


# Psychotic Experiences and Alternate Dimensions: A Thematic Analysis Exploring Frameworks of Psychotic Symptoms Among Saudis

SAGE Open  
 July-September 2021: 1–11  
 © The Author(s) 2021  
 DOI: 10.1177/21582440211030276  
[journals.sagepub.com/home/sgo](https://journals.sagepub.com/home/sgo)  


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## Abstract

Psychotic expression is influenced by unique contexts, including the individual's culture. The majority of research on psychotic experiences is quantitative and from Western, democratic societies. This article explores the explanatory models used by Saudis to describe psychotic experiences (i.e., hallucinations and delusions). Using open-ended responses to a structured psychosis screener embedded within a comprehensive mental health survey instrument, we conducted thematic analysis on data representing the psychotic experiences of 59 individuals. We found that Saudis report religious (e.g., Jinns) and cultural (e.g., modest clothing) frameworks alongside biological, psychological, and social mechanisms which potentially trigger an alternative reality for the affected individual. Our findings suggest it may be helpful for health care professionals to consider individual differences and work with religious leaders (e.g., *Shaykhs*) to prevent misdiagnosis and mistreatment. In-depth qualitative studies are needed to examine trajectories of psychotic symptomatology among Saudis and the specific language used to describe such occurrences.

## Keywords

psychotic experiences, hallucinations, delusions, psychosis, explanatory models, thematic analysis, mental health, Saudi Arabia, Arab

## Introduction

Previous studies indicate that the symptoms of psychosis exist in the general population as part of a continuous distribution of severity (Van Dael et al., 2005; Van Os, 2003). This ranges from healthy functioning “normal” experiences, through eccentric behaviors and subclinical psychotic experiences, to full-blown psychosis with clinical need (Loch et al., 2011; Van Os et al., 2001). These complex experiences involve interactions between biological, psychological, social, and environmental factors (Larøi et al., 2014). Specifically, there may be cultural variants in how psychotic experiences (i.e., hallucinatory and delusional experiences) manifest (McLean et al., 2014; Vega and Lewis-Fernández, 2008). Stompe et al. (2006) suggest that as much as 15% to 30% of psychosis expression is influenced by culture. Through their cultural perspectives, individuals—the sufferers, their family, and their community—interpret sensory, emotional, and behavioral experiences (including psychotic experiences), primarily drawing from the belief systems and

explanatory models known to them (Castillo, 2003; Pumariaga, 2016). For instance, Cook (2015) note that religious beliefs can shape the content of psychotic experiences. Others even go so far as to propose considering demonic possession as an etiological pathway to psychosis, as the behaviors associated with possession are similar to those of psychotic experiences (Al-Habeeb, 2003; Irmak, 2014).

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Saravanan et al. (2004) also rightly emphasize the influence of globalization, resulting in the spread of biomedical systems of thought; it is now common for people to use naturalistic (or Western) explanations (e.g., disease, abnormality) alongside personalistic (or Eastern) explanations (e.g., supernatural causes, sin, and punishment). There is indeed evidence to show that people follow beliefs and explanatory models of both the prevailing culture and their culture of origin; for example, immigrants often seek medical treatment and engage in their traditional spiritual practices in parallel (Pumariega, 2016; Suhail & Cochrane, 2002).

However, existing research from Saudi Arabia on psychotic experiences is dated. Decades-old studies depicted that Saudis mainly adopted religious explanations and treatment approaches for their hallucinatory experiences (Wahass and Kent, 1997a, 1997b). In addition, Kent and Wahass (1996) found that the content of hallucinations of Saudi patients had more cultural (e.g., family affairs), religious, and superstitious themes (e.g., instructions related to the holy book, demons, and magic) than other types (e.g., persecutory, hostile, or threat-related) in comparison with British patients.

The majority of research studies on psychotic experiences are also quantitative and mostly from Western, educated, industrialized, rich, and democratic societies (Henrich et al., 2010). Methodological diversity and disciplinary approaches employing qualitative methods, which do not reduce “culture” to a one-dimensional proxy variable (e.g., country of residence), are rarely used (Luhmann et al., 2015; Woods et al., 2014). According to Woods et al. (2014), hallucinations, for example, exist only in context—of the human consciousness, of an individual’s life—and are made meaningful within the available frameworks of particular places and historical periods; psychotic experiences are therefore part of a gestalt of the person. Even within the same cultural milieu, Lim et al. (2018) note that Muslims are diverse individuals, which is crucial to remember in today’s era of personalized medicine. The understanding of sociocultural factors can thus help in properly interpreting psychotic experiences and assist in responding appropriately to any associated distress (Bentall, 2004). This can be of diagnostic significance for clinicians who want to effectively build trust with their patients, make them feel more understood (Cook, 2015), and attempt to destigmatize their experience (Larøi et al., 2014; Lim et al., 2015). Given that religion and culture are entangled and usually coexist (Gearing et al., 2011), it may also be helpful for health care professionals to be aware of the subtle differences and work with religious leaders (*Shaykhs* or *Imams*) or faith healers (Irmak, 2014; Khalifa & Hardie, 2005) to ensure the psychotic experiences of individuals are not misdiagnosed, unnecessarily pathologized, and mistreated (Kleinman, 2019).

Yet few qualitative studies have examined sociocultural factors, including one with Saudi patients (AlNzawi, 2012;

Drinnan & Lavender, 2006). And scarcely any Arab studies have considered the perspective of family members (Hasan & Musleh, 2017), who might share the same explanatory models as the suffering individual and can be a reasonable alternative when individual-specific knowledge is absent to allow adequate evaluation of pathological significance. In their comprehensive review of previous literature on culturally diverse children, adolescents, and their families, Pumariega et al. (2013) asserted that psychotic symptoms can be based on religious-spiritual experiences, which are in turn a response to stressors. And in a case study of a Moroccan family living in Belgium, where family members reported multiple hallucinations, the psychotic experiences were not strictly linked to pathological indicators but were an outcome of family members’ response to acculturation (Sluzki, 2004). The study emphasized that health professionals must bear in mind the following issues during their clinical evaluation of individuals with psychotic symptoms: intrinsic tensions within a family (and between generations of family members), issues of gender expressed differently (which further differ based on subcultures), and potential clash between psychosocial and biomedical models.

As part of the World Health Organization World Mental Health (WMH) Survey Consortium, the Saudi National Mental Health Survey (SNMHS) collected psychosis screening data from respondents who either had a psychotic experience themselves or had an affected family member. Although some countries under the Consortium have individually examined the quantitative data on psychotic experiences as assessed by the Composite International Diagnostic Interview (CIDI; Gale et al., 2011; Ochoa et al., 2008), none have considered a qualitative approach. The aim of this study is to explore the characteristics and explanatory models of psychotic experiences reported by Saudis in the SNMHS.

