The “common” experience of voice-hearing and its relationship with shame and guilt: a systematic review

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Abstract

Background

Despite Auditory Verbal Hallucinations (AVHs) have been long associated with mental illness, they represent a common experience also in the non-clinical population, yet do not exhibit distress or need for care.

Objectives

This paper aims to provide a systematic review of studies that investigated the relationship between auditory hallucinations, shame, and guilt in people without relevant signs of psychiatric issues.

Methods

We searched studies reporting information about voices characteristics, the relationship between voices and hearers, hearer's reactions, and beliefs (1946-2021) and those that explored the differences between “patients” and “non-patients”, paying peculiar attention to shame and guilt issues. Included papers were evaluated for risk of bias.

Results

Eleven studies that explored the relationship between AVHs, shame and guilt, were extracted. Phenomenological, pragmatic, as well as neuropsychological features of hearing voices in non-clinical populations, allowed us to note a dynamic relationship and the constellation of subjective experiences that can occur. The role of guilt was characterized by few studies and mixed results, while shame was mainly common.

Conclusions

Due to the high heterogeneity detected and the scarce sources available, further studies should focus on both the aetiology and the bidirectional relationship between hearing voices, shame, and guilt in non-clinical people. This might favour the development and implication of different treatments considering emotion regulation, distress tolerance and interpersonal sensitivity on the other people.

Background

Auditory Verbal Hallucinations (AVHs) are often associated, in psychiatric contexts and everyday life, with the universe of mental illness. Although there is not a univocal consensus concerning the definition, the

DSM-5 delineates hallucinations as perceptions-like experiences that others would not sense and do not exist outside one's perception (DSM-5).

Voices in the mind, reported as “alien yet self”(1), can be experienced by many people without a diagnosis, in absence of distress or a psychiatric disorder (2–8). According to Romme and colleagues (9) hallucinations are a disorder of perception that people describe as being located in the external world (ego-dystonic), with the same qualities of “normal” perceptions, but in the absence of external stimuli (10). Reported hallucinations are perceived as real, as demonstrated by Aggernaes’s study (11), later confirmed by Barrett and Caylor (12) and Garrett (13).

AVHs indicate auditory perceptions of speech (14), with pragmatic properties similar to “real” speech (15). In healthy people, AVHs are isolated experiences that can be associated with psychological conditions such as anxiety, depression, difficulty concentrating, suspiciousness or withdrawal from family and friends (16). They can experience voices principally because of sleep deprivation or major life stressors and can be intra- or extracranial (17). Voices are often related to individual’s lives, and they are often described as messengers (18), communicating something that can be very important for hearers (i.e. may be acting as a voice of their conscience). Despite some voices may be hushed, loud or difficult to discern, the main part of the hearing sounds is audible (19, 20). AVHs mainly comprise someone’s else voice or multiple sounds (19), familiar (21) as well as unfamiliar voices (20). Non-clinical individuals are more likely to appraise their hearing voice’s experience as benign, positive, and controllable (22), less hallucination-related distress (23), and with lower levels of negative beliefs about AVHs than people with psychiatric disorders (24, 25). Healthy individuals develop different beliefs about the origins of the voices (my voice in 41% vs. other's voice in 42% cases), 17% are uncertain if these voices are real or not (26) and others believe that they originate from guardian angels, source of deceased and ghosts.

Some epidemiological studies tried to provide an estimate of the frequency of AVHs in the general population but they neither give any indication of the quality of these experiences nor do they clarify whether they are comparable to the AVHs experienced by those diagnosed with a clinical disorder (27, 28). Furthermore, it is very difficult to identify and recruit nonclinical voice-hearers, because it may be uneasy to share their own experience, probably fearing encountering stigma (29, 30). Consequently, it is not easy to correctly estimate the prevalence of the phenomenon. Sidgewick, Johnson, and Myers (1894) conducted the first reported survey on verbal hallucinations, collecting data from approximately 17,000 participants, in 10 countries; they found that approximately 7.8% of men and 12% of women reported hallucinations (3.3% auditory hallucinations). At present, a meta-analysis estimated both a lower median prevalence of psychotic experiences of 6% and a median incidence of 1.2% in the general population (8), indicating that age, minority or migrant status, marital status, income, education, alcohol and cannabis use, stress, urbanization and family history could all influence their onset.

