

# **Characteristics of health information channels usage by**

## **Deaf and hard of hearing people in Israel / Liat Winter**

### **Abstract**

As technology and communications have developed, the methods used for seeking information in many fields have also changed. Health is one of the fields that has experienced change because of technological developments, and one expression of these changes is the increase in health care issues.

The issue of health inequality has been recognized for 150 years, but only in recent decades have there been efforts to reduce health inequality. Health inequality appears in disadvantaged populations, including ethnic and linguistic minorities, and also among people with physical and sensory disabilities. The Deaf and hearing-impaired are among the populations whose health is adversely affected by health inequality. This inequality is evident, among other things, in their ability to obtain, understand and use health information. The Deaf and hearing-impaired (especially those who use Israeli sign language) may suffer impaired health due to the difficulty they have accessing health information, as a result of accessibility and communication problems.

### **Goal**

The aim of this study was to examine of how Deaf and hearing-impaired people seek health information. Do they derive benefit from the health information they find? What are their preferred information channels? What are the leading health information topics that interest the research population? This study did not deal with

the overall information behavior of the Deaf, but rather focused on one important component of their information behavior, namely, the selection and evaluation of information channels.

## **Research Methods**

The study was conducted among 79 Deaf and hearing-impaired people (of whom 49 identified themselves Deaf, and 30 as hearing-impaired). It was a quantitative study based on a questionnaire that was available in two versions. The first, an online form created in Google Forms, was shared through Facebook groups of Deaf and hearing-impaired people, by e-mail, and among friends. The second, print version was distributed to people who do not regularly use Facebook, had difficulty filling out the online questionnaire, or rarely use a computer.

The questionnaire examined the effect of independent variables (gender, marital status, age, income level and hearing-related variables such as hearing level, type of communication, reading literacy, and level of education) on the dependent variables concerning information channels, both traditional (newspapers, books, advertising brochures, television, family, friends, health professionals) and online (social networks, health websites, forums, videos). To compare the responses of the two research populations (Deaf and hearing-impaired) on these subjects, the questionnaire was analyzed statistically using measures of frequency, standard deviation, and *t*-tests for independent variables for the questions relating to computer knowledge and use, and health questions.

## **Findings**

The findings showed that the leading health information subjects sought by participants were general topics that also interest the general population (Information

on drugs, making appointments, diseases, physicians, hospitals, healthy lifestyle), followed by topics specific to the research population (e.g. ENT specialists, Cochlear implant, hearing test and speech speech-language therapists). Study participants sought health information for their parents, children, themselves and, to a lesser extent, friends. Most of the Deaf and hearing-impaired participants communicate using speech, because most were born to hearing families, use speech to communicate with their families and environment, and were educated in individualized, mainstreaming programs.

Participants search for health information using online information channels, informal and formal channels, as well as traditional channels (radio, telephone, facsimile, television, print newspapers, libraries, print books, print leaflets). The preference for using online channels (social networks, health websites, forums, videos) can mostly be explained by the problem of accessibility presented by traditional channels, because people with severe hearing loss cannot use hearing aids, and these channels do not include accessibility features such as subtitles or interpretation in Israeli sign language. An additional reason relates to the low level of literacy, and poor ability to understand material written for and targeting a more literate population.

Within the study population, participants with severe hearing loss had difficulty using traditional channels that do not include accessibility features such as subtitles or interpretation in Israeli sign language. The Deaf participants preferred to seeking information on the Internet over going to the doctor. By its nature, the internet is an information source that does not require hearing, where they can be express themselves freely; understanding speech is not a prerequisite, and the information is accessible from anywhere, at any time. In the real-world, these factors create difficulties for some members of the research population, but internet blurs their

difficulty. However, hearing-impaired people who can use the auxiliary aids for communication do use traditional channels also.

Moreover, it was found that the level of knowledge and use of computers and the internet among the Deaf and hearing-impaired was good; participants know how to evaluate the quality of a website, and adopt every technological innovation. They use e-mail, social networks and read the news. There were no differences in level of computer and internet use between the Deaf and hearing-impaired.

In other findings regarding a majority of the research population: more women than men sought health information; their average age was 42-53, born in Israel, married, up to 3 children, educated in individualized mainstreaming programs, were Deaf or hearing-impaired from birth or age of two years, have severe hearing loss, have difficulty speaking on the phone, believe that listeners understand their speech, prefer to speak Hebrew, self-evaluated their literacy for reading and writing Hebrew as very good but very low in English. Research participants who defined themselves as Deaf were characterized by a better command of Israeli sign language than the hearing-impaired. The Deaf had more Deaf/hearing-impaired relatives, and more contact with other Deaf/hearing-impaired people.

## **Conclusions and Solutions**

It is necessary to increase public awareness, and expand the use of subtitles and sign language in traditional media. (Among older Deaf people, there may be a problem with literacy, and it would be desirable to have professionals in the community adapt publications and information to be linguistically and culturally appropriate.) Creating a free database of reliable health resources built specifically for the Deaf and hearing-impaired population should be considered.

Encouraging Deaf speakers of Israeli sign language and hearing-impaired people to pursue careers in public health, health research and health care should be considered, thereby creating collaboration between the public health community, and the Deaf and hearing-impaired community, which ought to create more effective ways of disseminating health information, and for developing appropriate and accessible programs.

Despite the similarities between Deaf and hearing-impaired populations, some differences were found between the two. The differences included:

*Physician-patient relationship.* Absent good communications between doctors and patients, uncertainty leads patients to seek other information channels, including the internet. Compared to the Deaf, the hearing-impaired have better communications with doctors; therefore, they did not seek additional information to fill-in gaps in understanding that remained after an appointment.

*Seeking health information.* On a question regarding their internet search preferences, Deaf people preferred searching the internet because hearing is unnecessary, and they use it as a substitute for going to a doctor. The Deaf also estimated that they received more information from family and friends, while the hearing-impaired estimated that they received more information from information centers, organizations, audiologists/speech-language therapists.

Possible solutions may include training medical teams in ways of communicating with the Deaf and hearing-impaired. These solutions must be provided by the public health authorities, who must work with representatives of the Deaf and hearing-impaired population to adapt solutions for the Deaf and hearing-impaired population. Among the proposed solutions: providing a basic course in Israeli sign language for medical teams; assistance by a professional interpreter trained in medical

interpretation, as necessary and at the patient's request; and using written notes. Care should be taken to ensure clear speech, with good lighting and no background noise, not hiding lips, removing masks, facing the patient to facilitate lip reading, using vocabulary without complicated medical terms, and pictures if necessary; requesting the assistance of a family member; and remembering that the Deaf or hearing-impaired person is the patient and speaking directly to him rather than the assistant (family, friend or interpreter).

Another solution involves conducting surveys that include useful medical data and facilitate future research. This data would allow creating programs to prevent chronic diseases, and improve the health status of the Deaf and hearing-impaired population, according to appropriate priorities, and evaluate the effectiveness of these programs. It is also necessary to create a training program for sign language interpreters who specialize in health, know medical terminology and translate it effectively for Deaf patients. They must also be aware of confidentiality requirements. It is important to note that it is necessary to define the research populations uniformly and use terminology for who is Deaf and who is hearing-impaired consistently, in order to ensure more accurate and consistent studies.

With all these steps, we can hope that Deaf and hearing-impaired people will be better able to seek and benefit from health information, thereby improving.

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