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## The Effects of Auditory Verbal Hallucinations on Social-Behavioral-Functioning and Mental Status: Perceptions among Mental Health Social Workers

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THE EFFECTS OF AUDITORY VERBAL HALLUCINATIONS ON SOCIAL-  
BEHAVIORAL-FUNCTIONING AND MENTAL STATUS: PERCEPTIONS  
AMONG MENTAL HEALTH SOCIAL WORKERS

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A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Social Work

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by  
Zachary Robert Eckert

June 2018

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## ABSTRACT

Auditory Verbal Hallucinations (AVH) are a generally distressing phenomena that can have a negative impact on the quality of life of the experiencer. Furthermore, individuals diagnosed with psychotic disorders often display deficits in social/cognitive domains. Despite this, little is known about how AVHs directly affect social functioning and mental status. Because of this dearth of information, exploratory research is needed to generate potential avenues for future experimental research. Qualitative themes about how AVHs influence behavior were derived from interviews with mental health social workers. Eight primary domains were identified: Behavior, social ability, observable traits, voice plasticity, life difficulty, beneficial auditory hallucinations, coping strategies, and stigmas. Implications of this research could guide future direction for experimental research as well as contribute to assessment and treatment procedures of psychotic individuals.

## ACKNOWLEDGEMENTS

I would like to thank the Miraculous Moon Man whose benevolence has rained much fortune upon my being. He bestowed unto me my great talent. My distinguishing talent of taking care of cacti (i.e. cactuses)—I am incredibly good at taking care of cactuses—in a very profound sense. Curses upon those who doubt the Miraculous Moon Man’s power! He will strike doubters down with righteous fury. The rocket ship awaits.

I would also like to thank the Pepsi Polar Bear. We used to drink diet ginger ale together. He touched my hand once. I’ll never forget the Pepsi Polar Bear. Lastly, I would like to thank my witchdoctor for gifting me a penguin suit. That suit has been in my life for so many years—it’s almost an extension of my being.

## TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vii
CHAPTER ONE: INTRODUCTION	
Problem Formulation.....	1
Purpose of the Study.....	2
Significance of the Project for Social Work.....	3
CHAPTER TWO: LITERATURE REVIEW	
Introduction.....	5
Theories Guiding Conceptualization.....	8
Conclusion.....	11
CHAPTER THREE: METHOD	
Introduction.....	12
Study Design.....	12
Sampling.....	14
Data Collection and Instruments.....	14
Procedures.....	15
Protection of Human Subjects.....	16
Data Analysis.....	17
Summary.....	17
CHAPTER FOUR: DATA ANALYSIS AND FINDINGS	
Introduction.....	18

Demographic Data .....	18
Findings .....	19
Summary .....	28
<b>CHAPTER FIVE: DISCUSSION</b>	
Introduction .....	29
Discussion .....	29
Domain One: Behavior .....	29
Domain Two: Social Ability .....	32
Domain Three: Observable Traits .....	33
Domain Four: Coping Strategies .....	35
Domain Five: Voice Plasticity .....	37
Domain Six: Life Difficulty .....	38
Domain Seven: Beneficial Auditory Verbal Hallucinations .....	40
Domain Eight: Stigma .....	41
Conclusions .....	42
Recommendations for Social Work Practice, Policy, and Research .....	43
Limitations and Future Research .....	43
APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL FORM, INFORMED CONSENT AND AUDIO RECORDING CONSENT .....	45
APPENDIX B: DATA COLLECTION INSTRUMENTS .....	49
REFERENCES .....	52



## LIST OF TABLES

Table 1. Behavior .....	20
Table 2. Social Ability .....	21
Table 3. Observable Traits .....	22
Table 4. Coping Strategies .....	23
Table 5. Voice Plasticity .....	24
Table 6. Life Difficulty .....	25
Table 7. Beneficial Auditory Verbal Hallucinations .....	26
Table 8. Stigma .....	27

## CHAPTER ONE

### INTRODUCTION

#### Problem Formulation

Auditory verbal hallucinations (AVH) can be described as a phenomenon in which the experiencer perceives “voices” independent of an actual external sound (American Psychiatric Association, 2013). AVHs are generally stressful experiences, as they often involve commands, personal abuses/insults, incidences of shaming, distracting “running commentaries”, and random disorganized content (Larøi et al. 2012; McCarthy-Jones et al. 2014a). Because these experiences are often distressing, understanding how to cope with them would be important for social workers as this knowledge could inform the treatment approach. On top of this, an important yet understudied aspect of AVHs are the direct effects they have on mental status and social-behavioral functioning (Velhorst et al. 2016).

In micro practice, AVHs are of particular concern because there is a powerful relationship between AVHs and instances of suicide (e.g. in ideation, specific plans, and attempts) (DeVylder, & Hilimire, 2015). In particular, there is a positive correlation between the prevalence of AVHs and an escalation in suicide risk (e.g. moving from ideation to a specific plan to a suicide attempt the more frequent and intense voices are) (DeVylder, & Hilimire, 2015). According to the American Psychiatric Association (2013) suicidal behavior in individuals diagnosed with schizophrenia is often a direct result of command hallucinations

(one subtype of AVHs). In clinical practice, increased attention is given to command hallucinations because of the increased risk of the voice hearer acting on the hallucination and harming themselves or others (Upthegrove et al., 2016). Although individuals usually do not act on command hallucinations, the act of resisting the hallucination is often another source of distress amongst voice hearers (Shawyer et al., 2012). The implications for voice hearers having an increased suicide risk has powerful impact for macro practice because if a patient completes suicide or harms another, practitioners can have their licenses revoked and can be sued for malpractice if they cannot demonstrate proper care. No clinical studies could be found regarding the micro and macro practice concerns regarding the direct effects of AVHs on social behavioral functioning. Therefore, there is a need for research that fills this gap.

### Purpose of the Study

The purpose of the study is to explore the effects of AVHs on social behavioral functioning and mental status, as well as to probe for coping strategies. An important facet of the study will be its emphasis on mental health social worker perceptions. The reason for this is to help fill a gap in research about social worker views while simultaneously starting to determine whether the deficits in social functioning often exhibited by psychotic individuals are due to the voices themselves or if they are due to some other aspect of psychosis (e.g. mood disturbances). Furthermore, since research suggests that psychotic people

usually employ maladaptive coping strategies (e.g. Davis, Lysaker & Nees, 2003) perhaps new adaptive coping strategies can be found.

Participants were audio-recorded so that their statements could be transcribed and analyzed. The study asked participants open-ended questions about the degree at which auditory hallucinations have affected client behaviors. Data was subsequently dissected, coded and organized via thematic analysis.

### Significance of the Project for Social Work

Understanding the effects of AVHs on social behavior could have significant implications for social workers performing assessments and engaging in therapy with individuals who experience AVHs. Gregory (2010) points out that the use of CBT is a generally effective treatment in combination with psychiatric medication. A CBT session would differ for someone exhibiting a different level of social functioning due to the severity of the hallucination—understanding the relationship between the AVH and social functioning could inform the emphasis of the therapy session (e.g. should the therapist address functional communication or symptom management?).

Having a deeper understanding of AVHs (as well as how to cope with them) might inform social workers during assessment procedures, CBT sessions, case presentations, treatment plans, as well as understand which symptomatology should take top priority during treatment. Therefore the question of this research is: What are the effects AVHs on mental status and

social behavioral functioning? Furthermore, what coping strategies can be used to address these hallucinations?

