‘This is the peer reviewed version of the following article: Golder, F., Walsh, E., Buchanan, A., & LIND, C. (2012). Attendees’ perceptions of, motivation for and outcomes following an adult group aural rehabilitation program. Australian and New Zealand Journal of Audiology, 32, 2, 73-82.

which has been published in final form at http://www.australianacademicpress.com.au/

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The aim of this grounded theory (GT) study was to gain insight into adult participants’ perceptions of a group aural rehabilitation (AR) program. The participant group for this in-depth interview-based study were 8 female and 2 male adults with acquired hearing losses who had completed an introductory group AR course conducted by South Australian organisation Hearing Solutions (now Guide Dogs of South Australia and Northern Territory Hearing Services) in the prior 12 months. Semistructured interviews were carried out and analysed using GT methodology. The core category (Empowerment through improved self-image) describes the overall main benefit the participants reported from attending the course. Six descriptive categories were found that underpinned the core category: Improved understanding of communication strategies, Improved social relationships, Course satisfaction, Personal validation from social interaction, Decreased emotional isolation, and Improved self-confidence. An additional three descriptive categories were discovered that related to factors that motivated people to attend the course: Motivation for change, Hearing difficulties, and Negative self-perceptions of hearing loss. The current study provides a model for understanding how these factors may interrelate, and highlights the importance of motivation and group interaction in obtaining positive outcomes in AR.

Keywords: Aural Rehabilitation, group programs, Grounded Theory, motivation

Acquired hearing impairment (HI) is a serious concern for many Australians, courtesy largely of the ageing of the baby boomer generation. Current estimates indicate that HI occurs in approximately one in three people over 60 years of age (Hickson & Worrall, 1997). The view held by many is that acquired HI can be ‘fixed’ via hearing aid fitting, yet many individuals report residual communication and social adjustment difficulties leading to activity limitations and participation restrictions suggesting the need for additional rehabilitation (Chisolm, Abrams, & McArdle, 2004). Importantly also, there are those adults who have HI who may benefit from communication training regardless of whether they wear a hearing aid (Hickson & Worrall, 1997; Laplante-Lévesque, Hickson, & Worrall, 2010). Group and individual aural rehabilitation (AR) programs are typically designed to address these communication limitations and social restrictions and involve training in hearing strategies and tactics to assist to ameliorate these consequences of acquired HI in everyday situations.

Several studies have identified benefits associated with attendance by adults who have acquired HI at group AR programs.
Beynon, Thornton, and Poole (1997) investigated the efficacy of a communication course for first time hearing aid users. The four session communication course covered hearing loss, hearing aid troubleshooting, basic lip-reading, and coping strategies for better communication. Beynon et al. (1997) assessed self-reported benefits of the program via pre- and postintervention assessment of hearing handicap. They found that both treatment and control groups reported significant reduction in perceived handicap. However, the reduction in handicap for the treatment group was significantly greater than that for the control group. Chisolm et al. (2004) evaluated the long-term self-reported benefits of a counseling orientated AR program up to a year after participants had completed the course. Those who attended the course experienced improvement more immediately and the improvement was more stable over the measurement period than those who obtained hearing aids alone. Hickson, Worrall, and Scarinci (2007) used a number of self-report outcome measures to compare perceptions of those who attended the active communication education (ACE) program and a control group of participants who attended a social support group. ACE attendees reported improvements in all outcome measures and similarly to Beynon et al. (1997), Hickson et al. (2007) also noted some self-reported benefits in their control group. On the basis of these results, it may be suggested that the social interaction amongst HI adults in the control group positively influenced their attitudes towards their HI (Hickson et al., 2007).

