The Hearing Aid Effect Revisited: Cultural Differences

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Introduction

Hispanics make up 14.8% of the total population in the United States, 44.3 million people (Census Bureau, 2005). The prevalence of hearing loss among this population is estimated between 10% and 23%. Of those that have a hearing loss of 30 dB HL or greater, only 12% use hearing aids (Kennedy & Deapen, 1991). According to Sergio Kochkin, in 2004 of the 32.5 million people who had a hearing loss only 23% had adopted the use of amplification. There is a significant difference in the use of hearing aids between the Hispanic population and that of the national average; a difference of 11.5%. There are many different reasons that contribute to the lack of adoption of hearing aids among minorities in general. Such reasons are cost (Franks, 1985), insurance (Lee et al., 1996) and low consumer awareness (Kennedy & Deapen, 1991). In 1977, Blood and colleagues found the lack of hearing aid use was due to cosmetic and perceived negative stigma. This was defined as the “hearing aid effect”.

There has been extensive work looking at the “hearing aid effect” in various populations. However, there is relatively little empirical evidence of the cultural stigmas that may exist between and within the Hispanic population using different ear worn devices which may be contributing factors to the low adoption rate of hearing aid use among the Hispanic population.

The purpose of this study was to examine how Hispanics (primarily Mexican-American and South American), as compared with Caucasians, judge members of their own race and of a different race wearing and not wearing different styles of ear worn devices on the basis of appearance, personality, assertiveness, and achievement.

Methods

**Subjects:** 24 adult subjects. 11 Caucasian (6 Females, 5 Males) and 13 Hispanic (7 Females, 6 Males) with normal hearing and vision participated in the study.

**Stimuli:**

- **Photographs:** 1 Practice photograph
- 5 Caucasian photographs
  - Consisted of 5 conditions: (1) No hearing aid (None), (2) Behind-The-Ear (BTE), (3) Open-Fit (OF), (4) Full Shell In-The-Ear (FS-ITE), (5) Bluetooth device
- 5 Hispanic photographs
  - Consisted of 5 conditions: (1) No hearing aid (None), (2) Behind-The-Ear (BTE), (3) Open-Fit (OF), (4) Full Shell In-The-Ear (FS-ITE), (5) Bluetooth device

**Procedure:** Participants were randomly presented with 11 counterbalanced photographs. Participants rated each photograph using the Semantic Differential Scale in four dimensions: I. Appearance II. Personality III. Assertiveness IV. Achievement

Hispanic participants were instructed and completed the scale in Spanish.

Stimuli Samples

Preliminary Results *

Results shown are mean ratings of the observers for each model and ear worn device condition. 

**Domain I**

- Caucasian observers rated the Hispanic FS-ITE group more negatively (-0.41) compared to the Hispanic None group (0.13).
- Hispanic observers rated the Caucasian FS-ITE group more negatively compared to the None group respectively.
- Hispanic observers rated the Caucasian None group (1.15) less compared to the Caucasian None group (1.15).

**Domain II**

- Caucasian observers rated the Hispanic and Caucasian FS-ITE group more negatively compared to the None group respectively.
- Hispanic observers rated the Caucasian FS-ITE group (0.79) less compared to the Caucasian None group (1.15).

**Domain III**

- Caucasian observers rated the Hispanic FS-ITE group more negatively (-0.75) compared to the Caucasian None group (0.79).
- Hispanic observers rated the FS-ITE models, both Caucasian and Hispanic, more positively than the None models.

**Domain IV**

- No significant trend regarding judgment between conditions for the Hispanic observers.
- Caucasian observers rated the FS-ITE models, both Caucasian and Hispanic, more negatively than the None models.

Discussion

Graphs shown are preliminary results demonstrating interesting trends.

1. Between subjects. Caucasians were routinely rated higher in all 4 domains.
2. Between ear worn device style, with exception to the Bluetooth condition, the Hispanic models were routinely rated more negatively than their Caucasian counterpart (by both Caucasian and Hispanic raters).
3. The Bluetooth condition reveals in the Assertiveness and Achievement Domains, the Hispanic models were routinely rated more positively, regardless of observer, as compared to all other ear worn device conditions.
4. The Hispanic observers rated the Hispanic models more negatively in all ear worn device styles and in all 4 domains compared to the ratings by Caucasian observers. This suggests a more general culturally/racially mitigated self-image among Hispanics due to the “Technology Halo Effect”.

Taking a closer look, the differences in observer ratings between the most visible, FS-ITE, ear worn device condition and the “None” ear worn device condition show the following trends:

1. The Caucasian observers rated the Hispanic models more negatively in the FS-ITE condition as compared to the “None” condition. Whereas, the Hispanic observers showed more cautious judgments for Hispanic models in the FS-ITE condition.
2. The Hispanic observers varied greatly regarding their ratings as compared to the Caucasian observers in all 4 domains.

These pilot participants were not prompted to look for models wearing and/or not wearing an ear worn device. According to findings by Johnson et al. et al., we would expect the OFF condition and the “None” condition to demonstrate comparable results, however, preliminary results of this investigation demonstrate no similar consistency between these ear worn device conditions. Although Caucasian models, rated by both Caucasians and Hispanics, were rated more positively in the Domains of Personality, Assertiveness, and Achievement the ratings of Hispanic models, by both Caucasian and Hispanic raters, are not consistently in the same direction.

There is a more negative perception of the Hispanic models regardless of the type of ear worn device or race of the observer (Caucasian or Hispanic). Future direction of the study would be:

1. Add to the instructions given to the observers that the models they will be looking at may or may not be wearing an ear worn device and to look for this before making their judgments regarding “appearance”, “personality”, “assertiveness”, and “achievement”.
2. Further research the impact of the “Technology Halo Effect” in mitigating cultural bias.
3. Examining the impact of “Technology Halo Effect” in mitigating cultural bias.

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References:


