Patient Communication Following Laryngectomy: A Pilot Study Using Visual Communication Guide

Larenjektomiden Sonra Hasta İletişimi: Görsel İletişim Rehberi Kullanılan Pilot Çalışma

(Research)

Melek ERTÜRK YAVUZ[1], Ayla GÜRSOY[1]

[1]Karadeniz Technical University Faculty of Health Science, Nursing Department, Trabzon, Yurkey

ABSTRACT

Aim: The aim of this study was to determine the efficacy of the visual communication guide.

Materil and Methods: This research was carried out with the mixed method, integrating qualitative and quantitative research methods. Fourteen partial laryngectomy patients and 20 healthcare professionals took part in this study.

Results: The patients stated that the visual communication guide helped them to express themselves. They also stated that the issues in the guide were handled appropriately, and they found the guide useful. However, half of the patients found the images inadequate. At the same time, healthcare professionals and patients found the images in the guide clear and easy to understand, and the colors and sizes of the images and fonts adequate. The healthcare professionals thought that the guide was convenient and saved time in communication but it did not contain enough images for patients to share their psychological issues. After analysis of the qualitative data, four main themes were determined. These were: the experience of being unable to speak, quick and easy communication, confidence, and positive and negative opinions.

Conclusion: It was concluded that the visual communication guide can be effective and useful for the communication of patients who have undergone partial laryngectomy.

Key Words: *Laryngectomy, nonverbal communication, nursing, visual communication guide.*

Correspondence : melekerturk87@gmail.com

ÖZ

Amaç: Çalışmanın amacı görsel iletişim rehberinin etkinliğini belirlemekti.

Gereç ve Yöntem: Araştırma kalitatif ve kantitatif araştırma metodlarını içeren karma yöntemle yapıldı. Çalışmada parsiyel larenjektomi olan 14 hasta ve 20 sağlık personeli yer aldı.

Bulgular: Hastalar görsel iletişim rehberini kendilerini ifade etmede yardımcı olduğunu belirttiler. Ayrıca, rehberdeki konuların uygun bir şekilde ele alındığını bildirdiler ve rehberi kullanışlı buldular. Ancak hastaların yarısı resimleri yeterli bulmadı. Hem sağlık personeli hem de hastalar rehberdeki resimleri açık ve kolay anlaşılabilir, resimlerin rengini ve boyutunu ve yazıların tipini uygun buldu. Sağlık profesyonelleri rehberin kullanışlı olduğunu ve iletişimde zaman kazandırdığı ancak hastaların psikolojik sorunlarını paylaşması için yeterli resim içermediği görüşündeydi. Kalitatif verilerin analizinden sonra, dört ana tema belirlendi. Bunlar: konuşamama deneyimi, hızlı ve kolay iletişim, güven ve olumlu ve olumsuz görüşlerdir.

Sonuç: Görsel iletişim rehberinin parsiyel larenjektomi olan hastaların iletişimi için yararlı ve kullanılabilir olabileceği sonucuna varıldı.

Anahtar Kelimeler: *Görsel iletişim rehberi, hemşirelik, larenjektomi, sözsüz iletişim*

INTRODUCTION

Larynx cancer is an important health problem today which is frequently encountered among head and neck cancers. Its world-wide incidence is 2.1 per hundred thousand with a mortality rate of 1.1 per hundred thousand[1]. Most head and neck cancer cases can be sucessfully treated, however, these cancers and their treatments often cause severe physical deformities and functional losses (dry throat, inability to speak, etc.).

The inability to speak ranks first among the negative results caused by laryngectomy[2,3]. Loss of speaking function makes it difficult for the patients to communicate with their relatives and healthcare professionals in the postoperational period, and patients' frustration with this can present as stress, anger, despair, rage, and anxiety[4,5].

