NOTICE CONCERNING COPYRIGHT RESTRICTIONS

The copyright law of the United States [Title 17, United States Code] governs the making of photocopies or other reproductions of copyrighted material.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use" that use may be liable for copyright infringement.

The institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law. No further reproduction and distribution of this copy is permitted by transmission or any other means.

This material may be protected by copyright law (Title 17 U.S. Code).

American Journal of Psychiatric Rehabilitation, 9: 241-258 Taylor & Francis Group, LLC ① 2006 ISSN: 1548-7768 print/1548-7776 online DOI: 10.1080/15487760600962160



Coping with Voices: A Group Approach for Managing Auditory Hallucinations

Brian Perron

Washington University, St. Louis, Missouri, USA

Michelle Munson

Case Western Reserve University, Cleveland, Ohio, USA

This article describes a group intervention designed to help people with severe mental illnesses cope with auditory hallucinations. Each session is comprised of both a supportive discussion and skills training. The skills training component utilizes a modeling sequence to promote the development of behavioral coping strategies. These strategies are empirically derived and have been organized into a user-friendly format based on the input of persons who experience hallucinations and mental health professionals. Practical information is also provided to serve as a guide for organizing and implementing this group.

Keywords: Auditory hallucinations; Coping; Mental illness; Positive symptoms; Voices

Auditory hallucinations, or *voices*, are sounds that occur in the absence of an external stimulus. They are a hallmark symptom of psychosis, prevalent among people diagnosed with a schizophrenia spectrum disorder and other psychoses. The estimated prevalence

We would like to acknowledge Barbara Hiltz, John Bricout, and the anonymous reviewers for their assistance in preparing this manuscript. We also have many other colleagues and clients who provided valuable insights, assistance, and recommendations. It is our regret that there are too many to name.

Address correspondence to Brian Perron, GWB School of Social Work, Washington University, One Brookings Drive, St. Louis, MO 63130, USA. E-mail: beperron@wustl.edu

of hallucinations for this population is 60% (Shergill, Murray, & McGuire, 1998). It is also estimated that between 25% and 50% of those who hear voices do not experience complete relief from neuroleptic medications (Carter, Mackinnon, & Copolov, 1996; Frederick & Cotanch, 1995). This symptom is not unique to schizophrenia, as it is also found among people with bipolar disorder (Ketter, Wang, Becker, Nowakowska, & Yang, 2004), major depression (American Psychiatric Association, 2000), substance abuse problems (e.g., Chen et al., 2003), delirium (Webster & Holroyd, 2000), and neurological disorders (Fénelon, Mahieux, Huon, & Ziégler, 2000; Bassiony & Lyketsos, 2003).

Although some people with mental illnesses report hearing friendly or benign voices (Jones, Guy, & Ormrod, 2003; Honig et al., 1998), they are more typically malevolent, stigmatizing, and distressing (Buccheri, Trygstad, Kanas, & Dowling, 1997). Harkavy-Friedman and colleagues (2003) investigated the relationship between hallucinations and suicide, finding that people who are at risk for suicidal behavior may be at increased risk for attempting suicide when command auditory hallucinations are present. Taken together, this evidence highlights the public health significance of auditory hallucinations.

Currently, the most effective means of managing voices is an integrated approach of medications and psychosocial interventions. The effectiveness of medications has improved over the years for treating mental illness, but for many individuals voices remain a debilitating and chronic symptom. In a review of evidence-based treatments for schizophrenia Lehman and Colleagues (2003) found that family interventions, supported employment, assertive community treatment, and skills training are all psychosocial interventions with some level of demonstrated efficacy. They also reported that social skills training has been found to improve social skills, increase illness knowledge, and assist in the acquisition of skills and the management of treatment. Cognitive behavioral therapy is receiving increased recognition in the treatment literature for treating positive symptoms of schizophrenia (see Bustillo, Lauriello, Horan, & Keith, 2001). However, many frontline practitioners are often at a loss for knowing what coping strategies are effective for managing auditory hallucinations and how to teach them to their clients.

The article will describe a group designed to help people with severe mental illnesses develop strategies for coping with voices. In addition, it will offer a guide to teaching specific coping skills

Coping with Voices 243

that work. This group was derived from the empirical and conceptual literature and developed through extensive collaboration with persons who experience auditory hallucinations. A range of service providers from multiple disciplines provided consultation on the design and organization of this group. The approach also draws upon features of other psychosocial interventions that have strong empirical support, most notably the modules of the UCLA Social and Independent Living Skills Program (Psychiatric Rehabilitation Consultants, 2000; see also Buccheri et al., 1997).