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

Because AVHs are a common positive symptom of Schizophrenia (SZ) (around 70% of SZ patients hear voices, Sommer et al., 2012), research into the life outcomes of individuals with SZ will be explored as a means of highlighting the need to dissect the phenomena of AVHs in social work practice. While it is important to note that other conditions can lead to AVHs, (Dissociative disorders, Parkinson's disease, substance use, etc., (Larøi et al. 2012)) the bulk of the research suggests that AVHs are most common in individuals with a SZ diagnosis, so the implications of voice-hearing will be tied to SZ because most of the research about hearing voices is linked to SZ.

SZ is a condition in which those with the diagnosis receive medications that are sometimes effective (but come with negative side effects), and receive minimal psychosocial support systems (DeVylder, 2016). Individuals diagnosed with SZ have higher risk for suicide, dying early, substance abuse, homelessness, social stigma, and physical/psychological comorbidities (DeVylder, 2016). Individuals with SZ also face increased social difficulties, (E.g. recognizing emotions of others, appreciating others' mental states) as well decreased ability in social perception and social cognition (Brüne, 2005). On top of this, individuals with SZ experience deficits in overall cognitive domains

such as attention, memory, reasoning, and other forms of executive functioning (Eack, 2012).

The coping strategies used by individuals with a schizophrenia diagnosis tend to be maladaptive (Davis, Lysaker & Nees, 2003). Individuals with a SZ diagnosis are likely to engage in self-limiting thought patterns, and have beliefs that contribute to depressive tendencies (Davis, Lysaker & Nees, 2003). These poor coping strategies tend to negatively affect the schizophrenic person's view of the future, as well as promote isolating coping strategies that contribute to poor work performance and difficulties forming relationships at work (Davis, Lysaker & Nees, 2003). Other common coping mechanisms amongst voice hearers are creating self-distractions, trying to ignore the voices, putting limits on how voices influence the voice hearer, and selectively listening to voices (Romme, Noorthoorn & Escher, 1992).

Schizophrenics are generally employed at a lower level than their parents, have limited social circles, and typically do not marry (American Psychiatric Association, 2013). SZ is highly comorbid to substance use disorders (e.g. over half of schizophrenics have tobacco use disorder, and just under half abuse alcohol) (American Psychiatric Association, 2013). Around 5-6% of people diagnosed with SZ successfully complete suicide (while 20% make multiple attempts throughout their lifetimes) (American Psychiatric Association, 2013). Although SZ can also involve delusions and disorganized thinking/behavior, according to the American Psychiatric Association, (2013)--it is

self-evident that an individual that hears malevolent voices would experience a disadvantage in functional living. Therefore, the risk factors mentioned above are indicative that AVHs can often reduce the quality of life, and the coping strategies used to deal with them are often maladaptive. Despite this, it should be noted that not all of the content experienced in AVHs are considered negative--sometimes experiencers report "neutral" voices or even "pleasurable" voices (Larøi et al. 2012; Sanjuan, Gonzalez, Aguilar, Leal, & Os (2004). Some have even argued that it is not the voices alone but rather the interpretation of the voices that determines whether or not AVHs are positive or negative (Badan, 2008).

Interestingly, there is a significant population of people that experience AVHs that are considered healthy and not in need of clinical treatment (Johns et al., 2014) For example, there are similarities and differences amongst individuals that hear voices that need clinical treatment vs. voice hearers that do not require treatment (Johns et al., 2014). Generally, voice hearers that need treatment hear negative/distressing content, have low control of the voices, the voices occur often/last for long periods of time, the voices cannot be linked to life circumstances, the voices are related to a negative sense of self, and the voices start in late adolescence/early adulthood as opposed to childhood (Johns et al., 2014). Voice hearers that do not need treatment experience neutral/enjoyable content, have high control over the voices, the voices are low in frequency/duration, the voices can be linked to life circumstances, the voices are not related



to a negative sense of self, and the voices start in childhood as opposed to late adolescence/early adulthood (Johns et al., 2014). In terms of similarities between healthy/unhealthy voice hearers, both groups experience similarities in voice loudness (e.g. conversational volume), the number of voices (e.g. an average of 4.3), the location of the voices (inside head/outside head), gender of the voices (usually both genders), and the personification of the voices (Johns et al., 2014; McCarthy-Jones et al., 2014a).

### Theories Guiding Conceptualization

There multiple models of the causes of AVHs and no single model accounts for every type of AVH (McCarthy Jones et al., 2014b) Currently, there are cognitive models, dimensional models, and psychological models that explain the phenomena of AVHs (Upthegrove et al., 2016). Although the source of AVHs has been widely debated, understanding how and why AVHs emerge is important for treatment and could lead to different treatment methods/ coping mechanisms depending on the type of AVH (Jones, 2010; McCarthy-Jones et al., 2014b). One cognitive model holds that AVHs emerge from the voice hearer mistaking whether or not the AVH is a self-generated-thought because of a lack of ability to monitor inner thoughts (Upthegrove et al., 2016). Hence, the voice hearer incorrectly interprets their regular thoughts to be auditory hallucinations. One criticism of this theory is that most AVHs present in the second and third person, and generally people do not think in the second and third person (Upthegrove et al., 2016). Another cognitive model holds that AVHs arise from

issues in memory recall--by some mechanism in the brain, a failure to prevent the intrusive memory from emerging causes a stressful memory to present as an AVH (Upthegrove et al., 2016). This model of AVH would likely inform a trauma based cause of the hallucination and might involve trauma based treatments (Jones, 2010). Lastly, another cognitive model regarding AVHs involves individuals with deficits in cognitive functioning (e.g. memory/executive functioning) which causes the voice hearer to misinterpret actual sounds as AVHs (e.g. the individual misinterprets the sound of the rain to be a conversation about the voice hearer as the result of cognitive impairments) (Upthegrove et al., 2016)

Dimensional models of AVH emerged out of recent studies that suggest that voice hearing alone is not pathological, as around 20% of the population experiences auditory hallucinations at some point (Johns et al., 2014; Upthegrove et al., 2016;). Dimensional models put AVH's on a spectrum in which impairments in functioning are the central pillar at which AVHs require clinical treatment. One interesting emergence out of the dimensional models of AVHs is the distinction between "true hallucinations" and "pseudohallucinations". "True hallucinations" are perceived as occurring outside the voice hearers head and a boundary is unable to be established between the hallucinations and actual sounds (Upthegrove et al., 2016). Dimensional models also explain why individuals that experience hypnagogic AVHs (hearing voices just before sleep onset) and hypnopompic AVHs (hearing voices just before/during waking up)

have better life outcomes than individuals that regularly experiences AVHs in non-sleep related states (Leede-Smith & Barkus, 2013). However the fact that only certain people experience hypnagogic/hypnopompic (18-25% of the general population) suggest that biological factors are likely a large component of AVHs (Leede-Smith & Barkus, 2013). It should be noted that hypnagogic/hypnopompic hallucinations can still produce measurable levels of distress amongst hearers and can have significance in the clinical setting (American Psychiatric Association, 2013).

Psychological models of AVHs involve the relationship between the hallucinations and how the hearer perceives them (Upthegrove et al., 2016). In particular, how the voice hearer reacts emotionally to the voices determines if the voices are an actual problem. For example, an individual that hears a voice that reinforces the individual in a positive way would likely react in a less emotionally-charged way. An individual that hears a malevolent voice may act fearfully or angrily as a means of dealing with the hallucination. In social work, there is a movement in which treatment involves reframing the voice hearer's relationship to their voices (Sapey & Bullimore, 2013). This approach seeks to reestablish the experiencer's perception of the voices so that they reduce negative feelings associated with them as well as reducing the general stigma of voice hearing. This approach seems to align with psychological models of AVHs, as the usual goal of getting rid of the voices is replaced with goal of reinterpreting the voices and controlling the emotional reaction to the voices.

