Educational video for nursing students of the insertion of the nasogastric tube

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Nursing professionals are faced with tough challenges when it comes to learning and understanding skills because their profession requires a lot of precision. Lacking a clear understanding of a skill is equivalent to putting a person's life in great danger. One such skill that requires precision is the insertion of nasogastric tubing into the nasal cavity of patients suffering from complications that cannot allow them to ingest solid food orally. The tubing works in two ways because it also disposes of gastric or toxic fluids out of the stomach. Inserting the tube needs the professional to have a high skill level because it is a very crucial procedure. Wrongful insertion of the tube by a nurse can lead to a complication such an inserting the tube into the tracheal passage, thus resulting in breathing problems.

This thesis plan is for educational and learning purposes for the nursing students to teach them about nasogastric tube insertion and removal while following a clean and safe procedure with minimal errors. The goal is to make the nursing students get a better understanding of the concepts using a more suitable teaching method.

The purpose of this thesis is to provide theoretical knowledge for nursing students of safe insertion and removal of a nasogastric tube.

The aim of this thesis is to create an instructional guidance video for nursing students on the process of inserting and removing a nasogastric tube.

Keywords: Nasogastric tube, Insertion, Nursing students, Educational video

Contents

1 Introduction

In the nursing field knowledge is paramount, be it theoretical, visual, or practical. Nutrition occupies a core aspect of the health of individuals, oral consumption of food following proper nutrition will lead to a better quality of life and health. Some health conditions interfere with oral food consumption, they include esophagitis, burns, dysphagia, degenerative neurological disorder, pharyngitis, bulbar palsy, surgery, and gastrointestinal cancers (Groundström, Heino, & Halttunen, 2014). Patients suffering from these conditions may have deteriorating health because they are unable to keep up with proper nutrition, the solution is to improve their nutrition status using alternative methods of nutrition. Medically approved methods for improving the nutritional status are done through enteral feeding, which is administered through nasogastric tube. (Irving, Rempel, Lyman, Seville, Northington & Guenter, 2018.)

Nasogastric tube is usually very flexible it is inserted through the nostrils to nasal passage down nasopharynx then to the stomach. It requires well specialized procedure of insertion. In relation to the insertion, once the procedure has been done, it's recommended to confirm with an x-ray (A.G. Perry, P.A Potter & Ostendorf, 2014).

Research indicates that nursing students are more likely to understand concepts taught following a multi-media design than they are likely to understand traditional models of teaching (Sweeny, 2017). Using these videos in teaching helps to develop a realistic environment that exposes students to real-life situations. Videos provide a step-by-step visual that puts the theory into a practical perspective. A student who learns from videos will have more confidence than a student who only learns from written material when it comes to putting the information into practice. A combination of visual and audio teaching programs helps students understand clearly and they are less likely to forget this mode of teaching in comparison to theoretical teaching methods that have students learning only from written material (Hakkarainen & Kumpulainen, 2011). Teaching nursing students on how to use the nasogastric tubing using video programs will help them become better at doing this and give them an overview of real-life situation (Giuseppe & Laura, 2016).

Assessment of the effectiveness a video-based program would have on increasing the knowledge base and skill level of nursing students, the assessment will also compare the previous teaching methods to the use of video-based programs and determine which method has a greater impact on increasing the skill level of nursing students (Irving et al., 2018).

The purpose of this thesis is to create an easy step by step learning video for English speaking nursing students. It provides theoretical knowledge for nursing students of safe insertion and removal of a nasogastric tube.

The aim of this thesis is to create an instructional guidance video for nursing students on the process of inserting and removing a nasogastric tube.

The general objective of this thesis is to assess the existing methods used to teach nursing students on the use of nasogastric tubes. This is aimed at understanding the current practice level of nurses when it comes to using tubes for nutritional feeding. After the assessment, it seeks to determine the effectiveness of those methods and the skill level imparted in the students, and whether it can help them be ready to undertake real cases.

The thesis seeks to help teaching programs in the nursing field and whether they prepare nursing students to face real-life situations in their fields of practice. Theory learning as per course materials is important in increasing the knowledge base of students, but when it is combined with practical learning the results are better.