Within the following framework this article first reviews critical issues with regard to the format, planning, and organization of a ten-session group on coping with voices. Then the curriculum and teaching modality of the group is discussed. Finally, the limitations of the group and suggestions for future directions are offered. It should be noted that it is beyond the scope of this article to present a comprehensive review of the theory and the full continuum of treatment approaches for hallucinations specifically and mental illnesses in general.

GROUP FORMAT

The purpose of this group is to offer an integrated approach to managing voices that offers both support from peers and the development of skills for coping with voices. Two core components, supportive discussion and skills training, comprise each session.

Supportive Discussion

The group leader facilitates the supportive discussion. It consists of a routine check-in followed by the application of the problem solving process to resolve issues raised during the check-in. The group leader facilitates the supportive discussion by first opening with all members invited to briefly review their recent activity of voices and share experiences directly or indirectly related to the coping process. This type of discussion is important because prior studies indicate that people who experience voices report a sense of comfort and reduced isolation when they interact with other persons with similar experiences (Wykes, Parr, & Landau, 1999; Buccheri et al., 1997). During the first few sessions of the program, the leader can consider engaging the participants in a short game or *ice-breaker* to promote group cohesion. During the check-in, the group leader

is encouraged to actively listen for various problems raised by the participants to bring forth during the problem-solving segment of the supportive discussion.

After all participants have completed the check-in, the group selects an issue and applies the problem solving method with the assistance of the group leader. Liberman, Eckman, and Marder (2001) note that effective problem solving can help persons with a mental illness improve social functioning, promote attainment of personal goals, and avoid stress induced relapse. Structured problem-solving methods that work well for this group and are thoroughly reviewed include those found in the modules of the UCLA Social and Independent Living Skills program (see Psychiatric Rehabilitation Consultants 2000) and those of Rose (1989). It takes about one hour to facilitate the first part of the session.

Skills Training

The second component of the session involves teaching the information and skills specifically related to coping with voices. As there is tremendous heterogeneity in the experience of voices, overall treatment needs, group dynamics, learning styles, and cognitive functioning, the group leader must be prepared to modify and adapt the curriculum and teaching strategies to effectively teach the information. Therefore, the curriculum reviewed later in this article is presented as a guide, not a recipe for success. Duration will vary; however, it will typically last about 45 minutes to one hour. It is important for the group leader to briefly review the information or skills presented at the last session, including homework and monitoring records, to ensure the participants have demonstrated sufficient learning before presenting new material. This can be done either formally or informally through examinations or discussions.

PLANNING AND ORGANIZING THE COPING WITH VOICES GROUP

The purpose of this section of the article is to assist group leaders with planning and organizing their own group. Planning and organizing a group is critical to the group's success. Although there is a wide base of group work literature to consult (e.g., Rose, 1989; Psychiatric Rehabilitation Consultants, 2000; Yalom, 1985), this section will review some points of significance specifically important for conducting a group for individuals coping with voices.

Group Membership

The Coping with Voices group is intended to supplement the overall treatment plan. Therefore, it is important that membership into this group is coordinated with the client and other members of the treatment team, including but not limited to the psychiatrist, case manager, rehabilitation specialists, housing specialists, and the client's identified supports. A pregroup interview and clinical assessments may be useful when considering who becomes a member of the Coping With Voices group.

A pregroup interview may be useful to screen for whether there is a match between the specific needs of a potential participant and what the group can offer. Participants can be provided with enough information about the group to make an informed decision about whether to join. For example, during the pregroup interview group leaders can explicitly discuss with potential group members that the group is not to be considered a substitute for medication. This interview can also facilitate the development of rapport between the participant and group leader, and allow relevant concerns to be explored and contracts formulated (see Hepworth, Rooney, & Larsen, 2002).

The pregroup interview also offers an opportunity for a psychiatric interview that can help procure information useful for understanding individuals' needs and for organizing groups based on similar skill and cognitive levels. The use of psychometrically sound assessments to facilitate this process is recommended, as these data can be useful in the planning and evaluation stages of the group. Assessments specific to auditory hallucinations include the Psychotic Symptoms Rating Scale (Haddock, McCarron, Tarrier, & Faragher, 1999) and Cognitive Assessment of Voices (available in Chadwick, Birchwood, & Trower, 1996). It is particularly helpful to assess the circumstances in which voices are typically heard, the content of voices, and the effect of the voices on emotions and behaviors (MacKinnon & Yudofsky, 1986).