## Method

### *Sampling institution masked for blind review*

Data are from the SNMHS, a national epidemiological household survey with the aim to estimate psychiatric morbidity among the Saudi population in the Kingdom of Saudi Arabia (KSA). The survey data were collected between 2013 and 2016. Sampling comprised a stratified multistage cluster area probability sample of non-institutionalized Arabic-speaking Saudis—males and females between the ages 15 and 65 years from rural and urban areas across KSA. Of the 4,004 main survey interviews, 1,975 respondents completed the psychosis screening section; individuals were selected by the computerized survey instrument algorithm for various sections based on the completion of core diagnostic assessments (Kessler & Ustun, 2004). From this, available open-ended data from 57 respondents were considered (further explained under the “Analysis” section). Survey procedures were

approved by the Institutional Review Board committee at the King Faisal Specialist Hospital & Research Centre, Riyadh. All respondents provided written informed consent and were assigned a sample ID by the survey instrument software. Respondents belonging to this qualitative study were further anonymized with a case number ID. Details of the SNMHS methods can be found elsewhere (Altwaijri et al., 2020).

## Measures

The Saudi adaptation of the CIDI 3.0—an in-depth fully structured interview—was used to conduct face-to-face household interviews (Shahab et al., 2019; Kessler & Ustun, 2004). This instrument assessed mental disorders according to the definitions and criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. The interviewers underwent comprehensive training sessions before being certified to use Saudi CIDI 3.0. The gender of each interviewer was matched with the gender of the selected respondents. Details of field and data quality methods were published earlier (Shahab et al., 2017; Hyder et al., 2017).

The CIDI 3.0 has a two-part structure based on a diagnostic algorithm; the psychosis screening section appears in Part II (Kessler & Ustun, 2004). This section consists of six items, where each item has two subitems asking the following: (a) who experienced the potential psychotic symptom (the respondent themselves or their family members) and (b) briefly describe what happened. The survey interviewers typed the responses to these questions onto the digital interface of survey instrument software on their laptops. These excerpts were either recorded in first-person (i.e., verbatim from the respondent) or in third-person (i.e., referring to the respondent by their pronoun).

## Analysis

Open-ended data describing psychotic symptoms, that is, experiences related to hallucinations and delusions, were extracted from the survey database. Out of 1,975 respondents, only 207 provided affirmative detailed responses to any or all of the six items from the psychosis screener. Data from six of these participants were missing potentially due to technical error. The remaining cases were translated from Arabic to English by one of the coders. This database was then divided between two co-authors—psychiatrists—to determine which excerpts from 201 respondents qualified as “psychotic experiences.” Next, two coders reviewed the excluded and included extracts, and finalized the database with 74 excerpts. Although these excerpts came from 57 respondents, they represented psychotic experiences of 59 individuals (i.e., either the respondent themselves or their family member). All data were managed and analyzed in Microsoft Excel 2010 (Microsoft Corporation, Redmond, Washington, USA).

The criteria for excluding extracts were as follows: vague information (e.g., “Sees cartoons—voices”), experiences of children under the age 12 years (e.g., “She laughs without reason and is aggressive, and she hits her brother and she loves getting undressed and she cries for no reason, the incidents are many”), cases where multiple household members had a variety of unrelated experiences (e.g., “During my illness, I would see things that looked like black insects crawling up the wall and then disappearing. Farah said that she saw a man but he disappeared. Hanan said that she saw a cat”), incidents that seemed unrelated to psychotic experiences of family members or respondent (e.g., “We would be sitting and chatting, suddenly my friend leaves and comes back, and when he is back you can tell that he is different”), speculations that were ruled out by the psychiatrist (e.g., He was asleep and he was dreaming, he said that people were chasing him and they wanted to kill him), and unclear situations that suggested “caregiving burden” but did not provide details (this theme was also deemed to be beyond the scope of this study; for example, “Because of the things he sees and hears, he has become someone who cannot be depended on, I do everything, even the bills”).

We carried out thematic analysis as outlined by Vaismoradi et al. (2013) and Crowe et al. (2015). These comprised two main rounds of coding. In the first round, both coders independently assigned categories according to emergent themes and keywords; each extract was categorized as a hallucination and/or delusion, and also given a theme(s) and subthemes. Following this, both coders shared their categorization, discussed their approach, and reviewed a selection of cases together to determine the revision process for the next round.

During the second round, both coders strengthened the theoretical foundation associated with the themes. The first coder revised the categories and shared it with the second coder. At this stage, a separate tabular representation of keywords was used to explore relationships between the overarching themes and subthemes according to existing theoretical models and previous literature on psychotic experiences. The second coder then renamed and reshuffled the themes, linking them to relevant extracts in the database. Next, one of the psychiatrists evaluated the resultant themes and subthemes with an associated extract for each. According to the feedback received, minor changes were made and the themes were finalized. Any implicit biases from the coders and psychiatrists during this analysis with respect to personal, clinical, cultural, and religious affiliations were mitigated by several stages of review done by them individually and as a team. See online supplement for details of sample characteristics analysis.

## Results

### Sample Description

The sample had an almost equal proportion of female and male individuals. The average age of these individuals was

36 years. The majority of them were from urban areas, such as Al-Riyadh, Makkah, and Eastern region. Most individuals belonged to low-income households, followed by those who belonged to average and high-income households. Auditory and visual hallucinations—individually, as well as together—and delusions of control were the most commonly reported psychotic experiences. A small percentage of excerpts also indicated that some individuals endured a combination of multiple psychotic experiences; for example, auditory tactile hallucinations, and delusions of persecution. See online supplement for table of sample characteristics.

Three main themes were identified that contributed to the explanatory models used by Saudis to make sense of their psychotic experiences. The analysis also allowed the exploration of interacting elements, and thus several characteristics emerged for each of the explanatory models. In some instances, the individuals with psychotic experiences drew from more than one explanatory model identified in this study.

