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School of Health Promotion and Kinesiology

HEALTH INFORMATION SOURCES THAT DEAFENED ADULTS WITH HIGH PERCEIVED RISK OF CANCER TRUST AND USE: A PILOT STUDY

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Introduction

Healthy People 2020 (*HP 2020*) contains objectives that aim to 1) decrease cancer morbidity and mortality rates, 2) increase efforts in determining health information-seeking behaviors (HISB), and 3) increase health literacy. Factors such as age, race, income, gender, culture, military status, disability status, literacy level, health literacy, having a chronic disease, functional hearing status, functional communication, and perceived risk of cancer influence individuals' HISB.[1-14] Few studies identify which health information (HI) people with high perceived cancer risk (HPCR) trust and use. Also, there is a lack of research focusing on HISB and PCR among the medically underserved such as the deafened.[15] The purpose of this study was to examine: (a) HISB of deafened adults with HPCR, (b) which HI sources deafened adults with HPCR trust, and (c) whether there is a relationship between HPCR and HISB among deafened adults.

Methods

Research Questions

- Which HI sources did deafened adults with high PCR access first on their most recent search?
- What are the top three HI sources that deafened adults with HPCR trust the most?
- What are the top three HI sources that deafened females and males with HPCR trust the most?

Hypothesis

There will be no relationship between deafened adults with HPCR and their degree of trust regarding HI sources.

Delimitations

- Participants were deafened, aged 18 years and older, and living within the US.
- Participants completed the HINTS 4 Cycle 3 in English.

Assumptions

Participants:

- voluntarily completed the HINTS 4 Cycle 3 in English.
- correctly self-identified as deaf or having trouble with hearing.
- could read and comprehend the survey questions in English.
- were honest and accurate in responding.

Analyses

Data from HINTS 4 Cycle 3 were cleaned and analyzed. Frequencies were calculated, and correlation analysis and t-tests were used to examine relationships between PCR status and the various trusted HI sources.

Population

Deafened in HINTS 4 Cycle 3

A total of 229 individuals self-reported being deaf or having serious difficulty hearing. The mean age for participants was 69.25 years with a *SD* of 15.12 years. A majority were white (79.0%), 13.5% were black, 3.9% were American Indian or Alaskan Native, and the remaining participants self-identified as Asian. In addition, 4.4% of respondents self-identified as Mexican and 4.4% self-identified as other Hispanic. In terms of employment status, 55.9% were retired, 19.2% of were employed, 14.0% were disabled and unable to work, 7.4% were homemakers, 5.2% were unemployed, and 0.4% were students.

Results

Demographics

Table 1: Demographics of Deafened Individuals and Deafened Individuals with High PCR in the HINTS 4 Cycle 3 Data Set

	Deafened		Deafened With High PCR	
Demographic Variables	**n**	**%**	**n**	**%**
Gender				
Male	102	44.5	20	43.5
Female	118	51.5	23	50
Marital Status				
Married	96	41.9	21	45.7
Previously Married	109	47.6	22	47.8
Never Married	19	8.3	2	4.3
Household Income				
$0-$19,999	81	35.4	17	37
$20,000-$49,999	120	52.4	26	56.5
>$50,000	23	10	3	6.5
Education Level				
< 11 years of school	35	15.3	6	13.1
12 Years Or Graduated High School	75	32.8	21	45.7
Post High School Training	18	7.9	4	8.7
Some College	55	24	10	21.7
Graduated College	28	12.2	3	6.5
Postgraduate	15	6.6	1	2.2
Military Status				
Never Served	156	68.1	29	63
Training for the Reserves or National Guard	5	2.2	0	0
Active Duty or Recent Active Duty	49	21.4	10	21.8
English Speaking Status				
Well	213	93	44	95.6
Not Well	6	2.6	1	2.2

Deafened with HPCR in HINTS 4 Cycle 3

A total of 46 deafened individuals noted having high PCR (likely or very likely to get cancer within their lifetime). The mean age was 65.38 years with a *SD* of 13.21 years. In terms of race, 78.3% were white, 19.6% were black, and 2.2% were American Indian or Alaska Native. Regarding ethnicity, 6.5% of respondents self-identified as Mexican, and 4.3% self-identified as other Hispanic. Additionally, the self-reported employment status was as follows: 47.8% retired, 23.9% employed, 17.4% disabled and not working, 8.7% unemployed, 6.5% homemaker, and other occupational status was 2.2%.