Given the importance of medication compliance, conducting a review of medications and discerning possible problems (e.g., compliance) that may interfere with participation may be useful. The pregroup interview and clinical assessments prior to beginning the group, coupled with the understanding that this group is to be considered as

a part of the overall treatment plan may help to ensure a successful group where members have a clear understanding of the group purpose.

STRUCTURAL CONSIDERATIONS

Group Leaders

Practitioners conducting this group should have experience working with adults with severe and persistent mental illness. Although instructions are provided for facilitating the group, it is also helpful that practitioners also have experience conducting groups. On-going supervision from a mental health professional can allow practitioners of a variety of disciplines and levels of experience to effectively conduct a Coping With Voices group. Seeking professional certification, such as Certified Psychiatric Rehabilitation Practitioner¹, can help provide the requisite knowledge base for effectively conducting skills training. The recovery-oriented literature and resources (e.g., Deegan, 1996) can also facilitate the awareness and sensitivity to the needs of persons with mental illnesses who are participating in this type of group.

Open vs. Closed Groups

Closed groups are groups that do not allow participants to join after the first session, whereas open groups allow membership at virtually anytime. For this group a closed format is recommended. The content of the group is organized in a sequential process, where each group draws upon skills and knowledge acquired from previous groups. Thus, participants who miss preliminary groups may not fully grasp the coping strategies taught in later groups.

Size of Groups

A group leader using this group approach can accommodate about six to eight participants, but those with limited experience may find it easier facilitating a group with fewer participants. Participants

¹This certification is offered by the US Psychiatric Rehabilitation Association (www.uspra.org)

who are more symptomatic or who have lower cognitive abilities (or both) may also perform better in small groups or may benefit from sessions that are individually tailored to meet their needs.

Duration

The duration of each session will vary depending on many factors. Group leaders should allow approximately one-and-half to two hours to complete an entire session. It is suggested that the group leader breaks the session into shorter blocks depending on the needs of the group, such as holding 45 to 50 minute sessions twice a week. If a single session is to be completed in a single day, it is important that a substantial break is offered midway through the session. The leader should remain aware that too much information presented at one time can inhibit learning.

Physical Environment

The physical environment for this group is important given the sensitivity to stimuli that many participants experience. The environment should be comfortable and inviting. Leaders should take measures to reduce unnecessary distractions, such as placing a "do not disturb" sign on the door, turning off intercoms or paging systems, and eliminating hallway noise.

CURRICULUM

The Coping With Voices group is comprised of ten sessions that include both supportive discussion and coping skills training. The topics covered in the sessions include theories of the origin of voices, behavioral strategies for managing voices, and development of an individualized coping plan. Each session teaches a new strategy for coping with voices, and participants can employ the techniques that they find most effective. The following section describes the content of each session.

Session One—Introduction, Biological and Cognitive Approaches

The first session involves facilitating introductions and orienting participants to the purpose and format of the group with special

attention given to developing rapport. The educational focus of this session is on the etiology of voices. Participants may have preexisting beliefs about the origin of their voices, so theories should be presented as alternate ways of thinking about the causes of voices. Challenging the participants' beliefs about voices early in the group may increase resistance, inhibit the development of rapport, and ultimately increase dropout. Therefore, it is important for group leaders to have an understanding of theories underlying the etiology of voices, coupled with an ability to lead an open discussion where differing beliefs are welcome. There are two widely accepted bodies of knowledge relevant to this program: namely, the biological and cognitive evidence on voices.

The purpose of presenting the biological approach is that it provides a rational explanation for the cause of voices, it is empirically supported and it provides support for medication compliance. In teaching the biological theory of voices, the group leader describes to the group that many studies have found voices to be linked to different parts of the brain and various neurotransmitters (e.g., Bentaleb, Beauregard, Liddle, & Strip, 2002; Laruelle, Dargham, Gil, Kegeles, & Innis, 1999; Woodruff et al., 1997; Shergill et al., 2001; Szechtman, Woody, Bowers, & Nahmias, 1998). It is helpful for the leader to be generally familiar with these studies; however, they should also be cautious of teaching information that is too technical. One way of aiding the delivery of this information is through the use of colorful neuroimages that visually show these associations. Doing this can help the participants see the mechanisms in the brain that may be causing the voices. This can help provide a sound rationale for medication compliance. This can also challenge nonrational explanations of voices that may be interfering with one's ability to try behavioral coping strategies.

