ARE MIDWIFERY STUDENTS KNOWLEDGEABLE AND SKILLFUL IN COMMUNICATION WITH THOSE HARD OF HEARING CLIENTS?

Zahra Rezaei-Shahsavarloo and *Mohsen Adib-Hajbaghery

Department of Medical-Surgical Nursing, Faculty of Nursing and Midwifery, Kashan University of Medical Sciences, Kashan, Iran

* Author for Correspondence

ABSTRACT

Effective healthcare needs workers how can identify clients’ needs. Then healthcare workers should be knowledgeable and skillful in communication. However, no studies are available on Iranian nursing and midwifery students’ communication skills with clients with hearing impairment. The present study was conducted to investigate nursing and midwifery students’ knowledge and skills in communication with patients having hearing impairment. This study was performed on 93 nursing and midwifery students who were near graduation from the Kashan Nursing School at spring 2013. Data collected through 7 multiple choice questions testing students’ knowledge on communication with patients with hearing impairment and a skill checklist for evaluation of communication skills. Data analysis was performed through independent sample T-test, Pearson correlation coefficient and fisher’s exact test. In total, 35.5% of the students had a history of part time working as a nurse or midwife and no one could use Persian sign language. Only 17.2% of the students had a history of caring for a patient with severe hearing impairment. The mean score of knowledge was 2.24±1.17 for nursing students and 2.43±1.43 for midwifery students. However, no significant difference was found between the mean score of knowledge in the two groups. Also, the mean score of skills was 13.23±4.68 for nursing students and 11.86±5.55 for midwifery students. However, no significant difference was found between the mean score of skills in the two groups. Nursing and midwifery students did not significantly differ in terms of communication with deaf people. While most of the students had low or average knowledge, the majority of them showed low or very low skills in communication with patients with hearing impairment. Special workshops or training programs are suggested to empower nursing and midwifery students in communication with hard of hearing patients.

Keywords: Nursing, Midwifery, Students, Knowledge, Professional Practice, Patients, Hearing Impaired Persons

INTRODUCTION

Effective caregiver-patient communication is a vital component in healthcare, health education and health promotion (Balandin et al., 2007; Taghizadeh et al., 2007). Through communication, healthcare workers can identify clients’ needs and perform appropriate actions to solve clients’ problems (Farajzadeh et al., 2006). However, it is difficult for nurses and other caregivers to work with clients with hearing impairment (Hemsley et al., 2001).

Deafness and hard of hearing are common communication disorders (Hoffman et al., 2005). In the United States of America, 13% of people have hearing difficulties (Judith and Annette, 2006). Also, it is reported that at least one third of old people experience degrees of hearing impairment (Moore et al., 2002).

Clients with hearing difficulty usually are dependent on their close relatives to communicate with healthcare providers, however relatives sometimes may interfere in the treatment process (Hemsely et al., 2008; Halder, 2012). Clients with hearing impairment are at risk for health disparity and usually report inferior health than general population (Steinberg et al., 2002). They also feel great anxiety in medical visits and therefore, feel they are deprived of appropriate healthcare (Judith and Annette, 2006; Iezzoni et al., 2004; Hemsely et al., 2008).
Research Article

Healthcare organizations should have staffs capable to communicate patients with hearing impairment (ADA Business BRIEF, 2003). Park and Song (2005) have studied the communication barriers perceived by elderly clients and nurses. They have reported that clients’ hearing problems are of the main barriers in communication between nurses and elderly clients. Ralston et al., (1996) have also reported that many physicians and healthcare workers misjudge the intelligence of people with hearing impairment. Such attitude then affects their conduct with such people. Many healthcare workers also think that people with hearing impairment are able to lip read while most people with hearing difficulties have not acquired lip reading skills. Then, lack of staff skilled in communication with patients with hearing impairment, exaggerate the problems in communication between healthcare providers and patients with hearing problems (Halder, 2012).

Nursing and midwifery students should have high levels of communication skills (Mobaraki and Karimi, 2007). Studies have shown that nursing and midwifery schools do not effectively teach communication skills. Then, nursing and midwifery students have difficulties in communicating patients with normal hearing (Sabzevari et al., 2006; Adib-Hajbaghery, 2012). Also, Taghizadeh et al., (2007) have investigated communication skills of midwives and reported that more than 50% of midwives are deficient in their verbal and non-verbal communication skills.