Together, these studies raise the point that both the structure of the AR program and the choice of outcome measures may influence the results that are obtained, as well as the stability of subjective measures of treatment benefit over time (Chisolm et al., 2004). It is important that outcomes in the clinical setting are measured so that continuous improvement in the services provided can take place (Nemes, 2003). Decisions relating to funding also rely on being able to show the benefit of the intervention. Few of the current array of adult rehabilitation-based questionnaires are designed specifically to evaluate AR programs. Hickson et al. (2006) investigated the use of the International Outcome Inventory for Alternative Interventions (IOI-AI) as an outcome measure for evaluating a communication program to attempt to establish a measure that would, at least in part, compensate for these shortcomings. While they concluded the IOI-AI was quick and easy to administer for evaluating communication programs it was not designed to address the deeper question what made the program worthwhile. Programs vary in their content and delivery and their evaluations need to be tailored to establish outcomes specific to the program.

In order to address the perceived shortcomings of some of the current questionnaire based self-report assessment tools in assessing the benefits of group AR programs, the current study was designed to obtain and analyse via in-depth interviews participants’ perceptions of Hearing Solutions’ introductory group AR program. The aims of the study were to identify attitudes towards the Hearing Solutions program, and to gain insight into what the participants reported as the main issues influencing their attending the course. The study was undertaken as a first step towards developing an activity-specific questionnaire for adult group AR programs.

METHOD

Participants
Participants comprised a group of adults who had attended Hearing Solutions’ Introduction to Effective Management of Hearing Loss program run on six occasions between mid 2006 to mid 2007. The Hearing Solutions program typically ran for 2 hours per week over a 5-week period. The only bases for nonparticipation arose when group members either had a health issue that prevented them from attending or if a mutually convenient time for interview was not able to be established in the brief window of opportunity for the conduct of the study. Fourteen individuals consented to participate in the study of whom 10 were free to be interviewed at a mutually
convenient time and place and they formed the participant group. Eight females and two males were included in the study and their ages ranged between 60 and 75 years. Years of hearing aid usage ranged from 2 to 35 years. More detailed hearing data had not been collected by Hearing Solutions prior to participation in the group program. Two of the participants had attended the introductory AR group with their significant other, the others had attended alone.

**Procedure**

Following informed consent, an audio taped interview was scheduled with each participant. The interviews were performed in a quiet room at Hearing Solutions in the Adelaide central business district. Each interview ran for approximately two hours. The interviewers (AB, FG and EW) worked in pairs to conduct the interviews and none had met the participants prior to the interview. The initial themes that guided the in-depth interviews were constructed through consultation with Hearing Solutions, and from questions identified in previous similar studies and included ‘motivation’, ‘communication’, ‘relationships’, ‘course satisfaction’, ‘communication strategy use’, and ‘perceived benefits of completing the course’. Throughout the interviewing new themes emerged, including ‘preparation for future hearing decline’ and ‘use of technology’. These themes were incorporated into the questioning at subsequent interviews (Duffy, Ferguson & Watson, 2000; Patton, 1990).

During the interview, participants had the opportunity to raise any issues of relevance to their own communication situation, or the Hearing Solutions program. This investigation was given ethical approval by the Flinders Clinical Research Ethics Committee, Flinders University, South Australia.

**Data Analysis**

Data analysis followed grounded theory (GT) guidelines (Glaser & Strauss, 1967; Strauss & Corbin, 1996). The methodology of GT required data analysis to take place concurrently with data collection. The audiotaped interviews were transcribed orthographically and the text was examined using the constant comparative method (Strauss & Corbin, 1994; Strauss & Corbin, 1996; Holloway & Wheeler, 2002) in which interview material is examined for recurring and novel themes until saturation is reached at which point additional interview data do not reveal new concepts. Four levels of coding were undertaken. In the first of these, open coding, the transcribed data were analysed line-by-line, and codes were generated by using words that describe what is happening in the data (see Table 1).

To verify and confirm that the code was grounded in the data, each open code was described and compared to other open codes within the interview transcripts. The open codes were then grouped into themes and coded (see Table 2). The resulting thematic codes were then grouped and conceptualised into more abstract axial codes (see Table 3).
Axial codes were analysed for their interrelationship(s) with each other and a single core category was identified as a result of this analysis. The core category is a central theme related to all other codes. All coding was undertaken by two researchers, results at each stage were compared and differences discussed until resolution was reached.