2 Theoretical background

2.1 Nasogastric tube

A nasogastric tube is made of plastic, rubber or silicone. It is inserted into a patient's nasal or oral passage to administer or remove substances from the stomach. (Groundström et al., 2014.)

The nasogastric tube is inserted into the body of the patient through the nose. The tube passes through the gastrointestinal tract into the stomach. After insertion, nursing professionals use it to administer drugs and food artificially for the while that the patient is unable to orally consume on their own. In some cases, nasogastric tube can be used to decompress stomach from gastric content such as toxic substances. (Eriksson, Isola, Kyngäs, Leino-Kilpi, Lindström, Paavilainen, Pietilä, Salanterä, Vehviläinen-Julkunen & Åstedt-Kurki, 2012.) Nursing professionals use this tube to examine the stomach by extracting samples then studying them, it helps them in developing nutritional supplements and drug administration. The tubes come in different shapes and sizes depending on their use. (Hakkarainen & Kumpulainen, 2011.) Before the procedure is started, the patient needs to be aware of what is going to happen. The patient needs to be informed on why the procedure is required, the implications of the procedure and any possible consequences that may occur. (Hakkarainen & Kumpulainen, 2011.)

2.2 Insertion of nasogastric tube

Insertion is a process or act of inserting something into the nose for example. It can also have a different meaning. Insertion can also mean something that is inserted. For example, the bone that's inserts. (Marriam-Webster, 2020.)

The process of inserting the tube is not easy and it should follow a step-by-step procedure for the best results and minimal complications. The nurses need to wash and disinfect the hands and wear clean protective gloves before commencing (Ford & Park, 2018). The length, size, and type of tube are determined before proceeding, mostly tubes are marked from the factory to help the nurse have an easier time. The patient is tilted upwards from a lying position then the tube is inserted slowly (Groundström et al., 2014). This process is done by inserting the tube up the nose, toward the pharynx and then the tip is directed in a downward manner so that it can enter the gastrointestinal tract (Irving et al., 2018). During this process, the patient is required to swallow water, and this Nasogastric tube goes gently through the oesophagus towards the stomach.

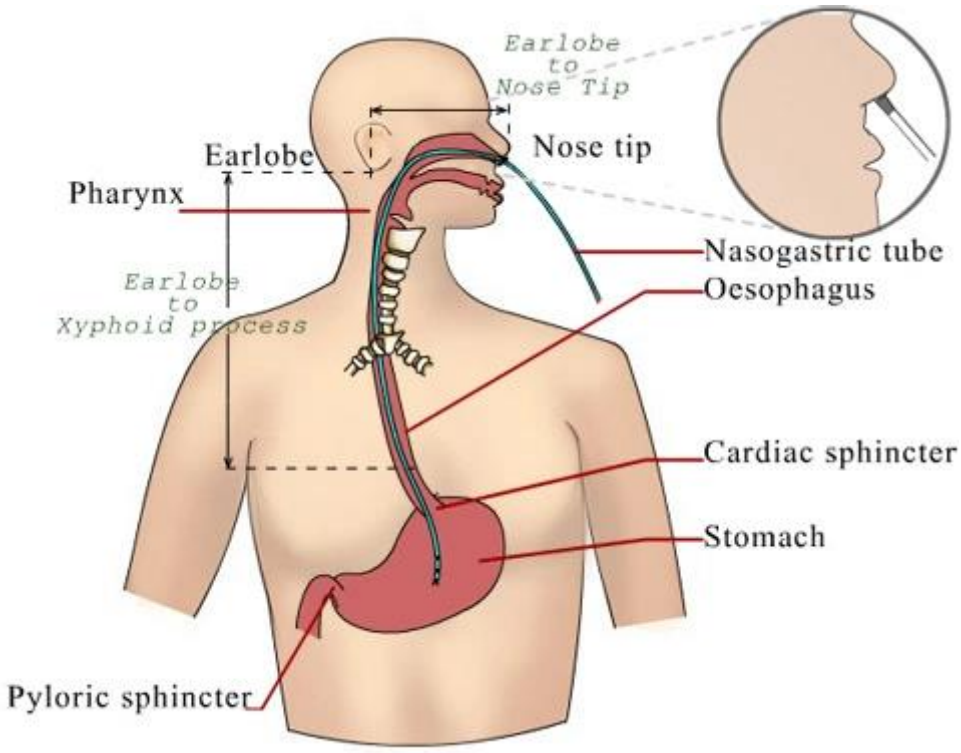

Figure 1 Insertion of a nasogastric tube source: Medically Speaking

The insertion of the tube is done using combined efforts by the health professionals and the patient. After the insertion, the patient is closely monitored to ensure no complications arise