## Religious Interpretations

When religious terminology was used by respondents, the excerpts were categorized under this theme. In these cases, respondents cited Jinn or implied Jinn (metaphysical beings that exist alongside human beings according to Islamic belief) when describing the psychotic experience. Behaviors such as laughing, aggression, nonsensical speech, reaction to the Qur'an, and/or experiencing mental distress were some of the indicators of Jinn possession (Al-Habeeb, 2003; Irmak, 2014; Utz, 2011) reported by respondents. Respondents were thus considered to be under the influence of Jinn when they reported feeling threatened, disoriented, or began screaming and crying:

She is possessed; when she is sitting with us she says that someone is in front of us and she starts screaming and shaking. (R28 [M, age 17] about his sibling [F, age 14])

One time, he was laughing on his own and he was doing strange things and he lost the house, we put on the Qur'an and he fell. (R3 [F, age 23] about her sibling [M, age 25])

He says that someone passed by saying "Allah Yastir, Allah Yastir" [God help us], he thinks that someone will come and enter his body. (R34 [F, age 35] about her husband [M, age 39])

Usually invisible to human beings, Jinn can take on disguises such as the human form, especially as a woman (Lim et al., 2015), and as this appearance of Jinn is more life-like in character—affecting various sensory modalities—some individuals are more susceptible to associating their psychotic experience with Jinn than others (Lim et al., 2018). An instance of this was explicitly reported by one respondent:

Riyadh told my husband that he saw a woman downstairs walking around the house, Shatha says that she saw a Jinni in the bathroom and asked if I saw it, I said no. (R7 [F, age 32] about her husband's siblings [M, age 37; F, age 43])

With respect to dwelling, Jinns inhabit—as mentioned in the above excerpt—dirty areas like bathrooms, deserted places, houses generally, and darkness (Khalifa & Hardie, 2005; Lim et al., 2015). Some of these places even become known haunted areas:

She sees things we do not see, maybe it's because we live in *Al Oud* neighbourhood. (R5 [F, age 42] about her daughter [F, age 19])

As Jinn cannot be seen usually, when they do speak, they sound like disembodied voices. For example, one respondent directly mentioned having this type of paranormal interaction with Jinn:

When he reads the Qur'an he has a fit, and he talks to jinn. (R35 [M, age 21] about himself)

An important aspect of interpreting psychotic experiences in terms of religion includes seeking Islamic counsel. As specified in the earlier excerpts, respondents turned to the holy book Qur'an as the prime source of remedy for their psychotic experiences. Some reported consulting traditional healers, *Shaykhs*, or (knowledgeable or pious) people for their experiences, who determined whether the individual was cursed or had been affected by the "evil eye"; such inferences explained why the individual was possessed or afflicted with psychological and physical symptoms and misfortune in their life (Al-Habeeb, 2003; Lim et al., 2018; Suhail & Cochrane, 2002):

It used to be screaming, this was 34 years ago, we took her to a Shaykh and he said that she was cursed . . . (R16 [F, age 58] about her sibling [F, age 80])

## Cultural Allusions

Modest clothing—usually full-length robes called "Abaya" for women and "Thobe" for men—is commonly worn by Saudis. Anything that deviates from the norm of modesty, especially in the sense of dressing, is therefore considered inappropriate culturally and more so in the context of psychotic experiences:

. . . sometimes she leaves the house without her Abaya and sometimes she walks around the house in the dark. (R7 [F, age 32] about her husband's sibling [F, age 43])

He used to leave the house in his underwear, sit by the garbage bin, and laugh alone in his dark room. (R40 [F, age 54] about her son [M, age 26])

The Saudi culture like other Arab cultures is known for its hospitality and generosity. This is often shown by offering one's share of food or inviting others to eat with them. Saudi individuals who had psychotic experiences comprised these food-related allusions:

Sometimes she hears someone talking to her, or someone sharing her food. (R6 [M, age 27] about his parent [F, age 48])

Sometimes I see her talking to someone, laughing as if someone is in front of her, or she gives someone biscuits or chocolates. (R21 [F, age 32] about family member [refused to disclose relation and age])

The custom of showing respect for one's elders, for instance, by making a special effort to greet them and sit with them, is another feature of Saudi culture. This allusion appeared in one individual's psychotic experience:

She imagines people in the house, she sees them, and sometimes she imagines that someone is sitting next to her when nobody is sitting next to her, and sometimes she imagines that someone came to greet her when nobody has. (R20 [F, age 18] about her grandparent [F, age 80])

There was also an individual whose psychotic experience consisted of desert-related imagery, specifically of a camel. Camels are the national animals of Saudi Arabia and are symbolic of the Saudi way of life:

He imagines camels, and he tells me to take away that camel, and tell that camel to get away from the window. (R22 [M, age 16] about his grandparent [M, age 89])

## Biopsychosocial Perspectives

As psychotic experiences involve complex interactions between biological, psychological, and social factors (Larøi et al., 2014), the third explanatory model was termed biopsychosocial perspectives. Several Saudi respondents described psychotic experiences in terms of the individuals' circumstances without any evident religious undertones. Instead, underlying cognitive-emotional mechanisms seemed to trigger an alternate reality, causing these individuals to have a psychotic experience (Bell et al., 2010). These included experiences of paranoia (irrational feelings of mistrust), dissociation from themselves/their life, or encounters with phantasms.

Paranoia, for example, was reported in one case where the individual was undergoing the traumatic transition period after her divorce. Often the instances of paranoia were related to family members and involved the individual feeling threatened (like they were being watched or spied upon) and seeing vivid imagery (e.g., insects and cars):

Sometimes she thinks that her phone is watched by her ex-husband, and sometimes she imagines him walking behind her when she is doing errands and sometimes she imagines that

he is parking his car close to the house and watching her, he uses his friend's car or a rented car. (R25 [M, age 27] about his sibling [F, age 38])

. . . she sees insects or she sees things or hears voices, while people around her do not see them and she sees them in front of her. When she wakes up she also sees images of insects and she feels scared and her husband comforts her and tells her nothing is there. (R47 [F, age 26] about herself)

I see cars, and I feel like there is someone watching me. (R48 [M, age 45] about himself)

He thought that someone was harming his son Azzam. (R17 [F, age 26] about her husband [M, age 38])

One individual had a drug-induced psychotic experience indicating paranoia associated with a biological explanation:

When I am taking drugs, I feel like people are watching my movements and actions. (R15 [M, age 39] about himself)

When respondents reported losing agency, dysfunctional behavior—such as aggression, laughter, or nonsensical speech—which impaired daily functioning, seemed strange, or inappropriate, they were considered as experiencing dissociation. The individuals having the psychotic experience in these excerpts seemed to be observing themselves from the outside or as though they had lost control of themselves and were behaving unlike themselves:

She leaves the house in the middle of the night and breaks dishes and shouts loudly. (R45 [M, age 34] about his wife [F, age 35])

We would be sitting with him and he would suddenly start laughing and speaking unintelligibly. (R5 [F, age 55] about her son [M, age 32])

Some individuals reported having strange encounters involving phantasms such as ghosts, visitors, movements or noise, and vivid imagery (e.g., skulls or creatures— insects, cat, people). In contrast, there were a few instances where such encounters were reported as being benign, harmless, and almost friendly as though the individuals simply had an imaginary friend; excerpts of this were also mentioned under "Cultural allusions" for food-related hospitality:

She sees a cat and people who look like her husband but younger, she hears whistling sounds and she also sees a moving shadow. (R54 [F, age 27] about herself)