Patients who cannot speak try to communicate using non-verbal communication techniques such as head and lip movements, gestures, and writing etc[6]. However, since these methods are often ineffective, the need for different ways to communicate becomes very clear. In order to address this need, various visual communication methods have been developed to communicate with the patients who are unable to speak. The first visual communication board was developed by Appel-Hardin in 1984[7]. It presented alphabetical letters, some words defining basic physiological needs (pain, thirst, nutrition etc.), an image of the body and some names (spouse, family members, and doctor). Later, Stovsky, Rudy, and Dragonette (1988) developed a communication board for patients receiving mechanical ventilation after heart surgery, and yet another such board was the Vidatak EZ card patented in 1999[8,9]. In 2008 Soo, Aldridge, French, and Alison developed an information card with some Chinese and English expressions to facilitate communication between patients receiving radiation therapy for head and neck cancer and the radiation therapists[10]. In Turkey, there is only one communication tool available for the patients who cannot speak, that is an A3 sized template and is prepared so that both front and back sides can be used. There are pictures on the front side that describe the requests and needs (excretion, feeding, etc.) as well as the words "yes" and "no". The back side shows an illustration of the human body which helps

the patient to show the location of the pain and a numerical pain assessment scale to assess the severity of the pain. In addition, the alphabet was included for the patients to describe their needs and feelings other than the depicted topics. The effectiveness of the communication tool has been tested in mechanically-ventilated patients[11].

Visual communication guides provide less exhaustive, faster, and more economical communication with the patients[9,10]. Moreover studies have reported that such guides increase patients' satisfaction, reduce their anxiety and help with pain management[12]. However, the use of illustrated communication tools is not common in our country. The only illustrated communication tool developed in our country addresses the requests and needs of the patients dependent on mechanical ventilation; thus it contains a limited number of visuals. Regrettably, visual communication tools developed in other countries are not appropriate for all patients because of language differences. Therefore, researchers worked to develop a communication tool for the patients who cannot speak and communicate with the health team during their hospital stay.

MATERIAL AND METHODS

Aim of the Study

This research was carried out with the intention of developing a "Visual Communication Guide" to help patients with communication problems due to laryngectomy. We also wanted to determine the contribution this guide could make to improving patients' communication problems.

Type of Research

The type of research used for this study was the mixed method which employed the integrating qualitative and quantitative research methods.

The Sample of the Research

The research was carried out in the otorhinolaryngology (ENT) clinic of the only university hospital in the Eastern Black Sea region of Turkey with the capability of performing partial laryngectomy operations. Because patients with partial laryngectomy experience post-operative loss of voice and are beginning to talk again after a while, this hospital provided a suitable venue for our study. In order to determine which patients to include in the study, the purposeful sampling method was utilized. Selection of study participants was based upon patients who had undergone partial laryngectomy for the first time; had loss of voice or inhibited communication; had been using the communication guide; had not had full vision loss and hearing loss; were expected to be able to speak in the future, and had not experienced any psychological disease. The study was completed with 14 patients who had partial laryngectomy. In addition, the study aimed to reach all the healthcare professionals (12 physicians, 13 nurses) in the ENT clinic where the study was carried out. Nevertheless, some were on leave during data collection; therefore only eigth physicians and 12 nurses could be contacted.

The Process of Developing a Visual Communication Guide

As the content of the communication guide was being compiled, we determined which problems and needs should receive primary focus. The expressions and images that

would be featured in the guide were also determined. Thereafter, each image was created in its original and unique form by a graphic designer using corel drawing and illustrator programs. Furthermore, five specialists (two academicians working in the ENT department, one academician from the surgical nursing department, the nurse in charge in ENT clinics, and a supervisor nurse) gave their professional opinions concerning the communication guide. Based upon their recommendations, modifications to the guide were made, and preliminary implementation was completed with two patients. These two patients were not included in the study sample. The communication guide was finalized in accordance with the remarks and recommendations of the patients, and it was then used in the study. Upon completion of the study, the communication guide was revised according to the recommendations of the patients and the healthcare professionals.

The Features of the Communication Guide

The communication guide includes requests and requirements that may arise with patients in the hospital and consists of two separate sections. The first section covers patients' requests and needs in the post-operative 24 hours. These appear on an A4 size single page so that the patient can use it comfortably (see Figure 1). The second section measures 9 cm by 13 cm and has 24 pages. One page has Turkish alphabet characters and symbols as well as five blank pages. The purpose of the blank pages is simply to reduce the necessity of a separate notebook to write down those needs that the guide does not cover. An erasable pen was given to the patients to write on these blank pages. This second section was printed on 350 gr matt coated paper for protection against wrinkles or water, and the front and back covers were covered by matt cellophane (see Figure 1).