Descriptive Statistics

Table 2: Frequency Table of Deafened Adults With High PCR and HI Sources First Accessed in Latest Search

Source	n	%
Traditional Print Sources (Books, Brochures, Pamphlets, and Magazines)	4	8.7
Family, Friends, Co-Workers	2	4.4
Doctor or Healthcare Professional	10	21.7
Internet	13	28.3

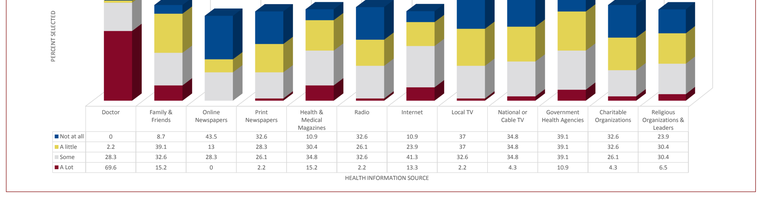

Table 4: Most Trusted HI Sources Ranked for Males and Females

	Rank 1	Average	Rank 2	Average	Rank 3	Average
Male	Doctor	1.35	Internet	2.39	Family & Friends	2.47
Female	Doctor	1.26	Health or Medical Magazines	2.14	Government Health Agencies	2.19

Inferential Statistics

Table 5: Correlation Pearson's *r* Between PCR Status and Trust in HI Sources

HI source	Pearson's *r*	N
Doctor	-0.067	158
Family and Friends	-0.043	150
Online Newspapers	0.129	135
Print Newspapers	0.134	141
Health or Medical Magazine	0.016	144
Radio	0.025	142
Internet	-0.028	143
Local Television	-0.024	145
National or Cable Television	0.036	142
Government health agencies	0.07	142
Charitable Organizations	0.102	142
Religious Organizations/Leaders	-0.01	144
Trust Mean	0.039	158

Correlation

Pearson's *r* revealed no statistically significant relationship between PCR status (very likely, likely, neither likely nor unlikely, unlikely, and very unlikely), Trust in HI sources, and the Trust Mean.

T-tests

Further analysis utilized t-tests to examine the relationship of PCR (high PCR and low PCR) and HI trust. The independent t-test (with equal variances assumed) revealed no statistically significant relationship between PCR status, the 12 HI sources, and the Trust Mean.

Results

The null hypothesis was not rejected for the correlation analysis and t-tests.

Discussion

- Data alludes that most of the participants within the data set were late-deafened (LD) because of the age of the participants, military status, and their self-reported ability to speak English. There are distinct differences between LD individuals and deafened ASL users that must be considered when interpreting study results.
- Deafened ASL users trust HI from doctors less than deafened English users,[16] which can restrict access to credible health information.
- LD individuals are probably comfortable speaking to and obtaining HI from their doctors and other healthcare providers, which can increase their access to quality HI.
- Future research should include a larger sample and compare HISB of LD English users to early-deafened ASL users and the general population. There is also a need to examine whether there are significant differences between other demographic variables and HI trust among deafened individuals with HPCR.

Conclusion

This study had the following limitations:

- Self-reported data and therefore subject to error and reporting bias.
- HINTS 4 Cycle 3:
  - was a mailed survey, not translated into ASL, developed to fit the priority population, utilized stratification based on race, and did not have an item about onset of deafness.

Nevertheless, this study revealed important findings that contribute to the literature. Results indicate that doctors should be culturally sensitive and apply sound health literacy concepts when communicating with the deafened population. Additionally, health educators and health communication specialists can partner with interdisciplinary professionals to assess HI needs of deafened individuals, including those with HPCR. These professionals can collaborate to: (1) create accessible HI sources and (2) plan, implement, and evaluate health communication campaigns and health promotion programs that deliver appropriate and accessible HI and cancer-related HI for all deafened individuals. Ideally, programs and efforts aimed at enhancing accessible HI and cancer HI sources will correlate with the topics and objectives of HP 2020 designed to decrease morbidity and mortality of cancer, improve health literacy and eHealth literacy, and potentially increase utilization of preventive services.

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