I see people walking in the house and I see images of skulls falling from the sky. (R48 [M, age 45] about himself)

He saw strange things, like birds, and sometimes he would speak as if he was talking to a friend but he wasn't here. (R8 [M, age 61] about his son [M, age 33])

In excerpts representing individuals who were relatively old, the psychotic experiences seemed to be due to a biological cause such as undisclosed dementia:

. . .she sees insects on the wall, she imagines them—they are not real. (R46 [F, age 15] about her grandmother [F, age 70])

One excerpt suggested that the psychotic experience was related to grief and the overwhelming phase dealing with death, especially of a family member:

When the father first passed away, Hasan told them that the father had passed and they came to take their father . . .Hasan started talking to someone that was not there. (R27 [F, age 20] about her sibling [M, age 25])

Some of the instances of experiencing an “alternative reality” showed the individuals undergoing more than one component of this explanatory model simultaneously. For instance, individuals seemed to suffer from paranoia as well as dissociation, or encounter phantasms as well as experience dissociation together:

People come to her and tell her kill your daughter and we will let you live in peace for a while, or go kill a woman in the hospital or cause her to have a miscarriage and we will let you go. (R47 [F, age 26] about herself)

Sometimes he imagines that people are talking to him about things that are happening, and his situation got worse when he hit a cat, he started making noises like howling. (R31 [F, age 34] about family member [refused to disclose relation and age])

Some respondents recognized the need to seek medical treatment for psychotic experiences. They mentioned consulting doctors and specialists like psychiatrists, identifying that there was a mental condition affecting the individual:

He imagines voices and sometimes he laughs, we see him talking and we do not know what he is saying. We asked a psychiatrist and he said don't worry about it, so we said all right. (R13 [F, age 65] about her son [M, age 46])

There were also a few respondents who suggested that they not only had a religious interpretation for their psychotic experience but also accepted the biopsychosocial perspective. The excerpts also emphasized the need to improve the treatment interventions available to Saudis with psychotic experiences:

In the beginning, he would imagine things and hear voices, and he asked me if I heard them I would say, no. The story started as imagining things and hearing things, now he sees things, he sees a woman and a man and he hears their voices in the house. We went to every Shaykh and Doctor we could find and nothing worked. I had to leave the house, and now I've lived in this house for 3 months, and after all this, it has not worked, he still

has the same problem. Now he cannot even go to work/school and we do not know what is wrong. (R29 [F, age 38] about her husband [M, age 50])

## Discussion

Consistent with past studies that compared Western and non-Western patients (Al-Issa, 1977; Kent & Wahass, 1996), we found that the most common psychotic experiences among our study sample were auditory and visual hallucinations. Persecutory delusions have been reported to be the most prevalent among Saudis (AlNzawi, 2012), but delusions of control occurred relatively more than persecutory delusions in our study. Following the continuum of severity of psychosis theory (Van Os, 2003) and other epidemiological studies (Linscott & Van Os, 2013) including Arab populations (McGrath et al., 2015), several kinds of psychotic experiences were described in the SNMHS, where some experiences seemed fleeting, whereas others indicated more distress. This suggested that not all psychotic experiences—as aptly recorded by the CIDI psychosis screener—were necessarily indicative of a diagnosis of psychosis; some experiences depicted “normal processes gone awry” as Freeman et al. (2010) noted.

Under the WMH Survey Consortium, this study was the first to qualitatively examine the characteristics and explanatory models of psychotic experiences reported by Saudis in the SNMHS. The thematic analysis yielded three main explanatory models: religious interpretations, cultural allusions, and biopsychosocial perspectives. These models were grounded in the previous literature. For instance, the explanatory models related to religion and culture were based on Luhrmann et al.'s (2015) concept of social kindling. The theory suggests that the local social world of an individual plays a significant role in how the individual gives meaning to a sensation and interprets it (resulting in the psychotic experience) while factoring in the variability in individual's psyche, culture, temperament, and personal history. Accordingly, characteristics of the religious explanatory model in our study were mainly related to Jinn and seeking Islamic counsel for treatment, similar to other studies with Arab and Muslim patients (Kent & Wahass, 1996; Lim et al., 2015, 2018; Wahass and Kent, 1997a, 1997b; Khalifa & Hardie, 2005). In line with our co-authors' clinical experiences, Saudis in our study also reported some instances of “evil eye” and magic (e.g., being cursed), which are sometimes more commonly encountered in Saudi mental health settings than patients being affected by Jinn or those in distress manifesting “suspiciousness” or pseudo-paranoid ideation turning into delusion(s) with continuing stress.

With respect to cultural allusions, Larøi et al. (2014) highlight that cultural expectations demonstrate whether or not an “unusual sensory experience” is perceived as worrisome; personal vivid detail reported by individuals can suggest whether an experience is authentic. In our study, deviating

from the cultural norm concerning modest clothing, offering and sharing food with imaginary friends, seeing visions of camels, and having imaginary interactions involving greetings due to one's seniority and age were some of the reported characteristics. These instances affirm that cultural milieu plays an important role in determining pathological and culturally sanctioned experiences, as has been observed in past cross-cultural studies on psychotic experiences (Suhail & Cochrane, 2002; Vermeiden et al., 2019).

Within the framework of biopsychosocial perspectives, childhood adversity (McGrath et al., 2017), earlier trauma (Freeman et al., 2002, 2010), other mental disorders (such as anxiety; McGrath et al., 2016; Morrison, 2001), and/or general medical disorders (Moreno et al., 2013; Oh & DeVlyder, 2015) can be key predictors of a psychotic experience or in severe cases full-blown psychosis. Woods et al. (2014) point out that life events and internal struggles not only contribute to the onset but also influence the content, structure, and degree of associated distress or disability linked to psychotic experiences (Longden et al., 2012; Lysaker & Lysaker, 2001). Theoretically, Gallagher (2009) proposes that a "delusional reality" is one where the normal rules of reason do not apply; these realities offer their own set of "affordances." The multiple realities hypothesis—inspired by Kafka's (1989) work in clinical psychoanalysis—suggests that the emotional reactions of an individual to their social, cultural, or environmental factors in their normal reality can transition them into a delusional reality where the presence of certain objects/situations/individuals can trigger brain dysfunction (Gallagher, 2009). This can then appear in the form of dissociative experiences like nonsensical speech, the logic of which makes sense in the delusional reality but not in the normal reality. Tying this neurocognitive symptom to biological origins, Maher (2003) posits that "aberrant utterances" occur because the processes that lead to the execution of the actual utterance are disrupted; the inhibitory cognitive activity related to language is disrupted, giving rise to a discrepancy between intention and action in the execution of the utterance. This is also in agreement with neuroimaging findings indicating that there is greater blood flow to Broca's area (associated with language) during auditory hallucinations (Allen et al., 2008), and neurocognitive activity among such individuals is linked to creativity and divergent thinking (Barrantes-Vidal, 2004). There were several instances of psychotic experiences in our study, conforming with the above-mentioned (primarily Western) literature, where the individual displayed apparently "strange" behavior such as speaking unintelligibly, laughing, being aggressive, or seeming to lose control of themselves.

