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Knowledge and Practices of Nurses Regarding the Management of Elderly Patient with Dysphagia at Tertiary Care Hospital Lahore

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Abstract
Introduction: Dysphagia is the subjective sensation of difficulty swallowing and there are many potential etiologies. It also negatively impacts quality of life and decreases work productivity, and it is the 10th leading cause of ambulatory care visits in the United States among gastrointestinal (GI) symptoms, with more than 600,000 visits annually.
Method: Quantitative cross-sectional study design was used to determine the knowledge and practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital. 111 nurses working at gastro, medical and surgical wards were selected as sample. Data was collected through the standardized well adopted 14 item questionnaires.
Results: Results revealed that only (52) 47 % nurses have good knowledge and majority (59) 53% nurses have poor knowledge. Further the practices of nurses regarding dysphagia management analysis revealed that 41 % nurses have adequate practices and majority 59% nurses have inadequate practices.
Conclusions: The results of the present study showed that the participants had a moderate/low knowledge practice of the definition, diagnosis, and clinical management of liquid dysphagia and inadequate. So necessary tools must be provided for their training in this field. This training must be multidisciplinary and should be directed to all professionals who provide healthcare to patients with liquid dysphagia.
Keywords: knowledge, practices, dysphagia, management, elderly
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CHAPTER I
INTRODUCTION

Background of the study: Nutrition is a basic function of the living being, carried out involuntarily for the acquisition of the necessary nutrients for the correct functioning of the organism. Nutrition starts with the processing of food in the mouth, which involves chewing, formation of abolus, and swallowing, and continues with the bolus being transported to the digestive tract where digestion and subsequent absorption of the different nutrients will take place (Sánchez-Sánchez et al., 2021).

It is for this reason that swallowing is an important step in obtaining the body's requirements and needs in a safe and effective way (Pérez-Cruz et al., 2018). The digestive tract runs parallel to the respiratory one, and the two share anatomical structures; therefore, swallowing must be carried out in a coordinated manner, so that food cannot enter the airway (Suárez-Escudero, Rueda Vallejo, & Orozco, 2018).

Dysphagia is the subjective sensation of difficulty swallowing and there are many potential etiologies. It also negatively impacts quality of life and decreases work productivity, and it is the 10th leading cause of ambulatory care visits in the United States among gastrointestinal (GI) symptoms, with more than 600,000 visits annually (Peery et al., 2022).

Globally, the community prevalence of dysphagia ranges between 2% and 20%. Although some of these population-based efforts were conducted in the United States, these studies were either limited by a small number of respondents with dysphagia, had cohorts that were predominantly non-Hispanic white, were not focused solely on dysphagia, or were performed 10 years ago or more (Almario et al., 2018).

Dysphagia or impaired swallowing refers to difficulties in any of the three main phases of the swallowing process, i.e., the oral, pharyngeal, and esophageal phases. Dysphagia can appear with solid or liquid intake. It is widely accepted that it is a prevalent disorder among older adults. In fact, signs of dysphagia were common among patients aged 65 years or older in acute care settings (Bomze et al., 2021). The current situation could be even worse in the institutionalized elderly population. Swallowing inefficiency could also be prevalent in younger individuals with amyotrophic lateral sclerosis (Olesen et al., 2021).

Swallowing disorders are common among patients with a range of conditions, and dysphagia were identified in 22.6% of adults consulting at primary care centers. In developed countries, fundamental and epidemiologic studies have been conducted and support measures have been proposed. Developed countries are considered as those with human development index higher than or equal to 0.8 (Diendéré et al., 2016).

The consequences of fluid dysphagia include tracheobronchial aspiration. Although some clinical signs, like coughing, help in the diagnosis of aspiration, silent aspiration may occur(Annunziata, Valente, Cauteruccio, & Fiorentino, 2020), which, being asymptomatic, may remain undetected by observation. This may lead to aspiration pneumonia (Umemoto & Furuya, 2020).

Pneumonia is one of the main causes of mortality after a stroke (Bray et al., 2017). Dysphagia patients have a higher rate of pneumonia compared to those without dysphagia (29.7% vs. 3.7%). Dysphagia can reduce patients' quality of life and increase hospital stays, socio-sanitary charges, and the risk of mortality (Trimble & Patterson, 2020). Limited food and fluid intake, as well as abuse of fast to avoid aspiration in patients with liquid dysphagia, are risk factors for the onset of malnutrition and dehydration (Bray et al., 2017).

The care of patients with liquid dysphagia aims to reduce the complications derived from this condition. It is recommended to adopt some general measures. These measures include the adaptation of food texture and viscosity according to the degree of dysphagia present, avoiding foods with two textures, especially for patients with liquid dysphagia, avoiding the use of syringes and of straws for the oral administration of liquids, as they do not stimulate swallowing and promote aspiration, placing and maintaining the patient in a suitable position before and during ingestion, adapting the kitchenware to the patient's needs (Joundi et al., 2017).

Early dysphagia screening and recognition by trained nurses is considered as one of best practices for patient to prevent subsequent complications and promote stroke rehabilitation (Sherman et al., 2018). Nurses are the first and most interactive personnel to acute stroke patients, they are in a typical position to early identify individuals with swallowing problems and initiate interventions that prevent further complications until a formal assessment takes place (Liu, Shi, Shi, Hu, & Jiang, 2016).

Nursing interventions to manage dysphagia in order to ensure optimal patients' nutrition, dehydration as well as to decrease the risk for chest infection are early dysphagia assessment by using a familiar, valid, reliable, test. Upon which nurses can determine the patient's level of dysphagia, the right food consistencies and the need for a Naso- gastric intubation (Fedder, 2017).

The nurse also provides adequate position during eating to prevent aspiration, maintain upright position 60 minutes after eating to prevent aspiration, ensure safe swallowing by maintaining adequate location of the food in the mouth, providing the right size, consistency and temperature of the food ensuring food preferences to the patient. And finally providing adequate oral hygiene (Hall & Gilliland, 2019).

Obtaining a full understanding of nurses' knowledge and practices is necessary to determine the gaps in dysphagia quality of care. Previous studies have often detected poor dysphagia knowledge and practices among nurses, in the light of the international guidelines and recommendations, while others recommended early dysphagia screening and recognition by trained nurses to prevent subsequent complications and to promote stroke recovery (Khoja, 2018).

This study aimed to evaluate nurses' knowledge and practice regarding management of dysphagia among patients at tertiary care hospital.

Rationale of Study:

Dysphagia affecting most of people while they are admitted at hospital setting due to any illness. Among them more than 50% of all patients suffering from dysphagia especially older people. In study setting numbers of patient effected with dysphagia either they admitted with already infectious or chronic diseases. Moreover, high percentage of patients with dysphagia are never able to maintain their nutritional status and also suffer from

different complication.

By the end lacking the accepted level of knowledge and practices regarding dysphagia among nurses makes the dysphagic patients more susceptible to complications such as aspiration pneumonia, dehydration, malnutrition, unnecessary nasogastric tube insertion. So, there is need to evaluate the nurse's knowledge and practices regarding the management of dysphagic patients to prevent relative risk complication. However, it is found less studies regarding management the disphia. Therefore, the present study aims to obtaining a full understanding of nurses' knowledge and practices is necessary to determine the gaps in dysphagia quality of care.
Purpose of the study: the main purpose of the study is to evaluate the knowledge and practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital.

RESEARCH QUESTION

What is the the knowledge and practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital?

SIGNIFICANCE OF THE STUDY

Patient: who conceded for the most part is profoundly helpless to dysphagia. In this manner, the use of widespread safety measures, protect the patient from dysphagia. it also promotes patient safety and decrease risk.
Nurse: subsequently, assessment level of nurses' knowledge and practice regarding the management of dysphagia is vital action to control and prevent. In this way nurses will understand their weakness and tried to adopt standard guide line in results their knowledge and skills will be improved.
Organization: The Finding of the examination may be useful for the association to build up the methodologies to control superfluous of dysphagia through instructional meeting, workshop, and class in result at last this will improve the workplace and nature of care. It will be appropriate for the administration to find a way to locate the powerless components. In results the quality of care will be improved.
Policy maker: This mindfulness will help the strategy creator to plan methodologies and set in motion to improve the workplace.
Future researcher: The aftereffect of this investigation will provide guidance to the future analyst to use this examination as a writing and direction. Moreover, study will assist them with identifying the investigation hole. The discoveries of the examination can be utilized as optional information for future research researchers.
Practical implications: As the medical professionals who have the most contact with the patients, nurses have a central role in the care of patients with dysphagia. This study provides information that will guide strategies for in-service nurse education dysphagia programmes.

CHAPTER II
LITERATURE REVIEW

This chapter provide a review of relevant literature related to the knowledge and practices of nurse regarding the management of dysphagia. Studies were identified by searching the following databases from their inception date through January 2017. PubMed, google scholar, cinahal, these data base are approached by using synonyms and key words regarding study variable.

The most recent and relevant descriptive and analytical studies regarding prevalence of dysphagia, knowledge and practices of clinical nurses regarding the management of dysphagia are include for literature review. The inclusion criteria for literature selection were applied as published in peer review journal in English and descriptive study. Previous studies evaluating the epidemiology of dysphagia were performed in older individuals and failed to include all age groups (7-10). However, available data (7-11) suggest that dysphagia is surprisingly common, occurring in 8% to 22% of persons over age 50 years (Reiter, Johnston, Anderson, Soltero-Rivera, & Lobprise, 2019).

Globally, the community prevalence of dysphagia ranges between 2% and 20%. Although some of these population-based efforts were conducted in the United States, these studies were either limited by a small number of respondents with dysphagia, had cohorts that were predominantly non-Hispanic white, were not focused solely on dysphagia, or were performed 10 years ago or more (Almario et al., 2018).

Other studies in nursing homes estimate the prevalence of dysphagia may be as high as 60%. In a gastrointestinal symptom survey study of all ages in a Midwestern population, the prevalence of dysphagia was estimated to be 7% but risk factors for dysphagia were not assessed. Thus, the purpose of this study was to estimate the population prevalence of dysphagia and to identify the characteristics associated with this important alarm symptom (Brodsky, Nollet, Spronk, & González-Fernández, 2020).