from the procedure especially if the tube was inserted into the air passage. The position of the tube is verified using an x-ray, and by injecting 30ml of air then auscultating the abdomen to hear a whoosh sound. Lastly, aspiration of a small amount of gastric content to check the PH, colour, and consistency (Eriksson et al., 2012). The markings on the tube should rest at the entry of the nostril after the insertion, if this is not the case then the tube may not be correctly placed so it must be attached to the skin (Jeffries, Ratoni, Roberts, Stevens, Winskill, Cichero & Kelly, 2016).

2.3 Removal of nasogastric tube

Removal of the nasogastric tube is not as complex as the insertion process; it happens quickly and takes a very short time. The patient should be informed of what is happening so that they may prepare themselves. Clean gloves are mandatory for the person removing the tube. Before removing the nasogastric tube, the tube should be flushed with the 10ml of normal saline solution to ensure that the tube doesn't contain stomach contents which could irritate the tissue during removal. The tapes used to attach the tube to the body are first removed to let the tube loose (Groundström et al., 2014). Then the tube is pulled out slowly from the nasal cavity as the patient exhales. After the removal, clean swabs are used to clean the nose and they are discharged together with the tubing (Groundström et al., 2014).

2.4 Nurses responsibility concerning nasogastric tubing

Performing nasogastric tubing requires nurses to have knowledge and skills to prevent complications that may arise after tubing (Groundström et al., 2014). The responsibilities of intervention in the procedure include tube insertion, assessing patient status, checking fluids, checking weight, tube maintenance, and nutrition management (Irving et al, 2018). Nurses need to have a high skill level to enable them to determine appropriate tube sizes, tube position, tube securing, tube patency, determine the amount and type of liquid food then assess intestinal actions (Korhonen, Kaakinen, Mäkelä & Miettinen, 2016). These skills are important to prevent the occurrence of complications caused by the nasogastric tube. The complications include wrong positioning of the tube in the respiratory tract, at other times the tube may enter the brain from the nasal cavity leading to brain damage and also perforations caused by the tube in the gastric tract (Irving et al., 2018). Adequate knowledge is therefore needed in the performance of nasogastric tubing.

2.5 Importance of an educational video

An educational video comes from an idea and the realisation of it is a production process. Educational video is a video that presents the material of the topic in the form of a video. The format of the educational video may vary, and it can come in different forms, for

example it can be a teacher talking to the camera or it can be anyone presenting a topic and giving a step-by-step guidance. (Michael O'Donoghue, 2010.)

An educational video is an educational content-delivery tool used for learning purposes. Videos can be paused or forwarded depending on the student's grasping capabilities making them very efficient teaching materials (Tomáš & Seidel, 2013). Unlike a teacher who cannot repeat a concept multiple times because of time restrictions, a video is a very reliable and convenient learning material (Hakkarainen & Kumpulainen, 2011). An instructor can develop a teaching video where they teach concepts then use the video to provide instructions to the students, the students can use these videos for learning at any time, any location depending on their convenience. Videos have no expiry date and can be used to store the learning instructions for an even longer time for future references (Groundström et al., 2014). In addition to this, students can also outsource for more learning videos from the internet to supplement their class materials (Jeffries et al., 2016). It is not easy to be distracted from a video, but it is very easy to lose concentration in wordings because of the boring nature of the traditional model of learning. Videos encompass a variety of interesting material, and the deliverability is better, as it ensures the students get a better understanding of the material and they have more retention as compared to traditional learning (Tomáš & Seidel, 2013). Video programs can also be enhanced for a better effect on the students, this can be done by increasing the engagement of the learning instructions. The most effective videos are those that pay attention to the background and the audio components of the video, it should also have clear visuals and steady images (Morel & Cushman, 2015). Learning instructions should be organized neatly in a progressive way that will allow students to understand the instructions progressively.