RESULTS

The findings of this study and the GT methodology are best highlighted through reporting the relationships between the axial codes and the ultimate core category; empowerment through improved self-image. Analysis of the data revealed nine axial codes leading ultimately to one core category. Details of the most populated axial codes are presented below. The model summarising the interaction between the nine axial codes and the core category for those attending the Hearing Solutions introductory AR program is presented in Figure 1. The nine axial codes were split into two distinct groups with reference to being participants’ reasons for or consequences of attending the program. The first group of axial codes all relate to reasons behind participants’ attendance:

- Hearing difficulties prior to course
- Negative self-perceptions of hearing loss prior to course
- Motivation for change.

The second group of axial codes relate to the participants’ perceived outcomes of the course:

- Improved understanding of communication strategies
- Personal validation from social interaction
- Improved confidence
- Decreased emotional isolation
- Improved relationships
- Course satisfaction.

Axial Codes

Reasons for Attending the Course

Three axial codes, hearing difficulties prior to course, negative self-perceptions of hearing loss prior to course, and motivation for change, were identified as the driving forces behind participants’ attendance at the Hearing Solutions AR program. The axial code Hearing difficulties prior to course refers to participant reports that they did not feel as if they were coping in hearing situations in everyday life (‘It is never easy in ordinary conversation with people’, Participant 4).

### TABLE 2
Example of the Relationship Between Open Codes and Thematic Coding

<table>
<thead>
<tr>
<th>Open Codes</th>
<th>Thematic Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are all in the same boat</td>
<td>Relating to other people in the course</td>
</tr>
<tr>
<td>There are so many in the same situation</td>
<td></td>
</tr>
<tr>
<td>We all have hearing impairment in common</td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 3
Example of the Relationship Between Thematic Codes and Axial Coding

<table>
<thead>
<tr>
<th>Thematic Codes</th>
<th>Axial Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relating to other people in the course</td>
<td>Personal validation from social interaction</td>
</tr>
<tr>
<td>Insight from others in the course (hearing others stories/strategies)</td>
<td></td>
</tr>
<tr>
<td>Sharing information</td>
<td></td>
</tr>
</tbody>
</table>
Difficult hearing situations were most often expressed as communication problems rather than as simply the (in)ability to hear. As such, participants attended the course on the understanding that communication skills would help them improve their communication ability. The axial code Negative self-perceptions of hearing loss prior to course refers to the participants’ views that hearing loss results in social embarrassment and isolation (‘I felt embarrassed and got annoyed with myself’, Participant 2). This social isolation was not perceived as the fault of others but the fault of their own hearing loss. The axial code Motivation for change describes the personality traits of the individuals attending the course (‘I was the only person who could do something about it’, Participant 5). The participants reported being motivated to attend as they recognised they no longer wished to be seen as having hearing difficulties or struggling. This theme is closely tied to the Negative self-perceptions of hearing loss prior to course. These three axial codes also highlight the desire not only for tangible improvements in communication ability, but also in improving the social perspective on their own hearing and their social competence.

Attendance at the Hearing Solutions AR program led to outcomes summarised by the remaining six axial codes: Improved understanding of hearing and communication strategies, Personal validation from social interaction, Improved self-confidence, Decreased emotional isolation, Improved social relationships, and Course satisfaction. These axial codes were grouped into outcomes that were seen to result from improved understanding of communication strategies (comprising improved understanding of hearing and communication strategies and improved social relationships) and those resulting from group interaction (comprising personal validation from social interaction, improved self-confidence, decreased emotional isolation and course satisfaction).

FIGURE 1
Model of interaction between axial codes and the core category reflecting perceptions of adult attendees at a group AR program.
Improved Understanding of Communication Strategies

The Hearing Solutions group AR program focuses on teaching communication tactics for specific hearing situations. Under the theme of Improved understanding of communication strategies, participants reported being aware of certain strategies including, but not limited to, the need to ask for repetition and clarification and selecting their seating to maximise audibility and visual cues. Participant comments included:

I don’t have any reservations about saying to somebody, would you mind moving your hand out of the way of your mouth, (Participant 3).