Recently a study conducted in 2020 to evaluate the prevalence of dysphagia among admitted 31,129 individuals who participated in the survey, 4998 respondents (16.1%) reported experiencing dysphagia; 92.3% of these had symptoms in the previous week. We found that 16.3% of respondents described their dysphagia over the previous 7 days as either quite a bit or very severe. Drinking liquids to help with dysphagia (86.0%) and

taking longer to finish eating (76.5%) were the most common compensatory maneuvers. Overall, 51.1% of individuals sought care for their difficulty swallowing; older age, male sex, having a usual source of care and insurance, having comorbidities, and more severe dysphagia symptoms increased the odds for seeking care (P < .05). The most commonly reported esophageal comorbidities were gastroesophageal reflux disease (30.9%), eosinophilic esophagitis (8.0%), and esophageal stricture (4.5%) (Adkins et al., 2020).

In 2018, a study conducted in Saudi Arabia to assess the knowledge and practices regarding the management of patient with dysphagia among a sample of 174 nurses and results revealed that, the participants had partial theoretical and practical knowledge about nursing care for patients with dysphagia. Of interest, 78 per cent of the nurses reported that they had received less than 1 h of training in dysphagia, and only 4 per cent were aware of speech and language pathologists' role in dysphagia management (Khoja, 2018).

In China (2022) a study conducted regarding the assessment of knowledge, attitude and practices regarding dysphagia management and results revealed that the univariate analysis showed that the geriatric dysphagia-related knowledge scores differed significantly among the nurses according to their age, education level, title, hospital level, and years of work experience (P<0.05). The multivariate regression results indicated that title, hospital level, and experience with caring for elderly patients with dysphagia were the main factors that influenced geriatric dysphagia-related knowledge scores (Luo, Wei, & Zhang, 2022).

Another other study conducted in 2021 at Spain regarding the assessment of knowledge and practices of regarding dysphagia management and results revealed that A total of 396 nurses participated in the study. Of these, 62.3% knew the definition of dysphagia as a swallowing disorder. In addition, up to 39.2% of the participants reported that they did not know whether the Eating assessment tool for dysphagia screening is useful. Similarly, up to 49.1% of them did not know the major issue. In addition,76.4% of the professionals had witnessed a broncho aspiration; after it, 44.4% (n = 175) of them reported the appearance of pneumonia, and 14.5% (n = 57) the death of the patient (p = 0.005). Moreover, the participants revealed a moderate/low knowledge and also average level of practices (Sánchez-Sánchez et al., 2021).

Moreover, a study conducted in Namibia regarding the assessment of knowledge regarding the dysphagia and for this sample of 182 was selected. The findings of the study confirmed that nurses have a moderate knowledge of the signs, symptoms, and complications of dysphagia, but poor knowledge about its management. Training and experience in the care of dysphagia patients was a stronger predictor of knowledge than the initial qualification or years of experience as a nurse (Rhoda, 2015).

A descriptive study conducted in South Africa in 2020 regarding the nurse's knowledge of dysphagia and results revealed that the mean scores of correct responses for each section were 66.7% for signs and symptoms, 47.3% for complications and 54.2% for management practices. Statistically, there were no differences between the levels of healthcare for the signs and symptoms section and the complications section. The study found that nurses across all levels of healthcare had only moderate knowledge regarding identification and management of dysphagia. Interdisciplinary collaboration between nurses and speech-language therapists may improve nurses' knowledge in identification and management (Knight, Pillay, Linde, & Krüger, 2020).

Gap analysis: above reviewed article shows that most of nurses working at clinical site have moderate level of knowledge and practices which indicates some room for improvements. Moreover, these all studies were not specified the patient involvement even the epidemiological report shows that the dysphagia affected the older patients with high percentage. Furthermore, there is no any study found in Pakistan regarding the nurse's knowledge and practices to manage the dysphagic patients. So, there is need to evaluate the nurse's knowledge and practices regarding the management of older patients with dysphagia.

OBJECTIVE

General objective:

- ✓ To evaluate the knowledge and practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital.

Specific objective:

- ✓ To evaluate the knowledge of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital.
- ✓ To assess the practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital.

Operational Definition

Knowledge: information or idea of nurses working at medical and surgical wards of the tertiary care hospital to manage the admitted elderly patients whom suffering from difficulty in swallowing. That is measured by well adopted tool. The total score will be 0-7 with higher scores reflecting more knowledge regarding the management of patients with dysphagia. (Poor knowledge: score ≤ 3) and (Good knowledge: score ≥ 4).

Practices: actions of nurses working at medical and surgical wards of the tertiary care hospital to manage the

admitted elderly patients whom suffering from difficulty in swallowing. That is measured by well adopted tool. The total score will be 0-7 with higher scores reflecting more adequate practices regarding the management of patients with dysphagia. (Inadequate practice: score ≤ 3) and (Adequate Practices: score ≥ 4).

Dysphagia: elderly patients whom are admitted at medical and surgical wards of the tertiary care hospital with difficulty in swallowing.

CHAPTER III
MATERIAL AND METHODS

Study Design: Descriptive cross-sectional study design was used.

Settings: Study conducted at Lahore general hospital Lahore.

Duration of Study: Study duration was 6 months after the approval of synopsis from Departmental Research Committee.

Study population: Nurses working at medical, surgical and gastro wards of Lahore general hospital Lahore.

Sample Size:

Sample size was calculated by using the Yamane method.

$n=N/1+ (N) (E)^2$

The total population is 245.

N=Population, n=Sample size, E= 7% Margin of error Confidence interval 93%

$n =N/1+ (N) (E)^2$

$n=245/1+ (245) (0.07)^2$

$n=245/1+ (245) (0.0049)$

$n= 245/1+1.200$

$n= 245/2.200$

$n=111$

The sample size for this study was 111.

Sampling Technique: Simple Random Sampling technique was used.

Sample Selection

Inclusion Criteria:

- Nurses (male, female) working at medical and surgical wards on permanent basis.
- Nurses age between 21 to 60 years
- Experience more than one year.
- Directly involve in patient care.
- Willing to participate.

Exclusion Criteria:

- Head nurse, nursing supervisors and clinical nursing instructors whom are not directly involved in patient care.
- Reliver nurses.
- Nurses have a planned for leave.
- Already participating in another study.

Study tool: This section provides a detailed account of study tool. The study tool consists of two sections (a) demographic information (b) knowledge and practices regarding the management of dysphagia.

Section A: Demographic information; this section includes demographic information such as demographic information such as age, gender, marital status, Level of education, experience, department and numbers of elderly patients admitted with dysphagia at the moment.

Section B: knowledge and practices; this section includes 14 items regarding knowledge and practices of nurses to manage the dysphagia among elderly patients.

Tool development: The tools were adopted by researchers based on a review of relevant recent literature. The found well adopted with CVI 0.89 score and reliable with Cronbach's alpha (p = 0.74) (Sánchez-Sánchez et al., 2021).

ETHICAL CONSIDERATIONS

- ✓ Written permission was taken from the Ethical committee of LSN department in University of Lahore.
- ✓ Permission was taken from the research board of Lahore general hospital to collect data.
- ✓ Written informed consent will be taken from all participants.
- ✓ All the participants were informed about the purpose, procedure, benefits and nature of the study.
- ✓ All information and collected data were kept confidential by principal investigator hard copy in lock.
- ✓ Confidentiality of soft copy was maintained by a coding.
- ✓ The subject was informed that there are no disadvantages or risk on the procedures of the study.

- ✓ They was be informed that they will be free to withdraw at any time during the process of the study.

DATA COLLECTION

This section provides a detailed account of how the variable was measured. Therefore, well adopted tool consists of demographic information and items regarding knowledge and practices of nurses to manage the dysphagia was used. Demographic consisting information such as age, gender, marital status, Level of education, experience, department and numbers of elderly patients admitted with dysphagia at the moment. Knowledge and practices will be measured by items. A written Performa given to nurses and they will ask to marked suitable option. 30 min will be allowed to each nurse for filling the Performa.

DATA ANALYSIS PROCEDURE

Data wwas entered and analyzed in SPSS version- 21. Quantitative variables will be presented in the form of mean ± standard deviation and histogram will be made. Categorical variables will be presented in the form of frequency and percentages. Pie chart or bar chart will be made.

CHAPTER IV

RESULTS

This study is conducted at general hospital to evaluate the knowledge and practices of nurses regarding the management of elderly patient with dysphagia at tertiary care hospital. The result of this study distributed into two sections, first section is statistics of demographic factors of nurses working at medical, surgical and gastro ward and second is knowledge and practices related 14 items regarding the management of dysphagia.

Section A: Table 1 shows that the frequency of demographics includes gender, age, experience, level of education, area of working and marital status (at time of study) of the 111 participants and the results revealed that the gender of the participants was found 2 (1.8%) male and 109 (98%) were female. Age of participants was found minimum 21 to highest 60, participant's age group 21-30 years frequency was 5 (4.5%), moderately 41 (36.9%) participants were belonging to age group 31-40 years and 38 (34.4%) were fall in age group 41- 50 years and 27 (24.3%) were 50 and above year-old. Participants have experience more than 15 years nurses 6 (5.4%) have 1-5 years job experience and majority 55 (49.5%) have 6-10 years' experience and 27 (24.3 %) nurses have 11-15 years' experience and 23 (20.7%) have more than 15 years job experience.

Participants' department as expected was majority 47 (42.3%) working in gastro ward and 39 (35.1 %) working in surgical wards and only 25 (22.5%) working in medical ward. The qualification of the participants was found as 0 (0%) diplomas in midwife, majority 61 (55%) diploma in general nursing, 35 (31.5%) were hold a degree of post RN BSN and only 15 (13.5%) were bachelor of science in nursing (Generic). The most of 74 (66.7%) nurses were unmarried, 13 (11.7%) nurses were married and 24 (21.6 %) nurses were widow or divorced.