## Conclusion

Regardless, research into specific coping mechanisms useful for dealing with AVHs are scant and research that explores the direct effects of hallucinations are non-existent. It can also be argued that there is a need for studies that simulate AVHs as a means of gaining deeper insight into how they affect functioning as well as what strategies can be used to deal with the hallucinations. On top of this, dissecting perceptions of mental health professionals may also help provide insight into AVH effects and useful coping strategies for them. After all, 1 out 4 voice hearers that experience persecutory AVHs receive no benefit from psychiatric medication and new approaches are needed to help these individuals cope with symptoms (Leff, Williams, Huckvale, Arbuthnot & Leff, 2014).

## CHAPTER THREE

### METHODS

#### Introduction

This study sought to examine mental health social worker perceptions regarding the effects of auditory hallucinations on general behavior. Furthermore, the study probed for coping strategies used to deal with auditory hallucinations. This section highlights how this was done. The following sections will discuss the design of the study, sampling, data collection/ instruments, procedures, and the protection of human subjects.

#### Study Design

The purpose of this study is to understand the effects that verbal hallucinations have on the social functioning/mental status of people and to generate potential coping strategies to be used in treatment. The reason for the study's emphasis on mental health social worker participants is to make up for a general lack of information on their perceptions of the phenomena. The study is also aimed to help determine whether the social/cognitive deficits that psychotic people demonstrate are due to the presence of hallucinations themselves or if the impairments are linked to broader factors. This project was exploratory, because there is little information regarding the direct effects of verbal hallucinations on the mental status of people, and there is limited information on effective coping strategies to be used while auditory hallucinations are present.

The study involved asking participants open-ended questions that were transcribed and coded after being interviewed

One advantage of the study consisting of one-on-one interviews is that the experimenter was able to narrow the focus of the interview and be able to redirect the conversation to keep things concise. This also made transcribing and coding the data simpler as there was no confusion as to who had said what. Lastly, the study's emphasis on utilizing interviews of mental health social workers was aimed to generate a general richness in responses and to facilitate novel perspectives.

One limitation of using one-on-one interviews was that participants may have felt like they were being interrogated as opposed to having a fluid conversation. This may have contributed to participants not fully expanding on their answers or hesitating to disclose the particular nuances of their experiences working with psychotic clients. Furthermore, because data was transcribed and analyzed by a single researcher, a causal link between the presence of hallucinations was unable to be fully related to general behavior.

Nevertheless, this study seeks to answer three basic questions: A) What are some potential effects of auditory hallucinations on the social behavioral functioning of psychotic people? B) What are the some potential effects of auditory hallucinations on the mental status of psychotic people? C) What coping strategies do psychotic people use in the presence of auditory verbal hallucinations?

## Sampling

This study utilized a non-random purposive sample of four mental health social workers. An important aspect of the sample is that all participants had been involved in the field of mental health for a minimum of two years. The purpose for was to ensure that perceptions of the phenomena were grounded at an acceptable threshold of experience. Participants were also between the ages of 25 and 49. Furthermore, participants all had a master's degree in social work. The data was collected by using a combination of face to face interviews and telephone interviews--participants were given a choice as to which they would prefer. The questions were designed to be open ended. After each participant was instructed as to what his or her information would be used for and why the information was being collected, each participant signed the informed consent. For telephone interviews, the researcher read the consent paperwork and requested verbal consent. Following this process, the interviews were recorded. During the course of the interview, the researcher took steps to not allude to any particular answer and encouraged each participant to answer freely from their own experiences.

## Data Collection and Instruments

This study used audio recording equipment to gather live qualitative data. Each interview began with informed consent and a description of the study, as well as the study's purpose (See appendix A). Demographic information was collected before each interview began (See appendix B). This information

includes age, gender, education level, and numbers of months involved in the field of mental health.

The data collected consisted of the responses of mental health social workers who have worked with clients that have experienced auditory verbal hallucinations. The interviews were conducted through both face to face interviews and telephone interviews. The setting for the interviews took place at locations and times most convenient for the participants--this included private offices and private spaces on a college campus. All interviews were conducted in private settings to ensure participant confidentiality.

The interviewer used a semi-structured questionnaire (See Appendix C), asking closed and open ended questions, allowing the researcher to probe other areas on an individual basis. The areas that were covered in the interviews directly related to the participants' views of clients that experience auditory verbal hallucinations. Interview questions were developed using gaps in current research and by consulting peers for face validity.

### Procedures

Permission was requested from this investigator's advisor to provide a contact list of mental health social worker participants. After the list was acquired, the researcher contacted each person on the list on an individual basis and proposed a number of dates and time-slots for the interviews to take place. The researcher provided contact information (email address/ phone number) so that a time and place to meet could be arranged. Spaces to meet were



determined by participants in order to make it most convenient for them. In order to accommodate participants, time slots were provided in the late afternoon and early evenings. Each interview session will last between 20-30 minutes.

When contact was established with participants--each participant was given a random number to be used as an alias. This number was logged by the experimenter. Participants were then given a packet with consent forms and demographic information to fill out (See appendix B and D). After getting acquainted, the limits of confidentiality were discussed, and the researcher gathered the completed forms. After thanking the participant, the recording equipment was turned on and the interview began. After the interview, participants were thanked and given a \$10 Amazon gift card.

#### Protection of Human Subjects

The identities of the interviewees were kept confidential. Individual sign-in sheets were used for each interview and stored in a locked cabinet. Each interview took place in private rooms. Participants signed consent forms to be audio-recorded. All materials (documentation, and audio recordings) were stored in a locked cabinet. Audio was transferred into a password-protected computer. During transcription, the assigned numbers were used as the primary means of identification. The study was reviewed by the Social Work Subcommittee of the Institutional Review Board for the university. All materials will be deleted/shredded one year after the completion of the study.

## Data Analysis

All data that was gathered was analyzed with thematic analysis. First, audio recordings of the participants' statements and non-verbal behaviors were transcribed into written form. The data was then subsequently coded. The statements exhibited by participants were classified into four separate categories: People, places, things, and ideas. Domains were further broken down into anticipated and unanticipated responses. Frequencies and proportions of all comments were analyzed and ordered. Patterns were found and eight core themes were developed. Themes were compared to current research on the subject.

## Summary

This study seeks to explore whether auditory hallucinations induce deficits in social functioning and mental status as well as to probe for novel coping strategies. The interviews will allow the researcher to concisely analyze the statements of the participants. Because statements were transcribed and analyzed, qualitative methods were most ideal.

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

#### Introduction

This chapter presents the findings of the data collected in the form of a qualitative analysis. The data presented in this chapter were collected and ordered in response to the research questioned posed in chapter one. The purpose of this study was to explore social worker perceptions on the effects of auditory verbal hallucinations on behavior. The goals this study were accomplished through the use of interviews and qualitative data analysis.

#### Demographic Data

The data presented in this chapter are derived as a result of qualitative analysis of four mental health social workers. The participants were selected on a volunteer basis. There were three females and one male participant. All participants were between the ages of 25 and 49. All participants had a master's degree in social work—three of the four participants have been involved in the field of mental health for over 48 months. One participant had been in the field between 25 and 36 months. All participants participated in a 20-30 minute interview and were asked the same set of questions.