Figure 2 Sample of an educational teaching video. Source: Temple University

The human brain only pays attention for a very short time, videos should, therefore, be brief and precise, they should not be extremely long in such a way that students get tired watching and learning, in this manner, students can go through the videos over and over again until they develop a better understanding of the concepts, very long videos discourage students from revising or reviewing them. Videos that are engaging by having questions that the students are supposed to answer trigger students into paying more attention to every detail of the video, the questions will make them review the videos time and again that they may grasp all the important information that will help them in handling the questions in the video. (Morel & Cushman, 2015.)

2.6 Use of teaching video in nursing education

Nursing students refers to students who undergo trainings in the hospitals and nursing school and they goal is to become a nurse. (Dictionary, 2020).

Research shows that nursing students benefit from exposure to simulation situations both when learning simple clinical skills, and when learning complex clinical skills. (Good, 2003.) All kind of teaching, that uses videos as an educational tool provides a better visual demonstration of clinical skills in a simulated setting. (Cardoso et al., 2012; Hansen, 2011.) This mode of learning allows students to experience the performance of the skill by linking classroom (face-to-face) learning to clinical practice. (Duncan et al., 2013; Holland et al., 2013.)

Ensuring that every nurse has high level of knowledge and clinical skills may rise patient safety, decrease healthcare costs, mortality rates and patient morbidity. (Hibbert et al., 2013; Holland et al., 2013; Koeniger-Donohue, 2008.) Based on that, the use of videos for teaching and learning purposes has a bright future. According to the research, the main benefits of the use of videos is effectiveness. Studies show that the use of videos as a learning method is more effective especially for advanced clinical skills comparing it to classroom teaching. Use of videos has been found as beneficial in terms of skill possession as well as student gratification (Cardoso et al., 2012; Kelly et al., 2009; Lee et al., 2007; McKinney and Page, 2009).

A lot of studies have been done to test clinical nursing skills to evaluate the effectiveness of the videos and the results show that this particular method is superior in ensuring high-performance outcomes, student confidence, and satisfaction compared to traditional methods used in nursing education (Hibbert et al., 2013.) Students perceived videos as a useful teaching method and a good preparation method for professional practice (Holland et al.,

2013), choosing this teaching method for its flexibility, self-management, and repetition (Barratt, 2010; Kelly et al., 2009).

Based on various studies, it has been proved that the use of videos as educational material helps achieve good nursing skills. The main advantage of videos is that they enable a visual representation of clinical care situations viewed safely in a controlled environment (Cardoso et al., 2012; Williams et al., 2009).

3 Purpose and aim

The purpose of this thesis is to create an easy step by step learning video for English speaking nursing students. It provides theoretical knowledge for nursing students of safe insertion and removal of a nasogastric tube.

The aim of this thesis is to create a high-quality educational video of the insertion and removing of the nasogastric tube for nursing students.

4 Methodology

4.1 The script provides the process of insertion

The video making plan involves several steps in its design process, the steps involved are scripting, describing, and video editing. The script provides the outline for making and formatting the video, it is here that the content will be identified and refined while eliminating any irrelevant material. The preparation of a good video script lays the foundation for the filming process since most aspects are laid out at the script stage (Hakkarainen & Kumpulainen, 2011). It is this script that is developed that will be used in developing the content for the video, without a script the shooting process cannot be done since there will be nothing to shoot. At this stage the venue for the shooting is determined, any challenges that might arise are predetermined and their potential solutions are developed to ensure that nothing will interfere or stall the shooting process (Issa, Schuller, Santacaterina, Shapiro, Wang, Mayer & DaRosa, 2011). All the pieces to be shot are decided at this stage and all other factors are established so that once the shooting commences everything is in order and the work progresses smoothly (Hakkarainen & Kumpulainen, 2011). Appendix 1 tells the list of equipments needed when installing a nasogastric tube and Appendix 2 shows our procedure for the shooting.

The descriptive element as the name suggests, describes everything concerning the video, from the scene choice to the filming aspects. It describes what happens behind the scenes

and what happens in front of the camera (Hakkarainen & Kumpulainen, 2011). All the scene information is described in this phase, starting even before the camera clicks to the end of the entire filming process (Hakkarainen & Kumpulainen, 2011). All this happens in the video description phase, it describes the visual elements that create imagery, and it also describes the audio component and makes sure that these two components go hand in hand toward the development of a finished video product. The description follows a step-by-step order to avoid skipping any aspects that are crucial to the video and might affect the product quality. Video quality is very important in ensuring that students stay focused on the video, and they do not lose concentration along the way. Methods of dealing with background interruptions and noises are devised and detailed in the description phase (Keränen & Penttinen, 2007.)

