ESTUDOS DE PSICOLOGIA
Psychological Studies

RESEARCH REPORT

Health Psychology

Editor
Raquel Souza Lobo Guzzo

Support
Programa Ciência Sem Fronteiras (A072/2013) and *Fundação de Amparo à Pesquisa do Estado de Minas Gerais* (APQ-03346-15).

Conflict of interest
The authors declare that there are no conflicts of interest.

Data Availability
The research data are available from the corresponding author upon reasonable request.

Received
February 1, 2022

Approved
October 11, 2024

Spiritual experiences hallucination phenomenology associated with spiritual experiences in a non-clinical population: a qualitative study

Fenomenologia da alucinação associada a experiências espirituais em população não clínica: um estudo qualitativo

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How to cite this article: Mainieri, A. G., & Moreira-Almeida, A. (2025). Spiritual experiences hallucination phenomenology associated with spiritual experiences in a non-clinical population: a qualitative study. *Estudos de Psicologia* (Campinas), *42*, e220012. https://doi.org/10.1590/1982-0275202542e220012

Abstract

Objective
Studies show a high prevalence of psychotic experiences in the population, not associated with mental disorders, called anomalous experiences. The aim of the study was to explore the phenomenology of anomalous experiences in mentally healthy mediums.

Method
Six mediums undergoing these experiences with high frequency were interviewed about their sensory experiences and the content categorized as predictability (trance-mediumship/non-trance) and sensory modality (kinesthetic, visual, auditory and olfactory).

Results
No difference was found concerning predictability and quality of the experiences associated with all modalities except for the kinesthetic modality which was more frequent during trance-mediumship.

Conclusion
More sophisticated studies on anomalous experiences involving brain functioning are needed in order to develop more accurate explanatory hypotheses and their implications for the process. of diagnosis and clinical intervention.

Keywords: Anomalous experience; Mediumship; Trance.

Resumo

Objetivo
Estudos apontam alta prevalência de vivências psicóticas na população, não associadas a transtornos mentais, chamadas de experiências anômalas. O objetivo do estudo foi explorar a fenomenologia de experiências anômalas em médiuns mentalmente saudáveis.

Método
Seis médiuns que apresentavam alta frequência dessas experiências foram entrevistados quanto às suas experiências sensoriais e o conteúdo categorizado quanto à previsibilidade (transe-mediúnico/não-transe) e modalidade sensorial (cinestésica, visual, auditiva e olfativa).

Resultados
Não houve diferença quanto à previsibilidade e qualidade associadas a todas as modalidades, com exceção da cinestésica, a qual teve maior frequência durante o transe-mediúnico.

Conclusão
Estudos mais sofisticados sobre experiências anômalas, incluindo variáveis sobre o funcionamento cerebral, são necessários a fim de desenvolvermos hipóteses explicativas mais acuradas e suas implicações no processo de diagnóstico e intervenção clínica.

Palavras-chave: *Experiências anômalas; Mediunidade; Transe.*

Psychotic disorders have a considerable prevalence in the world population and are one of the major global causes of disability (Jongsma et al., 2019). Initiatives to minimize this disorder include early identification and treatment of psychotic disorders such as schizophrenia. Minimizing the duration of the period of untreated or transient psychosis bears an important impact on prognosis (Lopez-Diaz et al., 2021). Thus, one of the goals of clinical intervention is to identify earlier less severe cases in the general population so that treatment can be carried out as soon as possible (Fusar-Poli et al., 2017). Hallucinations are among the most common symptoms of psychosis. However, it is extremely important to differentiate between non-pathological perceptual changes and those that indicate a psychotic mental disorder. This is extremely important to avoid two harmful extremes: treating healthy people (causing iatrogenesis) or failing to treat early-stage schizophrenia (worsening the prognosis).

The importance of this distinction becomes even greater in view of the findings of recent decades that consistently point to a high prevalence of experiences considered psychotic (especially hallucinatory) in the general population and that these are generally not associated with a mental disorder, much less with a psychosis (Kusztrits et al., 2021; Moreira-Almeida & Cardena, 2011; Peters et al., 2016; Wusten et al., 2018). In a study conducted by the World Health Organization, the largest ever on the subject, with more than 250,000 people who made up representative samples from 52 countries, an average of 12.5% of the population reported at least one "psychotic symptom" during the previous year. This was after excluding cases resulting from substance use or during the sleep-wake transition. The prevalence varied between countries and in Brazil, the prevalence of hallucinations alone was 13.7%. Another important fact was that only 1/10 of those who reported these experiences had a diagnosis of schizophrenia (Nuevo et al., 2012). In other words, so-called "psychotic experiences" are very prevalent in the general population, but most of the time they are not related to psychosis. In fact, there is evidence that these experiences may be related to better mental health indicators (Peters et al., 2016; Scheunemann et al., 2019; Vencio et al., 2019). This has led to discussion about the need for a new nomenclature for these experiences, one of which was "anomalous experiences" (Machado & Moreira-Almeida, 2021).