Procedure

Before the study began, the first author held individual interviews with the healthcare professionals, when appropriate, and explained the objective and procedure of the study and introduced the communication guide. The importance of using the communication tool while communicating with patients until the end of the study was emphasized. The patients were trained individually in their rooms before surgery. In this training, the visual communication guide was introduced, its use was explained, and the patients were asked to use it for communicating all requests and needs after surgery. Patient trainings were held by the first author. These lasted about 20 minutes, and the guide was given to the patients in the end. The patients used this guide after the operation until they were able to speak again.

Data Collection Instruments

In this study, the data were collected in two different ways. Numerical data were collected by the researcher with a questionnaire developed separately for patients and healthcare professionals. The questionnaire contains open-ended and Likert-type questions. These questions dealt with the sociodemographical features of the patients, their diagnosis and treatment periods, and the patients' thoughts related to the communication guide. We posed questions about the guide to learn patients' opinions and impressions regarding the features (the size, usefulness, dimensions, number and clarity of the

images, characteristics of the font, problems covered in the guide) and the functionality of the communication guide. The opinions of the healthcare professionals regarding the properties and functionality of the communication guide were also sought by asking four questions on socidemographical properties and with 13 Likert-type questions.

Semi-structured interviews were held to learn in detail the feelings and thoughts of the patients about communicating via the communication guide. The semi-structured questions used in these interviews are listed below:

- What did you feel at the time you were unable to speak after surgery?
- Which methods did you use to communicate with your family and healthcare professionals during this period?
- How did the guide affect your communication with your family and healthcare professionals?
- Did you have difficulties expressing yourself while using the guide?
- What were your feelings when using the guide to communicate?
- What are the aspects of the guide that need to be amended or further developed? Please explain.
- What are the best aspects of the guide? Please explain.

Data Collection

The data was collected between May 2012 and April 2013. When the patients talked again, they were interviewed at a convenient time, at home, or in a quiet room of the hospital. These patient interviews lasted between 10.0 to 63.0 minutes with an average of 29.9 ± 1.5 minutes in duration, and they were recorded on the tape recorder. Qualitative and quantitative data were collected consecutively. First, a semi-structured interview was conducted and then the questionnaire was applied. After data collection with patients was completed, data were collected from the healthcare professionals. The data were collected using the face-to-face interview method by the first author.

Data Analysis

Qualitative data were analysed by using the thematic analysis approach of Braun and Clarke (2006), whereby the data obtained from the interviews were written down and read repeatedly[13]. Codes were first determined in a systematic way and relevant data for each code were integrated. The codes for potential subjects were collected, the codings of all data were checked, and a map was created for analysis. During the analysis, distinct nomenclature and definitions were decided for each subject. Lastly, a reporting process was implemented with this information. The questions in the interview were used while these proceedings were implemented.

Qualitative analysis was carried out independently by two researchers. Then the themes formed by the researchers were compared. In case of differences in analysis, themes were identified after reaching an agreement. In the analysis of quantitative data, mean and percent values were utilized.

Lıimitations

Since there was no available female patient who had undergone partial laryngectomy when our study was conducted, it was completed only with male patients. The study

was conducted in only one hospital because this was the only hospital in which partial laryngectomy operations could be undertaken. Consequently, the number of patients and healthcare professionals was limited. In addition, the study cannot be generalized to the patients who experience irreversible loss, since it was carried out with the patients who had only temporarily lost their verbal communication skills.

Ethical Approval

Permission for the study was obtained from the Ethics Board as well as the institution. The patients who planned to enroll in the study were informed of the research objectives and that the interview would be recorded using a tape recorder. In addition to the patients' approval form, verbal consent was also obtained from the patients who agreed to the use of a voice recorder during their participation.

RESULTS

The ages of the patients varied between 48 and 75, and the mean was 59.0 ± 8.6 years. All the patients were male, 12 were primary school graduates and eight were retired. Patients who were interviewed were unable to speak for a mean of 18 days. The healthcare professionals were aged between 20 and 40 years, with a mean age of 29.7 ± 5.5 years. Eighteen of them were women, 12 were nurses and eight were physicians. Their work experience in the ENT diseases clinics varied between 1-12 years with a mean of 4.7 ± 2.9 years (see Table 1).