The purpose of the cognitive approach for voices is to provide additional empirical explanations for voices and help explain why behavioral strategies are effective for coping with voices. One cognitive approach suggests that voices are thoughts that are attributed to an external source (Morrison & Haddock, 1997; Baker & Morrison, 1998). For example, a person may talk to his or her self, but think that somebody or something else is engaged in the communication. Another related cognitive model suggests that voices occur when the person is unable to filter irrelevant external stimuli that results in a sensory flooding, giving rise to misperceptions, distractions, and fragmented thinking (Payne, 1961; Breier & Strauss, 1983). While attempting to make sense of the stimuli, it is hypothesized that the person mistakenly perceives the meaningless sounds as meaningful (Hoffman, Rapaport, Mazure, & Quinlan, 1999).

It may be helpful to utilize a group activity to assist clients in further understanding the cognitive approach to voices. For example, the group leader can facilitate a brainstorming session, compiling a list of specific environments with high stimulation that tend to be associated with the experience of voices (e.g., noisy shopping malls or busy city streets). After compiling a list, the group leader can utilize the problem-solving method to facilitate discussion around ways to cope with these trigger situations. An example of a possible solution may be shopping at a less busy time of day or masking the noise by listening to soothing music through headphones.

Reviewing and discussing the major theoretical approaches underlying the etiology of voices is a critical building block for a successful Coping With Voices group. It allows participants to learn the evidence based theoretical perspectives underlying the etiology of voices, while providing them a safe place to discuss their own ideas of why they experience voices.

Session Two—Self-monitoring

Self-monitoring is the process of assessing the characteristics of voices and the context in which they are heard. Self-monitoring has been shown to reduce the quantity of voices, help identify antecedents that give rise to voices, serve as an alert for an emerging psychiatric decompensation, and promote discovery of coping strategies that are effective (Breier & Strauss, 1983; Buccheri et al., 1997). In teaching participants how to monitor voices the group leader should first prepare and introduce monitoring records or worksheets matched to the skill level of the participants to facilitate the process. Information to record can include the severity of the voices, the time when the voices were heard, the activity or events preceding the voices, the coping strategy utilized, and the effectiveness of the strategy. Those with higher cognitive abilities will be able to record more detailed information. Appendix 1 contains a sample monitoring record that can be reproduced and used with this group. Participants will find it easier to complete the monitoring record at the same time every day and should bring them to each session for discussion. Participants who report favorable

results should also be provided with materials to continue monitoring voices after finishing the group.

Session Three—Stress Reduction

According to Kopelowicz, Liberman, and Zarate (2002), high stress environments have been shown to significantly increase relapse in people with schizophrenia. Personal and environmental protective factors can buffer the stressors that can lead to a relapse (Ventura & Liberman, 2000). Thus, the purpose of this session is to teach a stress management technique and promote general knowledge of mental health and stress. One stress management skill that is easy to teach and learn is controlled breathing. This is the process of taking slow, deep breaths, in through the nose and out through the mouth. Sitting or lying in a comfortable position facilitates relaxation and closing the eyes helps reduce the environmental stimulation. Group activities should include practicing the strategy and discussing sources of stress and ways of managing them. Application of the problem solving method to address sources of stress can also be beneficial.

Session Four—Humming and Singing

Singing or humming a single note has been found to reduce auditory hallucinations (Green & Kinsbourne, 1989, 1990; Sims, Farhall, Seal, Mackinnon, & Copolov, 2000). This activity may work by interrupting internal thought processes that may be misattributed to an external source. When employing this strategy, the individual should select an easy tune or simply hum a single note. It should take only minimal effort to employ this strategy properly. A group activity may be utilized during this week. For example, the group leader can facilitate a discussion on group member's previous experiences utilizing humming and singing or brainstorm a list of suggested songs. These activities may be useful for group members utilizing this coping method for the first time and it may build a sense of overall group cohesion.

Session Five—Naming Objects

Naming objects is a technique that helps the individual focus her or his attention on the external environment and engage in a behavior that inhibits the behavior of listening to voices (see Buccheri, Trygstad, Kanas, Waldron, & Dowling, 1996). To employ this strategy the individual observes the environment in which he or she is situated and *names* or says the objects being viewed. For example, if the individual were sitting on a city bench, he or she would look around and say the different objects in view (e.g., bus stop, garbage can, sign, door, car, bus). This should be done at a slow and steady pace. It works best to do this out loud to create an auditory stimulus that is highly discernible, but it should not be so loud that it draws undue public attention. In situations where speaking out loud is not appropriate (e.g., a church or library), this strategy can be employed silently to help focus attention on the environment and away from the voices. It is helpful to practice this strategy in different environments to promote learning and generalization.