Thus, it is of great practical relevance to better understand the characteristics, predictors, and evolution of non-pathological "psychotic experiences" in the non-clinical population so that the necessary distinction can be made regarding when they are symptoms of a psychotic condition. Since there are several religious groups (e.g., spiritualists, Umbanda practitioners, charismatic Catholics, and Pentecostal Protestants) who value and encourage anomalous experiences, they constitute privileged populations for the study of these experiences in non-clinical populations. In

Brazil, one group that has been especially investigated in recent years is the group of spiritualist mediums (Bastos et al., 2020), as they present a high frequency and variety of hallucinations and other "psychotic experiences" such as experiences of thought and feeling insertions.

Studies have found characteristics that could potentially distinguish mediums from patients with schizophrenia, such as those with preserved neural connectivity (Mainieri et al., 2017; Schoorl et al., 2021), higher levels of self-direction and less cognitive disorganization (Alminhana et al., 2017b), good social adjustment and lower levels of childhood abuse (Vencio et al., 2019). However, an important gap has been the understanding of the phenomenology of non-pathological hallucinatory experiences in the general population (Laroi et al., 2019) and, in particular, of mediums. It is not clear to what extent non-pathological perceptual alterations in the general population (e.g. in spiritual experiences such as mediumship) resemble and to what extent they differ from those occurring in psychotic disorders such as schizophrenia (Moseley et al., 2021; Toh et al., 2020). There are some case studies (Damiano et al., 2021; Delmonte et al., 2016) and studies with groups of mediums that investigated phenomenology (Menezes et al., 2012; Roxburgh & Roe, 2014; Wahbeh & Butzer, 2020), but they are few and often provide little detail.

Thus, this study aims to help fill this gap by exploring the phenomenology of mentally healthy mediums' hallucinatory experiences.

Method

Participants

Six mediums (3 men and 3 women) from a group of 30 mediums were selected for qualitative assessment of anomalous experiences phenomenology given the quality and intensity of the experiences reported.

Instruments

Screening instruments were used to pre-select participants with the purpose of selecting mediums who had consistent participation in mediumistic meetings, presented visual and/or auditory hallucinations during the mediumistic trance (referred to as seeing and/or hearing spirits) and did not use hallucinogenic drugs; in addition we excluded volunteers with indications of mental disorders (axis I and II according to the DSM-IV). The instruments were:

Self-Report Psychiatric Screening Questionnaire (SRQ): (self-administered instrument designed to screen for mental disorders in primary care services, consisting of 24 items) (Harding et al., 1980). A cut-off point of 5 for men and 7 for women is suggested, since individuals with scores above this threshold cut off point have a high possibility of presenting psychiatric morbidity).

Sociodemographic Questionnaire: Sociodemographic information, such as gender, age, marital status, education, occupational status, religion, as well as variables related to the universe of mediums, such as years of spiritualism, attendance at mediumship courses and mediumship development meetings, types of mediumship and approximate frequency of these types of mediumship per month – self-estimated.

Clinical Assessment: the instruments were:

Structured Clinical Interview (SCID – Brazilian version): Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

Positive and Negative Syndrome Scale (Chaves & Shirakawa, 1998): It consists of 2 groups of symptoms: 7 positive symptoms and 7 negative symptoms associated with psychotic condition. Only mediums who presented a score of 1 for each of the items on the scale were included in the sample, with the exception of the item related to hallucinatory behavior, which was allowed a score of up to 3, since the descriptive nature of this item resembles the hallucinatory experiences of mediums during mediumship sessions.