Similarly, false beliefs or as Currie (2000) calls it the faulty awareness of other people's intentions or behavior (e.g., paranoia; Collip et al., 2011; Freeman, 2008) and the "loss of capacity to identify imaginings" due to faulty awareness of one's own intentions also fall under experiences of an alternate reality. In line with these theoretical

concepts, there were instances in our study where the reported psychotic experiences indicated underlying paranoia and trauma. Collip et al. (2011) suggest that social environment influences the intensity of such ideations. As mentioned in studies with South-Asian and British patients, if the individual lives in a climate of suspicion and has traumatic memories of real-life events, tendency to catastrophize, scarce resources to obtain help, weak protection from authorities/relevant agencies tied to feelings of exploitation and victimization and therefore mistrust, then the paranoid beliefs of the individual toward their environment and others are their habitual ways of coping and making sense of their world (Morrison et al., 2002; Suhail & Cochrane, 2002). Instances of vivid imagery related to paranoia (e.g., seeing cars or insects) were also consistent with Western literature on psychotic symptoms (Bell et al., 2010; Morrison et al., 2002). According to Morrison (2001), this type of mental imagery is associated with maintaining hallucinations and delusions, concurrent to similar processes which are involved in the maintenance of anxiety and psychosis. As for the case of drug-induced psychotic experience expressing paranoia, it was consistent with the international substance use crisis described by Roncero et al. (2014). Our findings therefore suggest that assessments of psychotic symptoms could benefit from including evaluations of the affected individual's contexts, the emotional states preceding the psychotic expressions, and the emotional reactions of those in contact with the person (Bell et al., 2010) as these could indicate psychiatric comorbidities.

Experiences with phantasms described by individuals as ghostly strangers, intruders, and imaginary companions were also reported. These types of imagery or visual experiences of fantasy-creatures, animals, people, ghosts, death or the deceased, light, shadows, and landscapes, similar to our study, were consistent with previous Western studies on hallucinations (Dudley et al., 2018; Van Ommen et al., 2019), and earlier work overviewing hallucinations from different cultural standpoints (Larøi et al., 2014). Glazer et al. (2013) observes that there is an association between the predisposition to experience involuntary imagery and proneness to psychotic experiences. With regard to experiences of those who probably had undisclosed dementia, Japanese and European studies indicate that the condition makes such individuals more likely to have encounters with phantom intruders (Cipriani et al., 2014; Terada et al., 2005). However, some Western studies suggest that imaginary friends are more commonly reported among relatively younger populations than in older adult populations with psychotic experiences (Barkus et al., 2011; Fernyhough et al., 2007).

As majority of Saudis in our study were from industrialized urban areas, they were likely to be modern in addition to being somewhat conservative and traditional in terms of their way of life and beliefs. As also noted in other varied cultural and Muslim literature (Lim et al., 2015, 2018; Suhail & Cochrane, 2002; Utz, 2011; Vermeiden et al., 2019), we

found that Saudis employ bicultural belief systems wherein they may hold a mixture of beliefs and explanatory models in parallel, endorsing biomedical thinking (i.e., prevalent in the prevailing modern culture) and adhering to traditional spiritual discourses (from their culture of origin). Perhaps this is why following the multiple realities hypothesis (Gallagher, 2009), Irmak (2014)—a Professor from Turkey—advocates for the consideration of the possibility of a demonic world (which overlaps with the religious interpretation) in the etiology of psychosis (as according to Islamic belief, Jinns—who can be helpful or demonic—coexist alongside humans; Lim et al., 2018).

In fact, biomedical treatment in Islam is not forbidden but encouraged; in the “Book of Medicine” in the comprehensive collection of sayings called *Sahih Al-Bukhari*, Prophet Mohammad (peace be upon him) is known to have said, “There is no disease that Allah has created, except that He has also created its treatment.” Given this, some individuals in our study sought both medical treatment and religious healing through the Qur’an, and *Shaykhs* (faith healers), aligning with Lim et al. (2015) who found that traditional healers assess the situation and, when appropriate, refer their patients to biomedical health professionals. Although a more careful enquiry into the relationship between faith (or religion) and psychopathology is needed (Cook, 2015), our results suggest that it would be helpful for the biomedical therapeutic platform to form alliances with religious leaders or traditional healers, and elicit their input before determining treatment plans for affected individuals and their families (Irmak, 2014; Khalifa & Hardie, 2005). However, Gearing et al. (2011) caution that it is important for clinicians and perhaps even faith healers to not let their inherent biases (religious or otherwise) to pathologize or minimize symptoms and make premature judgments. Clinicians must distinguish between “functional impairment” and “clinical outcome” by bearing in mind unique individual contexts (Larøi et al., 2014). Moreover, training in culturally or religiously informed models for psychotic symptoms may address the gap between biomedical training for mental health disorders and cultural interventions (Pumariega, 2016).

It is important to take into account some limitations of our study. First, the psychosis screener—part of CIDI 3.0—used to obtain data was not diagnostic. As a result, the respondents were not probed further to give details about the reported symptoms, contextual factors, and coping methods, as they would be in a semi-structured interview. The clarity and interpretation of the obtained open-ended excerpts were left to the discretion of the researchers; however, we adopted preventive strategies to avoid any systematic biases through intercoder reliability and reflectivity. Second, as the psychosis screener was carried out by a trained lay interviewer, it was difficult to determine whether some reports indicated comorbidity. We sought the help of psychiatrists to filter out any excerpts which did not denote

clinical significance. Still, given the constraints of the available data, it is possible that many of the individuals with psychotic experiences in our study had other mental (e.g., anxiety disorders, posttraumatic stress disorder [PTSD], personality disorders; Lim et al., 2018; Steel et al., 2005) or medical disorders (e.g., dementia; Terada et al., 2005) which affected their symptomatology. Regardless, Van Os and Reininghaus (2016) note that some psychotic expressions can be transdiagnostic psychosis factors (i.e., factors that are relevant across many disorders). Third, a large proportion of the excerpts were categorized as biopsychosocial perspectives as they did not mention any religious terminology. It could be that respondents toned down their attribution to religious phenomena like Jinn as they potentially feared their symptoms would increase consequently (Lim et al., 2018); there may also be societal stigma attached to being associated with those who have been affected by Jinn or a curse (Wahass & Kent, 1997a), in addition to the stigma around mental illness in general. Finally, psychotic symptoms can occur in nonclinical populations (Cella et al., 2007), change over time (Bell et al., 2010), and eventually develop into psychosis; the psychotic experiences reported in our study and assessed for thematic analysis did not take these dynamics into account.