Shame, Guilt And Avhs

Shame and guilt are self-conscious emotions that convey crucial information in the way we consider ourselves and they can both regulate social behaviours in interpersonal situations. Literature of the last two decades agrees on the fact that shame and guilt are two separate emotions with different implications for psychological adjustment (32, 33). While the feeling of shame is linked to a stable internal and negative perception of the entire self (e.g. "I'm a bad person), guilt appears when people attribute an adverse outcome to unstable causes (e.g. "I've made a bad mistake"). Therefore, shame is associated with feelings of inferiority and worthlessness for a defective self while guilt is associated with feelings of tension and remorse (34). They also involve different behavioural trajectories: while shame is associated with the desire to escape disappearing of others, guilt is related to the desire to apologize, confess or repair. While the social function of guilt is linked with reparative behaviours, the adaptive role of shame is to communicate \show similar patterns of brain activation related to the temporal lobe, but while guilt seems related to the amygdala and insula, shame is involved in the frontal lobe activation (35). The relationship between shame and guilt and mental disorders has been explored in the last decades. Both shameful feelings of powerlessness and maladaptive feelings of guilt and hyper-responsibility can exacerbate anxiety, depression, eating behaviours and traumatic symptoms (36). Even if the different studies showed that shame can be more strongly associated with various psychological symptoms (37–39), still little is known about how shame and guilt are involved in the perception of AVHs. As evidenced by McCarthy-Jones (2017), the occurrence of AVHs may be linked with the use of inflexible approaches aimed at processing unresolved events related to shame- and guilt-related experiences. Inflexible avoidant strategies such as dissociation and suppression that are commonly used to deal with shame- and guilt-related events often cause a rebound effect that can generate intrusive AVHs with unexpected greater vigour (40). Within this perspective AVHs can be considered in a continuum of clinical severity: the more inflexibility is adopted to try to deal with negative experiences the more AVHs will be severe as they will be probably related to unresolved materials and ruminative thoughts (41). On the contrary, the use of a flexible "talking to myself" strategy can foster adaptive meanings of past negative experiences. This can avoid cognitive or emotional overload and enhance a constructive internal dialogue.

Objectives

Despite a certain level of knowledge about auditory hallucinations in psychiatric populations, in the last decades, there have been few reviews about AVHs in a nonclinical sample, and they were limited in scope (e.g., they focused on specific mechanisms or experience)(42), theoretical, centred on the continuum (28) or focused on the comparison between clinical and non-clinical voice-hearers (27, 43–46). Despite the crucial information in the way we consider ourselves shame and guilt provide and the intrusive thoughts that are often related to these emotions, no review explored their relationship with AVHs.

Moreover, in the previous studies, auditory verbal hallucinations were mainly described as related to cognitive cause and consequences, while the potential involvement of emotions such as shame and guilt was neglected both in clinical and non-clinical samples. This systematic review aims to describe and tease out the relationships between non-clinical voice-hearers, AVHs, shame and guilt.

Methods

Registration and protocol

The guidelines of the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) were followed (47). The study protocol was registered with PROSPERO and the registration number is CRD42017054819.

Eligibility criteria

Papers were included if they were published in English in a peer-review journal up to July 27th, 2021, and met the criteria outlined below and in Table 1.

Search strategy

To identify studies for possible inclusion, we conducted comprehensive searches of the electronic databases PsycINFO and PsycARTICLES, MEDLINE, PubMed, EMBASE Classic (1947-1973) and EMBASE (1974-2021), Web of Knowledge, Scopus and The EBSCO Online Research Database, Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) (1946 to Present), Global Health (1973 to 2021), HMIC Health Management Information Consortium (1979 to July 2021), Journals@Ovid Full Text, Mental Measurements Yearbook (1st to 20th Yearbooks March 2021), PsycARTICLES Full Text, PsycINFO (1806 to July 2021), Social Policy and Practice, Your Journals@Ovid up to 27th July 2021 (Table 2).

The findings were cross-referenced with references from reviews.