The editing phase is the last and it is done after the scripting and description phases and after the filming has been completed. The video is edited on multiple fronts depending on how it was scripted (Keränen & Penttinen, 2007.) Several factors may hinder the filming process and lead to the final product being of a lower quality than indicated in the script (Hakkarainen & Kumpulainen, 2011). The editing phase removes all background interruptions such as noises, lighting, and other factors that are edited to improve the image quality, and a balance is established between the visual and audio aspects. During this phase, a lot of discussions are made to ensure the quality of the video is at per with the standards stated in the script. The plan of the video is not rigid and it undergoes multiple reviews to set it in line with the expected standards that will lead to the development of a video that will provide learning instructions to nursing students on the use of nasogastric tubing's in a manner that will make them industry-ready (Issa et al., 2011.)

4.2 Development of instructional video

The teaching video needs to be of very high quality so that students can concentrate easily and grasp the concepts the video teaches them. It makes it more interesting to learn from a high-quality video. The first thing to consider in developing quality is to create a video that reflects a realistic learning environment (Keränen & Penttinen, 2007.) In this case, the video is meant to teach nursing students on the use of nasogastric tubing, the most realistic learning environment would be in a lab or a hospital ward using practical examples such as a doll or a plastic illustration of a human being. This kind of environment gives students the impression of being in a hospital and learning from a practical session. To ensure that the students are not confused by changes in mood, attitude, or other factors, the video follows through in one day so that the conditions are kept constant, this also improves the effectiveness of the video (Hakkarainen & Kumpulainen, 2011).

A high-quality camera with a powerful resolution is used in this case to ensure that the images are of very high quality (Hakkarainen & Kumpulainen, 2011). The camera is placed on

a supporting base to ensure that it remains at the same level throughout the shooting process and that images do not fluctuate due to shakiness. The camera stand also ensures that the person filming does not struggle to find the right angle with the most sufficient lighting (Issa et al., 2011). Artificial lighting from studio equipment is used to create sufficient lighting in the filming process and hence increase the quality of imagery, by using these types of equipment, the filming could be done in any direction with greater ease while still maintaining the visual and audio quality (Keränen & Penttinen, 2007.) Actors in the video stick to particular roles throughout the shooting process because any shift in roles could result in a confusion where the students will not understand whatever is happening, when the human brain is programmed in a particular manner, any attempt to alter this would result in a total collapse of any developments that had been made (Hakkarainen & Kumpulainen, 2011). High video quality is paramount in the creation of a learning video program, especially one that is medical related.

4.3 Evaluation of the usefulness of the video

To evaluate usefulness of the teaching video in Nursing program, we are going to ask feedback from 10 Nursing degree teachers from Laurea university of applied sciences, Tikkurila. Collection of the feedback is going to be done be answering a short 4-5 questions questionnaire. Questionnaires are going to be send to the randomly selected teachers, by email. To ensure the anonymity of the participants the feedback is going to be collected by using the online application program named SurveyLegend. Collecting feedback is completely anonymous. Email is going to contain a link to the questionnaire. After submitting the answers by the teachers, we are the only ones that will be able to see, read and analyse the feedback by login into the survey website.

The purpose of collecting the feedback from the teachers is to prove that educational video is more efficient than learning from the books (Sweeny, 2017.), but also to improve educational system in the future.

Collecting feedback is a part of the development and improvement. The feedback is going to be collected after the implementation of the video to check if we achieve the desired goal. Which, in this case, was to prepare a high-quality educational video of the insertion of the nasogastric tube.

Collected feedback are going to be analysed and used to improve the video if it will be required. Our goal for this video is to present a high-quality educational material that will be accepted by teachers and thus used by nursing teachers in the future as an educational material. By collecting the feedback, we are ready to make any changes to the video to make sure that it meets the teaching requirements.