Demographics factors frequency

Table 1

Variable		Frequency	Valid Percent
Gender	Male	2	1.8 %
	Female	109	98.2 %
	Total	**111**	**100 %**
Age	21-30 years	5	4.5 %
	31-40 years	41	36.9 %
	41-50 years	38	34.2 %
	50 and above years	27	24.3 %
	Total	**111**	**100 %**
Educational status	☐ Diploma in midwifery	0	0
	☐ Diploma in general nursing	61	55 %
	☐ Post RN BSN	35	31.5 %
	☐ Generic BSN	15	13.5 %
	Total	**111**	**100 %**
Marital status	☐ Married	13	11.7 %
	☐ Unmarried	74	66.7 %
	☐ Divorced/ separation	24	21.6 %
	Total	**111**	**100 %**
Experience	☐ 1-5 years	6	5.4 %
	☐ 6-10 years	55	49.5 %
	☐ 11-15 years	27	24.2 %
	☐ More then 15	23	20.7 %

	Total	**111**	**100 %**
Department	☐ Medical ☐ Surgical ☐ Gastro ward **Total**	25 39 47 **111**	22.5 % 35.2 % 42.3% **100**

Table 2 shows the mean, median, mode and standard deviation of demographic variable the highest mean 2.78 for duty age, then 2.60 for experience and 1.98 for gender which is lowest. The Std. Deviation is (1.032, .497, .963, .816, .716, .692) were respectively for, age, gender, Qualification, experience and Department.

Demographics factors Statistics

Table 2

Statistics						
Statistics	**Age**	**Gender**	**Qualification**	**Marital status**	**Experience**	**Department**
N	111	111	111	111	111	111
Mean	2.78	1.98	2.59	2.10	2.60	2.20
Median	3.00	2.00	2.00	2.00	2.00	2.00
Mode	2	2	2	2	2	3
Std. Deviation	1.032	.497	.963	.816	.716	.692

Figure 1 shows that the frequency of demographics includes gender of the participants was found 2 (1.8%) male and 109 (98%) were female.

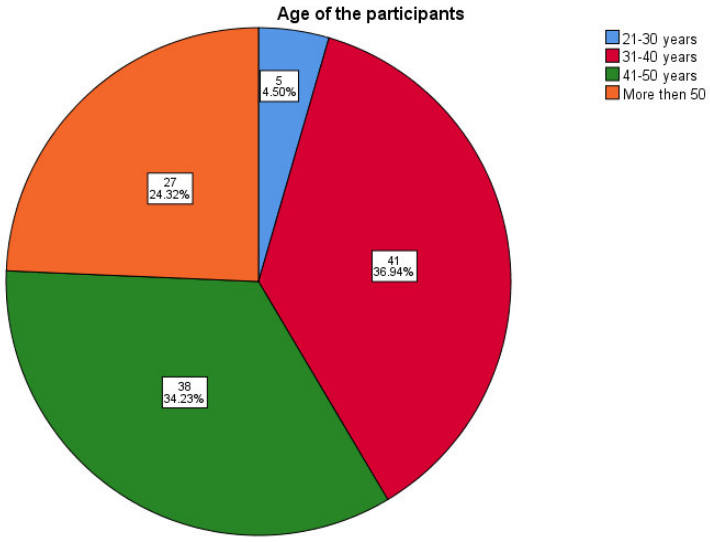

Figure 1

Figure 2 shows that the frequency of demographics includes age of participants was found minimum 21 to highest 60, participant's age group 21-30 years frequency was 5 (4.5%), moderately 41 (36.9%) participants were belonging to age group 31-40 years and 38 (34.4%) were fall in age group 41- 50 years and 27 (24.3%) were 50 and above year-old.

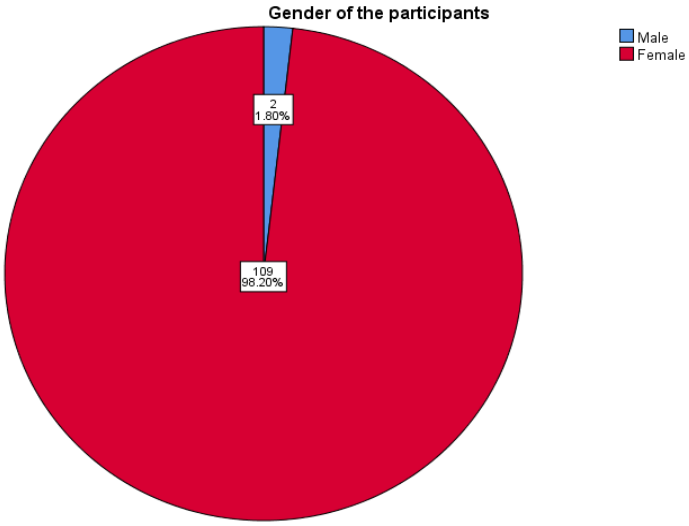

Figure 2

Figure 3 shows that the frequency of demographics includes qualification. The qualification of the participants was found as 0 (0%) diplomas in midwife, majority 61 (55%) diploma in general nursing, 35 (31.5%) were hold a degree of post RN BSN and only 15 (13.5%) were bachelor of science in nursing (Generic).

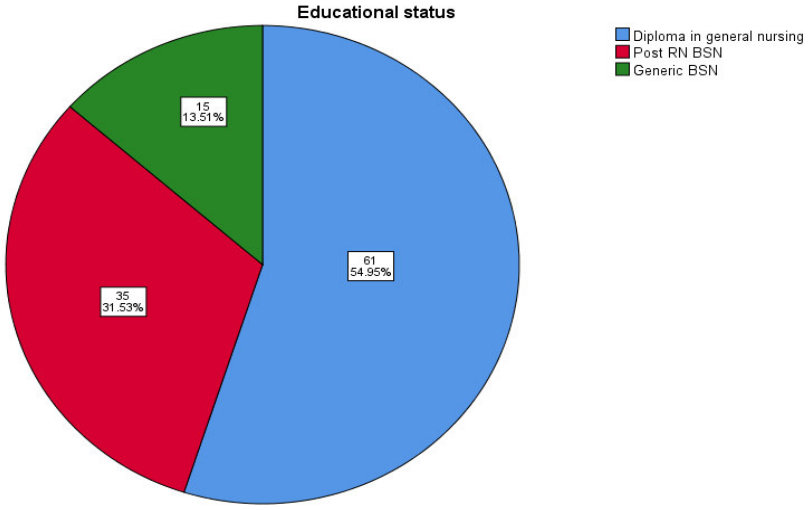

Figure 3

Figure 4 shows that the frequency of demographics includes material status. The most of 74 (66.7%) nurses were unmarried, 13 (11.7%) nurses were married and 24 (21.6 %) nurses were widow or divorced.

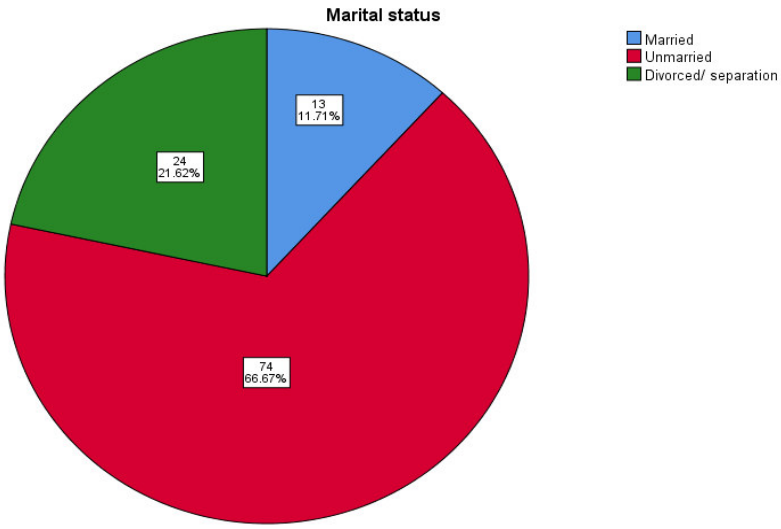

Figure 4

Figure 5 shows that the frequency of demographics includes experience. Participants have experience more than 15 years nurses 6 (5.4%) have 1-5 years job experience and majority 55 (49.5%) have 6-10 years' experience and 27 (24.3 %) nurses have 11-15 years' experience and 23 (20.7%) have more than 15 years job experience.

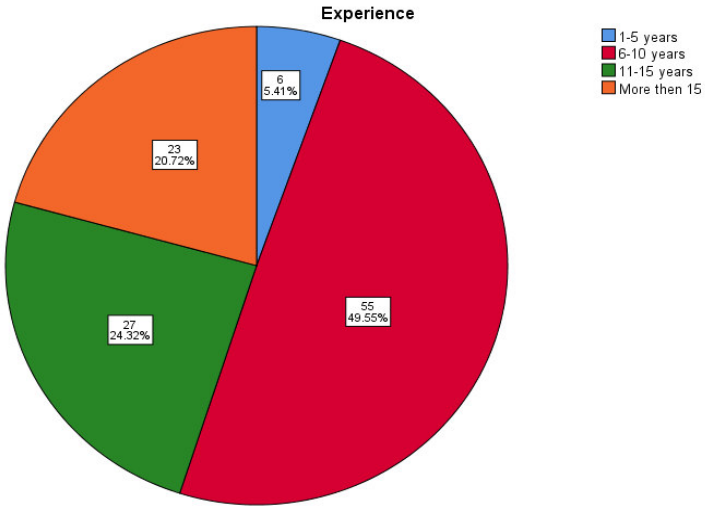

Figure 5

Figure 6 shows that the frequency of demographics includes departments. Participants' department as expected was majority 47 (42.3%) working in gastro ward and 39 (35.1 %) working in surgical wards and only 25 (22.5%) working in medical ward.