Session Six—Reading Out Loud

This is a technique intended to create a highly discernible auditory stimulus that has been found to help inhibit voices (Peroná-Garcelan & Cuevas-Yust, 1998; James, 1983; Margo, Hemsley, & Slade, 1981; Buccheri et al., 1997). When employing the strategy, the individual should select reading material that is both simple to read and interesting. The group leader should help participants select materials for employing the strategy. Those who find this strategy helpful should be encouraged to carry appropriate reading materials with them throughout each day.

Session Seven—Affirmations

Talking back to voices is a commonly reported coping strategy among people who hear voices (Westacott, 1995; Carter et al., 1996; Cohen & Berk, 1985). This involves engaging the voices in an active and deliberate dialogue. While some individuals find talking back helpful, the cognitive theory suggests that it can also be a source of voices. A modification of this strategy can help make it more effective. Rather than *talking back*, the person should repeat positive affirmations. They should be repeated in a slow, evenly paced manner. If the individual is in a private situation, they can be said more loudly. Such affirmations might include: "I am a good person;" "I can cope with my voices;" and, "I am stronger than my voices." This strategy can also be employed silently, as long as the

process of repeating affirmations interrupts the self-talk. A group activity can include developing individualized lists of affirmations and using them while practicing the strategy.

Session Eight—Listening to Music

Various studies have reported on positive outcomes of listening to music using a personal stereo as a strategy for coping with auditory hallucinations (Haddock, Slade, Bentall, Reid, & Faragher, 1998; McInnis & Marks, 1990; Johnston, Gallagher, McMahon, & King, 2002; Feder, 1982). To employ the strategy the individual should listen to music or speech at a medium-loud volume through headphones. The music should be loud enough to mask unimportant sound in the environment but not too loud where it may be harmful to one's hearing or that it covers emergency sounds (e.g., fire alarm). Group activities can include identifying appropriate music and practicing the strategy.

Session Nine—Physical Activity

Physical activity has been reported to be an adjunct in treatment for persons with auditory hallucinations (Tkachuk & Martin, 1999). People who use this strategy also report on its effectiveness (Frederick & Cotanch, 1995; Carter et al. 1996). As a coping strategy physical activity can help the individual refocus attention from a stimulus that is perceived as voices to the activity. For some people this activity may be a light exercise such as bicycling or jogging. It can also be as simple as a short, relaxing walk. The activity should be appropriately matched to the physical health needs of the individual and a physician should be consulted before he or she engages in any formal exercise. Other strategies for coping can also be incorporated into this strategy. For example, a person can use humming and singing, naming objects, or affirmations while taking a walk in a quiet area.

Session Ten—Coping Plan

Before reaching the final session of the program, the group leader should consider various services and supports that can be offered to enhance the durability of the learning outcomes achieved by the participants. Given the nature of severe and persistent mental illnesses, participants will benefit from ongoing support, encouragement to use coping strategies, and a frequent review to keep the information fresh in their minds. Family and peer support may be helpful for continued reinforcement of coping skills after the group concludes. These resources should be considered, as they have been found to be helpful for people living with serious mental illness (see Dixon et al., 2001; Davidson et al., 2001).

When facilitating this final session, the group leader should focus on what was learned during the group and guide the participants in developing individualized coping plans. The group leader can help participants develop written plans that can be shared with their treatment providers and posted in their living environments to serve as cues or reminders. It is helpful to also review the monitoring records to identify strategies that were found to be effective. Group activities can include sharing the individual coping plans and organizing supplemental opportunities to promote learning. Administration of assessments for measuring outcomes can also be done during this final session.

TEACHING STRATEGIES

Modeling Sequence

Sessions two through eight focus on the development of specific behavioral strategies for coping with voices. A recommended modality for teaching these strategies is the three-step modeling sequence, comprised of modeling, rehearsal, and feedback (Rose, 1989). Modeling involves both a verbal overview and a physical demonstration of each step of the skill.

After the verbal overview, the individual steps and the entire skill are demonstrated. The second step of the modeling sequence is rehearsal. This is the process of directing the participants in practicing the strategy. The leader should coach the participants in the rehearsal. This involves offering prompts and cues to initiate the target behavior and promote accuracy. For example, when controlled breathing is rehearsed, participants may need to be cued to close their eyes or adjust their rate of breathing. Feedback is the final step of the modeling sequence, which means giving participants specific information regarding their individual rehearsals, focusing on both the aspects done properly and on those that

require further improvement. Also, participants are encouraged to give one another constructive feedback. This entire modeling sequence can be repeated until the participant's exhibit mastery of the skill. The UCLA modules can also be an important resource for acquiring or improving skills related to this teaching modality.