Study screening and selection

Following electronic searches, retrieved records were uploaded to Mendeley where duplicates were removed. After a preliminary training exercise in consistently using inclusion and exclusion criteria, two reviewers (EV; CC) independently selected potentially eligible papers. The final set of records was selected by reading the full texts of all articles that passed an initial screening of titles and abstracts. Disagreements were resolved thanks to a consensus with a third reviewer (FP).

Figure 1 shows a flow chart diagram of the search process. Through electronic and manual searches, 3348 separate records were identified after duplicates were removed. Ninety-nine records were screened, and 31 relevant papers were downloaded for full-text screening. A final set of 11 papers, which met inclusion and exclusion criteria, were selected for review.

Data extraction, study quality assessment and synthesis

A structured template was developed to extract relevant data from eligible papers. Four reviewers (EV; CC; FP; GC), independently, extracted data and conducted study quality assessment, using a codebook. Discrepancies between researchers were resolved through discussion.

Data were extracted on publication date, type, country, participant characteristics (such as age, gender, recruitment method, kind of psychiatric illness), AVH (according to their pragmatic and phenomenological features), details of assessment instruments, number of cases, setting, dropout rate, physiological parameters, the presence of a family member, explored themes, follow-up.

The methodological quality of each study included in the systematic review was assessed using a standard form adapted from the Mixed Methods Appraisal Tool (MMAT) – Version 2018, a critical appraisal tool that is designed for the appraisal stage of systematic mixed studies reviews (48). The four criteria were selection bias, quality of measurement, adjustment for confounders and proportion of complete outcome data/response rate/follow-up rate (see Supplementary file). We conducted a narrative synthesis of the results because the expected heterogeneity of the included studies, e.g. in samples, predictive measures and outcomes, made a meta-analysis inappropriate.

Results

Study characteristics

Table 3 shows the main characteristics of the included studies. We identified a total of 11 studies. Among the identified trials, there are 3 (27.3%) cross-sectional studies or surveys, 1 (9.09%) cohort study, 3 (27.3%) reviews, 2 (18.2%) hypothesis and theory articles, 1 (9.09%) qualitative research and 1 (9.09%) original article. The studies were published between 2017 to 2019. They were published in UK (3, 27.3%), USA (2, 18.2%), Australia (2, 18.2%), Ireland (1, 9.09%), Norway (1, 9.09%), France (1, 9.09%), The Netherlands (1, 9.09%).

Shame was found to be positively correlated with more variables describing negative features of verbal hallucinations in non-clinical populations (49). Specifically, adverse life events may prompt greater onset of negative content, characterised by a relationship mediated by mechanisms including those involving shame and guilt (40, 50, 51). On the other hand, guilt is perceived by the hearer as a burden on those around him, especially in case of older adults (52). At the same time, intrusive memories, images and thoughts about past experiences, together with the shame associated with them, can stimulate the onset of traumatic experiences (40, 53). Furthermore, a couple of studies underline the need to find functional interventions that reduce stigma rates towards those who hear voices (30), taking into account differences linked to the life cycle (54). Moreover, de Boer's study claims that, once in a lifetime, the experience of an auditory hallucination is associated with an aberrant perception of auditory language, suggesting a close relationship between the two processes in the general population (55).

Risk of bias in studies

The quality of included studies is generally low and most of them received just a first screening approval because their overall quality scores were not in complete accordance with the methodological quality criteria of MMAT (Supplementary Material -1). Indeed, many studies did not have complete information about baseline response rate, outcome data, follow up and none of them was a randomized controlled trial, resulting in a lower quality assessment rating. This makes it impossible to conclude the relationship

between shame, guilt, and auditory hallucinations in the non-clinical population, although it can be assumed that there is a circular relationship, probably also influenced by the phenomenological characteristics of the voices themselves.