I did speak to my friend and said, look you don’t look at me my dear and I’m having great difficulty hearing you, (Participant 8).

Speech reading made me concentrate more. Thinking about it helps, (Participant 4).

Interestingly, Improved understanding of communication strategies was closely tied to Improved social relationships. This was identified as being due to enhanced communication ability as well as improved confidence in asserting oneself in hearing situations. For example, one participant reported: ‘By making people aware of my hearing loss then it made things much easier and you get on a lot better’, (Participant 10), and ‘My partner has learnt to be more tolerant’, (Participant 4).

Group Interaction

Group interaction was the most commonly mentioned source of Course satisfaction, mentioned by all 10 participants. Specifically, group interaction was closely tied to the three axial codes: Personal validation from social interaction, Decreased emotional isolation, and Improved self-confidence. The axial code Personal validation from social interaction refers to the way that participants felt that talking to other people in a similar situation allowed them to feel more comfortable with their hearing loss (‘Hearing other people’s stories stressed the point that I’m not alone in my troubles’, Participant 1). The closely linked axial code Decreased emotional isolation refers to participants feeling ‘not alone’ (‘It’s encouraging to speak with people that are in the same situation’, Participant 9, ‘I have come out of my shell’, Participant 5). This is not specifically related to hearing loss but to the empathy among participants that was reported in the sessions. Improved self-confidence is very closely tied to Decreased emotional isolation, but was often expressed in terms of dealing with hearing situations specifically (‘Anything that goes wrong I just handle it when it happens rather than worrying about it’). Participants felt that group interaction led to sharing and building confidence in dealing with difficult communication and hearing situations.

Core Category

Empowerment Through Improved Self-Image

The core category aims to relate the main themes that have been gathered from the data. The nine axial codes identify the main themes that emerged from the transcribed material. In this case it is useful to observe the relationships between axial codes that led to the development of the overlying core category, Empowerment through improved self-image. Comments by participants that reinforce the core category include:

[I]t (aural rehabilitation program) restores confidence. I don’t feel quite so out of it and not so embarrassed. (Participant 2).

No longer feeling quite as embarrassed and the fact that you’re one of many suffering the same sort of thing. You’re not alone. (Participant 10).

[G]iving you more confidence to be comfortable. (Participant 8).

These comments reflect that group interaction was the key contributor to this empowerment and improved self-image not only in relation to participants’ views of hearing loss but also in terms of their general outlook on life. Group interaction in the course led directly to the three axial codes: Personal validation from social interaction, Decreased emotional isolation, and Improved self-confidence. These outcomes, together with Improved social relationships from a better understanding of communication strategies led to improved self-image. In turn, this improve-
ment in self-image led to an emotional empowerment of participants.

**DISCUSSION**

Participants in the present study underwent semistructured interviews concerning their perceptions of attending the group AR program at Hearing Solutions. Following analysis of their reflections using GT analytic techniques it was evident that they attended the course because they were experiencing hearing difficulties, were motivated for change, and/or wished to address the negative perceptions they held about their hearing loss. In several cases, participants reported that they felt good simply knowing that by attending the course they were ‘doing something about it [their hearing difficulties]’.

Participants looked to the future, possibly with a view of their hearing loss as a chronic health problem as they reported that by attending the course they were preparing for any future decline in their hearing. Hickson et al. (2007) found that those who had positive attitudes towards addressing their hearing loss prior to course attendance were found to achieve better outcomes. Judging the readiness of an individual for AR may be a critical aspect in deciding when AR in the form of communication training should occur (relative to diagnosis or hearing aid fitting) to achieve best possible outcomes for the individual.

