**Journal of Educational Research and Evaluation**
Volume 6, Issue 2, 2022, pp. 229-238
P-ISSN: 2597-422x E-ISSN: 2549-2675
Open Access: https://doi.org/10.23887/jere.v6i2.37383

# The Effect of Dysphagia Education Through Video on the Level of Knowledge and Screening of Dysphagia and Self-Efficacy of Nurses

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**ARTICLE INFO**

**Article history:**
Received July 21, 2021
Revised July 22, 2021
Accepted March 09, 2022
Available online May 25, 2022

***Kata Kunci :***
*Video Edukasi Disfagia, Pengetahuan Disfagia*

**Keywords:**
Dysphagia Educational Videos, Dysphagia Knowledge



**ABSTRAK**

*Penelitian ini bertujuan untuk menganalisis pengaruh edukasi disfagia melalui video terhadap tingkat pengetahuan, tingkat skrining disfagia dan efikasi diri perawat. Metode yang digunakan adalah metode deskriptif analitik berjudul True Experimental dengan desain pretest and posttest control group design. Jumlah responden 35 perawat yang dipilih dengan menggunakan purposive sampling. Pengumpulan data menggunakan instrumen Self-Administered Questionnaire, Questionnaire Modified Nursing Disphagia Screen, dan Generalized Self-Efficacy Scale (GSE-10) dan dianalisis menggunakan T-test dependent sample. Hasil penelitian menunjukkan tingkat pengetahuan disfagia secara signifikan pada kelompok kontrol (p value = 0,017), kelompok video (p value = 0,002). Hasil yang signifikan juga terjadi pada tingkat pengetahuan skrining disfagia pada kelompok video. Hasil yang tidak bermakna terjadi pada kelompok kontrol pada tingkat pengetahuan skrining disfagia dan efikasi diri perawat, serta efikasi diri pada kelompok video. Seperti yang ditunjukkan dalam penelitian pendidikan disfagia melalui video dapat mempengaruhi tingkat pengetahuan dan tingkat pengetahuan skrining disfagia tetapi tidak mampu mempengaruhi efikasi diri perawat.*

**ABSTRACT**

This study aims to analyze the effect of dysphagia education through knowledge level videos, dysphagia screening, and nurse self-efficacy. The method used descriptive method of analytic entitle True experimental with pretest and posttest control group design. The number of respondents 35 nurses selected using purposive sampling. Data collection used Self-Administered Questionnaire instrument, Questionnaire Modified Nursing Dysphagia Screen, and Generalized Self-Efficacy Scale (GSE-10) and analyzed using T-test dependent samples. The result was significantly the level of dysphagia knowledge in the control group (p value = 0.017), the video group (p value = 0.002). Significant results also occurred at the knowledge level of dysphagia screening in the video group. Meaningless results occurred in the control group at the knowledge level of dysphagia screening and self-efficacy of nurses, as well as self-efficacy in the video group. As shown in educational research dysphagia through video can affect the level of knowledge and level of knowledge of dysphagia screening but is not able to influence the self-efficacy of nurses.

## 1. INTRODUCTION

Chronic disease is a condition of normal deviation with one or more of the following characters: permanent or residual defects; not reversible pathological changes in the body's system; patients require special training in rehabilitation, requiring supervision, observation and long-term care (Fan et al., 2020; Pinho et al., 2019; Schneider & Martini, 2011). In the United States chronic diseases are included in diseases with high health care costs of 3.5 trillion dollars per year (Centers for Disease Control and Prevention, 2019), while in Indonesia chronic disease is a disease that requires high costs in treatment with life-threatening complications that cost health costs amounting to 14.6 trillion rupiah or 21.8% of the total cost in health service. According to the World Health Organization (WHO) (2020) deaths from chronic diseases will increase by 73% of all deaths, in developing countries 79% is a disease burden globally.

Stroke is one of the chronic diseases with the prevalence of patients in the world estimated at 2.5% (Benjamin et al., 2019; Larry B Goldstein, 2020), among them 30% - 60% of acute stroke patients can experience dysphagia (Antonios et al., 2010). In the United States stroke is a high-cost disease (L. B Goldstein, 2020). The prevalence of stroke in Indonesia in the population of > 15 years of age is 10.9%

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with East Kalimantan Province being the highest province at 14.7% of cases (Tamburian et al., 2020). In samarinda city hypertension can be said as one of the causes and risk factors of stroke is in 2nd place of the 10 most diseases (Dinkes Prov. Kaltim, 2018). Data from the Medical Record in 2019, stroke disease 977 cases are the 5th most cases and in 2020 until December 17, 2020 with493 total cases, based on data from the Stroke Unit of A.W. Sjahranie Hospital, fluctuations on average 40 - 50 patients per month with Bed Occupancy Rate (BOR) ranged from 80% with the most risk factors of patients treated are hypertension and Diabetes Mellitus.