## Conclusion

This is the first study under the WMH Consortium to explore psychotic experiences of Saudis using a thematic analysis, contributing to the sparse research on this topic from an Arab, predominantly Muslim and collectivistic country like KSA. Our findings add rich and nuanced details to the cultural, religious, and biopsychosocial perspectives, which previously described psychotic experiences among Saudi populations (e.g., Wahass and Kent, 1997a, 1997b; AlNzawi, 2012). Indeed, Saudis not only cite religious and cultural themes when reporting psychotic experiences (Kent & Wahass, 1996), they also allude to psychological and socio-cultural mechanisms. The reports in our study provided by family members and affected individuals themselves were significant sources of knowledge about explanatory models used to recount psychotic experiences, which previous studies noted as being scarce in psychosis literature (Lim et al., 2018; Pumariega, 2016; Sluzki, 2004; Vermeiden et al., 2019). However, more in-depth qualitative studies (e.g., using focus groups) are needed to examine longitudinal trajectories of psychotic experiences in terms of distress, disability, recovery, remission, complex symptomatology, and the specific language used to describe such occurrences (Loch et al., 2011; Woods et al., 2014). These in turn might contribute toward overcoming the stigma and difficulty related to verbalization of these experiences, which can be a cause of immense suffering for those affected, their families, and communities (Bell et al., 2010; Lim et al., 2018; Pumariega, 2016).



## Acknowledgments

The Saudi National Mental Health Survey (SNMHS) is carried out in conjunction with the World Health Organization World Mental Health (WMH) Survey Initiative. We are grateful to Beth-Ellen Pennell, Zeina Mneimneh and other staff at the Survey Research Center, University of Michigan, Ann Arbor for supporting the SNMHS with its design and implementation. We thank the entire SNMHS team, including those that worked with us in the past. For full acknowledgement related to the WMH consortium, see supplemental material.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The Saudi National Mental Health Survey is conducted by the King Salman Center for Disability Research; funded by the Saudi Basic Industries Corporation, King Abdulaziz City for Science and Technology, Ministry of Health (Saudi Arabia), and King Saud University. Funding in-kind was provided by King Faisal Specialist Hospital & Research Center, and Ministry of Economy & Planning, General Authority for Statistics, Riyadh.

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## Supplemental Material

Supplemental material for this article is available online.

## References

- Al-Habeeb, T. A. (2003). A Pilot study of faith healers views on the evil eye, jinn possession, and magic in the Kingdom of Saudi Arabia. *Journal of Family & Community Medicine, 10*(3), 31.
- Al-Issa, I. (1977). Social and cultural aspects of hallucinations. *Psychological Bulletin, 84*(3), 570.
- Allen, P., Larøi, F., McGuire, P. K., & Aleman, A. (2008). The hallucinating brain: A review of structural and functional neuroimaging studies of hallucinations. *Neuroscience & Biobehavioral Reviews, 32*(1), 175–191.
- AlNzawi, F. M. (2012). *Cultural factors influencing content of delusions among schizophrenic patients in Saudi Arabia* [Doctoral dissertation]. School of Social Sciences, Brunel University.
- Altwayjri, Y., Al-Habeeb, A., Bilal, L., Shahab, M., Pennell, B., Mneimneh, Z., BinMuammar, A., Baig, M., Naseem, M. T., Hyder, S., & Al-Subaie, A. S. (2020). The Saudi National Mental Health Survey: Survey instrument and field procedures. *International Journal of Methods in Psychiatric Research, 29*(3), e1830.
- Barkus, E., Smallman, R., Royle, N., Barkus, C., Lewis, S., & Rushe, T. (2011). Auditory false perceptions are mediated by psychosis risk factors. *Cognitive Neuropsychiatry, 16*(4), 289–302.
- Barrantes-Vidal, N. (2004). Creativity & madness revisited from current psychological perspectives. *Journal of Consciousness Studies, 11*(3–4), 58–78.
- Bell, V., Raballo, A., Larøi, F., & Aleman, A. (2010). Assessment of hallucinations. In F. Larøi & A. Aleman (Eds.), *Hallucinations: A guide to treatment and management* (pp. 377–397). Oxford University Press.
- Bentall, R. P. (2004). *Madness explained: Psychosis and human nature*. Penguin.
- Castillo, R. J. (2003). Trance, functional psychosis, and culture. *Psychiatry: Interpersonal and Biological Processes, 66*(1), 9–21.
- Cella, M., Taylor, K., & Reed, P. (2007). Violation of expectancies produces more false positive reports in a word detection task in people scoring high in unusual experiences scale. *Personality and Individual Differences, 43*(1), 59–70.
- Cipriani, G., Danti, S., Vedovello, M., Nuti, A., & Lucetti, C. (2014). Understanding delusion in dementia: A review. *Geriatrics & Gerontology International, 14*(1), 32–39.
- Collip, D., Oorschot, M., Thewissen, V., Van Os, J., Bentall, R., & Myin-Germeys, I. (2011). Social world interactions: How company connects to paranoia. *Psychological Medicine, 41*(5), 911–921.
- Cook, C. C. (2015). Religious psychopathology: The prevalence of religious content of delusions and hallucinations in mental disorder. *International Journal of Social Psychiatry, 61*(4), 404–425.
- Crowe, M., Inder, M., & Porter, R. (2015). Conducting qualitative research in mental health: Thematic and content analyses. *Australian & New Zealand Journal of Psychiatry, 49*(7), 616–623.
- Currie, G. (2000). Imagination, delusion and hallucinations. *Mind & Language, 15*(1), 168–183.
- Drinnan, A., & Lavender, T. (2006). Deconstructing delusions: A qualitative study examining the relationship between religious beliefs and religious delusions. *Mental Health, Religion & Culture, 9*(4), 317–331.
- Dudley, R., Aynsworth, C., Cheetham, R., McCarthy-Jones, S., & Collerton, D. (2018). Prevalence and characteristics of multimodal hallucinations in people with psychosis who experience visual hallucinations. *Psychiatry Research, 269*, 25–30.
- Fernyhough, C., Bland, K., Meins, E., & Coltheart, M. (2007). Imaginary companions and young children's responses to ambiguous auditory stimuli: Implications for typical and atypical development. *Journal of Child Psychology and Psychiatry, 48*(11), 1094–1101.
- Freeman, D. (2008). Studying and treating schizophrenia using virtual reality: A new paradigm. *Schizophrenia Bulletin, 34*(4), 605–610.
- Freeman, D., Garety, P. A., Kuipers, E., Fowler, D., & Bebbington, P. E. (2002). A cognitive model of persecutory delusions. *British Journal of Clinical Psychology, 41*(4), 331–347.
- Freeman, D., Pugh, K., Vorontsova, N., Antley, A., & Slater, M. (2010). Testing the continuum of delusional beliefs: An experimental study using virtual reality. *Journal of Abnormal Psychology, 119*(1), 83.
- Gale, C. K., Wells, J. E., McGee, M. A., & Oakley Browne, M. A. (2011). A latent class analysis of psychosis-like experiences in the New Zealand Mental Health Survey. *Acta Psychiatrica Scandinavica, 124*(3), 205–213.
- Gallagher, S. (2009). Delusional realities. In M. R. Broome & L. Bortolotti (Eds.), *Psychiatry as cognitive neuroscience: Philosophical perspectives* (pp. 245–268). Oxford University Press.
- Gearing, R. E., Alonzo, D., Smolak, A., McHugh, K., Harmon, S., & Baldwin, S. (2011). Association of religion with delusions and hallucinations in the context of schizophrenia: Implications for