## Findings

After interviewing the participants, the investigator transcribed the data and began to look for common themes of people, places, things and ideas amongst participants' responses—data was further broken down into anticipated versus unanticipated responses. After transcriptions were completed, statements were reviewed and common themes were developed. With the research question in mind, eight domains were identified. These eight domains include “behavior”, “social ability”, “observable traits”, “voice plasticity”, “life difficulty”, “beneficial auditory hallucinations”, “coping strategies”, and “stigmas”. All domains were identified and further expanded upon by the participants during the structured interviews. The eight domains are presented in the tables below

Table 1. Behavior

<p>Theme 1: Behavior</p> <p>Direct Quotes:</p> <ul style="list-style-type: none"> <li>• “My opinion is that [the auditory verbal hallucinations] have a great impression on clients’ behavior” (Participant 4, Personal Interview, March 2018).</li> <li>• “So much so that it controls their actions” (Participant 2, Personal Interview, March 2018)</li> <li>• “Even leading up to suicide attempts and homicidal ideations” (Participant 1, Personal Interview, March 2018).</li> <li>• “I feel that it’s a strong influence [on behavior] because at that point the individual is confused on what is reality and what is not reality” (Participant 3, Personal Interview, March 2018)</li> <li>• “They may lash out at someone saying they’re the ones saying all this negative stuff when it’s not” (Participant 2, Personal Interview, March 2018)</li> <li>• “I think it’s a strong influence until the individual can control them” (Participant 3, Personal Interview, March 2018).</li> <li>• “They may be responding to voices which then can lead people to back off from them” (Participant 4, Personal Interview, March 2018).</li> <li>• “I was doing individual therapy with a patient and he was hallucinating during our session. So there was an empty chair in the session and he would talk to me and the chair. I said once ‘are you talking to someone’ he was like ‘yeah your spirit is here its telling me all these things” (Participant 2, Personal Interview, March 2018).</li> <li>• “I used to work inpatient. There was one lady who was diagnosed with SZ. She was in and out of the hospital for suicide attempts and even when she was in the hospital they used to give them little pencils with erasers on them—you know those metal things that hold the eraser? Well she chewed the eraser out and tried kill herself by gouging herself. She actually was very socially connected to her family. And so she did it because the voices wouldn’t stop and they told her she has to die and if she doesn’t die then her little nephew—who was her world—they were going to kill her nephew. Even though she knew they were voices, it was something she felt she had to act on to protect him.” (Participant 4, Personal Interview, March 2018).</li> </ul>
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Table 2. Social Ability

Theme 2: Social Ability
<p>Direct Quotes:</p> <ul style="list-style-type: none"><li>• “Okay well so [the social deficits] are primarily due to the hallucinations themselves” (Participant 2, Personal Interview, March 2018).</li><li>• “I think a lot of times they might have a harder time paying attention to social cues because there are so many other things going on in their head,” (Participant 3, Personal Interview, March 2018).</li><li>• “They may not realize when they’re being more intrusive, or they may have a harder time reading social cues or even how to socialize” (Participant 3, Personal Interview, March 2018).</li><li>• “I just think that it impacts their ability to interact, socialize, have relationships, and hold jobs” (Participant 2, Personal Interview, March 2018)</li><li>• “They may not respond to social cues because there’s so much going on in their head” (Participant 4, Personal Interview, March 2018)</li><li>• “If they are experiencing AH sometimes those hallucinations could be command in nature—telling them to do certain things—sometimes it can be very disruptive—which causes them to not be able to tolerate talking to somebody, participating in a group—things like that,” (Participant 3, Personal Interview, March 2018)</li><li>• “I’ve worked with people who we consider high functioning in that they were able to maintain living independently, a few were going to college—but I wouldn’t say any were high functioning socially,” (Participant 4, Personal Interview, March 2018)</li><li>• “It seems to me that the lowest social abilities that I’ve seen—was with the individuals diagnosed with schizophrenia,” (Participant 1, Personal Interview, March 2018)</li><li>• “I would say it’s more difficult [for voice hearers to bond] particularly if they are at the lower end of their awareness and self-awareness in treatment.” (Participant 2, Personal Interview, March 2018)</li><li>• “Bonding, I don’t think it has an [effect] at all,” (Participant 1, Personal Interview, March 2018)</li></ul>

Table 3. Observable Traits

Theme 3: Observable Traits
<p>Direct Quotes:</p> <ul style="list-style-type: none"><li>• “Their eyes wander and you can tell that they separate themselves from you because of what they are going through at that point (Participant 1, Personal Interview, March 2018).</li><li>• “They’ll have eye-contact but it’s inappropriate—like they’re in a different place—and sometimes you’ll see them mumbling they’ll actually have conversations with you and whoever or whatever else they have going on.” (Participant 2, Personal Interview, March 2018).</li><li>• “Yeah a lot of avoidant eye-contact” (Participant 2, Personal Interview, March 2018).</li><li>• “If the voices are loud and disturbing you will begin to see changes in a person’s face” (Participant 3, Personal Interview, March 2018).</li><li>• “They can be fidgety” (Participant 2, Personal Interview, March 2018).</li><li>• “Eye contact would be impacted” (Participant 4, Personal Interview, March 2018).</li><li>• “If they are actively hearing voices their affect might be a little flat or blunted” (Participant 4, Personal Interview, March 2018).</li><li>• “You will notice that their cognitive attention is skewed a little bit by eyes moving back and forth—as if someone else is there--that I can’t see but they can see and hear” (Participant 1, Personal Interview, March 2018).</li><li>• “Attention definitely, because it’s hard to pay attention to other things when you have all that going on. Memory for the same reason. It would be hard to pay attention to things and retain it” (Participant 4, Personal Interview, March 2018)</li><li>• “You tend to see delayed responses if someone is actively hearing voices because it takes a while to pull their attention to you” (Participant 4, Personal Interview, March 2018).</li><li>• “Let’s say they have some type of treatment or the voices aren’t there then they’re a little more focused--so the eye contact is a little more appropriate, their thought processes are more logical” (Participant 3, Personal Interview, March 2018).</li></ul>

Table 4. Coping Strategies

Theme 4: Coping Strategies
<p>Direct Quotes:</p> <ul style="list-style-type: none"><li>• “I think if somebody has had them for a longer time and has learned what they are, maybe they have some insight that they are voices they’re hearing, maybe has learned some coping skills or strategies to cope with the voices. Then I think that [the voices] are less likely to have a huge impact on behavior (Participant 4, Personal Interview, March 2018).</li><li>• “Some of them would use cognitive behavioral techniques where they would learn through therapy to dispute some of the stuff that the voices were saying (Participant 4, Personal Interview, March 2018).</li><li>• “This is one of the things we help teach—is to self-evaluate and to understand if what they are hearing or seeing is real.” (Participant 1, Personal Interview, March 2018).</li><li>• “Pacing the floor, listening to music, and writing (Participant 2, Personal Interview, March 2018).</li><li>• “Sometimes they would put cotton or tissues in their ears,” (Participant 2, Personal Interview, March 2018).</li><li>• “I’ve had individuals tell me that they pray, they try to do other things to “tune out” the voices—like music” (Participant 2, Personal Interview, March 2018).</li><li>• “Distraction—listening to music, exercise, gardening, any of those things where they can distract [themselves]” (Participant 3, Personal Interview, March 2018).</li><li>• “I think that the longer that they have had the symptoms (off and on) especially when it’s controlled by a medication—the longer that an individual experiences AH the better that they can adjust and cope because at that time they can distinguish what is real and what is not real” (Participant 3, Personal Interview, March 2018).</li><li>• “I think that the longer the person has these type of hallucinations--they can determine what is not real and what is real” (Participant 2, Personal Interview, March 2018).</li></ul>