The results of the analysis of qualitative data identified four main themes. These themes were:

- The Experience of being unable to speak
- Quick and easy communication
- Confidence
- Positive and negative aspects

The Experience of Being Unable to Speak

Interviews with patients revealed that all of them had stated that they truly understood how important speaking was to them when they could no longer do so. Some patients expressed that not being able to speak reminded them of death; others stated that they felt like a baby or as if they were imprisoned. There were also patients who became quickly agitated or angry and who experienced feelings of loss of confidence and fear of never being able to speak again.

"I felt like a baby who cannot express herself ." (7th interviewer)

"When one cannot express his problems, he feels like an incapable man... that is, I was feeling ashamed when I was unable to express myself." (6th interviewer)

"I lost my confidence totally, nothing left whatsoever." (8th interviewer)

When the patients started speaking again, they felt as if they were reborn and as if they possessed the whole world. Their lives became beautiful again with happiness and tranquility.

"When I began to speak, I was born again." (8th interviewer)

Table 1.   Descriptive Characteristics of the Patients and the Healthcare Professionals

Descriptive Characteristics of the Patients	n	%
Age Mean±SD 59.0±8.6 (Min: 48 Max: 75)		
Gender Male Female	14 0	100.0 0
Educational status Primary school graduate High school graduate	12 2	85.7 14.3
Occupational Retired Still working	8 6	57.2 42.8
Marital status Married Single	13 1	92.9 7.1
Descriptive Characteristics of the Healthcare Professionals		
Age Mean±SD (29.7±5.5) (Min: 25- Max: 40)		
Gender Male Female	18 2	90.0 10.0
Occupation Physician Nurse	8 12	40.0 60.0
Professional time in the ENT clinic 1- 3 years 4- 6 years ≥7 years	7 8 5	35.0 40.0 25.0

"Being able to speak again, to express myself, that was something giving happiness, peace, … life becomes beautiful then." (12th interviewer)

" It was as if I had the worlds …I have become better, flew up into the air …being able to speak is something very important." (14th interviewer)

Quick and Easy Communication

All of the patients stated that the communication guide was useful in the period that they were unable to express their problems and requests. Most of them reported that they could quickly communicate using the guide. This ease in communication was advantageous for both patients and healthcare professionals because the disease was provided to help earlier.

"It is more practical to point on the communication guide, so you answer faster." (13th interviewer)

"When I want to tell my problem I have just turned the page quickly. Whether I have nausea, or I have vomiting, or I have headache or I can't breathe or, whatever, I pointed to the communication guide and they were coming in seconds." (3rd interviewer)

Some patients (n:3) reported that they could even communicate with their illiterate relatives with the help of the images in the communication guide.

"My wife can't read and write, so we managed to communicate by showing the items in the communication guide." (11th interviewer)

During the interviews, 10 patients said that the communication guide had provided easier communication in comparison to the other communication methods (writing, gestures, mimicking, etc.)

"For example when I was showing them the image of coughing, the image being unable to breathe, they were coming and cleaning my throat." (12th interviewer)

The patients explained why the communication guide provided easier communication for them: their writing was not easily readable since it was slow and complicated; they did not yet have the strength to write; parenteral therapy equipment was hindering their arms and hands movement, and their gestures were often misunderstood.

"…I was writing, but not always could I write. I am primary school graduate. I saw blurry …I was writing slow… I had serum on my arm, so I was unable to write." (11th interviewer)

"Instead of writing I could tell my problem faster by showing it on the communication guide. Because I was not able to write fast." (4th interviewer)

"I thought that it was easier to use the communication guide. Because I could not have the power to write for 15 days." (13th interviewer)

However, four of the patients we interviewed pointed out that writing was the best method to express themselves.

"There is a difference between that and writing; and writing is easier." (14th interviewer)

"The most efficient way for me was writing." (9th interviewer)

Confidence

The patients stated that the communication guide made them feel confident, reduced their worries and gave them courage, peace and moral support. One patient described himself as the happiest person in the world.