Voices Audiotape

One method of making the practice environment more realistic is by integrating a stimulus into the modeling sequence that symbolically represents hallucinations. Doing so allows the participants to better understand how the strategies should be employed in addition to increasing the difficulty of the rehearsal to improve mastery of the strategy. An audiotape of a news commentary can provide such a stimulus that is both safe and easy to use. When creating the audiotape, the group leader should select and record a news commentary that does not contain emotionally arousing content or highly repetitious sounds. Weather and financial reports work well. It is helpful that the audiotape contains at least 45 minutes of commentary so it does not have to be rewound or recued during the sessions in which it is used. The purpose of the simulation tape should always be shared with the participants whenever it is used in the modeling sequence.

Homework

Assigning homework is an important way of promoting learning. Group leaders should construct assignments that are relevant to the information and skills taught during the session. An example of a homework assignment would be to review the information that was taught during the session and practice the skill each day until the next session. The group leader can develop handouts or worksheets to facilitate this process. It is important that the group leader reviews the homework to ensure that the information and skills were sufficiently learned.

CONCLUSION

The delivery of quality services to persons with severe mental illnesses should be firmly rooted in evidence-based practices. To

Coping with Voices 255

this end this article has gathered together a wide body of empirical evidence and translated it into a user-friendly, practice-oriented format. In addition to having an empirical grounding, the creation of this group has also captured the experiences and wisdom of many consumers and professionals. The anecdotal evidence of community-based mental health agencies that have utilized this group approach indicate that it can be successfully adopted into a range of services that its participants find useful and enjoyable.

While the strategies have an empirical basis, their effectiveness when organized into this coherent framework has not been empirically validated. This suggests that an important next step is collaboration with the research community to empirically validate this treatment approach. Critical attention should also be given to ways this intervention can be modified and adapted using sound clinical judgment to meet the complex treatment needs of persons with severe mental illnesses and promote its adoption by mental health service agencies.

REFERENCES

- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- Baker, C.A. & Morrison, A.P. (1998). Cognitive processes in auditory hallucinations: Attributional biases and metacognition. *Psychological Medicine*, 28, 1199–1208.
- Bassiony, M.M., Lyketsos, C.G. (2003). Delusions and hallucinations in Alzheimer's disease: Review of the brain decade. *Psychosomatics*, 44, 388–401.
- Bentaleb, L.A., Beauregard, M., Liddle, P., & Stip, E. (2002). Cerebral activity associated with auditory hallucinations: A functional magnetic resonance imaging case study. *Journal of Psychiatry & Neuroscience*, 27(2), 110–115.
- Breier, A. & Strauss, J.S. (1983). Self-control in psychotic disorders. *Archives of General Psychiatry*, 40, 1141–1145.
- Buccheri, R., Trygstad, L., Kanas, N., & Dowling, G. (1997). Symptom management of auditory hallucinations in schizophrenia: Results of 1-year follow up. *Journal of Psychosocial Nursing*, 35(12), 20–28.
- Buccheri, R., Trygstad, L., Kanas, N., Waldron, B., & Dowling, G. (1996). Auditory hallucinations in schizophrenia: Group experience in examining symptom management and behavioral strategies. *Journal of Psychosocial Nursing*, 35(2), 20–28.
- Bustillo, J.R., Laureillo, J., Horan, W.P., & Keith, S.J. (2001). The psychosocial treatment of schizophrenia: An update. American Journal of Psychiatry, 158(2), 163–175.
- Carter, D., Mackinnon, A., & Copolov, D.L. (1996). Patients' strategies for coping with auditory hallucinations. *The Journal of Nervous and Mental Disease*, 184(3), 159–164.
- Chadwick, P., Birchwood, M., & Trower, P. (1996). Cognitive therapy for delusions, voices and paranoia. New York: John Wiley & Sons.