Table 5. Voice Plasticity

Theme 5: Voice Plasticity
<p>Direct Quotes:</p> <ul style="list-style-type: none"> <li>• “I think that on a scale of 1 – 10, 10 being the worst, AH can range from 1 to a 10” (Participant 1, Personal Interview, March 2018).</li> <li>• “It depends on where there at in their treatment and the spectrum of what they’re hearing (Participant 3, Personal Interview, March 2018).</li> <li>• “I think it depends on how long the person has been having AH, what treatments they’ve had before, whether [the voices] are currently under control, and what type of AH” (Participant 3, Personal Interview, March 2018).</li> <li>• “I think sometimes it just depends on the type of voices they are” (Participant 2, Personal Interview, March 2018)</li> <li>• “I think there are other factors that can agitate or trigger the hallucinations--to the point where if they’re in the background and [they will move] to the forefront where they actually impede what that person is doing every day” (Participant 1, Personal Interview, March 2018).</li> <li>• “Some people will say that the voices don’t bother them and that they’re used to it. So I think for some people it becomes a part of their daily living” (Participant 4, Personal Interview, March 2018).</li> <li>• “It depends on the person and their genetic makeup and personality in the first place—especially if they are a little more outgoing” (Participant 2, Personal Interview, March 2018).</li> <li>• “When they first start experiencing the AH they feel as if it’s real” (Participant 3, Personal Interview, March 2018).</li> <li>• “But say someone is having their first break, and maybe they don’t realize they’re AH and they’re very distressing then it may have a greater impact on behavior” (Participant 4, Personal Interview, March 2018).</li> <li>• “A lot of times it’s neutral just narrating their daily life”, (Participant 2, Personal Interview, March 2018)</li> <li>• “We knew he was doing badly when the voices started to get more negative” (Participant 1, Personal Interview, March 2018).</li> <li>• “It’s a little bit different in my opinion. Let’s say someone is depressed with psychotic features—it’s usually more of a temporary thing. But then when we have a person with schizophrenia or schizoaffective it’s usually their baseline” (Participant 4, Personal Interview, March 2018)</li> </ul>

Table 6. Life Difficulty

Theme 6: Life Difficulty
<p>Direct Quotes:</p> <ul style="list-style-type: none"><li>• “With an individual that wakes up and the first thing they hear is someone saying things in their head—it’s hard—it’s a lot harder for an individual” (Participant 3, Personal Interview, March 2018)</li><li>• “It’s very hard for them to get up and do their daily activities and feel energetic, sociable and good” (Participant 2, Personal Interview, March 2018)</li><li>• “They always have to compensate for the things that they do because they have this extra thing on their plate” (Participant 1, Personal Interview, March 2018).</li><li>• “Sometimes they just have a lack of pleasurable activities” (Participant 2, Personal Interview, March 2018)</li><li>• “[It’s especially difficult for] those who have commanding voices telling them to harm themselves or someone else (Participant 3, Personal Interview, March 2018).</li><li>• “It’s hard for them to trust people” (Participant 2, Personal Interview, March 2018)</li><li>• “It’s hard for them to maintain relationships” (Participant 4, Personal Interview, March 2018)</li><li>• “It just seems that they typically have burnt out their family members. They don’t really have a good supportive network” (Participant 3, Personal Interview, March 2018).</li><li>• “I think it was doable but I would say it was a functional disadvantage because it required all that extra support and help to get through” (Participant 4, Personal Interview, March 2018).</li><li>• “It was always a lot of support behind him and a lot of extra work because he had to constantly filter out what was going on in his head” (Participant 4, Personal Interview, March 2018)</li><li>• “The older you get it’s a lot harder because you are also going through medical issues, adjustment of aging, and a mental illness,” (Participant 3, Personal Interview, March 2018)</li></ul>

Table 7. Beneficial Auditory Verbal Hallucinations

Theme 7: Beneficial Auditory Verbal Hallucinations
<p>Direct Quotes:</p> <ul style="list-style-type: none"> <li>• “One individual that was dealing with severe depression, the AH were kind of speaking to [his] self-esteem and confidence. So It kind of [kept him] motivated and going forward throughout the day without completely shutting down” (Participant 1, Personal Interview, March 2018).</li> <li>• “We had one client who had voices that would make him happy because it was like a laugh track from a sitcom. He would laugh along with it and stuff” (Participant 4, Personal Interview, March 2018).</li> <li>• “I’ve had people say that they like their voices—they keep them company—they tell them nice things. I don’t think it’s rare—I think it’s case by case” (Participant 2, Personal Interview, March 2018).</li> <li>• “Yes I have [worked with individuals who spoke positively of AVH]. Not many but—I’ve had a couple” (Participant 1, Personal Interview, March 2018).</li> <li>• “If the hallucinations don’t impede them from their daily functions, sometimes it’s best to leave them alone. Because they are a security blanket or a support system for them” (Participant 1, Personal Interview, March 2018)</li> <li>• “I’ve had a couple of people who experienced those type of AH. It’s very rare in my experience” (Participant 4, Personal Interview, March 2018).</li> <li>• “I haven’t had any interaction who has spoken highly about hearing the voices” (Participant 3, Personal Interview, March 2018).</li> <li>• “I have not personally worked with someone who spoke positively of auditory hallucinations” (Participant 4, Personal Interview, March 2018).</li> <li>• “Yeah I worked with a person who really tried to explore and communicate with some of the voices and the visions that they had seen. I thought that was pretty interesting because most people are afraid—and just want them to go away. Whereas this particular case was the only case that I’ve had where the person was really intrigued and wanted to fact-find with the hallucinations” (Participant 1, Personal Interview, March 2018).</li> <li>• “I don’t know if you have heard Dr. Patricia Deegan, So I facilitate that training for DBH for two or three years with the staff. In one of her videos she talks about a time when she was hospitalized. A lot of it was negative voices. She talks about one particular voice that said ‘You are the flyer of the kite.’ And the voice she tells and I’m not gonna say it right, but at that moment that was a positive for her. It was telling her you have control of this, you can take control” (Participant 4, Personal Interview, March 2018)</li> </ul>

Table 8. Stigma

Theme 8: Stigma
<p>Direct Quotes:</p> <ul style="list-style-type: none"><li>• “I just think that there is such a stigma behind getting help for people that experience AH” (Participant 1, Personal Interview, March 2018).</li><li>• “They’re anxious about the way they are behaving in front of other individuals. So I think that when this is happening they isolate themselves” (Participant 2, Personal Interview, March 2018).</li><li>• “They don’t want to show you that they’re experiencing these type of symptoms because they don’t want someone like myself to look at them any differently” (Participant 3, Personal Interview, March 2018).</li><li>• “I think that women are more—I don’t know if its embarrassed—or if women tend to not show those type of symptoms because they’re afraid of what the other individual is going to think of them.” (Participant 3, Personal Interview, March 2018).</li><li>• “A lot of times I see in the males—who are more forthcoming in telling me that they’re hearing voices at the time—verses a woman” (Participant 3, Personal Interview, March 2018).</li><li>• “I encourage anyone experiencing AH or VH that they should seek some help because there is help out here and they don’t have to do it alone” (Participant 1, Personal Interview, March 2018).</li></ul>

## Summary

This chapter highlighted eight themes that are strongest and most relevant to the purpose of the study. Those themes are behavior, social ability, observable traits, voice plasticity, life difficulty, beneficial auditory hallucinations, coping strategies, and stigmas. Each of these domains or can be explored further to better understand how auditory verbal hallucinations affect behavior.

These domains will further dissected in the following chapter.

## CHAPTER FIVE

### DISCUSSION

#### Introduction

This chapter will provide an in-depth discussion of the findings and conclusions of the study. Furthermore, implications of the findings will be tied to social work practice and the limitations of the study will be addressed. The purpose of the study was to examine the effects of auditory hallucinations on the behavior of clients.

#### Discussion

##### Domain One: Behavior

The eight core themes highlighted in Chapter 4 can be further broken down and analyzed in order to understand some potential effects of AVH on behavior. The first domain describes general behaviors that participants have noticed amongst voice-hearing client populations. Interestingly, this is the only domain in which a full consensus was established. That is, the stimulus of auditory verbal hallucinations seem to have strong impacts on client behaviors. While some responses by participants were oblique in nature—it was generally emphasized that AVH cause maladaptive manifestations of behavior.