Escala de Ajustamento Social – (EAS, Social Adjustment Scale) (Weissman & Bothwell, 1976): The concept of social adjustment is based on the integration of multiple factors that interfere in the individual's behavior in the social environment). Psychiatric morbidity often results in impairment of the individual's quality of life and social functioning. The EAS was translated from the original SAS-SR and validated for the Portuguese language by Gorenstein et al. (2002), allowing an assessment of social adjustment in seven areas: work outside the home, work at home, studies, social life and leisure, relationship with family, with spouse, with children, domestic life and financial situation. The scale is self-administered and has shown to be sensitive to help differentiate groups of individuals such as those with depression, schizophrenia, alcohol dependence and those without mental disorders.

Short-Form Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE-Short) (Mason & Claridge, 2006): The scale contains 40 questions that investigate four dimensions of Schizotypal Personality Disorder, namely 1) Unusual Experiences: 12 questions; 2) Cognitive Disorganization: 11 questions; 3) Introverted Anhedonia: 10 questions; 4) Impulsive Nonconformity: 10 questions. O-Life-R was translated according to the Portuguese language and the Brazilian cultural aspects by our research group (Alminhana et al., 2013). The inventory is self-administered.

Neuropsychological Assessment: The main objective of the neuropsychological assessment was to assess the participants' cognition regarding memory [WAIS-III (Nascimento, 2000): Digits; Arithmetic], verbal fluency [WAIS-III (Nascimento, 2000): Vocabulary; Similarities], executive function [WAIS-III (Nascimento, 2000): Matrix Reasoning.

Colored Paths Test (Rabelo et al., 2010) and focused attention [Concentrated Attention Test d2 (Brickenkamp, 1990). These cognitive areas were chosen in order to investigate characteristic neuropsychological deficits in patients diagnosed with schizophrenia that could possibly be present in the sample of mediums given the presence of hallucinatory states, as well as the known neural correlations of these psychological functions in the field of schizophrenia (Reichenberg, 2010).

Semi-structured interview: The main aspects and subjects investigated during the interview regarding the phenomenology of hallucinatory experiences were: 1) type and location (e.g. auditory: the voice/sound occurs inside the head or is heard through the ears; visual: the image occurs inside the head or is seen through the eyes); 2) sharpness and intensity (e.g. auditory: loudness of the sound/voice; visual: clarity of details of the image); 3) frequency and duration of the episodes; 4) interference of the experience in daily life (preservation/alteration of daily functioning); 5) the content of the experiences (e.g. predominantly negative, neutral or positive); 6) degree of anxiety generated by the experiences; 7) the person's control over the experience (e.g. auditory: power attributed by the listener to the voices, whether the voices speak in the first or second person, whether the experience is frightening, gender of the voices, number of voices); 8) age of onset of the experience (de Leede-Smith and Barkus, 2013; Laroi et al., 2012). The following topics related to mediumship were also included: 1) emergence of mediumistic ability (e.g. in what context or situation the person identified himself/herself as a medium); 2) types of mediumistic expression (refers to the fact that the medium hears, sees or feels the presence of spirits); 3) impact of these experiences on the participant's general life after he/she identified himself/herself as a medium. All interviews were recorded and later transcribed.

Procedures

The first author contacted the *Aliança Municipal Espírita de Juiz de Fora* (AME-JF, Municipal Spiritist Alliance of Juiz de Fora) to gain access to spiritist groups and mediums. The centers affiliated with AME-JF were chosen because they have standardized courses for mediums and very similar procedures for conducting mediumship meetings. Mediumship meetings take place weekly at the centers, and the center coordinator was asked for permission to present the study to the mediums. Those mediums willing to participate in the study received the informed consent form and answered the screening instruments. Mediums whose SRQ score was lower than the cutoff point for mental disorders, who regularly participated in mediumship meetings, and who presented hallucinatory experiences above 15 points (sociodemographic questionnaire) were invited to participate in the neuropsychological evaluation and the clinical and phenomenological interviews. At the end of the clinical interview, the participant answered the EAS scale and the O-LIFE inventory. The Positive and Negative Syndrome Scale was answered immediately after the end of the clinical session by the evaluator. The neuropsychological evaluation had the following sequence: Focused Attention test d2, Colored Trails Test and subtests of the WAIS-III.

The phenomenological interviews were analyzed using the content analysis method (Bardin, 2002). An initial reading was performed in order to generate the first interpretative hypotheses. Repeated themes were considered as cues in the creation of thematic categories, which were classified and counted (frequency).

This study was approved by the Research Ethics Committee of the Federal University of Juiz de Fora (Protocol nº 1.211.723). All participants signed the Free and Informed Consent Form.