Discussion

Shame and HV in a non-clinical population

The experience of hearing voices can be correlated with shameful experiences in several ways. Like other emotions such as sadness, shame could shape the content and triggering the onset of voices (40). Firstly, HV can represent a source of significant distress in terms of content, meaning ascribed, and the relationship between the voice and the hearer. Shame was found to be related to the negative content, qualities of the heard voices and the subjective ratings of deprivation (49). This finding supports the idea of mirroring between voice hearers' experience and the quality of voice-hearer relationship: for instance, in case of feelings of inferiority and defectiveness concerning the self, this is mirrored in the voice being experienced as powerful, dominant, harming, and intrusive (56). Given that induction of shame led to increased levels of intrusive thoughts and working memory impairments (38), there are reasons to expect that shame in response to a stressful event can be involved in the elicitation of HV (57). Therefore, shame can be not only simply correlated with this phenomenon, but it may be a causal factor in the onset of HV (40). One possible function of this process is proposed by McCarthy-Jones that evidenced that shame could elicit HV to encourages submissive and self-protective behaviours avoiding situations that can be potentially threatening for one's identity. For example, this can be true in people who lived negative past experiences of stigmatization, bullying or neglect. Within this perspective, shame can be related to HV playing an adaptive function that aids survival protecting people from further unpleasant experiences (40).

Finally, shame can emerge because of HV. The experience of HV *per se* can constitute a significant source of stress for cultural reasons (58, 59). Even when HV is appraised by their hearing voice's experience as benign, positive, and controllable, this phenomenon is considered a social taboo, as it is difficult to talk about voices "without being looked at in a strange way" (30, 60, 61). People who hear voices reported a lack of understanding by friends, families and even professionals and, as a result, many people hide these experiences, because of the fear of social judgment and stigma (61, 62). People who experience hearing voices may feel themselves negatively judged by others and they can experience shame perceiving themselves as defective or inadequate (32).

Guilt and HV in a non-clinical population

As with shame, guilt may influence people's HV. This can be common in people who experienced stressful life events that are linked with repentance or regret (40). HV with guilty content can be shown not only by veterans or people who experienced war or conflicts but also by people who experienced emotionally overwhelming events related to mistakes or bad actions. This voice represents the introjected negative thoughts and it ranges from unconscious or subliminal to fully conscious (63). Guilty voices can be

associated with emotional parts associated with self-criticizing narratives that can range from a benign advisor to a maladaptive judge (64). In their worst expression, feelings of guilt can be a key driver to HV related to past traumatic events (e.g. abuse, experiences of war or bullying) or be the content of intrusive and very disruptive HV in schizophrenia (40).

Although their relationship with pathological disorders, guilty HV can also have the role of establishing a precise responsibility related to personal negative experiences. Therefore, HV that show guilty contents may also give a perception of order towards stressful events that otherwise would seem even more frightening and chaotic. This can give the transgressor a sense of control over negative events and help avoid similar mistakes in the future. HV of guilt can be seen as an internal reminder of past mistakes that can be viewed as the source of helpful albeit challenging messages. Within this perspective, HV of guilt can be related to an internalized voice of moral authority that can guide interpersonal behaviour enhancing social relationships and restoring equities (16).

Shame and guilt HV neuropsychological aspects

Cognitive functions and inhibitory functions, context binding, reality monitoring and metacognition play a relevant role in the development of AVHs. Their dysfunction may lead to the emergence of redundant and/or irrelevant or distractive information from the long-term memory to awareness, resulting in AVHs. The negative emotional valence of AVH could be related to the activation of the right Broca's area (50, 65). In particular, AVHs were found to be similar to the automatic speech utterances that are generally generated by the right hemisphere of patients with aphasia. Due to the role of Broca's area in the inhibitory process, its relationship with the repetitive simple is considered plausible (66). Other studies noted a consistent activation of both amygdala and parahippocampal gyrus during processing the negative content of the heard voices (67). These data are particularly consistent with other studies that found specific activations in the anterior cingulate cortex, parahippocampal gyrus related to shame and in the amygdala and insula for guilt(35).

Moreover, Van Lutterveld and colleagues found that, in resting-state networks, the role of the amygdala tends to decrease, and Vercammen found its reduced connectivity with the left temporoparietal region, which is recognised to be generally overactive during AVHs (68, 69).

De Boer and colleagues noted that individuals with AHVs tend to be less sensitive than the others in the auditory verbal recognition and they show a higher false alarm rate if compared with people without AVHs. This may be related to an overload of the working memory that can be found within guilt and shame activations(38).