Analysis also indicated that the major positive outcomes expressed by the participants through the axial codes of Personal validation from social interaction, Decreased emotional isolation and Improved self-confidence were directly related to the group interaction that is involved with attending the AR program. Participant’s reported that interacting with the other members of the group made them feel that they were not alone, and they reported that this led to improved self-image. Participants not only reported fulfillment from friendships formed within the groups, they also noted that seeing others who were worse off led to an appreciation of their own predicament. Preminger and Yoo (2010) identified the AR group experience allowed for social comparison to occur, particularly by either downward social comparison, when one feels that he or she is coping better than others with a similar condition or upward social comparison, when one feels that he or she is coping as well as others who appear to manage their condition well (Suls et al., 2002).

The positive outcomes stemming from the process of group interaction were reported to be the most important for the participants in this study. By contrast, some of the content areas of AR programs such as hearing aid usage, communication strategies and access to services did not arise as major themes for this group of participants. The importance all participants placed on the group interaction reinforces the limitations of standard outcome measures that focus on communication ability or hearing aid usage alone.

The benefits of group interventions have been identified elsewhere. For example, Bosco, D’Agosta, and Ballantyne (1999) found that socialising and sharing experiences led to positive outcomes for a group of adolescent cochlear implant users. Similarly group interventions have been found to be beneficial for the rehabilitation for a number of other health problems including breast cancer (Cho, Yoo, & Kim, 2006), lower back pain (Nykanen & Koivisto, 2004) and Parkinson’s disease (Monnin et al., 2003).

It remains to be investigated what elements of this particular AR program influence participants’ commentary on the benefit of attending the Hearing Solution’s group AR program. Hickson et al. (2007) compared the outcomes of a group who attended a group ACE (similar to the program run by Hearing Solutions) with a group who attended a purely social program. While they found support for the ACE program, no significant differences were found on a number of outcome measures between the ACE and social groups. Similarly, Preminger and Yoo (2010) investigated whether the class content of group AR influences participant outcomes. They found no difference in reported benefit
by individuals who participated in AR classes that included both AR training and psychosocial compared to those who attended classes where content was purely training or psychosocial/informational (Preminger & Yoo, 2010).

These studies, in combination with the present study, lead to the questions: ‘How much of the positive outcomes expressed by those who attend an AR program are related to social interaction and group process with other HI individuals?’, and ‘How much are related to the information counseling and practical content of the course?’. The group structure leads to certain process-related positive outcomes, but the course content directs the interaction within the group. In the present study, participants also reported that hearing other people’s stories and experiences was extremely beneficial, but this sharing took place in an activity that was part of the course content.

Although the usefulness of the communication strategies taught in the Hearing Solutions AR program was not reported by the participants in the present study to be of most benefit in the course, it is clear that the strategies did have a positive effect on the participants. The lesser weighting given to content related aspects of the course is perhaps due to some participants seeing this advice as confirmation that they were using adaptive strategies rather than seeing these strategies as new information. For other participants improved understanding of the communication strategies led to improved relationships with their significant others. This was particularly the case for those participants who attended with their spouses, as they reported they could engage in discussion with greater ease and understanding. This is supported by Preminger (2003) who found that individuals who participated in group AR with their significant others demonstrated significantly greater improvement in hearing loss related quality of life than those who participated alone. Thus the content of the course may have as important a role to play in the group AR process as may have been previously assumed.

The present study used purposeful sampling to recruit and interview 10 people who had undertaken the Hearing Solutions introductory AR program. The key themes that emerged support the importance of both content and process aspects of group AR programs. No attempt was made to control for extraneous variables such as age, length of hearing aid usage, degree of hearing loss, and so on. As such the data presented here are limited to the participants in this study. Future research may further address the effects of communication-based versus social programs as well as group versus individual programs on the variables outlined in this study. The common perception is that the goal of an AR program is to reduce the communication handicap that hearing impaired people experience (Beynon et al., 1997). This study opens the discussion as to how AR programs might focus both on improvements in communication as well as on improving hearing impaired individuals’ self-image, especially via group interaction.

ACKNOWLEDGEMENT
The authors acknowledge Mrs Maureen McGrotty and staff at Hearing Solutions (now Guide Dogs of South Australia and Northern Territory Hearing Services) for their assistance in planning, participant recruitment and execution of this project.

REFERENCES