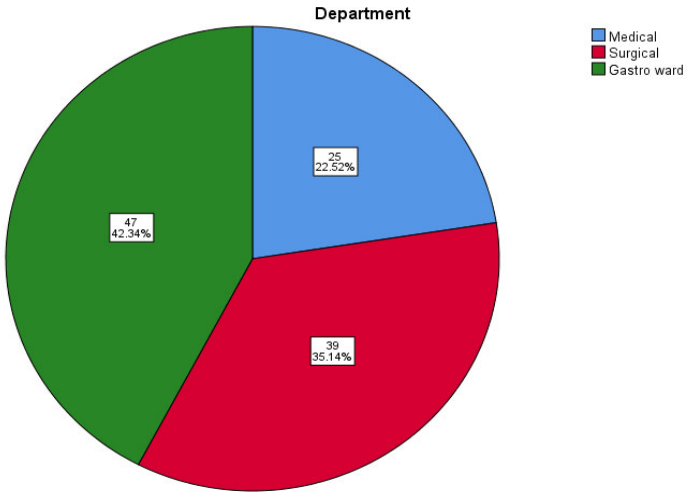

Figure 6

Table 3 shows that the knowledge and practices of nurses regarding dysphagia management at medical, surgical and gastro ward and results revealed that only (52) 47 % nurses have good knowledge and majority (59) 53% nurses have poor knowledge. Further the practices of nurses regarding dysphagia management and results revealed that 41 % nurses have adequate practices and majority 59% nurses have inadequate practices.

Knowledge and practices regarding the management of dysphagia

Table 3

Sr. No	Knowledge and Practices	f (n=111)	%
1	**Knowledge** ✓ **Good** ✓ **Poor**	 52 59	 47 % 53 %
2	**Practices;** ✓ **Adequate** ✓ **Inadequate**	 45 66	 41 % 59%

Table 4 shows the frequency percentage of 7 items of regarding knowledge of nurses working at medical, surgical and gastro ward and results revealed that only 47 % nurses have good knowledge and majority 53% nurses have poor knowledge. Further the observation revealed that the nurses, have different level of education and also working in different department such as ward or critical care unit is varying to each other, such as the observation regarding first item of questionnaire "What is the definition of dysphagia?" and results revealed that the 17(15.3%), were go with Don't know, 27 (24.3%) participants were select "Unavailability of food", 31 (27.9%) were go with Loss of appetite that are wrong option and only 36 (32.4%) participants were select correct option which is Impaired swallowing. Item two was "What approach would you take with a patient with liquid dysphagia?" and participants responds as Don't know=9 (8.1%), No fluid intake=22 (19.8%) adaptation of the diet=27 (24.8%), Dysphagia test=53 (47.7%). In the response of item three the results were 21 (18.9%) participants agreed with Do not know, 9 (8.1%) were select Upon admission, 41 (36.9) participants were going with on request only 40 (36%) were select correct answer which is Risk of dysphagia. Item four was "Who carries out these tests?" and participant responds as 10 (9%) Do not know, 33 (29.7%) were select Health professionals, majority 41 (36.9) were go with Speech therapist and only 37 (33.3%) choose the right answer. In the response of item five, that was "If the patient requires thickeners, when is the thickener used?" and the results were 1 (.9%) participant agreed with Do not know, 1 (.9%) were select Breakfast, 43 (38.7%) participants were going with lunch and only 40 (36%) were select correct answer which is dinner. Item six was "Based on what do you choose the texture to be prescribed to patients with liquid dysphagia?" and participants responds as Don't know=0 (0%), Palatability=1 (.9%), Patient tolerance=35 (31.5%) and MECV-V test results= 75 (67.6%). In the response of item seven, that was "What was the most serious result after witnessing broncho aspiration?' and the results were 0 (0%) participant agreed with Do not know, 9 (8.1%) were select No incidents, 41 (36.9) participants were going with Pneumonia and only 61 (55%) were select correct answer which is death.

Knowledge regarding the management of dysphagia

Table 4

Sr. No	Items	f%	f%	f%	f%
1	What is the definition of dysphagia?	Don't know 17(15.3%)	Unavailability of food 27 (24.3%)	Loss of appetite 31 (27.9%)	Impaired swallowing 36 (32.4%)
2	What approach would you take with a patient with liquid dysphagia?	Don't know 9 (8.1%)	No fluid intake 22 (19.8%)	Adaptation of the diet 27 (24.8%)	Dysphagia test 53 (47.7%)
3	When are these Dysphagia tests performed?	Do not know 21 (18.9%)	Upon admission 9 (8.1%)	On request 41 (36.9)	Risk of dysphagia 40 (36%)
4	Who carries out these tests?	Do not know 10 (9%)	Health professionals 33 (29.7%)	Speech therapist 31 (27.9%)	Nutritionist 37 (33.3%)
5	If the patient requires thickeners, when is the thickener used?	Do not know 1 (.9%)	Breakfast 1 (.9%)	Lunch 43 (38.7%)	Dinner 66 (59.5%)
6	Based on what do you choose the texture to be prescribed to patients with liquid dysphagia?	Do not know 0 (0%)	Palatability 1 (.9%)	Patient tolerance 35 (31.5%)	MECV-V test results 75 (67.6%)
7	What was the most serious result after witnessing broncho aspiration?	Do not know 0 (0%)	No incidents 9 (8.1%)	Pneumonia 41 (36.9)	Death 61 (55%)

Figure 7 shows the observation regarding first item of questionnaire "What is the definition of dysphagia?" and results revealed that the 17(15.3%), were go with Don't know, 27 (24.3%) participants were select "Unavailability of food", 31 (27.9%) were go with Loss of appetite that are wrong option and only 36 (32.4%) participants were select correct option which is Impaired swallowing.

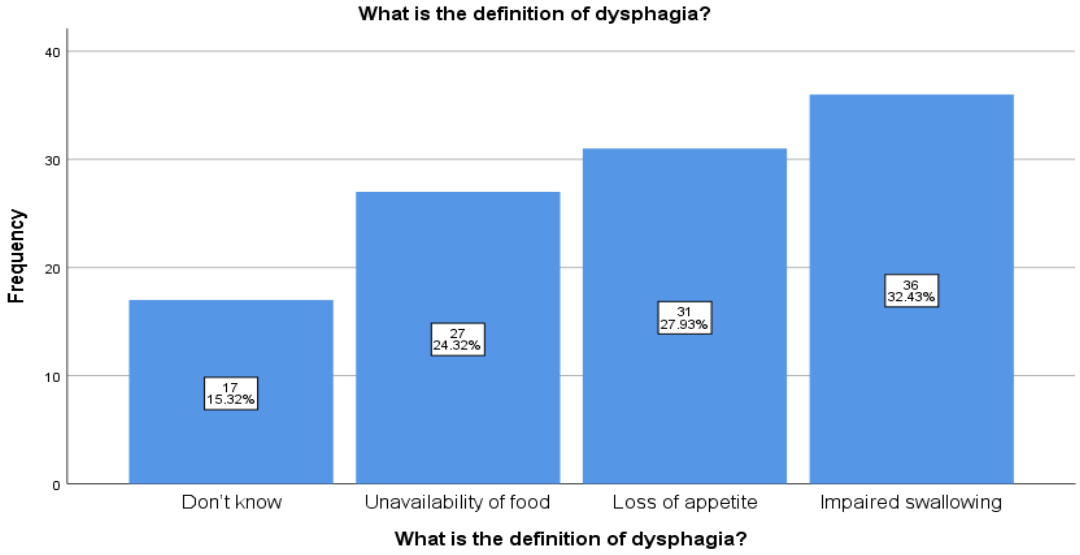

Figure 7

Figure 8 shows that the response of participants regarding item two was "What approach would you take with a patient with liquid dysphagia?" and participants responds as Don't know=9 (8.1%), No fluid intake=22 (19.8%) adaptation of the diet=27 (24.8%), Dysphagia test=53 (47.7%).

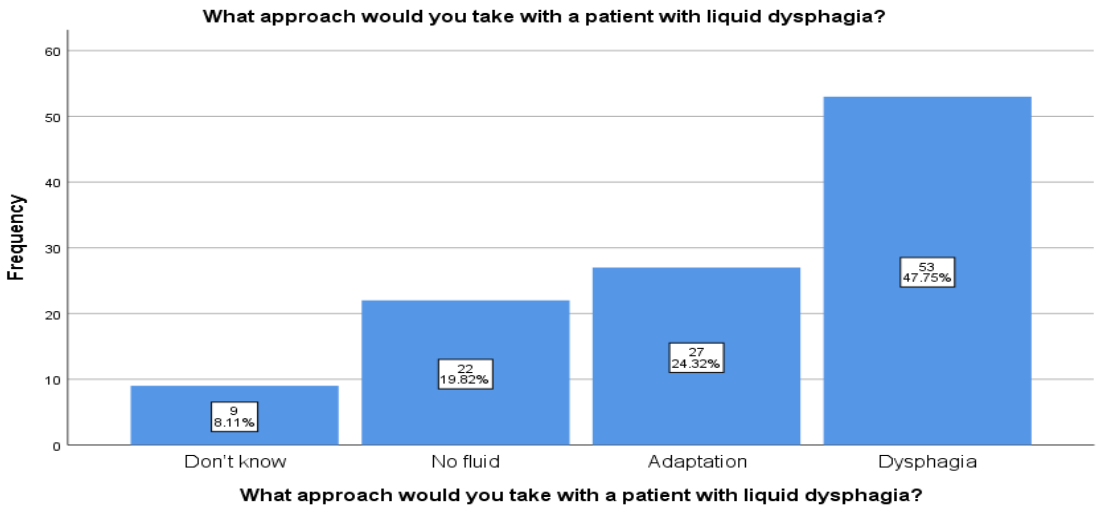

Figure 8

Figure 9 shows that the response of participants regarding item three the results were 21 (18.9%) participants agreed with Do not know, 9 (8.1%) were select Upon admission, 41 (36.9) participants were going with on request only 40 (36%) were select correct answer which is Risk of dysphagia.