"With the hope that I would take advantage of the communication guide you gave us, I did not feel too much worry... It made me feel safe." (1st interviewer)

"…I had peace." (6th interviewer)

"when you are able to express yourself to your counterpart, you become the happiest man in the world, you feel relieved and then you struggle to get better." (3rd interviewer)

One patient reported that the pages of the communication guide were more valuable than gold; another one stated that the guide was his best friend.

"…the book came to our rescue. It became our hands and feet. I will keep it as a reminder... the pages within this communication guide are even more valuable than gold." (3rd interviewer)

"I have never taken this book out of my pocket …It is my best friend." (10th interviewer)

When we asked the patients to give a name for the communication guide, we received the following answers:

"Silent voice. Because it provides voice to someone voiceless." (9th interviewer)

"Voice of those who can't speak." (2nd interviewer)

"Hands and feet of the patients staying in ENT department." (3rd interviewer)

"İndispensable for the patients unable to speak." (13th interviewer)

"A friend and an assistant of a patient." (11th interviewer)

Positive and Negative Aspects

A majority of the patients stated that they liked that the communication guide had both font and images, and they liked the colors of the images as well. Some patients commented they were happy to have the expressions about their needs and requests in the communication guide.

"Font size and the images were ok. All looked fine." (5th interviewer)

"It was nice that both font and images were used." (1st interviewer)

"It was nice that ninety percent of what I need was shown by images." (13th interviewer)

The patients expressed that improvements could be made in the guide's features by increasing its size, enriching the content and making its use available outside of the hospital environment.

"It could be bigger size. That way too it could be carried in the pocket. You can fit more inside if it were bigger." (13th interviewer)

"It is a necessity for example if it had terms like I'll go shopping. That is to say, it is possible to prepare a communication guide covering what I would need after I am discharged from the hospital." (10th interviewer)

Findings obtained by quantitative data analysis included the patients' and healthcare professionals' evaluations of the communication guide.

Patients' Evaluations of the Communication Guide

Patients' answers to our questions regarding the guide as "definitely appropriate" and "appropriate" were combined and accepted as "appropriate." In this regard, all the patients stated that the colors, comprehensibility of the images and size of the fonts in the communication guide were appropriate. The font types and image dimensions were also approved by 92.8% of the patients, and 88.7% of them considered the topics in the communication guide to be appropriate. Furthermore, 71.5% of the patients approved its dimensions, 85.7% of the patients approved its usefulness and 50% approved of the number of images (Table 2).

All of the patients noted that the communication guide was sufficient to express themselves to the health professionals and to their relatives. Most patients (92.8%) found the guide adequate to communicate their problems or request such as pain, nausea or vomiting, and 78.6% found it adequate to express their feelings such as stress, anger, or fear (Table 2).

Healthcare Professionals' Evaluation of the Communication Guide

The answers of the healthcare professionals to our questions as "definitely appropriate" and "appropriate" were accepted as "appropriate." In this regard, it was determined that 80% of the health professionals approved the dimensions of the communication guide and clarity of the pictures, and 85% found the font type and coloring of the

images adequate. Seventy-five percent of the health professionals approved of the font size and 70% approved the number of the images. Eighty-five percent of healthcare professionals pointed out that the guide proved convenient in communication and 65% said it saved time. On the other hand, only 35% of the health professionals thought the communication guide was adequate to express patients' psychological states (Table 3).

DISCUSSION

The human need to communicate is so crucial and indispensable in our daily lives, and this becomes even more important when disease may create a health problem or crisis in which a person becomes dependent on others. After laryngectomy, most patients experience difficulty in communication because they have lost their ability to speak[14]. During the period that they cannot communicate, the patients may experience a loss of identity or they may feel disabled and alienated[15,16]. For this reason, communication guides are needed to help laryngectomy patients communicate. This obvious need became the catalyst for our research which was carried out with the goal of developing a visual communication guide to aid patients and healthcare professionals. We also wanted to determine the efficacy of this communication guide.

Our study results showed that the patients easily became anxious when they couldn't express themselves. This can elicit angry feelings, a loss of confidence, stress, and the fear they may never speak again. Few patients accept this situation easily. Patients may also have to deal with pain, loss of control, fears and frustrations[17,18]. Furthermore, if the patients' need to speak is not adequately addressed, the negative feelings, anger, despair, hopelessness, and frustration will likely increase[12].