- engagement and adherence. *Schizophrenia Research*, 126(1–3), 150–163.
- Glazer, D. A., Mason, O., King, J. A., & Brewin, C. R. (2013). Contextual memory, psychosis-proneness, and the experience of intrusive imagery. *Cognition & Emotion*, 27(1), 150–157.
- Hasan, A. A., & Musleh, M. (2017). Barriers to seeking early psychiatric treatment amongst first-episode psychosis patients: A qualitative study. *Issues in Mental Health Nursing*, 38(8), 669–677.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2–3), 61–83.
- Hyder, S., Bilal, L., Akkad, L., Lin, Y. C., Al-Habeeb, A., Al-Subaie, A., Shahab, M., Binmuammar, A., Al-Tuwaijri, F., Kattan, N., & Altwaijri, Y. (2017). Evidence-based guideline implementation of quality assurance and quality control procedures in the Saudi National Mental Health Survey. *International Journal of Mental Health Systems*, 11(1), 60.
- Irmak, M. K. (2014). Schizophrenia or possession? *Journal of Religion and Health*, 53(3), 773–777.
- Kafka, J. S. (1989). *Multiple realities in clinical practice*. Yale University Press.
- Kent, G., & Wahass, S. (1996). The content and characteristics of auditory hallucinations in Saudi Arabia and the UK: A cross-cultural comparison. *Acta Psychiatrica Scandinavica*, 94(6), 433–437.
- Kessler, R. C., & Ustun, T. B. (2004). The world mental health (WMH) survey Initiative version of the world health organization (WHO) composite international diagnostic interview (CIDI). *International Journal of Methods Psychiatric Research*, 13(2), 93–121.
- Khalifa, N., & Hardie, T. (2005). Possession and jinn. *Journal of the Royal Society of Medicine*, 98(8), 351–353.
- Kleinman, A. (2019). The art of medicine: The soul in medicine. *The Lancet*, 394(10199), 630–631.
- Larøi, F., Luhrmann, T. M., Bell, V., Christian Jr, W. A., Deshpande, S., Fernyhough, C., Jenkins, J., & Woods, A. (2014). Culture and hallucinations: Overview and future directions. *Schizophrenia Bulletin*, 40(Suppl. 4), S213–S220.
- Lim, A., Hoek, H. W., & Blom, J. D. (2015). The attribution of psychotic symptoms to jinn in Islamic patients. *Transcultural Psychiatry*, 52(1), 18–32.
- Lim, A., Hoek, H. W., Ghane, S., Deen, M., & Blom, J. D. (2018). The attribution of Mental health Problems to Jinn: An explorative study in a Transcultural Psychiatric Outpatient clinic. *Frontiers in Psychiatry*, 9, 89.
- Linscott, R. J., & Van Os, J. (2013). An updated and conservative systematic review and meta-analysis of epidemiological evidence on psychotic experiences in children and adults: On the pathway from proneness to persistence to dimensional expression across mental disorders. *Psychological Medicine*, 43(6), 1133–1149.
- Loch, A. A., Wang, Y. P., Rössler, W., Tófoli, L. F., Silveira, C. M., & Andrade, L. H. (2011). The psychosis continuum in the general population: Findings from the Sao Paulo Epidemiologic Catchment Area Study. *European Archives of Psychiatry and Clinical Neuroscience*, 261(7), 519.
- Longden, E., Corstens, D., Escher, S., & Romme, M. (2012). Voice hearing in a biographical context: A model for formulating the relationship between voices and life history. *Psychosis*, 4(3), 224–234.
- Luhrmann, T. M., Padmavati, R., Tharoor, H., & Osei, A. (2015). Hearing voices in different cultures: A social kindling hypothesis. *Topics in Cognitive Science*, 7(4), 646–663.
- Lysaker, P. H., & Lysaker, J. T. (2001). Psychosis and the disintegration of dialogical self-structure: Problems posed by schizophrenia for the maintenance of dialogue. *British Journal of Medical Psychology*, 74(1), 23–33.
- Maher, B. (2003). Schizophrenia, aberrant utterance and delusions of control: The disconnection of speech and thought, and the connection of experience and belief. *Mind & Language*, 18(1), 1–22.
- McGrath, J. J., McLaughlin, K. A., Saha, S., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Bruffaerts, R., De Girolamo, G., De Jonge, P., Esan, O., & Florescu, S. (2017). The association between childhood adversities and subsequent first onset of psychotic experiences: A cross-national analysis of 23 998 respondents from 17 countries. *Psychological Medicine*, 47(7), 1230–1245.
- McGrath, J. J., Saha, S., Al-Hamzawi, A., Alonso, J., Bromet, E. J., Bruffaerts, R., Caldas-de-Almeida, J. M., Chiu, W. T., De Jonge, P., Fayyad, J., & Florescu, S. (2015). Psychotic experiences in the general population: A cross-national analysis based on 31 261 respondents from 18 countries. *JAMA Psychiatry*, 72(7), 697–705.
- McGrath, J. J., Saha, S., Al-Hamzawi, A., Andrade, L., Benjet, C., Bromet, E. J., Browne, M. O., Caldas de Almeida, J. M., Chiu, W. T., Demyttenaere, K., & Fayyad, J. (2016). The bidirectional associations between psychotic experiences and DSM-IV mental disorders. *American Journal of Psychiatry*, 173(10), 997–1006.
- McLean, D., Thara, R., John, S., Barrett, R., Loa, P., McGrath, J., & Mowry, B. (2014). DSM-IV “criterion A” schizophrenia symptoms across ethnically different populations: Evidence for differing psychotic symptom content or structural organization? *Culture, Medicine, and Psychiatry*, 38(3), 408–426.
- Moreno, C., Nuevo, R., Chatterji, S., Verdes, E., Arango, C., & Ayuso-Mateos, J. L. (2013). Psychotic symptoms are associated with physical health problems independently of a mental disorder diagnosis: Results from the WHO World Health Survey. *World Psychiatry*, 12(3), 251–257.
- Morrison, A. P. (2001). The interpretation of intrusions in psychosis: An integrative cognitive approach to hallucinations and delusions. *Behavioural and Cognitive Psychotherapy*, 29(3), 257–276.
- Ochoa, S., Haro, J. M., Torres, J. V., Pinto-Meza, A., Palacín, C., Bernal, M., Brugha, T., Prat, B., Usall, J., Alonso, J., & Autonell, J. (2008). What is the relative importance of self reported psychotic symptoms in epidemiological studies? Results from the ESEMeD—Catalonia Study. *Schizophrenia Research*, 102(1–3), 261–269.
- Oh, H., & DeVylder, J. (2015). Psychotic symptoms predict health outcomes even after adjusting for substance use, smoking and co-occurring psychiatric disorders: Findings from the NCS-R and NLAAS. *World Psychiatry*, 14(1), 101–102.
- Pumariiega, A. J. (2016). Cultural factors in the treatment of psychosis. In B. Pradhan, N. Pinninti, & S. Rathod (Eds.), *Brief interventions for psychosis* (pp. 117–189). Springer.

