hallucination Score = 3.4</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>29 18 11</td>
<td></td>
<td></td>
<td></td>
<td>SAPS Hallucination Score = 3.6</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>33 22 11</td>
<td></td>
<td></td>
<td></td>
<td>SAPS Hallucination Score = 3.2</td>
<td>20.7</td>
</tr>
<tr>
<td>Gutiérrez-Lobos et al. (2001)</td>
<td>Austria</td>
<td>639 239 400</td>
<td>ICD8: S, Aff, Org, Par, Other P, N, SA</td>
<td>NA</td>
<td></td>
<td>Mean age for 1st hearing voices 44.4 years</td>
<td>NK</td>
</tr>
<tr>
<td>Kim et al. (2001)</td>
<td>China (Shanghai)</td>
<td>182 119 63</td>
<td>DSMIV:</td>
<td>101</td>
<td>‘Religious/supernatural themes’</td>
<td>12 (11.9%) AH with supernatural/religious identity 12 (12.2%) AH with religious/supernatural theme</td>
<td>NK</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>S</td>
<td>56</td>
<td></td>
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<td>100</td>
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<td>55</td>
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<tr>
<td>Publication</td>
<td>Country</td>
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<td>Diagnosis</td>
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<td>Definition of RH</td>
<td>Information given about hallucinations</td>
<td>RD (% of total sample)</td>
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<td></td>
<td></td>
<td>Total, n Male, n Female, n</td>
<td>n % Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea (Seoul)</td>
<td>Korea (Seoul)</td>
<td>214</td>
<td>125 89</td>
<td>130 61 Any</td>
<td></td>
<td>37 (28.5%) AH with supernatural/religious identity 41 (36%) AH with religious/supernatural theme</td>
<td></td>
</tr>
<tr>
<td>Siddle, Haddock, Tarrier, and Faragher (2002)</td>
<td>England</td>
<td>193</td>
<td>135 58</td>
<td>128 60 AH</td>
<td>&lt;50 AH</td>
<td>No information given</td>
<td>Over 50% of the sample reported no AH</td>
</tr>
<tr>
<td>Suhail and Cochrane (2002)</td>
<td>England (White)</td>
<td>50</td>
<td>38 12</td>
<td>44 88 AVH</td>
<td>Voices identified as God</td>
<td>Voice of God: 5 (10%)</td>
<td>14</td>
</tr>
<tr>
<td>England (British-Pakistani)</td>
<td>Pakistan</td>
<td>98</td>
<td>48 50</td>
<td>13 24 VH</td>
<td>Voice of God: 6 (6%)</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Smith et al. (2005)</td>
<td>England</td>
<td>20</td>
<td>14 6</td>
<td>7 35 AH</td>
<td>Clinical Assessment in Neuropsychiatry (WHO, 1992)</td>
<td>n = 7 had AH</td>
<td>55</td>
</tr>
<tr>
<td>Gecici et al. (2010)</td>
<td>Turkey</td>
<td>373</td>
<td>215 158</td>
<td>236 63 AH</td>
<td>AVH classified according to source (God/Prophet/Devil)</td>
<td>n = 15 voices from God, n = 10 voices from the Prophet, n = 9 voices from the Devil (VH n=9, n=11, n=10 respectively)</td>
<td>15.5</td>
</tr>
<tr>
<td>Suhail and Ghauri (2010)</td>
<td>Pakistan</td>
<td>53</td>
<td>40 13</td>
<td>74 AVH</td>
<td>No information given</td>
<td>More/less religious patients did not differ on AVH (65% vs 76%)</td>
<td>NK</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>59 VH</td>
<td></td>
<td>VH of spirits/ghosts/jinee/holy – n = 3 (12%) in less religious group and n = 14 (50%) in more religious group</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>55 Olfactory</td>
<td></td>
<td></td>
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<tr>
<td>Publication</td>
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<td>Study subjects</td>
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<td>Information given about hallucinations</td>
<td>RD (% of total sample)</td>
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</tr>
<tr>
<td>de Araujo Filho et al. (2011)</td>
<td>Brazil</td>
<td>29 M, 11 F</td>
<td>TLE-MTS with Psy-ep</td>
<td>6 M, 4 F</td>
<td>None</td>
<td>7 (12.7%) of total sample had 'psychopathology with religious content' (RD, RH or ritual behaviour)</td>
<td>NA</td>
</tr>
<tr>
<td>Huang et al. (2011)</td>
<td>Taiwan</td>
<td>55 M, 22 F</td>
<td>DSMIV: S</td>
<td>29 M, 100 F</td>
<td>None</td>
<td>7 (12.7%) of total sample had 'psychopathology with religious content' (RD, RH or ritual behaviour)</td>
<td>NK</td>
</tr>
<tr>
<td>Krystanek, Krysta, Klasik, and Krupka-Matuszczyk (2012)</td>
<td>Poland</td>
<td>400 M, 204 F</td>
<td>S</td>
<td>6 M, 100 F</td>
<td>None</td>
<td>7 (12.7%) of total sample had 'psychopathology with religious content' (RD, RH or ritual behaviour)</td>
<td>NK</td>
</tr>
<tr>
<td>Iyassu et al. (2014)</td>
<td>England</td>
<td>383 M, 266 F</td>
<td>ICD10: S, S-aff, Other P</td>
<td>248 M, 65 F</td>
<td>None</td>
<td>7 (12.7%) of total sample had 'psychopathology with religious content' (RD, RH or ritual behaviour)</td>
<td>NK</td>
</tr>
</tbody>
</table>