Results

Sixteen spiritist centers were contacted, of which 5 allowed an oral presentation of the study on their premises; another 2 allowed the delivery of an invitation letter to the mediums, and those who were interested in participating contacted the first author by telephone, who carried out the clarification and consent procedures; the author also forwarded the screening instruments by e-mail. Out of a total of 70 mediums, 30 with a high frequency of hallucinatory experiences and participants in weekly mediumship meetings for more than two years were included in the main study; 6 were selected for qualitative analysis of the phenomenology of the hallucinatory experiences (Table 1).

Regarding the results of the clinical and neuropsychological evaluations, it was found that the 6 participants did not present cognitive deficits and did not meet diagnostic criteria for any mental disorder at the time of the interviews and testing (Table 1).

Table 1
Sample description, results of clinical and neuropsychological evaluations

Participant	Gender	Age	Education (years)	R/S family of origin	D2	Trail 1	Trail 2	Digits direct order	Digits reverse order	O-LIFE-Short	SAS
1	Female	41	18	Spiritist	476	25.7	61.8	8	6	8	1.5
2	Female	76	16	Catholic	241	49.0	77.9	5	6	12	1.6
3	Male	61	16	Catholic	270	22.8	125.0	9	7	8	1.3
4	Male	28	18	Spiritist	440	32.8	68.7	9	5	14	1.4
5	Male	44	18	No affiliation	368	24.3	66.0	10	6	21	1.6
6	Female	54	18	Spiritist	388	63.6	104.0	11	5	21	1.6

Note: D2: Concentrated Attention Test d2 (Brickenkamp, 1990); O-LIFE-Short: Oxford-Liverpool Inventory of Feelings and Experiences – Short version (Mason & Claridge, 2006); SAS: Social Adjustment Scale (Weissman & Bothwell, 1976).

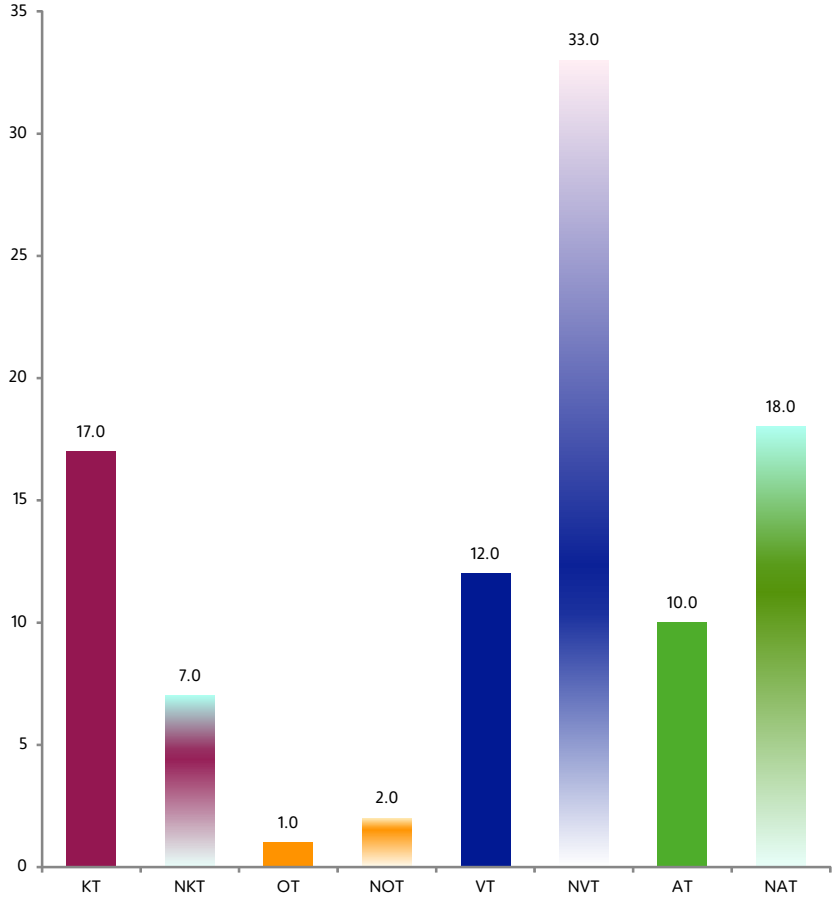
Regarding the analysis of the phenomenological interviews, two general categories were identified regarding the predictability of hallucinatory experiences [Trance (T) – hallucinatory experiences occurring during the mediumistic trance; Non-Trance (NT) – hallucinatory experiences occurring in daily life in a normal state of consciousness]. The predictability criterion was used because during the mediumistic sessions, in which the mediumistic trance is stimulated as a religious practice, the hallucinatory experiences were expected by the mediums, produced and encouraged given the nature of the mediumistic trance and the propitious religious environment; hallucinatory experiences that occurred in daily life had descriptions similar to those that occurred during mediumistic sessions and began without the medium's knowledge, but were controlled by him/her, signaled through the medium's awareness and mental procedures used to reduce or extinguish the hallucinatory experience. Within both categories, a subcategorization was made according to the sensory modality prevalent during the hallucinatory experience [kinesthetic (K), visual (V), olfactory (O), auditory (A)]. Figure 1 presents the proportions of each of the identified assessed categories.