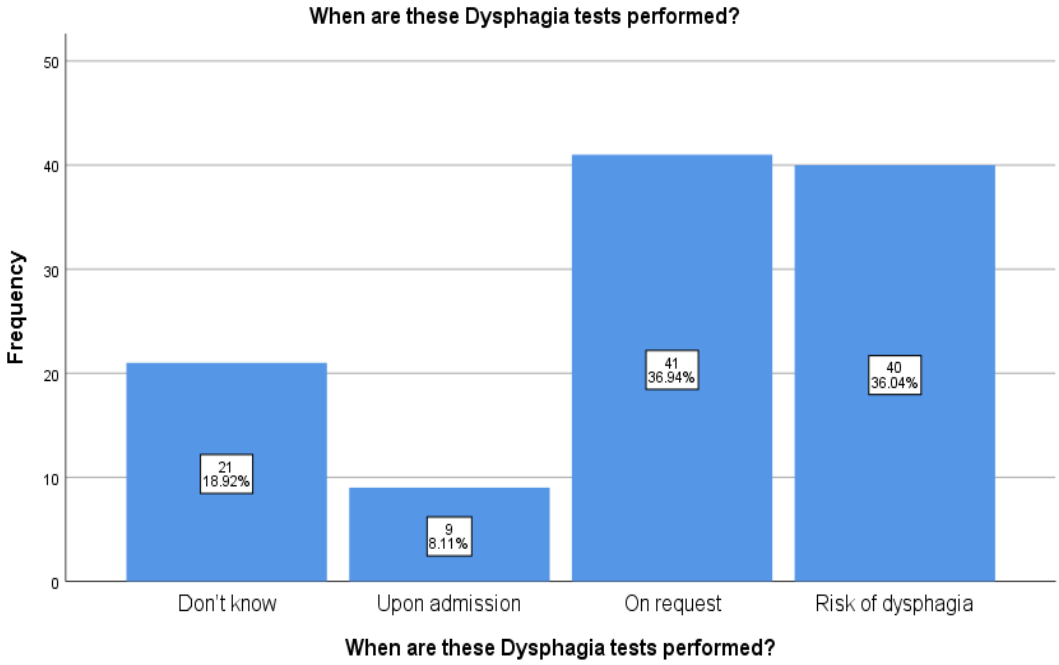

Figure 9

Figure 10 shows Item four was “Who carries out these tests?” and participant responds as 10 (9%) Do not know, 33 (29.7%) were select Health professionals, majority 41 (36.9) were go with Speech therapist and only 37 (33.3%) choose the right answer.

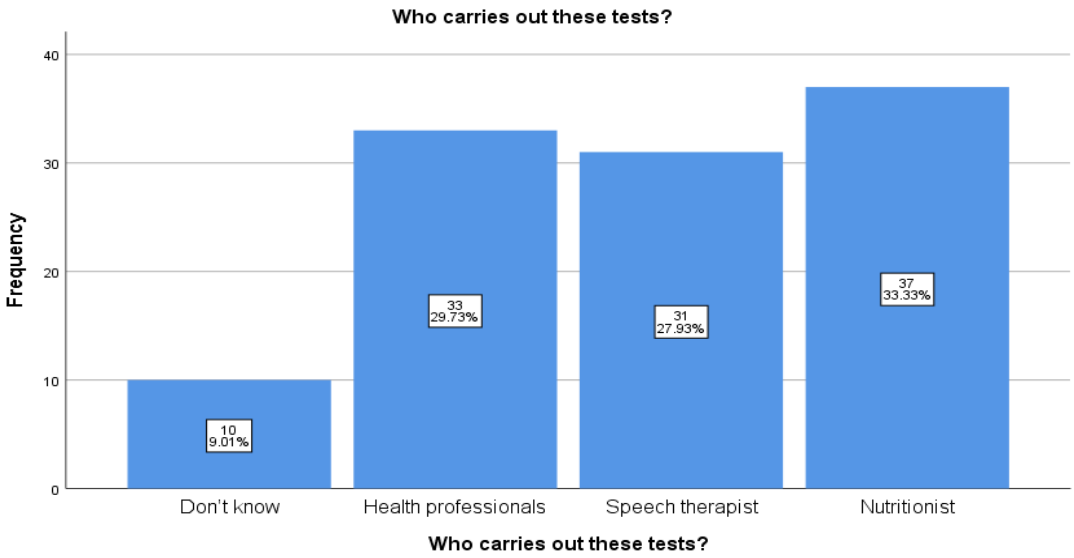

Figure 10

Figure 11 shows that the response of participants regarding item five, that was "If the patient requires thickeners, when is the thickener used?" and the results were 1 (.9%) participant agreed with Do not know, 1 (.9%) were select Breakfast, 43 (38.7%) participants were going with lunch and only 40 (36%) were select correct answer which is dinner.

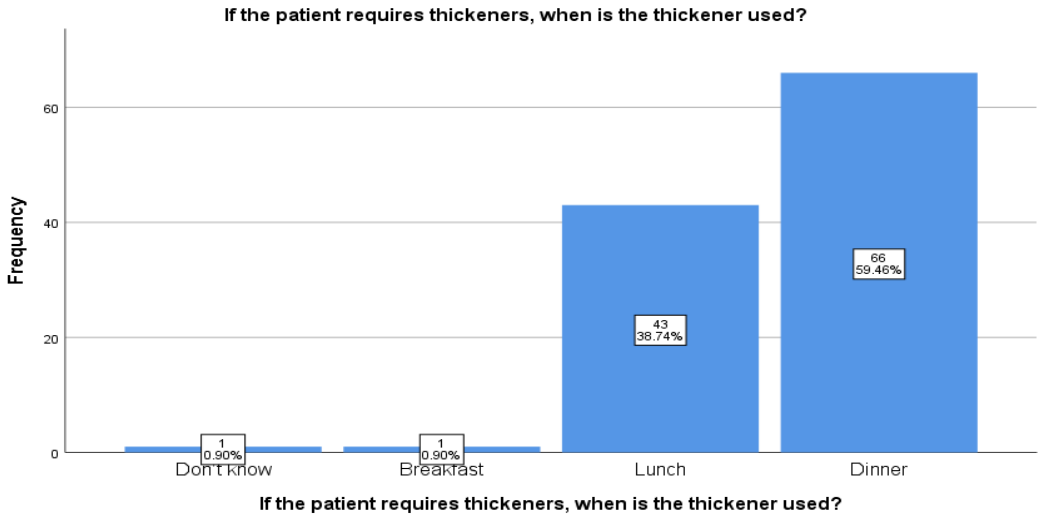

Figure 11

Figure 12 shows that the response of participants regarding Item six was "Based on what do you choose the texture to be prescribed to patients with liquid dysphagia?" and participants responds as Don't know=0 (0%), Palatability=1 (.9%), Patient tolerance=35 (31.5%) and MECV-V test results= 75 (67.6%).

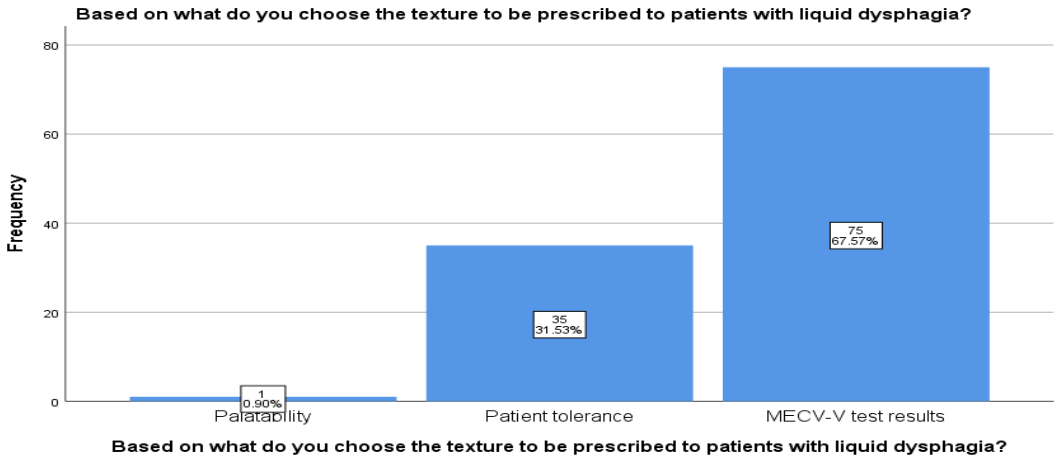

Figure 12

Figure 13 shows that the response of participants regarding item seven, that was "What was the most serious result after witnessing broncho aspiration?' and the results were 0 (0%) participant agreed with Do not know, 9 (8.1%) were select No incidents, 41 (36.9) participants were going with Pneumonia and only 61 (55%) were select correct answer which is death.

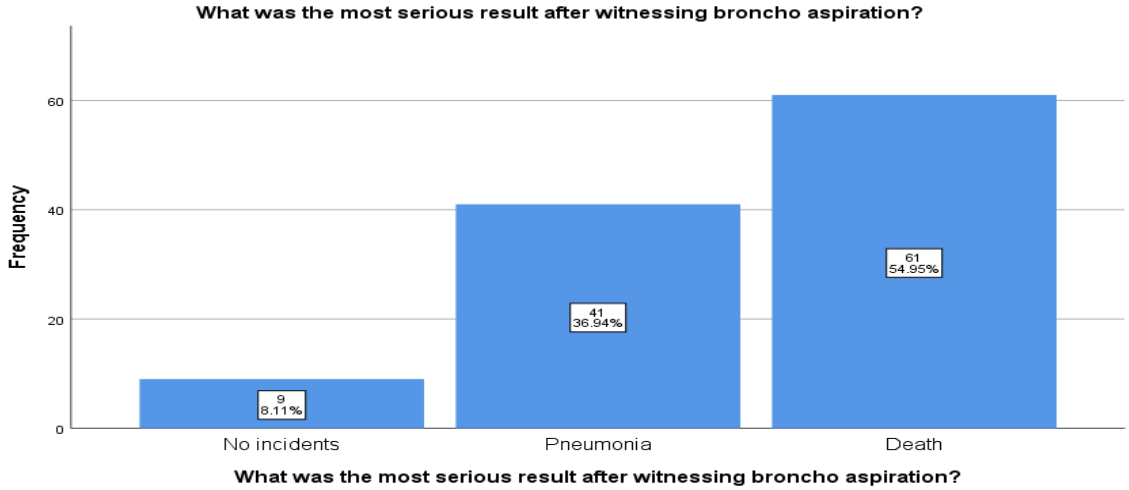

Figure 13

Table 5 shows the frequency percentage of 7 items of regarding practices of nurses working at medical, surgical and gastro ward and results revealed that only 41 % nurses have adequate practices and majority 59% nurses have inadequate practices. Further the observation revealed that the nurses, have different level of education and also working in different department such as ward or critical care unit is varying to each other, such as the observation regarding first item of questionnaire "Do you provide straws or syringes for the administration of liquid to patients with liquid dysphagia?" and results revealed that the 47 (42.3%) were go with yes and 64 (57.7%) select no but the appropriate answer is no. Item two was "Do you adjust the position of a patient with liquid dysphagia before eating?" and participants responds as 35 (31.4%) were go with yes and 76 (68.6%) were respond as yes. In the response of item three which is "Do you inform family members about preventive and broncho aspiration measures?" 47 (42.3%) were select yes and 64 (57.7%) were respond as no. Item four was "Have you witnessed a broncho aspiration?" and majority of participant responds as 58 (52.3%) as yes and 53 (47.7%) were go with no. In the response of item five, that was "Is the EAT-10 test performed at your center?" and the results were 42 (37.2%) participants agreed with yes and 69 (62.8%) respond as no. Item six was "Is the MEDCV-V test performed at your center?" and participants responds as 44 (42.3%) and 67 (57.7%) were respond as no. In the response of item seven, that was "Are subsequent checks carried out?' and the results were 47 (42.3%) participants agreed with yes and 64 (57.7%) were select no.