Yet, when patients start to speak again, they feel as though they have been reborn, as if the world has been given to them, their lives become beautiful again and they have peace. In a study by Wojnicki-Johansson when one patient's intubation tube was disconnected, his reaction was expressed by "it was wonderful to hear my own voice when the tube was removed"[19].

Almost all of the patients found the guide very convenient for communicating their problems or requests (pain, nausea, wish to read newspaper or listen to music etc.). About half of the healthcare professionals rated the guide as "definitely appropriate" and the other half gave a rating of "partially appropriate." While the majority of the patients found the guide appropriate for expressing their psychological states (stress, anger, fear etc), about half of the healthcare professionals found it "partly appropriate." In accordance with these data, the patients found communication using the guide as "quick and easy." Other studies have also reported that visual communication guides were beneficial in communicating with patients[6,11,20]. It became clear that the patients could relay their problems and requests using the communication guide, and this could often lead to an even earlier intervention by the healthcare professionals. More than half of the healthcare professionals stated that the communication guide saved time in overall communication. The Otuzoğlu and Karahan study also determined that the great majority of patients using the communication guide could express their needs, and communication times were much shorter than for patients without this help[11].

The study showed that a majority of the patients thought that using the communication guide was easier when compared to other communication methods such as writing, hand and arm gestures, or mimicking. The patients felt that their writing was illegible

Table 2. **Patients' Evaluation of the Communication Guide's Features and Functionality**

Features of Communication Guide	Definitely Appropriate n (%)	Appropriate n (%)	Partially Appropriate n (%)	Not Appropriate n (%)	Definitely Not Appropriate n (%)
Size of the guide	6 (42.9)	4 (28.6)	3 (21.4)	1 (7.1)	-
Usefulness	9 (64.3)	3 (21.4)	2(14.3)	-	-
Dimension of images	7 (50.0)	6 (42.8)	1 (7.1)	-	-
Number of images	2 (14.3)	5 (35.7)	7 (50.0)	-	-
Color of images	11 (78.6)	3 (21.4)	-	-	-
Comprehensibility of images	10 (71.4)	4 (28.6)	-	-	-
Font size	10 (71.4)	4 (28.6)	-	-	-
Font type	10 (71.4)	3 (21.4)	1 (7.1)	-	-
Problems covered in the guide	7 (50.0)	5 (35.7)	2 (14.3)	-	-
Functionality of the Communication Guide					
The guide helps me communicate my problems and requests (pain,nausea,newspaper reading, listening to music,etc.)	10 (71.4)	3 (21.4)	1 (7.1)	-	-
The guide helps me communicate my feelings (stress,anger,fear,etc.)	5 (35.7)	6 (42.9)	3 (21.4)	-	-
The guide helps me communicate with healthcare professionals	11 (78.6)	3 (21.4)	-	-	-
The guide helps me communicate with my family and friends	11 (78.6)	3 (21.4)	-	-	-

because they were writing slowly and did not have the strength to write, and they felt that the parenteral therapy equipment hindered their hand and arm movements. Additional factors preventing clear communication were discovered by Magnus and Turkington when healthcare professionals had difficulty in reading lips, when the patients had difficulty writing because of weakness in their upper extremities, when patients were sedated, or if the patients were illiterate[21]. The patients who tried to move their arms and hands to communicate when they had so little strength needed too much energy to do so[11].

The participants in this study indicated that the communication guide had reduced their worries, and had given them courage, peace, happiness and moral support. Some studies have found that visual communication guides increased patients' satisfaction, reduced

Table 3. Healthcare Professionals' Evaluation of the Features and Functionality of the Guide

