

Social Support, Social Companionship, and Social Distress in Young Adults with Cochlear Implants

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Purpose

In light of the importance of social support in the overall well-being of an individual and the lack of research on this topic in individuals with cochlear implants, the study purpose is as follows: to examine social relationships in young adults with cochlear implants and to determine the presence of any significant differences in social relationships between the group with cochlear implants and the group with normal-hearing sensitivity.

Methods

Design

- Observational, case-control study

Participants

- Participants (males and females, ages 18-30) were comprised of two groups: individuals with a cochlear implant(s) and individuals without hearing difficulty.
- Participants with cochlear implants
 - Monaural or binaural
 - Recruited from pool of eligible participants who were implanted at NYEE
 - Eligible if participant had a cochlear implant(s) for at least two years
- Participants without hearing difficulty
 - Recruited from flyers posted on bulletin boards at the CUNY Graduate Center.
 - Eligible if never worn hearing aid(s) or cochlear implant(s) or other hearing assistive devices

Test Materials

- Self-report scales from the NIH Toolbox Social Relationship Assessment Battery (Cyranowski et al., 2013). Scales examine social support, companionship, and social distress.
- Social support and distress scales includes 16 items, companionship scale includes 13 items
- Scoring ranges from 1 to 5, with 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Usually, and 5 = Always.

Procedures

- Surveys were mailed to the group with cochlear implants with prepaid, addressed return envelopes for the completed questionnaires and for the consent forms (separate envelopes to maintain anonymity).
- Participants in the group without hearing difficulty obtained questionnaire from room 7107 at the Graduate Center, CUNY, complete the form anonymously, and then submit it.

Statistical Analyses

- Individual scores for each scale in the NIH toolbox battery were summed across items in the scale and then divided by the number of completed items.
- Summary statistical analyses were obtained for the group without hearing difficulty and the scale scores for each patient with a cochlear implant were compared with the normative data

Results

Descriptive characteristics of the group with cochlear implants

Subject	Age	Sex	Ethnicity	Marital status	Employment status	Academic status	Highest level of education	Living status
CI1	30	F	Asian	Single	Not employed	Not currently a student	High school diploma	Living with parents
CI2	18	F	Asian	Single	Not employed	Full-time student	High school diploma	Living with parents
CI3	23	F	White non-Hispanic	Single	Employed full-time	Not currently a student	College graduate	Living with parents
CI4	20	F	White non-Hispanic	Single	Not employed	Full-time student	Some high school	Living with parents
CI5	26	M	White non-Hispanic	Single	Employed full-time	Full-time student	Some college	Living with parents

Results

Demographic and socioeconomic characteristics for the group without hearing difficulty

Characteristic	Frequency
Gender	
Male	1
Female	21
Ethnicity	
African American	1
Asian	2
White Non-Hispanic	18
Declined to Respond	1
Marital status	
Single	18
Married/living with partner	3
Declined to Respond	1
Employment status	
Employed part-time	7
Not employed	15
Academic status	
Full-time student	19
Not currently a student	3
Highest level of education completed	
College graduate	2
Some post college	13
Advanced degree	7
Residential status	
Living with parents/relatives	10
Living with roommates in a dormitory	1
Living in a non-dormitory residence with roommates	11

Communicative and cochlear implant characteristics in the group with cochlear implants

CI participant	Method(s) of communication	Primary method of communication	Primary social relationships	Monaural or binaural implant(s)	Number of years of cochlear implant use
CI1	Sign language plus verbal communication	Sign language	Deaf and use sign language	Binaural	9
CI2	Verbal communication	Verbal communication	Normal-hearing, communicate using speech	Monaural	14
CI3	Verbal communication plus cued speech	Verbal communication	Normal-hearing, communicate using speech	Monaural	19
CI4	Sign language plus verbal communication	Sign language	Normal-hearing, communicate using speech	Binaural	10
CI5	Verbal communication	Verbal communication	Normal-hearing, communicate using speech	Binaural	11

Results

Total scores for all subscales in group without hearing difficulty

Measure	Emotional Support	Instrumental Support	Friendship	Loneliness	Perceived rejection	Perceived hostility
Mean	36.6	27.3	32.6	10.2	15.4	14.9
SD	3.0	7.9	4.1	2.6	4.5	3.9
90% range	32-40	18-37	26-39	5-14	8-22	8-20

Total scores for all subscales in cochlear implant group

CI Participant	Emotional Support	Instrumental Support	Friendship	Loneliness	Perceived rejection	Perceived hostility
CI1	27	34	29	9	14	20
CI2	32	30	26	15	24	17
CI3	39	22	30	11	9	13
CI4	36	32	12	9	10	9
CI5	40	40	40	5	8	11

Discussion

Social Support - availability of aid given in times of need by individuals

- Emotional support - accessibility of person who can listen to person's issues with empathy
- Instrumental support - perceived availability of person to help in the completion of daily tasks
- 4/5 cochlear implant participants fell within the 90% range of the participants without hearing difficulty, indicating that cochlear implant participants feel similar levels of social support as the participants without hearing difficulty.

Social Companionship

- Friendship - availability of acquaintances
- Loneliness - subjective feeling of social isolation
- 3/5 cochlear implant participants fell within the 90% range of the participants without hearing difficulty for the friendship subscale and 4/5 participants fell within the 90% range for the loneliness subscale, suggesting that participants with cochlear implants may have a different perception of their friendships than the participants without hearing difficulty.

Social Distress - degree to which an individual identifies his/her daily social interactions as negative

- Perceived hostility - degree to which a person believes people argue with or criticize him/her
- Perceived rejection - degree to which an individual believes people do not like him or her
- All 5 of the cochlear implant participants fell within the 90% range of the participants without hearing difficulty for both subscales, indicating that all participants in the study perceive low levels of perceived rejection and perceived hostility.

- Overall cochlear implants participants had very similar scores to participants without hearing difficulty on almost all subscales.

Limitations

- Low response rate (4%) of cochlear implant participants resulted in a very small sample size of cochlear implant participants. (Cannot be considered representative of the larger population)
- Reasons for low response rate: many envelopes were returned and lack of incentive
- Statistical analysis of differences in means or medians between groups could not be accomplished
- Homogeneity in characteristics of the group without hearing difficulty

Future Research

- Replicating study on a larger sample and with an incentive
- NIH Toolbox questionnaire should be used in conjunction with another quality of life questionnaire (e.g., the Nijmegen cochlear implant questionnaire (developed by Hinderink, Krabbe, & Van Den Broek, 2000)) so that social relationships can be understood within the context of quality of life.
- Group-administered questionnaire method rather than the mail questionnaire method is employed.

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References

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