Practices regarding the management of dysphagia

Table 5

Sr. no	Practices regarding the management of dysphagia	f% Yes	f% No
1	Do you provide straws or syringes for the administration of liquid to patients with liquid dysphagia?	47 (42.3%)	64 (57.7%)
2	Do you adjust the position of a patient with liquid dysphagia before eating?	35 (31.4%)	76 (68.6%)
3	Do you inform family members about preventive and broncho aspiration measures?	47 (42.3%)	64 (57.7%)
4	Have you witnessed a broncho aspiration?	58 (52.3%)	53 (47.7%)
5	Is the EAT-10 test performed at your center?	42 (37.2%)	69 (62.8%)
6	Is the MEDCV-V test performed at your center?	44 (42.3%)	67 (57.7%)
7	Are subsequent checks carried out?	47 (42.3%)	64 (57.7%)

Figure 14 shows that the response of participants regarding item one of questionnaire "Do you provide straws or syringes for the administration of liquid to patients with liquid dysphagia?" and results revealed that the 47 (42.3%) were go with yes and 64 (57.7%) select no but the appropriate answer is no.

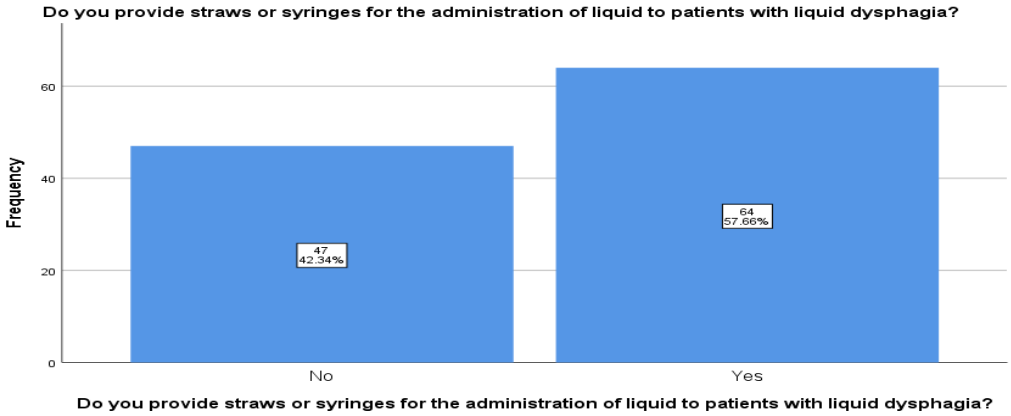

Figure 14

Figure 15 shows that the response of participants regarding Item two was "Do you adjust the position of a patient with liquid dysphagia before eating?" and participants responds as 35 (31.4%) were go with yes and 76 (68.6%) were respond as yes.

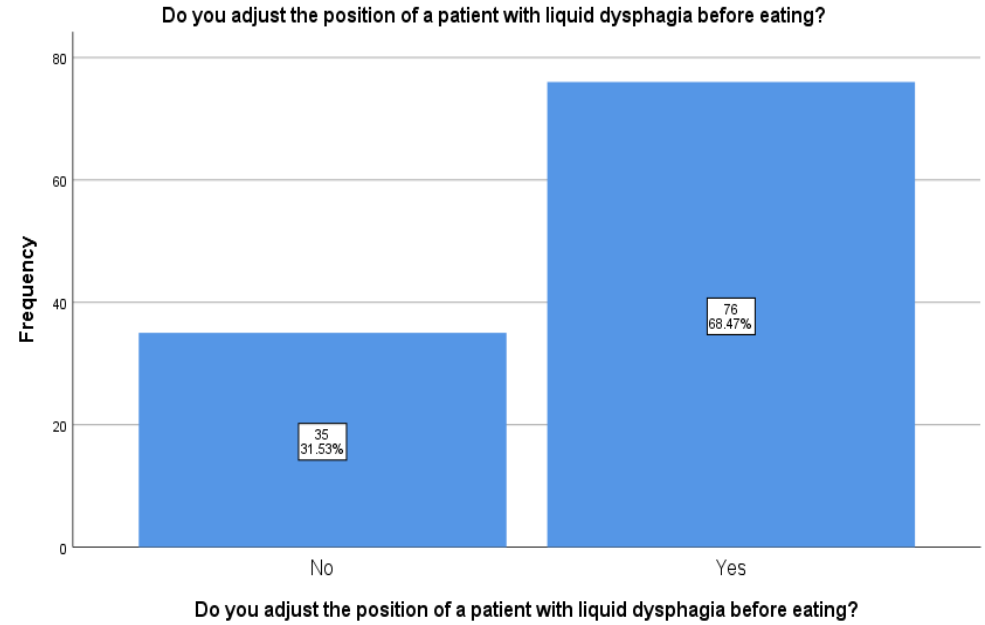

Figure 15

Figure 16 shows that the response of participants regarding item three which is "Do you inform family members about preventive and broncho aspiration measures?" 47 (42.3%) were select yes and 64 (57.7%) were respond as no.

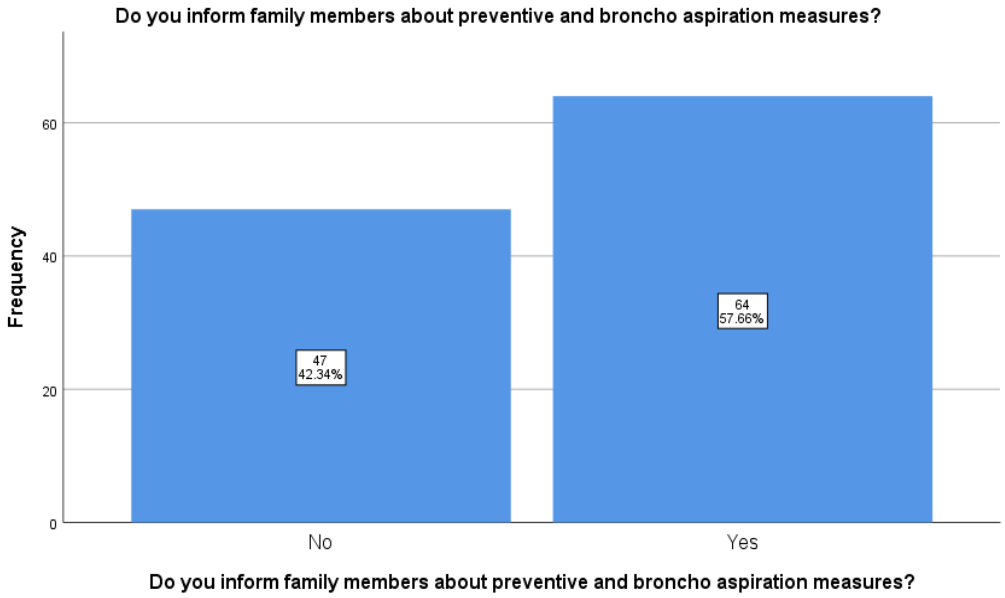

Figure 16

Figure 17 shows that the response of participants regarding Item four was "Have you witnessed a broncho aspiration?" and majority of participant responds as 58 (52.3%) as yes and 53 (47.7%) were go with no.

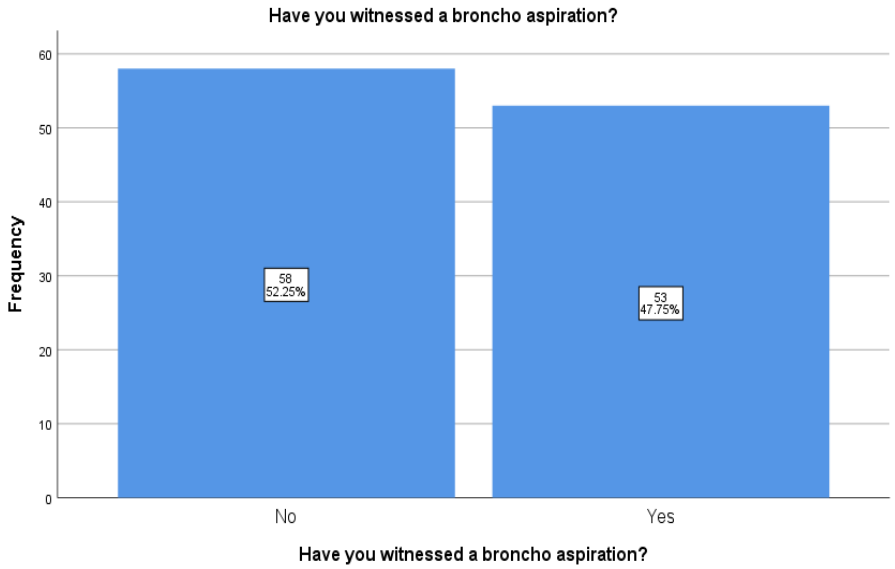

Figure 17

Figure 18 shows that the response of participants regarding In the response of item five, that was "Is the EAT-10 test performed at your center?" and the results were 42 (37.2%) participants agreed with yes and 69 (62.8%) respond as no.

