

2017Doctoral thesis (Abstract)

A study on the age-related hearing loss and nurse-patient communication difficulties

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## **I . Introduction**

Presbycusis, the incidence of which increases with advancing age, is considered as a sensorineural hearing loss due to age-related deterioration of the cochlear duct. Since the hearing decline starts from the late thirties, the disorder is commonly called an age-related hearing loss. Age-related hearing loss is usually accompanied by the decline in speech clarity, which negatively affects interpersonal communication. To identify problems surrounding communication between nurses and elderly patients with hearing loss and to find appropriate measures against misunderstanding should improve patients' overall satisfaction of the medical care they receive with enhanced qualities of nursing care.

## **II . Issues surrounding previous researches**

Nurse-patient communication problems of the elderly patients with hearing loss, when hospitalized and placed in a non-daily environment, have not been fully identified in the previous studies. They failed to identify how nurses properly understand the realities of the hearing difficulties of the elderly. Furthermore, few studies have made on the issues surrounding the methods for improving communication between nurses and elderly patients with hearing loss.

## **III. Purpose, significance, and organization of the study**

### **1. Purpose and significance of the study**

The purpose of the study was to identify issues surrounding communication between nurses and elderly patients with hearing loss. Analyses were done to clarify issues surrounding the nurse-patient communication expected from the elderly with hearing loss, as well as those perceived by nurses. Based on these analyses and by identifying delicate considerations necessary for each individual patient, the study aimed to bridge the communication gap and raise patient satisfaction of the medical care with improved nursing.

### **2. Organization of the study**

The study is composed of the following three researches. In study 1, semi-structured interviews were conducted and pure-tone audiometry was done with the sample of inpatients at and above the age of 65. Study 2 consists of two researches: study 2-1 and study 2-2. In study 2-1, nursing records of the medical charts were analyzed to identify related problems. In study 2-2, analyses were done to identify from the nursing perspective. The problems that arise in the communication process with the elderly patient with hearing loss. Problems surrounding care provisions due to hearing impairment of the elderly, specific examples, attitudes of nurses, and communications practiced by nurses were identified for clarifications of the problems leading to necessary solutions.

#### IV. Study

##### 1. Study 1 : “Nurse-patient communication expected from the elderly with hearing loss”

A pure tone audiometry was conducted for inpatients above the age of 65, followed by semi-structured interview tests. Sample was categorized into two groups: seven with normal-hearing and 8 with hearing loss. A total of 15 elderly(average age, 81.5±6.8)– 3 males and 12 females were targets of analyses. Using K J method, the authors deepened interpretation of the hidden meaning of the interview findings. The normal-hearing group were 7 elderly(average age, 77.3±4.3)– 1 males and 6 females were targets of analyses. The hearing loss group were 8 elderly(average age, 84.1±7.3)– 2males and 6 females were targets of analyses. Discussion was made on the nurse-patient communication expected from the elderly with hearing loss by comparison with that of the normal hearing group.

The normal-hearing group strongly felt that they were separated from their daily lives experiencing “difficulty adjusting to ‘non-everyday’ living due to hospitalization, in which a nurse played a central role”. They expressed their “deep gratitude for the compassionate support of nurses.”

The hearing loss group experienced “difficulties due to limited body movement”, which they accepted with “resignation accompanied by a sense of helplessness.” The situations included “experiencing confusion with the frequent nurse rotations”, “managing to get along without assistance” or “pretending to be unconcerned of the inconveniences.”

Patients well recognized that they were obliged to “bear the burden of undesirable consequences” and, therefore, the accumulated communication failures due to hearing difficulties lead to their unconscious adoption of strategies such as “contriving to overcome difficulties” or “staying concerned with what is important.”

In order not to be physically and mentally exhausted, the patients expected “sensitive cares from the patients’ perspectives” as well as “frequent confirmations of nurse-patient conversations” with deep concerns for the hearing-disabled elderlies. Elderly with hearing loss expects “communication which can be interrupted midway through conversation” by their own initiative.

##### 2. Study 2-1: “Evaluation of hearing function in the elderly patients: Related nursing issues”

The purpose of this study was to investigate the actual circumstances of how information was collected and evaluation analysis was conducted on the hearing functions of elderly clients in general hospitals. The study included information on the charts of 188 newly-admitted clients regarding their health perception/management, cognition/perception, and overall nursing assessments. Findings indicated that the elderly clients had diseases that tended to affect their hearing, and took medicines that often lead to hearing impairment. Furthermore, it was found that nurses determined the clients’ hearing impairment levels by experience based on the information regarding the usage of hearing aids and on the clients’ alertness of responses. An analysis was conducted of the contents of 32-unit nursing assessment records which were categorized qualitatively into three categories: Nurses’ evaluation of the clients’ impairment; Nurses’ evaluation of the clients’ communication impairment; Direction of nursing. The seven sub-categories were:

- 1) Nurses' evaluation of cognitive functioning
- 2) Nurses' evaluation of clients' hearing impairment levels
- 3) Nurses' evaluation of the clients' communication impairment
- 4) Nurses' understanding/consideration of clients' psychology
- 5) Nurses' evaluation of the risk/danger to clients
- 6) Nurses' confirmation of clients' level of understanding
- 7) Nurses' device/ ingenuity of communication methods

Nurses were found to determine their care direction based on their evaluations of clients' hearing and communication capacities. For the improved care of clients, results indicated the necessity for hearing evaluations to be conducted objectively and, also, subjectively by the clients.