Questionnaires will consist of the following questions:

1. After watching the video, what are the 3 key points you think we succeeded?
2. Do you think the video meets the teaching requirements? Is it easy to understand and does it provide all the necessary information?
3. After watching the video, do you think, that there is anything that should be improved? Please, give examples of what should be corrected.
4. Why students more likely prefer to watch video materials, rather than read the same information from the book?

The educational video was evaluated based on the feedback from the nursing teachers in Tikkurila. Online application program named SurveyLegend was used to collect the feedback, it was sent through e-mail. It was important to get the feedback because it was based on authors purpose and aims in educational video in insertion and removing of nasogastric tube. In the feedback form there was open-ended questions where the teachers could express themselves freely (Roulston, Baker & Liljestrom, 2001). The main aim for the open questions was that the authors could analyse the feedback and bring out the recurring subject.

5 Educational video: feedback and conclusion

The educational video was evaluated based on the feedback collected from nursing degree teachers from Laurea University of Applied Sciences Tikkurila. The feedback was collected from the teachers, because in this work it was important to receive professional feedback to be able to create a good quality videos that will be used by teachers in the future. Feedback was collected in March 2021. The authors used an online tool known as SurveyLegend, to create the questionnaire form. Due to the Covid-19 current situation and recommendations, feedback was collected in electronic form. Link to the educational video and link to the questionnaire was sent to the recipients by using Microsoft Outlook e-mail. Educational video was saved and shared using Laurea's OneDrive and link to the OneDrive was given in the e-mail. Answering to the survey was voluntary and answers were processed anonymously. The authors asked feedback from 10 respondents, but a total of 6 replied to the sent questionnaire. The length of collecting the feedback was 7 days.

There have been a few suggestions for improving the video. Suggestions for improvements focus on improving the quality of the picture with the instruments, the speed of changing scenes, the arrangement of the instruments on the table, correcting the position of the patient and making audio corrections.

Based on the feedback, the teachers were satisfied with the final product and would love to use it in the future. Feedback from respondents indicates that the video is professional, useful and of good quality.

The questionnaire was composed of four open–ended questions. The recipient had to answer all questions to complete the form. Open–ended questions were chosen purposely in this work because the use of this type of questions allows respondents to include more information, express their feelings, thoughts and have better understanding of the subject. This allows researchers to better access respondents' real feelings on a given issue.

Study shows that open-ended questions allow the respondent to have more freedom while answering the questions, are allowed to express an opinion without being control by the researcher (Foddy, 1993: 127). The advantages of open questions include the ability to discover the answers that provide individuals spontaneously, thus avoiding the bias that may arise from suggesting answers by the addressee (Reja, Manfreda, Hlebec, & Vehovar, 2003).

Collecting information using an open-ended questionnaire has several aims. The main goal is to get detailed answers that answer the asked question. After collecting all the feedbacks, all the answers where analysed and considered when correcting the video.

- The first question in the questionnaire asked to write three positive things that have been achieved in the video. All the recipient agrees that the quality of the video was good, the atmosphere was calm and aseptic was performed in a correct manner. Examples of received feedback: “Good aseptic practices were followed, clear and calm appearance, the length of the video was optimal.”, “Clear and well played video, good design, calm patient nursing care, patient guidance, a good ft between the practice and the theory of nasogastric tube placement.”

- The second question asked if the video meets the teaching requirements, is it easy to understand and does it provide all the necessary information. All the responses received were positive. According to the recipient, the video is professional, of good quality and contains all the necessary information and most importantly could be used by the teacher in the future as the study material. Teachers replied as follow:
  “I think this is well suited for teaching and guidance, the video is easy to understand and contained all the essential information.”, “I think that the video is a very good educational use by small increments. The video is very professional and high quality.”