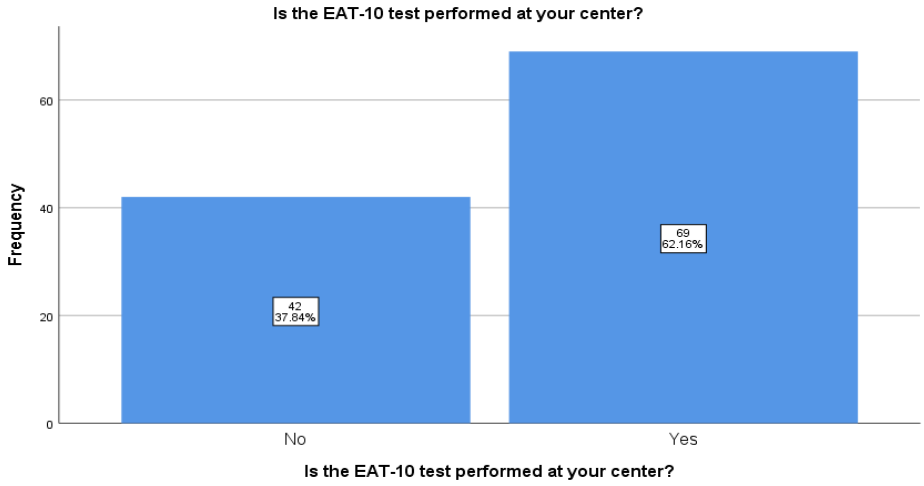

Figure 18

Figure 19 shows that the response of participants regarding Item six was "Is the MEDCV-V test performed at your center?" and participants responds as 44 (42.3%) and 67 (57.7%) were respond as no.

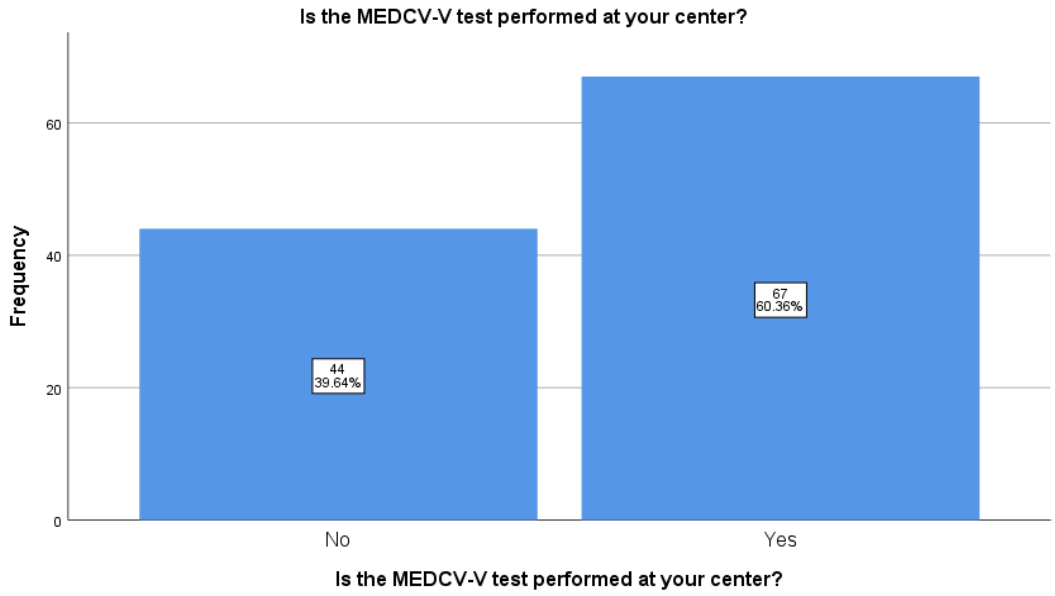

Figure 19

Figure 20 shows that the response of participants regarding In the response of item seven, that was "Are subsequent checks carried out?' and the results were 47 (42.3%) participants agreed with yes and 64 (57.7%) were select no.

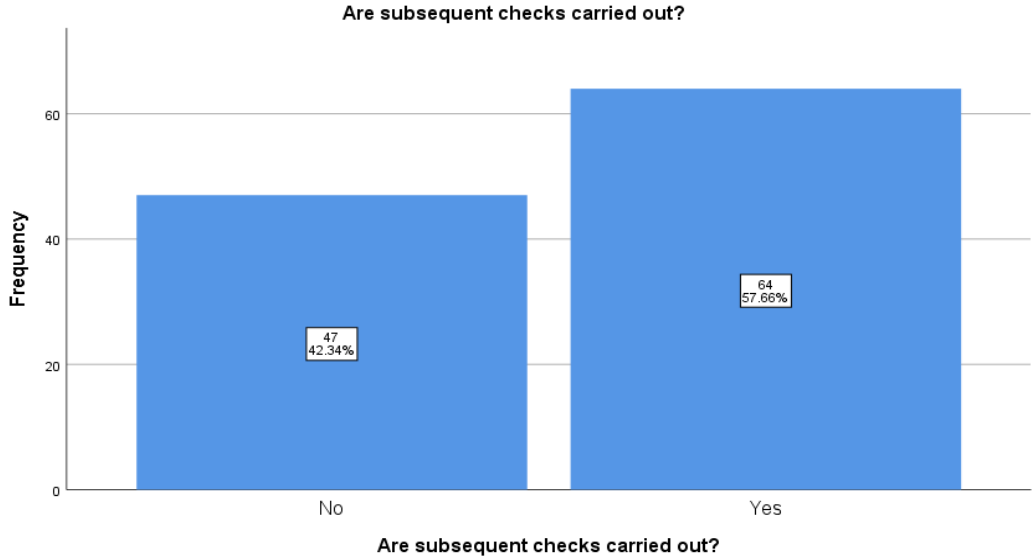

Figure 20

CHAPTER V
DISCUSSION

This paper conducted among 111 nurses working at tertiary care hospital to evaluate the nurse's knowledge and practices regarding the management of dysphagic patients at medical, surgical and gastro ward and results revealed that only (52) 47 % nurses have good knowledge and majority (59) 53% nurses have poor knowledge. Further the practices of nurses regarding dysphagia management and results revealed that 41 % nurses have adequate practices and majority 59% nurses have inadequate practices.

In the study published by Far pour et al. in 2019 (Farpour et al., 2019), it was observed that 96.82% of the health personnel interviewed knew the definition of dysphagia as a swallowing disorder. This value is higher than that reported in our study (34.2%). The aforementioned study was carried out in three university hospitals in three major cities in Iran, so the sample consisted of professionals from three large hospitals, whereas our sample was more dispersed because the professionals surveyed were carrying out their work throughout the national territory, that presents differences in the health system and in the protocols for the management of patients with dysphagia.

The lack of knowledge of the term dysphagia can lead to unjustified practices in these patients, such as the use of fasts or the prohibition of fluid intake, or to indecision about what approach to choose, thus increasing the negative consequences of dysphagia (Carrión et al., 2015).

Although the data on the prevalence of dysphagia reported in the introduction to this article indicated a very high value in the institutionalized elderly population as well as in patients with different neurological diseases, the percentage of health personnel interviewed, working in Neurology departments, who knew the definition of dysphagia was close to 50%, and that of professionals working in health centers was 16.7%. However, the percentage of professionals working in units such as the gastro department was high, possibly due to the fact that the lack of an adequate diagnosis makes patients go to the Emergency department more often to be treated for the negative consequences of dysphagia

The early diagnosis of dysphagia helps healthcare professionals to direct care to minimize its risks and consequences. The results obtained showed that only 20.8% of the subjects in our study stated that the EAT-10 dysphagia screening test was performed in their center, this value being very close (24.1%) to the percentage of participants who stated that the MECV-V scanning method was performed. These figures are lower than those reported by Farpour et al., who concluded that between 49.9% and 52.2% of the participants in their study had used a method to evaluate or treat dysphagia (Carrión et al., 2015). These tests should be performed on the entire population at risk, so a higher percentage than that reported in our study (69%) for EAT-10 and (67%) for MECV-V.

In the review carried out by Hines et al., it was shown that the detection of dysphagia by nurses improves the management of patients with dysphagia (Hines et al., 2011). In this study, a high percentage of nurses declared to conduct the tests, which can improve the approach to these patients.

Thickeners help achieve the texture or viscosity that allows a safe swallowing (I. J. García et al., 2015). The respondents used thickeners in all liquids, and the texture was chosen in relation to the tolerance of the patient, without carrying out an adequate diagnostic test (MECV-V).

Among the recommendations for the management of patients with dysphagia are postural considerations (Ballesteros & Palazuelo, 2017). A high percentage of professionals' report that they adjusted the position of patients with dysphagia before eating, and this percentage was higher for ANCTs and nurses. This may be due to the fact that these professionals provide bedside care, which includes the effective and efficient management of the patient's oral route while eating. Sometimes, these professionals are in charge of feeding patients who cannot eat autonomously.

In the protocol published by García et al. in 2018, entitled "Protocol for diagnosis and treatment of oropharyngeal dysphagia in the elderly", it can be seen how the use of straw and syringes should be avoided in elderly patients with dysphagia to prevent aspiration during fluid intake. Our results suggested that a higher percentage of ANCTs provided straws and syringes compared to the nursing staff (E. S. García, Olaya-Loor, & Mateos-Nozal, 2018).

Tracheobronchial aspirations can cause frequent respiratory infections. Up to 50% of patients with dysphagia can develop aspiration pneumonia, with an associated mortality of up to 50% (Barroso, 2009). Our results show that 76.4% of the subjects reported having witnessed an episode of aspiration, but 18.5% of them reported that this episode did not cause any incidence. It should not be forgotten that silent aspiration is one of the main complications that patients present. In this study, 44.4% of the respondents reported that aspiration resulted in pneumonia, and 14.5% of them that this pneumonia led to the death of the patient. If we take into account the relative frequencies, that is, with respect to the total number of aspirations observed, 58.1% of them resulted in pneumonia, and 32.6% of these pneumonia occurrences resulted in the death of the patient.

The lack of training of health professionals who provide their services to patients at risk of or with oropharyngeal dysphagia can lead to a delay in patients' diagnosis and increase the complications derived from this condition, which is an important barrier to the management of these patients (Tan, Gan, Hum, & Lee, 2018). Several authors have studied the knowledge possessed by health professionals, mainly nurses, finding that this knowledge was moderate and that specific training and experience in caring for patients with dysphagia provided new and better knowledge (Abu-Snieneh & Saleh, 2018).