A number of investigators have studied the medical and nursing staff in communicating patients with hearing and visual disabilities (Judith and Annette, 2006; Halder, 2012). Some studies have also studied nursing students’ communication skills (Sabzevari et al., 2006), however, did not focus on communication with clients with hearing impairment.

Objective

The present study was conducted to investigate the nursing and midwifery students' knowledge and skills in communication with patients having hearing impairment.

MATERIALS AND METHODS

A cross-sectional study was performed on all 95 nursing and midwifery students who were near graduation from the Kashan Nursing School at spring 2013. A census sampling method was applied and the Inclusion criteria were being a last year student and willingness to participate in the study.

Data collection instrument was designed through literature review (Judith and Annette, 2006; Halder, 2012; Iezzoni et al., 2004; Barnett, 2002). The instrument contained eight questions on age, gender, semester and having a history of part time working as a nurse or midwife, previous training on communication with deaf people, type of the training programs, ability to use of sign language and having a history of caring for patients with severe hearing impairment.

The second part was a knowledge questionnaire and consisted of 7 multiple choice questions on communication with patients with deafness or severe hearing impairment. Every question had a right answer that scored as 1. Therefore, the score of knowledge was between zero to seven. Obtaining the total score (the score of 7) was considered as a very good knowledge, and then scores between 6-5, 4-3, 2-1 and 0 were considered as good, average, low and very low knowledge, respectively.

The third part of the instrument was a skill assessment checklist and consisted of 14 items on communication with patients with hearing impairment. This checklist evaluated the student’s conduct in three domains of beginning of communication, during communication and receptive communication. The first section had 4 Yes (=2) or No (=0) items with a total score from zero to eight. The second section had 8 items scored in a 4 choice Likert scale from 'yes, throughout the session = 3 to never was done = 0. The total score in this section ranged from 24 to zero. The third section that was about receptive communication evaluated the subject’s skills on receiving feedback from the simulated patient. This part had two items that were scored similar to the second part and its total score ranged from 6 to 0. A choice of I do not understand was included in all items. If the observer was uncertain about the occurrence of a behavior, this option was checked and then the film of session was reviewed and the appropriate option was marked. The overall score of the checklist ranged from 0 to 38. Obtaining the maximum score was...
regarded as a very good communication skill, and then, scores were categorized as good (score 28-37), moderate (27-19), weak (18-9), and extremely weak (8-0).

Content validity of the instrument was confirmed by seven nurse instructors and one audiologist. Reliability of the knowledge questionnaire was confirmed through half-split method after administering on 20 nursing students. The Pearson correlation coefficient of the test halves was calculated (r=0.76). The reliability of skill assessment checklist was confirmed through inter-observers’ reliability. To do this, the second researcher and a clinical instructor concurrently observed 20 nursing students in clinical setting and completed the checklist. Then the Kappa agreement coefficient was calculated and ranged from 0.6 to 1 for different items. Also Cronbach's alpha coefficient was calculated to assess the internal consistency of the instrument and was 0.75 for the total checklist.

Observation setting
The students were evaluated in two stations. At the first one, students performed a short interview with a simulated patient who portrayed a deaf patient with elementary education who experienced pain in his chest. The second author was seated in the corner of station and assessed the students’ skills. Then students entered the second station, in which, they completed the knowledge and demographic questionnaires.

All students were initially quarantined and briefed on what they were anticipated to do. The station direction was posted on the station door and informed the students about the station structure, its content and the expected tasks. The station was close to the quarantine and its time was 10 minutes. At the first station, the simulated patient was on his bed, back to the door. The researcher was present at the station as the observer. The patient and the evaluator were identical for all students. Also, a hidden camera recorded all the sessions.

Ethical considerations
This study was approved by the university review board and research ethics committee at KAUMS (Kashan University of Medical Science). The objectives of the study and existence of a hidden camera were explained to all participants. They were all assured about the privacy of their personal information and signed an informed consent form before contribution in this study.

Data analysis
Data analysis was done by SPSS version 11.5. The level of statistical significance was selected to be lower 0.05. Descriptive statistics were used. Also independent sample T-test was used to examine the differences in knowledge and skills scores in terms of gender, academic semester, field of study, clinical experience, previous experience with deaf patients and history of training on communication with deaf people. Also Fisher’s exact test was used to compare the levels of knowledge and skills in terms of the field of study.