Shame, guilt and HV in psychotherapy

Even if the notion of hearing voices is not necessarily a pathological phenomenon, psychotherapy literature from very different orientations explored the multi-voiced nature of the self (70, 71). Working on the inner voice of guilt and shame can be a very enriching experience within the therapy session, even when HV don't cause a pathological impairment. Different voices can be related to a different part of the

self, some of which are more dominant than others, that may have different roles and relationships with each other's (72). HV with guilty or shameful content can be related to a self-criticizing part of the self that even in a non-clinical population, when is not properly accepted, can be extremely stressful. Within this context, psychotherapy can be the safe space where the therapist encourages clients to listen to their self-criticizing part and try to understand the reason for their shameful and guilty messages. This can start a new constructive dialogue between self-criticizing parts and other parts more related to compassionate and non-judgment (73). Clients can be encouraged to explore the content of that voices that are often tied to previous negative experiences that they can learn to manage and resolve (74). Within this perspective, the therapist and the client start to give equal space to all the parts of the self-fostering the development of a richer and more integrated constellation of voices that express different parts of the client's identity (75).

Limitations and strengths

The strength of this systematic review is a focus on guilt and shame as related to auditory hallucinations in non-clinically impaired people. Nevertheless, the consistency of the results obtained, considering the variety of the type of articles included, the research design, the instruments adopted, and the statistical analyses carried out, prevents generalizability. Moreover, the sample size of these studies is small and often includes great heterogeneity in terms of age and gender, as well as no follow-up.

Other limitations of this review concern the search strategy. Although our literature search was conducted in eight databases and several search terms were applied, the search may not be exhaustive. Eligible studies are only from 7 countries and most of them were carried out in the USA.

Implications for practice and research

Most studies included in our review focused on shame or on guilt and not on both, and this makes it complex to examine whether they do not also influence the occurrence of HVs together or arise together. Psychological interventions are suggested to target maladaptive appraisals and allow the construction of affect regulation strategies, including shame and guilt, which may play an important role in increasing the distress associated with AVHs, in those who are not clinically impaired. In addition, longitudinal studies with long follow-ups would be essential to highlight the direction of the relationship between AVHs, shame and guilt. Thus, there is a need to establish the longer-term association of shame, guilt and hearing voices. As well their effects on longer term mental health outcomes and hearing voices themselves, shame and guilt may contribute to adverse consequences such as isolation or increasing rates of depression, anxiety, or other mental disorders. Indeed, more systematic exploration is needed about how shame and guilt affect hearing voices in non-clinical people and viceversa.

This systematic review also can contribute to stress the relevance of understanding, targeting of specific psychological therapies, and informing of social policy (around the importance of an equal society) for those who hear voices.

Conclusions

In producing this report, we were constrained by the relative scarcity of well-powered studies to conduct a systematic review of the literature, which is why we elected to produce a narrative review. This review is intended to provide an overview of the relationships between AVHs, shame and guilt in a non-clinical sample. Even if these two self-conscious emotions can be easily found as a common topic in a lot of AVHs, other unpleasant emotional experiences should also be explored in future research.

Future studies should endeavour to recruit larger cohorts to further examine the potential and reciprocal influences between AVHs, shame and guilt as well as to identify benefits and adverse events of possible therapies. Further clinical research is therefore warranted to inform and train health professionals around clinical care, by enhancing the understanding of the patient perception of the disorder.

Abbreviations

AVHs = Auditory Verbal Hallucinations

HV = Hearing Voices

MMAT = Mixed Methods Appraisal Tool

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

All data generated or analysed during this study are included in this published article [and its supplementary information files].

Competing Interests

The authors declare that they have no competing interests.

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Authors' contributions

FP conceived of the presented idea. EV and CC have made the acquisition, analysis (with the support of FP and GC for the doubtful cases, or interpretation of data for the article and drafted the article. FP supervised all process; GC and EM revised the paper critically for important intellectual content. All the authors approved the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Tables

Table 1: Key words adopted for the search strategy

Key words

"Auditory Verbal Hallucinations", OR "AVH", OR "Auditory Hallucinations", OR "Verbal Auditory Hallucinations", OR "VAH", OR "hearing voices", OR "voice-hearing" AND "non-clinical population", OR "non-clinical patients", OR "non-patients", OR "non-psychosis", OR "non-psychiatric", "general population", OR "normal people" AND "shame" OR "guilt".

Due to technical limitations, Tables 2 and 3 are only available as a download in the Supplemental Files section.

Figures

Figure 1

PRISMA Flow chart diagram of the selection process

Supplementary Files

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