Features of the Communication Guide	Definetely Appropriate n (%)	Appropriate n (%)	Partially Appropriate n (%)	Not Appropriate n (%)	Definetely not Appropriate n (%)
Size of the guide	6 (30.0)	10 (50.0)	4 (20.0)	-	-
Font size	5 (25.0)	10 (50.0)	5 (25.0)	-	-
Font type	6 (30.0)	11 (55.0)	3 (15.0)	-	-
Clearness of images	8 (40.0)	8 (40.0)	4 (20.0)	-	-
Number of images	6 (30.0)	8 (40.0)	5 (25.0)	1 (5.0)	-
Color of images	6 (30.0)	11 (55.0)	3 (15.0)	-	-
Functionality of the Communication Guide	Definetely I Agree n (%)	I Agree n (%)	Partially I agree n (%)	I don't Agree n (%)	Definetely I Don't Agree n (%)
The communication guide was adequate to express patients' physiological problems	4 (20.0)	7 (35.0)	9 (45.0)	-	-
The communication guide was adequate to express patients' psychological states	1 (5.0)	6 (30.0)	11 (55.0)	2 (10.0)	-
The communication guide was helpful for easy communication with the patients	(20.0)	13 (65.0)	2 (10.0)	1 (5.0)	-
The communication guide saved time communicating with patients	(20.0)	9 (45.0)	5 (25.0)	2 (10.0)	-
The communication guide increased my communication with laryngectomy patients	3 (15.0)	7 (35.0)	9 (45.0)	1 (5.0)	-

anxiety and supported effective pain management[12,14]. Another study determined that the patients were relieved and felt safe when they were able to communicate their needs and problems[20]. The patients had referred to the communication guide with names signifying "support." The communication guide provided positive associations for them. These included "silent voice", "speaking tongue of those unable to speak", "friend and assistant of the patient", "hand and feet of the patient", "a must for the patients." These comments indicate that the communication guide had considerable positive significance and impact for the patients during the time they were unable to speak.

In line with the qualitative data, about three-quarters of the patients and about four-fifths of the healthcare professionals found the communication guide comprehensible and useful in regard to the size of the guide, the size, number, color and clarity of the pictures, and font size and type).

Patients felt that the communication guide needed improvement in its contents and in its potential to be used outside a hospital environment. The communication guide was originally planned with the intention to be used only during the hospital stay. After this study, the guide was modified based on the patient feedback. All the recommendations were considered except for the proposal that the communication guide should cover social life. It was enlarged in dimensions, and new images and font were added with new problems and requests.

CONCLUSION

The visual communication guide is the first and the only communication tool which was developed in our country for patients who have undergone a partial laryngectomy. Both healthcare professionals as well as partial laryngectomy patients concurred that the communication guide was effective and usable for communication. Utilization of the visual communication guide will ensure that errors arising from misunderstandings are prevented and faster solutions are found for patient problems and wants. The guide will also increase patient and healthcare professionals' satisfaction, and ensure that patients receive higher quality treatment and care. In addition, the goal is to help alleviate patients' feelings of anger, desperation, anxiety, etc. due to communication difficulties. Based on the advantages of the guide, its widespread use should be improved in all ENT clinics. The guide should be investigated as to its usability by other patients who are unable to speak for other reasons. Moreover, the guide can serve as an example to develop communication tools in other forms (posters in chart form hung on the wall, or software used in electronic devices) for individuals with different characteristics (age, speaking disability due to reasons other than laryngectomy etc.).

REFERENCES

1. Globocan 2012. Estimated cancer incidence, mortality and prevalence worlwide in 2012. URL: http://globocan.iarc.fr/Pages/fact_sheets_population.aspx.

2. Singer S, Merbach M, Dietz A, Schwarz R. Psychosocial determinants of successful voice rehabilitation after laryngectomy. Journal of the Chinese Medical Association. 2007; 70 (10): 407- 423.

3. Taş A, Yağız R, Karasalihoğlu A R, Koten M, Adal M K, Uzun C. Assessment of quality of life in patients with laryngeal cancer after surgical treatment. Journal of Ear, Nose, and Throat 2004; 12 (3-4): 84-90.

4. Alasad J, Ahmad M. Communication with critically ill patients. Journal of Advanced Nursing 2005; 50 (4): 356-362.

5. Happ M B. Communicating with mechanically ventilated patients: State of the science. AACN Clinical Issues 2001; 12 (2): 247-258.

6. Happ M B. Interpretation of nonvocal behaviors and the meaning of voicelessness in critical care. Social Science & Medicine 2000; 50: 1247-1255.