RESULTS
Out of 95 students, 2 ones were excluded due to lack of consent and finally 93 students were enrolled. In total, 71 participants (76.3%) were nursing and 22 ones (23.7%) were midwifery students. Mean age of the nursing and midwifery students was 22.59 ± 2.16 and 22.05±0.95 years, respectively.

In total, 69.9% of the participants were female, 35.5% had a history of part time working as a nurse or midwife and only 2.8% had been trained on communication with deaf people (out of the university). Also, only 22.5% of the nursing students had a history of caring for a patient with severe hearing impairment (table 1). No student could use Persian sign language. Also as table 1 shows, the mean scores of knowledge and skills in communication with deaf people were not significantly different in terms of gender, studying semester, history of part time working as a nurse or midwife, and having a history of caring for deaf patients.

None of the subjects had a very good knowledge and more than 90% showed a weak or very weak skill in communication with deaf patient (table 2).
Table 1: The Relationship between knowledge and skills scores and the student’s characteristics*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Nursing No. (%)</th>
<th>Knowledge scores Mean ± SD</th>
<th>P value</th>
<th>Skills scores Mean ± SD</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>43 (60.6)</td>
<td>2.16±1.26</td>
<td>0.141</td>
<td>12.71±4.83</td>
<td>0.561</td>
</tr>
<tr>
<td>Male</td>
<td>28 (39.4)</td>
<td>2.57±1.13</td>
<td></td>
<td>13.36±5.14</td>
<td></td>
</tr>
<tr>
<td>Semester</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th</td>
<td>26 (36.6)</td>
<td>2.37±1.28</td>
<td>0.603</td>
<td>13.86±4.05</td>
<td>0.125</td>
</tr>
<tr>
<td>7th</td>
<td>45 (63.4)</td>
<td>2.23±1.20</td>
<td></td>
<td>12.27±5.34</td>
<td></td>
</tr>
<tr>
<td>Doing a part-time nursing or midwifery job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28 (39.4)</td>
<td>2.45±1.20</td>
<td>0.327</td>
<td>12.97±4.41</td>
<td>0.868</td>
</tr>
<tr>
<td>No</td>
<td>43 (60.6)</td>
<td>2.19±1.24</td>
<td></td>
<td>12.79±5.77</td>
<td></td>
</tr>
<tr>
<td>History of training on communication with deaf</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>people</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2 (2.8)</td>
<td>2.50±2.12</td>
<td>0.805</td>
<td>12.50±0.70</td>
<td>0.907</td>
</tr>
<tr>
<td>No</td>
<td>69 (97.2)</td>
<td>2.28±1.22</td>
<td></td>
<td>12.91±4.96</td>
<td></td>
</tr>
<tr>
<td>Having a history of caring for deaf patients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16 (22.5)</td>
<td>2.12±1.31</td>
<td>0.568</td>
<td>13.62±5.00</td>
<td>0.521</td>
</tr>
<tr>
<td>No</td>
<td>55 (77.5)</td>
<td>2.32±1.22</td>
<td></td>
<td>12.75±4.91</td>
<td></td>
</tr>
</tbody>
</table>

* 5 midwifery students had a history of doing a part-time or midwifery job. However, there was no midwifery student among males and in seventh semester. Also no midwifery student had a history of training on communication with deaf people or caring for such patients.

Table 2: Levels of knowledge and skills among students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Levels of knowledge and skills</th>
<th>P value**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge (total score)</td>
<td>Very low No. (%)</td>
<td>Low No. (%)</td>
</tr>
<tr>
<td>Nursing</td>
<td>6 (8.6)</td>
<td>37 (52.9)</td>
</tr>
<tr>
<td>Midwifery*</td>
<td>3 (14.3)</td>
<td>6 (28.6)</td>
</tr>
<tr>
<td>Skills (total score)</td>
<td>Nursing</td>
<td>12 (16.9)</td>
</tr>
<tr>
<td>Midwifery</td>
<td>8 (36.4)</td>
<td>13 (59.1)</td>
</tr>
</tbody>
</table>

* One student in each group was excluded due to incomplete responses to the knowledge questionnaire.
** Fishers’ Exact Test

The mean score of knowledge was 2.24±1.17 for nursing students and 2.43±1.43 for midwifery students. However, no significant difference was found between the mean score of knowledge in the two groups. Also, the mean score of skills was 13.23±4.68 for nursing students and 11.86±5.55 for midwifery students. However, no significant difference was found between the mean score of skills in the two groups (table 3). Also no significant difference was found between the mean scores in skills subscales in the two groups (table 3).