- In third question recipient was asked if there was something that should be improved and give an example. The responses slightly differed from each other but also had some of the same comments. Inter alia, according to all recipients, the "photo" with

the instrument's changes too quickly, which means that the recipient is not able to read the entire list. The black font in the photo is hardly visible, which makes reading even more difficult. The next comment concerned hand disinfection. Some recipients suggested that it should be emphasized that the disinfection of the hands should last 30 seconds, and the disinfection of the hands should be reminded before the procedure of the removal of the nasogastric tube. The feedback received was as follows: “Maybe you could allow little bit more time for a viewer to read the list of equipment needed in NGT insertion.”, “... 1. The start (so-called start slide) is quite long and there is no sound at all, so the listener feels that there are problems with sounds. In addition, it could briefly mention what the video will teach. 2. An image in which the instruments are presented goes by too quickly, I would give the viewer some time to perceive what is on the table. Could the tools be displayed and named at the same time? 3. I was left wondering why the nurse looked at the patient’s wristband, the information was not told in the video. 4. At the point where the caregiver disinfecting her hands and wears gloves there could be a speech stating that it is important …"

- The fourth question asked why students more likely prefer to watch video materials, rather than read the same information from the book. Everyone agreed that the students are eager to learn by watching video. By making such arguments as: through video it is easier to understand the subject, it gives feeling of a real-life situation, helps in remembering as well produce better learning outcomes. Examples of responses received were as follows. “It gives feeling of a real situation. More easier to understand. Some people remember better with videos. I prefer showing a lot of videos when I am teaching.”, “It is easier to get the idea of the procedure by watching the video instead of only reading. The video should not be too long, and I think that you succeeded in that.”

One day was reserved for filming the instructional video, and the filming took place on Laurea's Tikkurila campus in a nursing class in February 2021. Editing the video took two days, since the video was improved after the evaluation. The final video lasted six minutes and fifty seconds.

The educational video was published on Laurea University of Applied Sciences' YouTube channel, where it will be seen for teaching situations in the future. The educational video is public and visible for everyone to see and use. The address for educational video is: https://youtu.be/RDS4_AITy8w

Improvements for the video after the feedback:

There are various factors which have influenced and led to the changes in educational video. One of those factors was some of the feedback that we got from the teachers. The improvements are as follows:

1. List with equipments- more time has been added to the "list of equipment's-picture."

2. Checking the patient's identity-voice has been added in the part 49 seconds.

3. Text has been added in the part "before starting the procedure."

4. Text has been added "check the patient identification" before removing the nasogastric tube in the end.

Functional thesis seem to have become more common in recent years, especially a lot of educational videos has been made. Nursing education involves a lot of online learning, and the educational videos are a good addition to be included in online materials as well. The purpose of this thesis was to provide theoretical knowledge for nursing students of safe insertion and removal of a nasogastric tube. The aim of this thesis was to create an instructional guidance video for nursing students on the process of inserting and removing a nasogastric tube.

6 Ethical considerations

The National Advisory Board on Social Welfare and Health Care Ethics called ETENE has developed common values, common goals and principles for healthcare professionals. Ethical principles also highlight the fact that everyone working in the healthcare field has the right and obligation to maintain and develop their professional skills. There is no good care without good professionalism. (ETENE, 2001.)

The thesis has been complied with Finnish universities of applied sciences ethical recommendations by following the RCR guidelines (Responsible conduct of research and procedures for handling allegations of misconduct in Finland. Guidelines of the Finnish Advisory Board on Research Integrity, 2012). Conducting research for this thesis different methods has been used to collect data and materials.

The aim of the ethical recommendations for Finnish universities of applied sciences prepared by (RCR guidelines, 2012) is to unify the thesis process, to observe scientific honesty and to raise the quality of the thesis. It is student responsibility to observe those rules and follow the RCG guidelines. When writing a thesis only reliable databases has been used. When doing

the thesis, the articles and knowledge base have been critically evaluated to ensure that they are relevant to the thesis. Studies in Finnish were also used in the thesis. Care was taken in the translation so that the information used are valid for use in the thesis.

The video uses an artificial representation of a person because of various reasons. The insertion of the tube is associated with very many health complications thus using an actual person would be ethically wrong since it would be paramount to put the person at great risk in case anything goes the wrong way (Guenter et al., 2018). The example is used to portray a real-life scenario to the students so that they are prepared to handle real-life situations with ease, therefore, an artificial example is even better since the patient would be still and it would be easier for the instructor to perform the procedure with minimal disturbance (Koskinen, 2017). The students have different levels of understanding, some are quick to grasp and would like the teacher to move at a faster pace, this conflicts with those students that grasps at a slower pace (Koskinen 2017). Students are taught several theory lessons, before undertaking a practical lesson. Using educational video to learn is a way of embracing and moving with technology which makes teaching and learning easier. The video method exposes the students into real situations before they go for simulations (Irving et al., 2018).