7. Appel-Hardin S. Communicating with intubated patients. Critical Care Nurse 1984; 6: 26-27.

8. Stovsky B, Rudy E, Dragonette P. Comparison of two types of communication methods used after cardiac surgery with patients with endotracheal tubes. Heart and Lung 1988; 17: 281-289.

9. Patak L, Gawlinski A, Berg J, Elizabeth A. Communication boards in critical care: Patients' views. Applied Nursing Research 2006; 19: 182-190.

10. Soo J, Aldridge S, French J, Alison M. Development of dual language information cards as a tool for communication between radiation therapists and cantonese-speaking patients undergoing radiation treatments for head and neck cancer. Journal of Medical Imaging and Radiation Sciences 2008; 39 (1): 16-22.

11. Otuzoğlu M, Karahan A. Determining the effectiveness of illustrated communication material for communication with intubated patients at an intensive care unit. International Journal of Nursing Practice 2014; 20: 490–498.

12. Patak L, Gawlinski A, Fung I, Doering L, Berg J. Patients' reports of health care practitioner interventions that are related to communication during mechanical ventilation. Applied Nursing Research 2004; 19: 182-190.

13. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology 2006; 3: 77-101.

14. Papadas T, Charokopos N, Karamouzis M V, Pierakeas C, Symeonidi M, Economou G, Goumas P. Rehabilitation after laryngectomy: a practical approach and guidelines for patients. Journal of Cancer Education 2002; 17 (1): 37-39.

15. Fletcher B S, Cohen M Z, Schumacher K, Lydiatt W. Blessing and a curse head and neck cancer survivors' experiences. Cancer Nursing 2012; 35 (2): 126-132.

16. Usher K, Monkley D. Effective communication in an intensive care setting: Nurse's stories. Contemporary Nurse: A Journal for the Australian Nursing Profession 2001; 10 (1-2): 91-101.

17. Dickerson S S, Stone V I, Panchura C, Usiak D J. The meaning of communication: Experiences with augmentative communication devices. Rehabilitation Nursing 2002; 27: 215-220.

18. Stein-Parbury J, McKinley S S. Patients' experiences of being in an intensive care unit: A select literature review. American Journal of Critical Care 2000; 9: 20-27.

19. Wojnicki-Johansson G. Communication between nurse and patient during ventilator treatment: patient reports and RN evaluations. Intensive and Critical Care Nursing 2001; 17 (1): 29- 39.

20. Hweidi I M. Jordanian patients' perception of stressors in critical care units: A questionnaire survey. International Journal of Nursing Studies 2007; 44 (2): 227- 235.

21. Magnus V S, Turkington L. Communication interaction in ICU- Patient and staff experiences and perceptions. Intensive and Critical Care Nursing 2006; 22: 167-180.

Figure 1. The first section of the visual communication guide

Figure 2. Page sample from the second part of the visual communication guide

Figure 3. Page sample from the second part of the visual communication guide
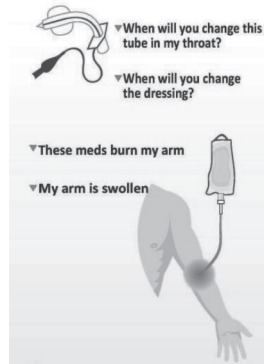

Figure 4. Page sample from the second part of the visual communication guide

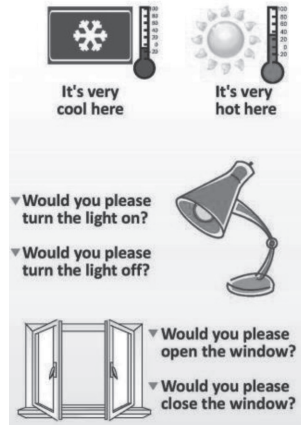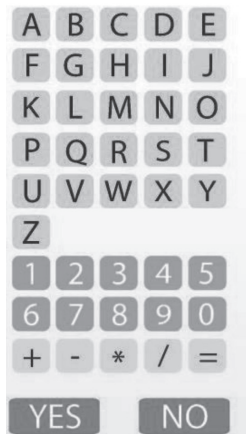**Figure 5. Page sample from the second part of the visual communication guide**

Figure 6. Page sample from the second part of the visual communication guide

Figure 7. Page sample from the second part of the visual communication guide