Table 3: Mean and standard deviation of knowledge and skills of nursing and midwifery students in communication with hearing impairment patients

<table>
<thead>
<tr>
<th>Items</th>
<th>Nursing</th>
<th>Midwifery</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge (Total score)</td>
<td>2.24±1.17</td>
<td>2.43±1.43</td>
<td>0.548</td>
</tr>
<tr>
<td>Skills (Total Score)</td>
<td>13.23±4.68</td>
<td>11.86±5.55</td>
<td>0.258</td>
</tr>
<tr>
<td>Start of communication</td>
<td>2.17±1.25</td>
<td>1.82±0.85</td>
<td>0.351</td>
</tr>
<tr>
<td>During communication</td>
<td>12.65±3.81</td>
<td>11.59±4.83</td>
<td>0.331</td>
</tr>
<tr>
<td>Receptive communication</td>
<td>1.04±1.08</td>
<td>0.95±1.04</td>
<td>0.740</td>
</tr>
</tbody>
</table>

DISCUSSION

This study was performed to evaluate the nursing and midwifery students' knowledge and skills in communication with patients suffering from hearing impairment. Nursing and midwifery students did not significantly differ in terms of communication with deaf people. Also, the majority had weak or very weak skills in communication with these people. These findings were consistent with previous studies. In a study of relation between deaf patients and the doctors, Chaveiro has reported that health care team is
Research Article

not ready to care for deaf patients. This put patients at risk for misdiagnosis and inappropriate treatment (Chaveiro et al., 2009). Steinberg et al., (2002) have also reported that deaf women have lower levels of health information and have used less preventive healthcare such as pap smear and mammography than other people. Castles has also investigated the problems in communication between nurses and people with hearing impairment and reported that nurses have poor skills in communication with such clients. Based on the Castles’ report, the time consuming nature of such communication made nurses to reduce their contacts with such patients. According to the Castles’ report, the nurses’ inability to evaluate the effects of medications, difficulties in patient training and taking the patients consent for therapeutic interventions were among the most prevalent problems in nurses communication with these patients (Castles, 1991). Another study reported that physicians usually use improper communication methods, do not take enough time to ensure that their patients understand what they said, and wrongly think that patients with hearing problems are disinterested in their treatment decisions (Iezzoni et al., 2004). Also it has reported that some healthcare workers presume that most patients with hearing difficulty can lip read whilst most of those people do not learned to lip read (Halder, 2012).

The present study showed that none of the nursing and midwifery students had good knowledge on communication with deaf people. Also the both groups did not significantly differ in this regard. In a study only 10% of nurses expressed that they received sufficient training on developmental disabilities (Walsh et al., 2000). Some studies also reported that healthcare providers had not adequate knowledge for communication with deaf patients (Steinberg et al., 2002) and such a problem has disrupted their communication with deaf people (Chaveiro et al., 2009).

The current study revealed that nursing and midwifery students were lacking in knowledge and skills required for effective communication with patients who are deaf or have hearing impairment. This fault may be related to the content of nursing and midwifery curricula. Then, nursing and midwifery education system should pay more attention to this issue as it is responsible to prepare competent nurses for the common issues they will face in practice.

Some limitations may limit the generalizability of results. The number of the subjects in this study was limited as the study conducted in a nursing and midwifery school. Therefore, a study with larger samples from different schools is suggested. Furthermore, we used a simulated patient. However, using real patients or observing the students’ conduct in a real clinical setting is suggested. Also, we tried to prevent any bias from the side of the research team, however, the possibility of evaluator bias may be considered as a limitation of the study.

Authors’ Contributions
Mohsen Adib-Hajbaghery participated in the study conception and design and supervised the study, performed the data analysis and made critical revisions on the first draft of the manuscript. Zahra Rezaei Shahsavarloo participated in the study conception and design, performed the data collection and prepared the first draft of the manuscript.

ACKNOWLEDGMENT
The researchers would like to express their gratitude to all Nursing and midwifery student who participate in this study.

Financial Disclosure The authors declare that they have no competing interests.

Funding/Support This project was funded by the research deputy of Kashan University of Medical Sciences and specified as the grant number: 9238.

REFERENCES