- Chen, C.K., Lin, S.K., Ball, D., Loh, E.W., Hsiao, C.C., & Chiang, Y.L. (2003). Premorbid characteristics and co-morbidity of methamphetamine users with and without psychosis. *Psychological Medicine*, 33(8), 1407–1414.
- Cohen, C.I. & Berk, L.A. (1985). Personal coping styles of schizophrenic outpatients. Hospital and Community Psychiatry, 36(4), 407-410.
- Davidson, L., Chinman, M., Kloos, B., Weingarten, R., Stayner, S., & Tebes, J.K. (2001). Peer support among individuals with severe mental illness: A review of the evidence. *Clinical Psychology: Science & Practice*, 6(2), 165–187.
- Deegan, P. (1996). Recovery as a journey of the heart. *Psychiatric Rehabilitation Journal*, 19(3), 91–97.
- Dixon, L., McFarlane, W.R., Lefley, H., Lucksted, A., Cohen, M., Falloon, I., Mueser, K., Miklowitz, D., Solomon, P., & Sondheimer, D. (2001). Evidence-based practices for services to families of people with psychiatric disabilities. *Psychiatric Services*, 52(7), 903–910.
- Feder, R. (1982). Auditory hallucinations treated by radio headphones. American Journal of Psychiatry, 139(9), 1188–1190.
- Fénelon, G., Mahieux, F., Huon, R., Ziégler, M. (2000). Hallucinations in Parkinson's disease. Brain, 13(2), 261–262.
- Frederick, J. & Cotanch, P. (1995). Self-help techniques for auditory hallucinations in schizophrenia. Issues in Mental Health Nursing, 16, 213–224.
- Green, M.F. & Kinsbourne, M. (1989). Auditory hallucinations in schizophrenia: Does humming help? *Biological Psychiatry*, 25(5), 633–635.
- Green, M.F. & Kinsbourne, M. (1990). Subvocal activity and auditory hallucinations: Clues for behavioral treatments? *Schizophrenia Bulletin*, 16(4), 617–625.
- Haddock, G., McCarron, J., Tarrier, N., & Faragher, E.B. (1999). Scales to measure dimensions of hallucinations and delusions: The psychotic symptom rating scales (PSYRATS). *Psychological Medicine*, 29, 879–889.
- Haddock, G., Slade, P.D., Bentall, R.P., Reid, D., & Faragher, E.B. (1998). A comparison of the long-term effectiveness of distraction and focusing in the treatment of auditory hallucinations. *British Journal of Medical Psychology*, 71(3), 339–349.
- Harkavy-Friedman, J.M., Kimhy, D., Nelson, E.A., Venarde, D.F., Malaspina, D., & Mann, J.J. (2003). Suicide attempts in schizophrenia: The role of command auditory hallucinations for suicide. *Journal of Clinical Psychiatry*, 64(8), 871–874.
- Hepworth, D., Rooney, R., & Larson, J. (2002). Direct social work practice (6th ed.). Pacific Grove: Brooks/Cole.
- Hoffman, R.E., Rapaport, J., Mazure, C.M., & Quinlan, D.M. (1999). Selective speech perception alterations in schizophrenic patients reporting hallucinated "voices." *American Journal of Psychiatry*, 156(3), 393–399.
- Honig, A., Romme, M.A., Ensink, B.J., Escher, S.D., Pennings, M.H., & DeVries, M.W. (1998). Auditory hallucinations: A comparison between patients and nonpatients. *Journal of Nervous and Mental Disease*, 186(10), 646–651.
- James, D.A. (1983). The experimental treatment of two cases of auditory hallucinations. British Journal of Psychiatry, 143, 515–516.
- Johnston, O., Gallagher, A.G., McMahon, P.J., & King, D.J. (2002). The efficacy of using a personal stereo to treat auditory hallucinations. *Behavior Modification*, 26(4), 537-549.
- Jones, S., Guy, A., & Ormrod, J.A. (2003). A Q-methodological study of hearing voices: A preliminary exploaration of voice hearers' understanding of their experiences. Psychology and psychotherapy: Theory, Research, and Practice, 76, 189–209.