Refer Appendix 1 for abbreviations.
Concerning the dead are similarly ambiguous. The relationship between RD and RH seems to have received surprisingly little attention. In a small and early study of West Indian immigrants in London, Kiev (1963) reported that ‘most’ RD were accompanied by ‘hallucinatory commands to preach and heal …’ In a similar but larger early study, Gordon reported that

The religious content was usually associated in the schizophrenics with auditory, and often visual, hallucinations, the patients frequently seeing visions and receiving commands from God.

Suhail and Ghauri (2010) report that more religious patients are both more likely to experience RD and to hear voices of ‘paranormal agents’. Siddle et al. (2002) report that RD occur most commonly secondary to RH. Iyassu et al. (2014) reported that 75.9% of those with RD and 61.7% of those with other delusions had ‘anomalous experiences’ (by which they meant hallucinatory experiences in any modality).

**Discussion**

Religious content of delusions and hallucinations would appear to be relatively common, and yet there is a lack of agreed definition as to where the boundaries of what is truly ‘religious’ lie. Even where standardised instruments such as the Present State Examination (PSE) or Scale for the Assessment of Positive Symptoms (SAPS) have been used, much is left to the discretion of the researcher. The lack of definition provides further cause for concern where, in some studies, little or no attention appears to have been paid to the religious affiliation or context of the research subjects. In the case of RH, only a few studies have distinguished between content and identity or source of AVH. All of this raises the important question of what properly constitutes ‘religious’ content of delusions and/or hallucinations.

To take a narrower view of things, it might be argued that religious content should be understood to reflect or refer to traditional religious beliefs, persons or stories. Thus, references to ‘sin’ (as opposed to more general concerns of morality), divinity, resurrection or reincarnation, and witchcraft would all appear to qualify as religious, as would references to figures such as Buddha, Jesus or Mohammed. However, much traditional religious belief has now become detached from its original context and is upheld by those who follow newer spiritual paths which may reflect either religious concerns or spiritual-but-not-religious concerns, or perhaps both of these or neither of these.

To broaden the category of interest to ‘spiritual’ (rather than religious) would be in danger of making the boundaries even more blurred. However, definitions of spirituality generally encompass relatively few subsidiary concepts (Cook, 2004), and these might prove to be more helpful categories for future research. For example, delusions might be classified according to whether they refer to immanent or transcendent relationships. (Immanent relationships refer to those with people and things in the natural order and transcendent relationships to those with a non-material, spiritual or divine order understood as being above and beyond the natural. For further discussion, see Cook, 2013.) As Koenig, King, and Carson (2012) have pointed out, definitions of religion and spirituality commonly emphasise broadly transcendent over immanent concerns (although see also Cook (2013)). Similarly, content might be classified according to reference to matters of meaning or purpose in life, concepts of life-force or soul, ultimate concerns and other deeply held values, all of which may reflect either religious concerns or spiritual-but-not-religious concerns, or perhaps both of these or neither of these.

An important difference between delusions and hallucinations is that delusional thought (with the important exception of thought insertion) is generally owned as ego-syntonic. Hallucinations are identified as originating from external agency, and so the source or identity of that agency becomes a separate, albeit related, concern to the matter of the content of the hallucination. Few studies to date have clearly or carefully addressed this important distinction, and the identity of AVH has often not been clarified. Thus, for example, the author once encountered a patient who reported what appeared to be an olfactory hallucination of the smell of rotting meat, which in itself is not a religious theme. However, taken in the whole context of the clinical history, and in particular of a delusional belief that she was demon-possessed, this hallucination had clear religious significance and was attributed by the patient to the activity of evil spirits.

It is therefore not immediately apparent that there is a simple answer as to how RD/RH should be defined, but it is clear that better characterisation and description of terms within future research will be important. It would also appear likely that the prevalence of RD and RH may have been underestimated in at least some studies.