- Pumariega, A. J., Rothe, E., Mian, A., Carlisle, L., Toppelberg, C., Harris, T., Gogineni, R. R., Webb, S., & Smith, J. (2013). Practice parameter for cultural competence in child and adolescent psychiatric practice. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52(10), 1101–1115.
- Roncero, C., Daigre, C., Grau-López, L., Barral, C., Pérez-Pazos, J., Martínez-Luna, N., & Casas, M. (2014). An international perspective and review of cocaine-induced psychosis: A call to action. *Substance Abuse*, 35(3), 321–327.
- Saravanan, B., Jacob, K. S., Prince, M., Bhugra, D., & David, A. S. (2004). Culture and insight revisited. *The British Journal of Psychiatry*, 184(2), 107–109.
- Shahab, M., Al-Tuwaijri, F., Bilal, L., Hyder, S., Al-Habeeb, A. A., Al-Subaie, A., Mneimneh, Z., Pennell, B.E., Sampson, N., Kessler, R.C., & Altwaijri, Y. (2017). The Saudi national mental health survey: Methodological and logistical challenges from the pilot study. *International Journal of Methods in Psychiatric Research*, 26(3), e1565.
- Shahab, M., Al-Tuwaijri, F., Kattan, N., Bilal, L., Hyder, S., Mneimneh, Z., Lin, Y.C., Al-Habeeb, A., Al-Subaie, A., Binmuammar, A., & Altwaijri, Y. (2019). Implementing the TRAPD model for the Saudi adaptation of the World Mental Health Composite International Diagnostic Interview 3.0. *International Journal of Mental Health Systems*, 13(1), 12.
- Sluzki, C. E. (2004). House taken over by ghosts: Culture, migration, and the developmental cycle of a Moroccan family invaded by hallucinations. *Families, Systems, & Health*, 22(3), 321.
- Steel, C., Fowler, D., & Holmes, E. A. (2005). Trauma-related intrusions and psychosis: An information processing account. *Behavioural and Cognitive Psychotherapy*, 33(2), 139–152.
- Stompe, T., Karakula, H., Rudalevičiene, P., Okribelashvili, N., Chaudhry, H. R., Idemudia, E. E., & Gscheider, S. (2006). The pathoplastic effect of culture on psychotic symptoms in schizophrenia. *World Cultural Psychiatry Research Review*, 1(3–4), 157–163.
- Suhail, K., & Cochrane, R. (2002). Effect of culture and environment on the phenomenology of delusions and hallucinations. *International Journal of Social Psychiatry*, 48(2), 126–138.
- Terada, S., Ishizu, H., Fujisawa, Y., Yokota, O., Kugo, A., Nakashima, H., Tanaka, Y., Ishihara, T., Nakashima, T., Nakashima, Y., & Sasaki, K. (2005). Delusion of theft and phantom intruder delusion in demented elderly patients in Japan. *Journal of Geriatric Psychiatry and Neurology*, 18(3), 142–148.
- Utz, A. (2011). *Psychology from the Islamic perspective*. International Islamic Publishing House.
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398–405.
- Van Dael, F., Versmissen, D., Janssen, I., Myin-Germeys, I., Van Os, J., & Krabbendam, L. (2005). Data gathering: Biased in psychosis? *Schizophrenia Bulletin*, 32(2), 341–351.
- Van Ommen, M. M., van Laar, T., Cornelissen, F. W., & Bruggeman, R. (2019). Visual hallucinations in psychosis. *Psychiatry Research*, 280, 112517.
- Van Os, J. (2003). Is there a continuum of psychotic experiences in the general population? *Epidemiology and Psychiatric Sciences*, 12(4), 242–252.
- Van Os, J., Hanssen, M., Bijl, R. V., & Vollebergh, W. (2001). Prevalence of psychotic disorder and community level of psychotic symptoms: An urban-rural comparison. *Archives of General Psychiatry*, 58(7), 663–668.
- Van Os, J., & Reininghaus, U. (2016). Psychosis as a transdiagnostic and extended phenotype in the general population. *World Psychiatry*, 15(2), 118–124.
- Vega, W. A., & Lewis-Fernández, R. (2008). Ethnicity and variability of psychotic symptoms. *Current Psychiatry Reports*, 10(3), 223.
- Vermeiden, M., Janssens, M., Thewissen, V., Akinsola, E., Peeters, S., Reijnders, J., Jacobs, N., Van Os, J., & Lataster, J. (2019). Cultural differences in positive psychotic experiences assessed with the Community Assessment of Psychic Experiences-42 (CAPE-42): A comparison of student populations in the Netherlands, Nigeria and Norway. *BMC Psychiatry*, 19(1), 244.
- Wahass, S., & Kent, G. (1997a). A comparison of public attitudes in Britain and Saudi Arabia towards auditory hallucinations. *International Journal of Social Psychiatry*, 43(3), 175–183.
- Wahass, S., & Kent, G. (1997b). Coping with auditory hallucinations: A cross-cultural comparison between Western (British) and non-Western (Saudi Arabian) patients. *The Journal of Nervous and Mental Disease*, 185(11), 664–668.
- Woods, A., Jones, N., Bernini, M., Callard, F., Alderson-Day, B., Badcock, J. C., Bell, V., Cook, C. C., Csordas, T., Humpston, C., & Krueger, J. (2014). Interdisciplinary approaches to the phenomenology of auditory verbal hallucinations. *Schizophrenia Bulletin*, 40(Suppl. 4), S246–S254.