Limitations: A few limitations should be tended to. To start with, use of comfort testing limits the speculation of these outcomes because of potential choice predisposition and the representativeness of test. Second, we utilized took on survey to gather information dysphagia management among registered nurses working in tertiary consideration in the earlier year, a few nurses may not recollect precisely because of the long range of time, which might prompt review predisposition. Last, this examination is a cross-sectional examination; it limits clarifications of the causal connection knowledge and practice.

Implication of the study: According to this paper, management of dysphagic patients should pay attention to this phenomenon and take effective measures to prevent the prevalence. Secondly, nurses had a low level of knowledge and inadequate practices regarding the management of dysphagia among elderly patients; therefore, nursing managers should establish a fair and reasonable compensation system to improve.

Conclusion

The results of the present study showed that the participants had a moderate/low knowledge practice of the definition, diagnosis, and clinical management of liquid dysphagia and inadequate. So necessary tools must be provided for their training in this field. This training must be multidisciplinary and should be directed to all professionals who provide healthcare to patients with liquid dysphagia.

This study shows the need for the implementation of guidelines and/or protocols for the management of patients with dysphagia, with the aim of promoting the training of different health professionals. In addition, it highlights the training needs of these professionals with respect to dysphagia to improve their approach to patients with this condition and allow them to identify the signs of dysphagia, so to refer patients to a qualified specialist.

GANTT CHART

Activity	Months					
	01	02	03	04	05	06
Data Collection						
Data analysis and interpretation						
Dissemination of findings and Publication						
Thesis presentation and submission						

CONSENT FORM

This study is being done by **NIMRA JAMIL** in the supervision of respected preceptor, department of Lahore school of nursing at the university of Lahore. the purpose of this study is **"KNOWLEDGE AND PRACTICES OF NURSES REGARDING THE MANAGEMENT OF ELDERLY PATIENT WITH DYSPHAGIA AT TERTIARY CARE HOSPITAL LAHORE"** This study is only for the academic purpose and the personal identity will be kept confidential. thank for your valuable time and opinion.

Risks and Discomforts

there is no risk of harm or harm from this research

Potential Benefits

You will be given the opportunity to participate in important research

Protection of Confidentiality

We will do everything we can to protect your privacy. Your identity will not be revealed in any publication resulting from this study.

Voluntary Participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate any time. You will not be penalized in any way should you decide not you participate or to withdraw from this study.

CONSENT

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Participant's Signature _____ Date: _____

A copy of this consent form should be given to the participant**snts**

تحقیق میں شرکت کا دعوت نامہ

عنوان: یہ تحقیق نمرہ جمیل لاہور یونیورسٹی کے لاہور سکول آف نرسنگ کے شعبہ کے معزز پریسپٹٹر کی نگرانی میں کر رہی ہے۔ اس مطالعہ کا مقصد ہے "ٹرٹیری کیئر ہسپتال لاہور میں Dysphagia کے بزرگ مریضوں کی دیکھ بھال کے بارے میں نرسوں کا علم اور مہارت کا اندازہ لگانا" یہ تحقیق صرف تعلیمی مقصد کے لیے ہے اور ذاتی شناخت کو خفیہ رکھا جائے گا۔ آپ کے قیمتی وقت اور رائے کا شکریہ۔

اس تحقیق سے کسی قسم کے نقصان یا تکلیف کا اندیشہ نہیں ہے :نقصانات اور تکلیف

:ممکنہ فوائد آپکو ایک اہم تحقیق میں حصہ لینے کا موقعہ دیا جائے گا۔

:رازداری کا تحفظ ہم آپ کی معلومات کے تحفظ کے لیے وہ سب کچھ کریں گے جو ہم کر سکتے ہیں۔ تحقیق کے متعلق اکٹھی کیی گیی تمام معلومات کو انتہا ئی خفیہ رکھا جاے گا۔ ڈیٹا انٹری اور تجزیے کے دوران آپ کے متعلق وہ تمام معلومات جن سے آپ کی شناخت ہو سکتی ہو کو ختم کر دیا جاے گا۔ اس تحقیق کے نتیجے میں شائع ہونے والی کسی بھی اشاعت میں آپ کی شناخت کو ظاہر نہیں کیا جاے گا۔

:رضاکارانہ شمولیت اس تحقیقی مطالعہ میں آپ کی شرکت رضاکارانہ ہے۔ آپ کو شرکت نہ کرنے اور کسی بھی

وقت بغیر وجہ بتانے اس تحقیق میں شمولیت کو چھوڑنے کا اختیار ہے۔ شرکت نہ کرنے یا اس میں شمولیت کو چھوڑنے کی صورت میں آپ کے خلاف کوئی کاروایی نہیں کی جاے گی

درجذیل معلومات تحقیق میں شامل ہونے والوں کے لیے پڑھیں اور ان کا جواب دیے گیے خانوں میں درج کریں

☐ میں نے معلوماتی شیٹ جو کہ تحقیق کی وضاحت کر رہی ہے کو سمجھ لیا ہےاورمجھے تحقیق کے سوالات کرنے کا موقع دیا گیا تھا۔

☐ میں سمجھ گیا/گیی ہوں کہ میری شرکت رضاکارانہ ہے اور یہ کہ میں کسی بھی وقت اپنا ارادہ بدل سکتا/سکتی ہوں اور تحقیق سے دستبردار ہو سکتا/سکتی

☐ میں سمجھ گیا/گیی ہوں کہ میرے جوابات خفیہ رکھے جاءیں گے۔ میں محقیقین کو اس بات کی اجازت دیتا/دیتی ہوں کے وہ جوابات کو جانچ سکیں۔

☐ میں سممجھ گیا/گی ہوں کے معلومات میرے نام کے بجاے نمبر کی صورت میں محفوظ کی جائیں گی۔ تا کہ میں نتائج کی اشاعت کے دوران کسی بھی طرح سے شناخت نہ کیا جا سکوں۔ میں اس بات سے رضامند ہوں کے جو معلومات مجھ سے لی جائیں گی وہ تحقیق میں استعمال ہوں گی۔

☐ میں اوپر بتایی گی تحقیق میں شامل ہونے کے لیے رضامند ہوں اور محقیقین کو اپنا پتہ تبدیل ہونے کی صورت میں مطلع کروں گا/گی۔

رضا مندی:**میں نے یہ اجازت نامہ پڑھا ہے اور مجھے سوال پوچھنے کا موقع دیا گیا ہے۔ میں اس سٹڈی میں شرکت کے راضی ہوں۔**

شرکت کنندہ کا نام _____ دستخط _____ تاریخ _____

اجازت لینے والے کا نام _____ دستخط _____ تاریخ _____

اس اجازت نامہ کی ایک نقل آپکو دی جانی چاہیے۔

References:

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LAHORE SCHOOL OF NURSING
THE UNIVERSITY OG LAHORE
QUESTIONNAIRE

Dear participants,
this study is being done by **NIMRA JAMIL** in the supervision of respected preceptor, department of Lahore school of nursing at the university of Lahore. the purpose of this study is **"KNOWLEDGE AND PRACTICES OF NURSES REGARDING THE MANAGEMENT OF ELDERLY PATIENT WITH DYSPHAGIA AT TERTIARY CARE HOSPITAL LAHORE"** This study is only for the academic purpose and the personal identity will be kept confidential. thank for your valuable time and opinion.

Section A: Demographic information: -

Respond by circling (O) or ticking (✔) the most appropriate responses

Age	☐ 21-30 years ☐ 31-40 years ☐ 41-50 years ☐ More then 50	Gender	☐ Male ☐ Female
Educational status	☐ Diploma in midwifery ☐ Diploma in general nursing ☐ Post RN BSN ☐ Generic BSN	Marital status	☐ Married ☐ Unmarried ☐ Divorced/ separation
Experience:	☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ More then 15	Department	☐ Medical ☐ Surgical ☐ Gastro ward
Number of elderly patients admitted in ward at the moment?			☐ _____

Section B: Knowledge and practice regarding the management of dysphagia:

Sr. no	**Knowledge regarding the management of dysphagia**	**a**	**b**	**c**	**d**
1	What is the definition of dysphagia?	Don't know	Unavailability of food	Loss of appetite	Impaired swallowing
2	What approach would you take with a patient with liquid dysphagia?	Don't know	No fluid intake	adaptation of the diet	Dysphagia test
3	When are these Dysphagia tests performed?	Do not know	Upon admission	On request	Risk of dysphagia
4	Who carries out these tests?	Do not know	Health professionals	Speech therapist	Nutritionist
5	If the patient requires thickeners, when is the thickener used?	Do not know	Breakfast	Lunch	Dinner
6	Based on what do you choose the texture to be prescribed to patients with liquid dysphagia?	Do not know	Palatability	Patient tolerance	MECV-V test results
7	What was the most serious result after witnessing broncho aspiration?	Do not know	No incidents	Pneumonia	Death

Practices regarding the management of dysphagia
No=0, Yes=1

Sr. no	Practices regarding the management of dysphagia		
1	Do you provide straws or syringes for the administration of liquid to patients with liquid dysphagia?	No	Yes
2	Do you adjust the position of a patient with liquid dysphagia before eating?	No	Yes
3	Do you inform family members about preventive and broncho aspiration measures?	No	Yes
4	Have you witnessed a broncho aspiration?	No	Yes
5	Is the EAT-10 test performed at your center?	No	Yes
6	Is the MEDCV-V test performed at your center?	No	Yes
7	Are subsequent checks carried out?	No	Yes

(Sánchez-Sánchez et al., 2021).

Knowledge Total Score = 7
Good Knowledge Score = 4 and above
Poor knowledge Score = 3 and less
Practices Total Score = 7
Adequate Practices Score = 4 and above (For practices item suitable option is 'Yes'**)**
Inadequate Practices Score = 3 and less
Knowledge questions Keys:

1. Impaired swallowing
2. Dysphagia test
3. Risk of dysphagia
4. Nutritionist
5. Dinner
6. MECV-V test results
7. Death