- Ketter, T.A., Wang, P.W., Becker, O.V., Nowakowska, C., & Yang, Y. (2004). Psychotic bipolar disorders: Dimensionally similar to or categorically different from schizophrenia? *Journal of Psychiatric Research*, 38(1), 47–61.
- Kopelowicz, A., Liberman, R.P., & Zarate, R. (2002). Psychosocial treatments for schizophrenia. In P. Nathan & J. Gorman (Eds.), *Treatments that work: Evidence-based treatments for psychiatric disorders* (2nd ed.), (pp. 201–228). New York: Oxford University.
- Laruelle, M., Dargham, A., Gil, R., Kegeles, L., & Innis, R. (1999). Increased dopamine transmission in schizophrenia: Relationship to illness phases. *Biological Psychiatry*, 46, 56–72.
- Lehman, A.F., Buchanan, R.W., Dickerson, F.B., Dixon, L.B., Goldberg, R., & Green-Paden, L. (2003). Evidence-based treatment for schizophrenia. *Psychiatric Clinics of North America*, 26(4), 939–954.
- Liberman, R.P., Eckman, T.A., & Marder, S.R. (2001). Training in social problem solving among persons with schizophrenia. *Psychiatric Services*, 52(1), 31–33.
- MacKinnon, R.A. & Yudofsky, S.C. (1986). Principles of the psychiatric evaluation. Philadelphia: J. B. Lippincott.
- Margo, A., Hemsley, D.R., & Slade, P.D. (1981). The effects of varying auditory input on schizophrenic hallucinations. *British Journal of Psychiatry*, 139, 122–127.
- McInnis, M. & Marks, I. (1990). Audiotape therapy for persistent auditory hallucinations. British Journal of Psychiatry, 157, 913–914.
- Morrison, A.P. & Haddock, G. (1997). Cognitive factors in source monitoring and auditory hallucinations. *Psychological Medicine*, 27, 669–679.
- Payne, R.W. (1961). Cognitive abnormalities. In H.J. Eysenck (Ed.), Handbook of Abnormal Psychology (pp. 420-483). New York: Basic Books.
- Perona-Garcelán, S. & Cuevas-Yust, C. (1998). Behavioural treatment of auditory hallucinations in a schizophrenic patient: A case study. *Psychology in Spain*, 2(1), 3–10.
- Psychiatric Rehabilitation Consultants. (2000). Modules of the UCLA Social and Independent Living Skills Program. Camarillo, CA: Psychiatric Rehabilitation Consultants (www.psychrehab.com).
- Rose, S.D. (1989). Working with adults in groups. San Francisco: Jossey-Bass.
- Shergill, S.S., Cameron, L.A., Brammer, M.J., Williams, S.C., Murray, R.M., & McGuire, P.K. (2001). Modality specific neural correlates of auditory and somatic hallucinations. *Journal of Neurology, Neurosurgery, and Psychiatry*, 71(5), 688–690.
- Shergill, S.S., Murray, R.M., & McGuire, P.K. (1998). Auditory hallucinations: A review of psychological treatments. *Schizophrenia Research*, 32, 137–150.
- Sims, E.F., Farhall, J., Seal, M.L., Mackinnon, A.J., & Copolov, D.L. (2000). The implementation and efficacy of behavioural strategies for coping with auditory hallucinations. *Schizophrenia Research*, 41(1), 173–174.
- Szechtman, H., Woody, E., Bowers, K.S., & Nahmias, C. (1998). Where the imaginal appears real: A positron emission tomography study of auditory hallucinations. *Proceedings of the National Academy of Sciences of the United States of America*, 95(4), 1956–1960.
- Tkachuk, G.A. & Martin, G.L. (1999). Exercise therapy for patients with psychiatric disorders: Research and clinical implications. *Professional Psychology, Research and Practice*, 30(3), 275–282.
- Ventura, J. & Liberman, R.P. (2000). Psychotic disorders. In G Fink (Ed.), Encyclopedia of Stress (pp. 316–326). San Diego: Academic Press.

Webster, R. & Holroyd, S. (2000). Prevalence of psychotic symptoms in delirium. *Psychosomatics*, 41(6), 519-522.

Westacott, M. (1995). Strategies for managing auditory hallucinations. Nursing Times, 91(3), 35-37.

Woodruff, P.W.R., Wright, I.C., Bullmore, E.T., Brammer, M., Howard, R.J., & Williams, S.C.R. (1997). Auditory hallucinations and the temporal cortical response to sppech in schizophrenia: A functional magnetic resonance imaging study. *American Journal of Psychiatry*, 154, 1676–1682.

Wykes, T., Parr, A., & Landau, S. (1999). Group treatment of auditory hallucinations: Exploratory study of effectiveness. *British Journal of Psychiatry*, 175, 180–185.

Yalom, I.D. (1985). The theory and practice of group psychotherapy (3rd ed.). New York: Basic Books.

APPENDIX 1. Voices Monitoring Record

	Day						
What situation(s) triggered the voices?							
How distressing were the							
voices? (Rate from 1 to 10)							
1 = Not distressing							
10 = Extremely distressing							
What coping strategy did you use?							
How well did the coping							
strategy work? (Rate from 1 to 10)							
1 = Not effective							
10 = Very effective							