7 Reliability

This thesis plan has followed ethical recommendations from Laurea University of Applied Sciences. Only reliable databases have been used in this thesis plan. While doing this thesis plan, the search for the sources used was critically evaluated. The sources are diverse for this thesis plan both international and local sources are used for examples scientific articles, studies, scientific literatures and among others (Groundström et al., 2014). Sources were searched from Laurea Finna databases among others. The aim of this thesis plan is to use researched and reliable sources based on up to date as possible so that we have the most reliable information that is currently available. The references for this thesis plan were marked according to Laurea's thesis instructions. According to Laurea's guideline we will obtain research permit before recording the educational video. There would be assessment from the teachers, and it will be done anonymously, and the feedback will be confidential.

The thesis ensures that the credibility of this thesis plan meets the ethical requirements of the Laurea University of Applied Sciences. The credibility of the sources can be proven since the literature review, the studies, the scientific plan of undertaking the research was well laid out. The researched work that was referenced has been properly cited to ensure that it can be traced. The sources from which the information has been derived are diverse as this gives the thesis a touch of originality that makes it easy to track (Groundström et al., 2014). Most of them can be traced from Laurea Finna databases as well as other websites that exist.

To ensure that the reliability of the study was met, the project is valid as it has followed all the steps that are needed to develop the subject matter. This will be met as the topic of study has been approved by the faculty and has been given a go-ahead ensuring its originality. The research methods are in line with the ethical requirements of the university guidelines and most of the results will remain anonymous. The work is also valid because there has been no similar research or any sources that be traced to have similar results or findings. Its validity has been brought to even a better notable fact of my familiarity with medicine since I have undertaken studies in the topic of nasogastric arrangement and the way the body works.

The topic is transferable because it can be applied by students who are learning the nursing courses that would like to learn how the procedure is done. It is therefore of very well equipped to be one of its kind. The importance surpasses just its application as it can be used in the teaching and examining the understanding of the medical students by their tutor. Therefore, the thesis will be a good reference point.

Reliability is obtained by correlation of scores from the two or more raters on the same construct or sometimes it is the decision of agreement of the judgments of the same raters. When writing the thesis only reliable databases have been used. When doing the thesis, the articles and knowledge base have been critically evaluated to ensure that they are relevant to the thesis. Studies in Finnish were also used in the thesis. Care was taken in the translation so that the information used is valid for use in the thesis.

The dependability is easily proven. It can be depended on in that it has a good narration that has been even translated to other languages. The thesis clearly will of importance to nursing research on nasogastric studies thereafter. Also, it is easy to confirm the sources that the information quoted has been derived from.

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9 Appendices

Appendix 1 Equipment's needed

The necessary equipment's are placed in a tray before the procedure commences, they include;

-Nasogastric tube 14-16 Fr (French gauze) and a lubricant jelly
-Gloves (disposable ones)
-Large syringe
-Wet and dry paper towels
-Strips to check on pH
-Vomiting bowl

-Water in a glass for swallowing purposes with a drinking straw
-Anaesthetic for numbing the pain
-Tape and scissors
-Stethoscope

Appendix 2 Procedure

1. Wash and disinfect your hands. Introduce yourself. Explain to the patient what you are about to do and why you are doing it. Confirm patient identity.
2. Position the patient to sit comfortably on a chair or bed high fowler's position.
3. Measure from the tip of the nose to the earlobe up to the zip void and mark the length of the tube to be inserted.
4. Disinfect your hands.
5. Lubricate the tip of the nasogastric tube.
6. Alert the patient and warn them that the tube is about to be inserted.
7. Insert the tube through one of the patient's nostril. Gently through the nasopharynx. Proceed gently towards the esophagus. Instruct the patient to take sips of water to facilitate the process. The process should be done gently as the tube passes the nasal cavity. The tube should not be forced.
8. Intermittently inspect the patient's mouth to ensure the nasogastric tube isn't coiling within the oral cavity.
9. Upon reaching the desired length, fix the tube with a tape.
10. Conduct aspiration auscultate and test for their pH of the contents.
11. Remove and dispose the used clinical equipment.
12. Wash and disinfect your hands.

Figures

Appendices