For example, one participant stated that voice-hearing clients “may lash out at [others] saying they’re the ones saying all this negative stuff when it’s not” (Participant 2, Personal Interview, March 2018). This response could allude to a

building up of paranoid or persecutory ideation catalyzed by the AVHs. This may signify a need for the voice hearer to confront a perceived threat. A behavioral manifestation on this level could emphasize that a client is experiencing a “true hallucination” as opposed to a “pseudo hallucination”—as the client confronts with certainty that a certain individual has said negative things. This may mean that the client has literally heard the voice of those they are confronting—or the AVHs are paranoid in nature and the client believes the voices with conviction. Regardless, while the stimulus of AVHs often run in tandem with delusions, a causal relationship between the two is not always clear. In micro practice, a client falsely confronting others could emphasize to the mental health professional that the client is either hallucinating the voices of those they are confronting, or they believe the other voices they are perceiving with a high degree of conviction.

Participants generally agreed that the negative manifestations of client behaviors are related to a confusion of the real versus the non-real. For example, one participant indicated that AVHs have “a strong influence [on behavior] because at that point the individual is confused on what is reality and what is not reality” (Participant 3, Personal Interview, March 2018). This statement could imply that hearing voices is tied to a state of disorganized “limbo” in which the client is effectively “shooting in the dark” with regards to their behavior. This might imply that the maladaptive behaviors often seen by clients that experience AVH is not fully due to the stimuli of voices—but rather due to the mental space

that is married to the voices. Whether or not this mental space “invites” the voices or if the voices “invite” the mental space is irrelevant—the ill manifestation of behavior could be related to this mental-space as opposed to the stimuli in that mental-space. Perhaps the phenomena of voice hearing is related to a state of selective-derealization in which the client is certain of only some facets of reality as opposed to perceiving the whole of reality as unreal or real.

Participants agreed that AVHs are related to suicidal behaviors. For example one participant stated that AVHs can “[lead] up to suicide attempts and homicidal ideations” (Participant 1, Personal Interview, March 2018). Another participant reported a story about a client attempting suicide at an inpatient unit:

I used to work inpatient. There was one lady who was diagnosed with schizophrenia. She was in and out of the hospital for suicide attempts and even when she was in the hospital they used to give them little pencils with erasers on them—you know those metal things that hold the eraser? Well she chewed the eraser out and tried kill herself by gouging herself. She actually was very socially connected to her family. And so she did it because the voices wouldn’t stop and they told her she has to die and if she doesn’t die then her little nephew—who was her world—they were going to kill her nephew. Even though she knew they were voices, it was something she felt she had to act on to protect him (Participant 4, Personal Interview, March 2018).



This statement could imply that the stimulus of AVHs contribute directly to delusions which in-turn contribute directly to suicide attempts. Interestingly, the participant indicated that the client had a fair level of insight about the voices (e.g. “even though she knew they were voices, it was something she felt she had to act on to protect him”). This could mean that AVHs have a persistent-barraging effect that can push a client to surrender to their delusions. It also could hint to AVHs causing states of disorderly thinking in which sufferers are unable to question the content of the voices. Furthermore, these statements confirm the findings of DeVylder and Hilimire, (2015) who found that the presence of auditory hallucinations leads to an escalation of suicide risk.

#### Domain Two: Social Ability

While participants generally agreed that voice hearers demonstrate deficits in social functioning, there were competing views about voice hearer’s ability to bond as well as voice hearer’s social needs. One theme generally shared by participants is the client tendency to have difficulties reading social cues and responding appropriately during social interactions. For example, one participant reported that “they may not respond to social cues because there’s so much going on in their head” (Participant 4, Personal Interview, March 2018). Another participant indicated that “they may not realize when they’re being more intrusive, or they may have a harder time reading social cues or even how to socialize” (Participant 3, Personal Interview, March 2018). These statements could imply that individuals that experience AVHs experience a great deal of

cognitive noise that may contribute to increased difficulties interpreting social behaviors and setting up appropriate social boundaries with others.

Another theme was the tendency for voices to distract clients during social situations. For example, one participant reported that “sometimes it can be very disruptive—which causes them to not be able to tolerate talking to somebody, participating in a group—things like that,” (Participant 3, Personal Interview, March 2018). This could imply that the social difficulties voice hearers often demonstrate is due to a limiting of cognitive resources catalyzed by an AVH-induced splitting of attention.

Interestingly, one participant noted that voice hearers “may be responding to voices which then can lead people to back off from them” (Participant 4, Personal Interview, March 2018). This could signify that the general behaviors voice-hearers engage in could repel others away—leading to a lack of social practice. Voice hearers that routinely respond to their voices may simply drive others away—to a point at which they lose out on the social reinforcement necessary to engage in the intricate nature of social dynamics.

### Domain Three: Observable Traits

The third domain is related to the mental status exam—the idea being that if observable patterns amongst voice hearers can be identified, then reliance on client reports can be minimized so that diagnosis can be more objective. The bulk of participants noticed behavioral traits related to avoidant eye contact—it seems that the old adage “the eyes are the window to the soul” is relevant in this

case. For example, one participant noted that “they’ll have eye-contact but it’s inappropriate—like they’re in a different place—and sometimes you’ll see them mumbling they’ll actually have conversations with you and whoever or whatever else they have going on” (Participant 2, Personal Interview, March 2018).

Another participant stated that “their eyes wander and you can tell that they separate themselves from you because of what they are going through at that point” (Participant 1, Personal Interview, March 2018). These responses could imply that AVH experiencing clients may demonstrate a disengaged type of eye-contact. And while it is important to note that while voice-hearing patients may “mumble” to themselves—it should be stated that talking to oneself is not necessarily an indicator of psychosis, as there is a difference between “thinking out loud” and responding to a hallucination.

Furthermore, participants noted that voice hearing clients will often demonstrate blunted affect, difficulties paying attention within the social context, and delayed responses during interactions. While these reports agree with the findings of Eack (2012), it seems apparent that patient reports of phenomenological experiences will continue to be the primary means by which psychosis is detected—because it is self-evident that some of these observable traits could be mistaken for symptoms of Autism Spectrum Disorder or Attention Deficit Hyperactivity Disorder. It should be noted that this is one of the reasons the research question was posed in the first place, to determine how much of a

direct impact AVH have on behavior. It seems that the broad tapestry of characterizes that voice hearers demonstrate will overlap with other conditions.

#### Domain Four: Coping Strategies

The fourth domain entails coping strategies that voice hearers have been reported to use. The bulk of participants mentioned that the longer patients experience voices the better they are at dealing with them. This implies that there are effective ways to deal with the AVHs. For example, one participant noted that:

If somebody has had them for a longer time and has learned what they are, maybe they have some insight that they are voices they're hearing, maybe has learned some coping skills or strategies to cope with the voices, then I think that [the voices] are less likely to have a huge impact on behavior (Participant 4, Personal Interview, March 2018).

Another participant stated that:

I think that the longer that they have had the symptoms (off and on) especially when it's controlled by a medication—the longer that an individual experiences AH the better that they can adjust and cope because at that time they can distinguish what is real and what is not real (Participant 3, Personal Interview, March 2018)

This statement alludes to one of the tendencies discussed in the “Behavior” domain—that is, distinguishing what is real and what is not real is important for the treatment of voice hearers. Perhaps the mere belief that a voice

is unreal would help reframe the voice hearer's relationship to the voice. The contrary could also be true—if a client believes that their voices are unreal then that may rob them of applying meaning to their experiences and the client will therefore experience distress at the notion that what they are experiencing is meaningless and arbitrary.