Presently, nurses' evaluations of the hearing functions of the elderly are found to be insufficient either from qualitative or quantitative perspectives. Standards should be set to determine both the specific items and the appropriate recording methods to improve the observer's objective evaluation and patient's subjective evaluations of hearing.

### **3. Study 2-2: Challenges in functioning communication between nurses and elderly with hearing loss**

The purpose of this study was the nurse's challenges in functioning communication with the elderly with hearing loss. Questionnaire items and its contents included information obtained both from the home pages of the Hearing Instrument Manufacturers Association and from the interviews of two nurses done in this research. Issues and content of what nurses found problematic during communications with the elderly with hearing loss. In order to identify scenes and contents of the situation when nurses found problematic during communication with the elderly with hearing loss, a question was asked, "Have you experienced any nursing problems due to the hearing loss of the elderly?" with the two alternatives of "Yes" and "No". To those who answered "Yes", additional questions were asked regarding the duties: "auxiliary medical care", "daily living assistance" and "others". Those who answered the question about the "auxiliary medical care" with multiple answers, and who selected 10 problematic situations, 10 problematic contents, and "daily living assistance" were requested to explain the 9 problematic situations 10 problematic contents. Regarding other daily duties, responses were obtained through free descriptions. Nurses' attitudes towards and practices of communication with the elderly with hearing loss. Multiple choice questions were asked about the nurse's attitudes towards elderly with hearing loss, including choices "positive", "more or less positive", "same as toward in other elderly", "more or less negative", and "negative". Regarding the communication methods the question asked was, "Please list five ways of communication you are usually practicing with elderly patients with hearing loss?"

For the items, "auxiliary medical care" "daily living assistance", percentages of responses were calculated regarding both the scenes and contents of communication with the hearing-impaired elderly that nurses found problematic. To identify relationships between nurses' attitudes and their basic attributes, the sample were categorized as "positive

group”and “non-positive group”.To a positive group, an allocation of score of 1 was assigned, and the negative group answering “same at towards other elderly” , “more or less negative ”or “Negative”, an allocation score of zero was assigned. This binarization lead to the two-value logistic regression, with this grouping as a dependent variable, and basic attributes as an independent variable. Odds ratios and 95% reliability were determined with the significant value 5%. For the statistical analysis was used SPSS ver.20.0 for Windows.

Target for analyses included 339 nurses who consented to participate in the survey out of 356 nurses working at C hospital (return rate 95.2%). The number of valid responses without missing answer items were 240(effective response rate, 70.8%). These 240 nurses were all registered nurses, not including any licensed practical nurses.

Nurses in general, regardless of the types of their duties, experienced problems and difficulties in providing nursing care to the elderly with hearing loss partially due to lack of understanding of such patients. On the other hand the number of nurses who tried to get actively involved with such patients were as small as 51 nurses. This may be interpreted that nurses do not consider the importance of providing well-intended behavior towards elderly with hearing loss in spite of the expectations of the elderly. Nurses were likely to have perceived the frustrations of the elderly. Knowledge and information regarding the appropriate communication should be necessary which lead to the reduction of psychological burden of nurses and elderly and elderly with hearing loss.

Attitudes of nurses towards elderly with hearing loss was improved if they had 10 years of nursing experience of more. Long clinical experiences of nursing practice with hearing-impaired elderly may have contributed to their positive involvement in such elderly.

Nurses seem to combine multiple communication techniques in responding to elderly with hearing loss in providing daily care. On the other hand, a technique of “low-tone voice”,which is not recommended by today’s manual, still exists among the recommended list. In-hospital training may be needed for the improvement of communication with hearing–impaired elderly –during which incidents are most likely to occur.

In the mean time, frequency of physical contacts including touch was very small(8 cases,3.6%), indicating insufficient recognition of their importance in alerting and giving assurance to the elderly with hearing loss.

## **V. Limitations and future challenges**

In Study 1, the sample patients were limited to the elderly with ‘moderate’ hearing loss, not including those with ‘mild’ or ‘severe’ hearing loss. Further studies should be made to identify problems in accordance with differing levels of impairment. In Study 2-1, the analyses were done on the question survey results, which may require analyses based on the observational findings to verify the findings of this research. In Study 2-2, the survey was self-administered, which may require further on-site research to ascertain the validity of the findings. It should be recommended that a seminar for nurses, especially for those with less than ten years of clinical experience, should be necessary to inform them of the pre-post research findings to be applied in the care provision for the hearing-impaired elderly.