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# Helping People Live with Hearing Loss: What Rehabilitative Audiologists Can Learn from Health and Social Psychology

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## The Need To Link Rehabilitative Audiology and Psychology

As early as 1949, Helmer Myklebust recognized the importance of linking clinical psychology and audiology.[1] Myklebust argued that these fields shared clinical and research interests such that an inter-professional approach could guide the development of better practices to improve the lives of people who are hard of hearing. In the 65 years since 1949, interventions have focused largely on medical and technological treatments. At long last, it seems that audiologists have now come full circle with the (re-)emergence of the realization that the next frontiers in audiologic rehabilitation practice will be shaped by using knowledge from social and health psychology to advance hearing health care.

Throughout the history of audiology, a dominant theme has been the need for audiologists to find better ways to evaluate the everyday experiences of people who are hard of hearing. There has been an ongoing quest to go beyond the audiogram and the ideal, but artificial, test conditions of sound-attenuating booths. To this end, researchers have continued to design new test materials and test environments in an attempt to approximate the acoustic complexities and cognitive challenges of more realistic listening situations. Accordingly, recent studies of speech understanding have used tests incorporating multiple talkers and various sorts of interfering noises presented in spatial displays, sometimes even using audio-visual virtual reality. Nevertheless, in almost all studies there is a tension or trade-off between experimental control and external or ecological validity. There is also an imbalance in the weight given to the study of the physical environmental compared to the social environmental factors that affect listeners. We have excellent ANSI standards for testing human hearing, measuring hearing instruments, and evaluating room acoustics. These acoustical standards enable the characterization of hearing in reference to the physical environment. Despite our progress in considering factors related to the physical aspects of listening environments, what is still lacking is a consideration of the social environment. Even more importantly, accuracy in repeating words on a speech test falls far short of measuring the psychological adjustment of the individual learning to cope with hearing-related problems.

Our current quest is to learn how psycho-social factors are affected by and contribute to successful audiological rehabilitation. An exciting (re-)emerging trend in rehabilitative audiology is to use lessons from health and social psychology to advance patient-centered care. Many individuals who are hard of hearing may delay or never seek or get the help they need to function well in everyday life and achieve their quality of life aspirations. Health and social psychology approaches have been used effectively in interventions for people living with a wide range of other chronic health conditions. By applying similar approaches, audiologists may be able to reduce delays in help-seeking, facilitate timely decision-making, predispose and accelerate readiness for action-taking,

support behavior change by the person and communication partners, and design follow-up to maintain benefits and prevent relapse. Moreover, translating this knowledge into our practices could help people who are hard of hearing to remain active and socially engaged with positive consequences to their general health and quality of life.

## Some Examples of Recent Progress in Translational Research

### Help-Seeking

In research investigating factors that motivate help-seeking for hearing problems, Arlene Carson conducted in-depth interviews with seven women age 72 to 82 years of age.[2] The goal of her study was to understand why it is that those with hearing problems wait so long to seek help and to uncover those factors that trigger hard-of-hearing persons to finally book a hearing test. Consistent with health psychology models of behaviour change, she found that hard-of-hearing persons evaluate their own situation using social comparisons and that they experience “push-pull” motivations that iteratively shift them to seek out and delay help-seeking.

### Decision-Making

It has long been recognized that the audiogram is a poor predictor of behaviour change. In order to better understand hearing health care decision-making, Gabrielle Saunders and her colleagues developed the Hearing Beliefs Questionnaire (HBQ), a 26-item scale that assesses hearing beliefs within the constructs of the Health Belief Model.[3] Not only will the HBQ help clinicians identify when individuals are candidates (or not) for treatments such as hearing aids, but it may also guide the design of new interventions that could accelerate entry into audiological rehabilitation programs and to improve treatment adherence.

### Readiness for Change

In their award-winning paper, Arianne Laplante-Levesque and her colleagues examine how classic psychological models of behaviour change can inform practice in audiology.[4] Over 150 people seeking hearing help for the first time completed a generic stages-of-change measure that was adapted by specifying “hearing problems.” The stages-of-change model and the test properties of the measure were determined in the context of audiologic rehabilitation. Notably, individuals in the action stage had better rehabilitation uptake and outcomes. Building on well-established principles of health psychology, their new approach to audiologic rehabilitation tackles the difficult issue of how to assess and factor in an individual's readiness for change when rehabilitation is planned.

### Social Isolation

It has long been assumed that hearing loss leads to social isolation, but Paul Mick and his colleagues have recently explored the topic and discovered interesting patterns of relationships.[5] In the largest population-based study to specifically investigate the association between hearing loss and social isolation, they found an association between hearing loss and social isolation for women aged 60?69 years, but no such relationship was present for men or older women. Interestingly, hearing aids did not mitigate the association between hearing impairment and social isolation, but as noted by the study authors, it is unclear to what extent participants in the study received hearing aid fittings of sufficient quality to merit meaningful conclusions regarding the efficacy of hearing aids to mitigate the effects of hearing loss on social isolation.

### Stigma

The stigmatizing effects of hearing loss and the use of hearing aids on the person who is hard of

hearing have been recognized for over half a century.[6] More recent evidence, however, has revealed that the reverse is also true. Specifically, in a sample of 300 people over 55 years of age, negative views of aging had negative effects on self-perceived hearing abilities and even behavioural measures of hearing such as audiometric thresholds and word recognition accuracy on a speech-in-noise measure.[7] An important implication of this research is that new interventions might benefit by addressing negative views of aging for those who hold such views.

### Social Support

At the University of Toronto, Gurjit Singh and his colleagues have been exploring how auditory and social factors relate to satisfaction with hearing aids. In two different studies, perceived social support was the best predictor of hearing aid satisfaction.[8] Social support is defined as the perception that one is cared for, has assistance from others, and is part of a supportive social network. This research suggests that the challenges of adapting to new hearing aids may be met best by fostering support from significant others and loved ones. This work has recently been submitted for publication and details regarding these studies will be provided in an upcoming pre-conference workshop at the Annual Conference of the Canadian Academy of Audiology (see below).

## Upcoming CAA Pre-conference Workshop

At the 2014 Annual Conference of the Canadian Academy of Audiology to be held in Whistler, British Columbia, a pre-conference workshop will take place with many of these researchers where we will discuss the application of health and social psychology to audiology.

**Part 1** of the workshop will familiarize audiologists with established health psychology models of behavior change that are inspiring new approaches to audiologic rehabilitation. Kathy Pichora-Fuller will introduce the general concepts and Gaby Saunders and Ariane Laplante-Lévesque will present their recent and ongoing work concerning the application in audiologic rehabilitation of the Health Belief Model and the Stages of Change Model.

**Part 2** will showcase illustrations of what the new AR revolution might look like if the application of a health psychology approach were more widely adopted to address the many unmet needs of people who are hard of hearing. Arlene Carson, Gurjit Singh and Paul Mick will explore re-framing hearing health care with an emphasis on social support, community involvement and inter-professional efforts to promote healthy aging.

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