Upon analyzing the data, it became clear that two main facets of the “coping strategies” domain were apparent: Coping strategies coming from the client, and coping strategies coming from the clinician. On the client's end it was reported that clients will pace, listen to music, write, pray, and plug their ears with material (Participant 2, Personal Interview, March 2018). It was also stated that voice hearing clients utilize “distraction—listening to music, exercise, gardening, any of those things where they can distract [themselves]” (Participant 3, Personal Interview, March 2018). This tendency for voice hearing patients to attempt to distract themselves is confirmed by Romme, Noorthoorn and Escher, (1992).

Nevertheless, the statement that patients would put “cotton or tissue” in their ears to cope with hallucinations caught this researcher off guard as hallucinations are generally thought to be a phenomena that immerses from within. Interestingly, there is data regarding the effectiveness of using earplugs to control auditory hallucinations. Done, Frith, Owens (1986) reported in a case study that a client was able to reduce the intensity of AVHs by plugging his dominant ear—plugging the non-dominant ear had a less prominent affect. Regardless, perhaps ear plugging “tricks” a hallucinating brain into thinking that

the hallucination can no longer be perceived as sound can't get through the ears. This coping strategy might be effective for clients that hear "true hallucinations" as opposed to "pseudo hallucinations"

For coping strategies that come from the clinician, it was reported that clinicians can help clients "to self-evaluate and to understand if what they are hearing or seeing is real." (Participant 1, Personal Interview, March 2018). Furthermore clinicians can teach "cognitive behavioral techniques where [the client] would learn through therapy to dispute some of the stuff that the voices were saying (Participant 4, Personal Interview, March 2018). These interventions might suggest that encouraging the client to look inward at their phenomenological experiences may help them deal with distressing stimuli.

#### Domain Five: Voice Plasticity

The fifth domain alludes to the generally ambiguous nature of AVHs. Based on the interviews, it was apparent that there is a large degree of variability with regards to the voice hearing experience. For example, one participant noted that "on a scale of 1 – 10, 10 being the worst, AH can range from 1 to a 10" (Participant 1, Personal Interview, March 2018). This statement might lead us to think that the effects of voice hearing on behavior is indeed on a spectrum— where voices can be relatively benign in some cases, while being damaging and highly distressing in other cases. This participant goes on to remark that "there are other factors that can agitate or trigger the hallucinations--to the point where if they're in the background and [they will move] to the forefront where they

actually impede what that person is doing every day” (Participant 1, Personal Interview, March 2018). This might provide a clue into the spatial nature of auditory hallucinations—that is, when the client is doing well, the AVHs are perceived to be further away. After a distressing event the AVHs are perceived to be closer to the client. This may suggest that the voice hearing experience is directly linked to the perceiver’s immediate environment. If the voice hearer’s environment influences the perception AVHs, then perhaps ecological modifications can be made as an additional coping strategy.

The bulk of the participants agreed that the effects of AVHs on behavior depends on the subtype of AVH. For example, one participant indicated that “it depends on how long the person has been having AH, what treatments they’ve had before, whether [the voices] are currently under control, and what type of auditory hallucination” (Participant 3, Personal Interview, March 2018). Another participant went on to state that “I think sometimes it just depends on the type of voices they are” (Participant 2, Personal Interview, March 2018). These views may provide hints into the future study of AVHs—more specifically, conducting a full taxonomy of AVHs in order to prioritize the emphasis of treatment (e.g. perhaps clients need more extensive treatment if they experience paranoid hallucinations as opposed to running commentary hallucinations etc.).

#### Domain Six: Life Difficulty

This theme points to the additional challenges to life that voice hearing clients experience. Participants pointed out that individuals that experience AVH

generally have lower levels of energy, anhedonia, burnt-out social networks, difficulties trusting others, and a need to compensate in order to deal with their condition. One participant stated that “with an individual that wakes up and the first thing they hear is someone saying things in their head—it’s hard—it’s a lot harder for an individual” (Participant 3, Personal Interview, March 2018).

Another participant indicated that “it’s very hard for them to get up and do their daily activities and feel energetic, sociable and good” (Participant 2, Personal Interview, March 2018). These statements might provide a clue to a potential withering effect of the voices on the clients’ dispositions—perhaps the AVHs overtime induce a general lethargy. This may suggest that the hypervigilance that voice hearers often demonstrate during initial psychotic episodes ends up being “traded” for depressive states—perhaps on some level this is a less conscious and maladaptive coping mechanism.

A participant reported that living life with voices “was doable but I would say it was a functional disadvantage because it required all that extra support and help to get through” (Participant 4, Personal Interview, March 2018). This participant went on to say that there “was always a lot of support behind [a client] and a lot of extra work because he had to constantly filter out what was going on in his head”. These statements might imply that the social network of voice hearing populations is integral to their life outcomes. This is compounded by the fact that the bulk of the participants mentioned that most of their patients had poor support systems. This may provide a clue to why certain voice hearers end



up in clinical settings—perhaps a poor social environment facilitates the development of distressing subtypes of AVHs.

#### Domain Seven: Beneficial Auditory Verbal Hallucinations

The seventh domain refers to AVHs that are either enjoyable to the perceiver or conducive to adaptive behaviors. Two of the four participants indicated that they have worked with clients that have had beneficial hallucinations. One participant reported that “one individual that was dealing with severe depression, the auditory hallucinations were kind of speaking to [his] self-esteem and confidence. So it kind of [kept him] motivated and going forward throughout the day without completely shutting down” (Participant 1, Personal Interview, March 2018) Another participant went on to report that “we had one client who had voices that would make him happy because it was like a laugh track from a sitcom. He would laugh along with it and stuff” (Participant 4, Personal Interview, March 2018).

These statements could lead us to think that certain AVHs can provide a type of support for depressive states. It was also reported that “if the hallucinations don’t impede them from their daily functions, sometimes it’s best to leave them alone. Because they are a security blanket or a support system for them” (Participant 1, Personal Interview, March 2018). This could imply that for voice hearers with poor social supports, AVHs can provide a type of social company for experiencers.

### Domain Eight: Stigma

The final domain refers to the generally taboo nature of voice hearing and seeking treatment for the condition. One participant noted that “there is such a stigma behind getting help for people that experience AH” (Participant 1, Personal Interview, March 2018). Another participant reported that clients that hear voices are “anxious about the way they are behaving in front of other individuals. So I think that when this is happening they isolate themselves” (Participant 2, Personal Interview, March 2018). This statement could lead us to think that in certain cases AVHs can make clients more self-conscious as to how they are acting in front of others—this may be related to the specific content of the voices.

Interestingly, one participant noted differences in gender regarding the reporting of AVH in clinical settings. The participant indicated that “I think that women are more—I don’t know if its embarrassed—or if women tend to not show those type of symptoms because they’re afraid of what the other individual is going to think of them.” (Participant 3, Personal Interview, March 2018). They went on to report that “I see in the males—who are more forthcoming in telling me that they’re hearing voices at the time—verses a woman” (Participant 3, Personal Interview, March 2018). This may be related to a gender based stigma of voice hearing—perhaps in western society AVHs are seen as a predominately male characteristic—so when certain females experience AVH, they feel a

heavier weight of judgment and therefore are more reluctant to talk about the voice hearing experience.

## Conclusions

Insights into the relationship between AVHs and behavior were increased based on this research. The findings conform to the bulk of the data indicated in chapter 2 of this research—that is, in most cases, AVHs lead to suicidal tendencies, drug use, social difficulties, cognitive problems, increased stigmas, and a generally more difficult life experience (Brüne, 2005; DeVylder, 2016; DeVylder, & Hilimire, 2015) . While it is still not fully apparent as to the specific relationship between voices and direct behavior, it can be concluded that there is probably a strong interaction between the two.