A few examples of each of the categories assessed are shown below:

KT (Kinesthetic Trance): It's very tiring, so I sweat a lot, it's... Sometimes I feel like I have spasms, tremors, it's... Sometimes I feel like I'm suffocating... very tiring; a very strong presence inside me and then I started to tremble, feel very cold; my head grew and grew, it felt like I had hydrocephalus.

Figure 1

Proportions of categories related to the analysis of the phenomenological interview



Note: AT: Auditory mediumistic trance; KT: Kinesthetic mediumistic trance; NAT: Non-auditory trance; NKT: Non-kinesthetic trance; NOT: Non-olfactory trance; NVT: Non-visual trance; OT: Olfactory mediumistic trance; VT: Visual mediumistic trance

NKT (Non-Kinesthetic Trance): I could feel the exact shape of the person, but I couldn't define his features; I felt that another person was combing his hair with me; I still feel it today, as if someone was passing by, making a movement in the air.

VT (Visual Trance): I see the spirit that is using me as a medium; when I touch certain things or enter a place, the images appear in my head as real images; the pictures I see are as if they were two-dimensional. I'm just seeing it like this. Just witnessing them. It's as if I were inside the image.

NVT (Non-Visual Trance): Since I was a child, I have seen and heard things that no one else could see or hear; at night, a painter would appear to me every night; there was a child holding the door... this child was not at all like us, because his finger had disappeared; There was only one light and I can't see a similar light; It was there, it kissed me on the forehead and then it disappeared, it vanished in front of me.

OT (Olfactory Trance): It doesn't come through the nose. It's as if you could smell it all over your body.

NOT (Non-Olfactory Trance): I started to perceive a very strong sugar smell... for me that was concrete, I wasn't thinking, I was imagining going through a mediumistic experience.

AT (Hearing Trance): Some spirits talk to me by moving their mouths like you are moving, others talk simply by looking in the direction of my eyes; I receive a voice message inside my head, from a spirit; I hear my voice when I am speaking, but it didn't go through my brain.

NAT (non-hearing trance): Look, I heard parallel voices. Complete ones. Complete dialogues of people sometimes laughing; for me it is very natural to be talking to spirits; I hear someone calling me and there is no one calling me.

Discussion

Despite the recent decades' efforts of the scientific community to study the symptoms of psychosis and their presence in the healthy population, especially hallucinations, the technical-scientific scenario remains quite complex and many factors appear to contribute differently to the build-up of the phenomenon (Chinchani et al., 2021; Maijer et al., 2018). The aim of this study was to explore the phenomenology of hallucinatory experiences of mentally healthy mediums with a view to contributing to the understanding of the characteristics of non-pathological "psychotic experiences" in the non-clinical population. We found that the visual, auditory and olfactory sensory modalities were more frequent during daily life, similar to studies with non-clinical populations (Moseley et al., 2021; Toh et al., 2020), and are qualitatively similar to those that occur during mediumistic trance. In addition, the kinesthetic modality appeared with greater frequency and richness of detail during mediumistic trance.

In general, the frequency of mysticism and delusions of grandeur is high in psychotic patients, actually around 25% to 39% of patients with schizophrenia and 15% to 22% of patients with bipolar disorder (Loch et al., 2019). Individuals with religious delusions have more severe symptoms compared to other patients (Anderson-Schmidt et al., 2019). In our study, the six mediums did not present delusions or other psychotic experiences, which may be a determining factor as a possible explanation for the fact that the mediums reported controlled hallucinatory experiences (Loch et al., 2019; Menezes & Moreira-Almeida, 2010). Peters et al. (2016) confirm the idea of symptoms severity such as the insertion of thoughts into another person and mind reading as important factors

in psychosis; however, among the mediums assessed, this effect did not occur, possibly due to the religious/spiritual framework (Milner et al., 2019). Schizophrenic patients tend to be more paranoid, with threatening appraisals (Milner et al., 2019); The hallucinatory experiences of mediums are interpreted according to the precepts of their religion, even when they occur during everyday life (Wahbeh & Butzer, 2020).