Notwithstanding these concerns, the frequency of occurrence of RD and RH does clearly appear to vary widely with time and place. In most cases, as in the comparisons between Saudi Arabia and the United Kingdom (Kent & Whahass, 1996) or Korea and China (Kim et al., 2001), it would appear likely that this reflects an influence of culture and environment on the individual. The work of Suhail and Cochrane (2002) suggests that the culture in which one lives may be more important than country of
Given that we now know that voices are heard in religious contexts which are not necessarily associated with major mental illness and that some voice hearers appear to derive benefit from dialogue with their voices (Luhrmann, 2012a), the question arises as to whether or not engagement of dialogue with RH might be helpful in the course of treatment.

**Conclusion**

RD and RH are commonly encountered in major mental illness, albeit prevalence varies according to time, place and personal religiosity. Comparisons between studies, and accurate estimates of prevalence, are hampered by lack of clear working definitions of exactly what constitutes a ‘religious’ delusion or hallucination and also by failure to obtain data on religious affiliation of research subjects. There is need for more critical attention to these issues in research design, and it is proposed here that a focus on transcendent concerns may well prove fruitful for future research, especially within multi-ethnic groups, and in other contexts where there is a plurality of religious belief and affiliation. Study of RH has especially been neglected, and more attention needs to be paid in future research to hallucinatory experiences in all modalities, rather than focusing almost exclusively on AVH, to distinguish between the content of the hallucination and its believed source or identity and to establish whether the RD or RH constitute the primary source of religious themes.

**Conflict of interest**

The author declares that there is no conflict of interest.

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**References**


## Appendix I

### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Aff</td>
<td>affective disorder</td>
</tr>
<tr>
<td>All psych</td>
<td>all psychiatric diagnoses</td>
</tr>
<tr>
<td>CPS</td>
<td>complex partial seizures</td>
</tr>
<tr>
<td>JME</td>
<td>juvenile myoclonic epilepsy</td>
</tr>
<tr>
<td>MTS</td>
<td>mesial temporal sclerosis</td>
</tr>
<tr>
<td>N</td>
<td>neurosis</td>
</tr>
<tr>
<td>Org</td>
<td>organic psychosis</td>
</tr>
<tr>
<td>Other P</td>
<td>other Psychosis</td>
</tr>
<tr>
<td>Par</td>
<td>paranoid psychosis</td>
</tr>
<tr>
<td>P</td>
<td>psychosis (any/all – unless otherwise specified)</td>
</tr>
<tr>
<td>P-CPS</td>
<td>psychosis secondary to complex partial seizures</td>
</tr>
<tr>
<td>PD</td>
<td>personality disorder</td>
</tr>
<tr>
<td>Psy-ep</td>
<td>psychosis of epilepsy</td>
</tr>
<tr>
<td>S</td>
<td>schizophrenia</td>
</tr>
<tr>
<td>S-aff</td>
<td>schizoaffective disorder</td>
</tr>
<tr>
<td>S-form</td>
<td>schizophreniform disorder</td>
</tr>
<tr>
<td>SA</td>
<td>substance abuse</td>
</tr>
<tr>
<td>S-TEEG</td>
<td>schizophrenia with temporal lobe EEG abnormalities</td>
</tr>
<tr>
<td>TLE</td>
<td>temporal lobe epilepsy</td>
</tr>
<tr>
<td>ip</td>
<td>in-patients</td>
</tr>
<tr>
<td>CR</td>
<td>case record study</td>
</tr>
<tr>
<td>IS</td>
<td>interview study</td>
</tr>
<tr>
<td>AH</td>
<td>auditory hallucinations</td>
</tr>
<tr>
<td>AVH</td>
<td>auditory verbal hallucinations</td>
</tr>
<tr>
<td>NA</td>
<td>not applicable</td>
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<tr>
<td>NK</td>
<td>not known</td>
</tr>
<tr>
<td>PICU</td>
<td>psychiatric intensive care unit</td>
</tr>
<tr>
<td>RD</td>
<td>religious delusions</td>
</tr>
<tr>
<td>RH</td>
<td>religious hallucinations</td>
</tr>
<tr>
<td>VH</td>
<td>visual hallucinations</td>
</tr>
<tr>
<td>FPS</td>
<td>Fragebogen fur Psychotische Symptome</td>
</tr>
<tr>
<td>PANSS</td>
<td>Positive and Negative Symptom Scale</td>
</tr>
<tr>
<td>PSE</td>
<td>Present State Examination</td>
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<tr>
<td>SADS</td>
<td>Schedule for Affective Disorders and Schizophrenia</td>
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<td>SAPS</td>
<td>Scale for the Assessment of Positive Symptoms</td>
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<tr>
<td>DSM</td>
<td>Diagnostic and Statistical Manual of the American Psychiatric Association</td>
</tr>
<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
</tr>
<tr>
<td>RDC</td>
<td>Research Diagnostic Criteria</td>
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</table>

- [✓] Information provided in the publication
- [✓] Some information provided in the publication