In terms of coping strategies used to deal with auditory hallucinations—the primary novel insights found seem hint toward making modifications to the voice hearer’s direct environment. Furthermore, it seems that clinicians must facilitate the voice hearing client to distinguish the real from the unreal. The findings of this research are in agreement with the findings of Romme, Noorthoorn and Escher, (1992)—that is coping strategies tend to involve distraction, selective listening, and shifting the client’s relationship to the voice.

Regardless, it can be argued that in order to determine the direct effects of AVH on social-behavioral functioning and mental status, experimental research needs to be conducted. More specifically, research into simulating auditory hallucinations on non-psychotic participants might provide insights into the

directly observable characteristics of voice hearing. This type of research could facilitate the development of more accurate mental status examinations as well as increase the reliability of diagnosis.

#### Recommendations for Social Work Practice, Policy, and Research

Within the context of social work, these findings may provide an extra dimension of detail for social workers tasked with the role of engaging a voice-hearing client. While research into the direct effects of hallucinations are scant—a general taxonomy of AVH subtypes and how these AVH subtypes affect behavior could help social workers prioritize the emphasis of treatment. Regardless, because social workers provide the unique role of addressing client needs within the context of the client’s environment—social workers must use the knowledge generated from this research to restore the lines of support within the voice hearer’s social system. Based on the interviews, it is apparent that many voice hearing clients that present in clinical settings have poor relationships with family, general peer groups, and the system at large.

#### Limitations and Future Research

Admittedly, the sample size is too small to accurately and completely assess mental health social worker perceptions of AVHs. Additionally, the qualitative methods used cannot determine a causal relationship between AVHs and behavior. Furthermore, it is clear that specific AVH effects are still not distinguished from the general tapestry of characteristics that psychotic people

demonstrate. Regardless, upon analyzing the data, it is clear that several future avenues of quantitative research can be derived from the findings of this research. More specifically, phenomena such as ecological conditioning as a coping strategy for voice hearing, the spatial nature of AVHs, gender based stigmas of AVH reporting, AVHs as a coping strategy for depression, and the relationship between a person's social environment and AVH subtypes should be explored.

APPENDIX A  
INSTITUTIONAL REVIEW BOARD APPROVAL FORM, INFORMED CONSENT  
AND AUDIO RECORDING CONSENT

**CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO**  
**SCHOOL OF SOCIAL WORK**  
*Institutional Review Board Sub-Committee*

Researcher(s) Zachary Eckert  
Proposal Title The Effects of Auditory Hallucinations on Mental Status and Social-Behavioral Functioning: An Exploratory Simulab  
# SW1840

Your proposal has been reviewed by the School of Social Work Sub-Committee of the Institutional Review Board. The decisions and advice of those faculty are given below.

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Proposal is:

- approved  
 to be resubmitted with revisions listed below  
 to be forwarded to the campus IRB for review

Revisions that must be made before proposal can be approved:

- faculty signature missing  
 missing informed consent  debriefing statement  
 revisions needed in informed consent  debriefing  
 data collection instruments missing  
 agency approval letter missing  
 CITI missing  
 revisions in design needed (specified below)
- \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

  
Committee Chair Signature

2/13/2018  
Date

Distribution: White-Coordinator; Yellow-Supervisor; Pink-Student

College of Social and Behavioral Sciences  
School of Social Work

## **THE EFFECTS OF AUDITORY VERBAL HALLUCINATIONS ON SOCIAL-BEHAVIORAL-FUNCTIONING AND MENTAL STATUS: AN EXPLORATORY SIMULATION**

You are being asked to take part in a research study. It is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information. The study is being conducted by Zachary Eckert, a MSW student under the supervision of Dr. Herbert Shon, Assistant professor in the school of Social Work, California State University, San Bernardino. The study has been approved by the Institutional Review Board Social Work Sub-Committee, California State University, San Bernardino.

### **PURPOSE OF STUDY**

The purpose of this study is to see if simulated auditory hallucinations can create temporary and measurable effects in the social functioning and mental status of non-psychotic people. The reason for this is to help determine if the social deficits often exhibited by psychotic people are due to the stimulus of the hallucinations themselves or if the social deficits are due to other factors. Furthermore, this study is designed to discover potential coping strategies that voice-hearers can use.

### **DESCRIPTION**

You will be provided a pair of open-ear headphones to put on. You will initially be given a simple mental status exam in which you will be asked a few specific questions about how you are feeling and where you are. You will also be given a simple memory task to complete. Do this to the best of your ability. This will take no more than 3 minutes. After this, you will be asked a series of open ended questions about a variety of subjects including music, food, apps on smartphones etc. There are no wrong answers. After a few minutes, the researcher will push "play" on an mp3 device and you will experience "voices" that voice-hearers often report hearing for 7 to 10 minutes. The open ended questions will continue during this time. After this, the researcher will ask you more specific questions again. Following these specific questions/memory tasks, the researcher will press "stop" and he will proceed to ask you how you managed to carry out a conversation while "hearing" voices. The study should last between 20 and 30 minutes.

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**VIDEO/AUDIO USE  
INFORMED CONSENT FORM  
FOR NON-MEDICAL HUMAN SUBJECTS**

As part of this research project, we will be making a videotape/audiotape recording of you during your participation in the experiment. Please indicate what uses of this videotape/audiotape you are willing to consent to by initialing below. You are free to initial any number of spaces from zero to all of the spaces, and your response will in no way affect your credit for participating. We will only use the videotape/audiotape in ways that you agree to. In any use of this videotape/audiotape, your name would *not* be identified. If you do not initial any of the spaces below, the videotape/audiotape will be destroyed.

**Please indicate the type of informed consent**

Photograph       Videotape       Audiotape

*(AS APPLICABLE)*

- The videotape/audiotape can be studied by the research team for use in the research project.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be shown/played to subjects in other experiments.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be used for scientific publications.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be shown/played at meetings of scientists.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be shown/played in classrooms to students.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be shown/played in public presentations to nonscientific groups.  
Please initial: \_\_\_\_\_
- The videotape/audiotape can be used on television and radio.  
Please initial: \_\_\_\_\_

I have read the above description and give my consent for the use of the photograph/videotape/audiotape as indicated above.

The extra copy of this consent form is for your records.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

APPENDIX B  
DATA COLLECTION INSTRUMENTS

Demographic Questionnaire (Developed by Researcher)

1. What is your gender? (Circle one or leave blank to not disclose)

Male

Female

Transgender

2. What is your age? (Circle one or leave blank to not disclose)

18-24 years old

30-49 years old

50-64 years old

65 and older

3. What is the highest level of education you have completed? (Circle one or leave blank to not disclose)

Some high school

High school graduate

Some college

Trade/technical/vocational training

College graduate

Some postgraduate work

Post graduate degrew

4. How long have you been working in the field of mental health? (Circle one or leave blank to not disclose)

0-12 months

13-24 months

25- 36 months

37-48 months

More than 48 months

INSTRUMENT (Developed by Researcher)

1. In your experience how strong an influence do AH have on client's behavior?
2. In what ways have individuals with psychotic disorders demonstrated social deficits?
3. Do you think these deficits are due to auditory verbal hallucinations or other factors?
4. Have you ever worked with an individual that was high functioning socially, but experienced auditory hallucinations?
5. What coping strategies would individuals experiencing AH use?
6. Do you think measurable effects could be seen on MSEs for people that hear voices?
7. Do you think that an individual experiencing AH would have a hard time bonding with others?
8. Have you noticed any differences in social ability from clients diagnosed with different psychotic disorders? (e.g SZ, SZA, BPWPF, DWPD etc)
9. Do you think AH have helped individuals improve socially?
10. Do you think individuals that routinely experience AH experience disadvantages in functional living?
11. Have you ever worked with an individual that spoke positively of their hallucinations?
12. Do you think individuals w/ AH are less socially "needy"?

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