In another line of research, schizotypal traits have been investigated in clinical and nonclinical populations in relation to three basic factors of schizotypy: (1) anomalous cognitive and perceptual experiences (positive factor), (2) interpersonal deficits (negative factor), including physical or social anhedonia, and (3) cognitive or psychological disorganization (Kocsis-Bogar et al., 2013). Cluster analyses have indicated that there are two main groups that score high in schizotypy: one related to more mental health problems ('high' schizotypy: high scores on all three dimensions of schizotypy) and another more related to mental health, the so-called 'happy schizotypal' or 'benign' schizotypy (high scores only on the positive factor of schizotypy, linked to anomalous experiences such as hallucinations) (Farias et al., 2013; Harris et al., 2020). The results of these studies have indicated that the increased incidence of the three factors is associated with an increased likelihood that the person will develop some clinical disorder associated with psychotic disorders. Furthermore, it was found that suffering and incapacitation (signs of mental disorder) are positively correlated with the factors interpersonal deficits and psychological disorganization, while the factor anomalous cognitive and perceptual experiences are not correlated with mental disorders, but rather with spiritual/paranormal beliefs and practices among the non-clinical population (Alminhana et al., 2017a; Parra & Paulo, 2010). Other studies have investigated the psychological variables that could lead to the transition from subclinical to clinical expression, such as emotional stress (Cella et al., 2012; Collip et al., 2013; Scheunemann et al., 2019), adverse experiences in adolescence (Healy, Brannigan et al., 2019) and sense of self (Healy, Coughlan et al., 2019).

However, it is worth noting that there is still no consensus in the literature regarding the vulnerability factors that would trigger the transition to the pathological state (Salazar de Pablo et al., 2021; Salazar de Pablo et al., 2022). In recent years, a great deal of effort has been made to identify neurobiological markers that could help in understanding the risk state, thus enabling the identification of cases in which the transition to the pathological psychotic state could be more likely. However, there is a considerable lack of consistency in the literature due to methodological variations (patient recruitment, brain region of interest, method of analysis, and functional task employed) (Palaniyappan, 2019; Wood et al., 2013).

Finally, the group of mediums studied distinguishes hallucinatory experiences as not belonging to the reality of others, unlike the frequent descriptions among psychotic patients, in whom hallucinatory experiences break the threshold of contact with reality. This effect may be due to the fact that the mediums do not have cognitive deficits which are frequently present in psychotic patients. Another possible explanation for this effect in the case of the mediums assessed is the high level of education of the sample and lower consumption of substances, associated with lower levels of social adversity, these being protective factors in relation to the conversion to the psychopathological state (Coughlan et al., 2020).

The mediums we selected also reported intense participation in their religious community, enabling a social environment in which the anomalous experience would be associated with shared cultural factors and not with the disorder. It is important to emphasize the fact that Brazil is a country with high religious syncretism, which facilitates the creation of meanings regarding anomalous experiences associated with culture.

From a neurobiological point of view, some studies have indicated that the belief in the importance of Religiosity and Spirituality (R/S) would be associated with a thickening of some regions of the cerebral cortex, which also have the function of processing sensory information (bilateral parietal cortex and occipital regions) (Li et al., 2019). In a systematic review of the neurocorrelates associated with R/S, including 25 studies using methods such as electroencephalography, structural neuroimaging (MRI), and functional neuroimaging (fMRI, PET) and involving participants of different religions and R/S practices (e.g., resting state and prayer), the results indicate that, collectively, R/S experiences have specific neurobiological correlates and that these are recognizable, involving a number of different brain regions (Rim et al., 2019). Such evidence indicates a possible protective factor of R/S, which could explain the presence of psychotic experiences in the general population and the non-conversion to the psychopathological state.

Conclusion

Finally, more complex studies, involving not only behavioral variables, but also measurements of the brain function during hallucinatory experiences are necessary in order to develop more accurate explanatory hypotheses about the phenomenon of non-pathological hallucinatory experiences and their implications in the process of diagnosis and clinical intervention.

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