If dysphagia in stroke patients do not get proper treatment will experience permanent dysphagia although 40% - 78% can be cured (Clare, 2018). A total of 15-30% of dysphagia patients lead to aspirations that if occurring in old age if left untreated the mortality rate ranges from 40-71% (Murray et al., 2016). Another result of limited swallowing is an increased risk of impaired nutrition and poor hydration as well as aspiration pneumonia leading to an increase in the length of the day of treatment due to mortality, comorbidity as well as increased maintenance costs (Antonios et al., 2010; Yingnan et al., 2021). Dysphagia can cause complications of pneumonia that can harm families, staff and hospitals (Tome et al., 2022; Wangen et al., 2019). In fact, based on an audit by the Royal College of Northern Ireland found that almost no nurses has dysphagia screening competence every tenth of a bed or on average zero (Over & Restraint, 2016). From research in South Africa revealed that nurses' health facility of second / secondary has good knowledge of symptoms and management of dysphagia but do not understand about complications and management of dysphagia so it is necessary to monitor speech therapy in screening and dysphagia management (Andrews & Pillay, 2017; Knight et al., 2020).

In addition, nurses consider the problem of dysphagia is complicated because it requires special knowledge and skills as well as involving the discipline of science (Kaufman et al., 2022; Knight et al., 2020; Nielsen et al., 2022). Other research in Saudi Arabia recommends that theoretical and practical aspects of dysphagia treatment be needed, so it is recommended for further research on the implementation of sustainable education programs to prevent negative outcomes of poor dysphagia management (Khoja, 2018). The use of video in improving nurse skills, is increasingly being used to improve the quality of skills education in current conditions but depends on the effectiveness, usability efficiency and quality of the video (Forbes et al., 2016). Some studies on the use of video in improving knowledge include, using mixed learning strategies with simulation videos to teach clinical skills for students is proven to improve the knowledge and skills of nursing students and is favored for their flexibility (Coyne et al., 2018). Other research stated the use video media and direct lectures is just as effective in preparation for the clinical part of medical examination and can replace conventional teaching (Brockfeld et al., 2018). In addition to improving knowledge, video can also improve the efficacy of nurses in performing dysphagia screening skills. In a journal researched said that education can make self-efficacy and self-ability improve through e-learning, self-learning, practical seminars and structured objective exams that can also be used in educational settings for nurses who busy or having a limited time (Yoshida et al., 2020).

This research crucial to do considering that there are still many nurses who consider the case of dysphagia that occurs as a complicated problem and requires knowledge as well as qualified skills to overcome it. This paper focuses on independent learning and self-efficacy, where independent learning is the construction of metacognition, motivation, and adaptation strategies when dealing with dysphagia conditions. This study aims to analyze the effect of dysphagia education through knowledge level videos, knowledge level screening, and nurses' self-efficacy.

## 2. METHODS

The research design uses True experimental with pretest and posttest control group design, using purposive sampling. The population of this study was 112 nurses with samples taken totaling 35 respondents divided into control group 18 respondents and Video Group 17 Respondents. Determination of the group of respondents based on the sequence number of the registration form, the odd sequence number for the Video group and the even sequence number for the control group. Respondent inclusion criteria in this study: nurses who served in stroke units; neurology wards and inpatient rooms that treat stroke patients; minimum education D3 with a minimum working duration of 2 years and or Bachelor of Nursing with a minimum working duration of 0 years. The research was conducted from April 14, 2021 to May 19, 2021 at Abdul Wahab Sjaranie Regional General Hospital and Inche Abdul Moeis Samarinda Regional General Hospital. The proposal and protocol of research procedures have been reviewed and approved by the Health Research Ethics Commission of the Faculty of Medicine, Mulawarman Samarinda University Number 27/KEPK-FK/III/2021 on March 31, 2021.

The study used a Self-Administered Questionnaire questionnaire developed by Andrea Pickle Voight to assess knowledge of dysphagia (Rhoda & Pickel-Voight, 2015). On the knowledge of dysphagia screening using the Modified Nursing Dysphagia Screen questionnaire (Titsworth et al., 2013). and to assess efficacy using the Generalized Self-Efficacy Scale Questionnaire from Schwarzer and Jerusalem (1995) in (Bender & Ingram, 2018) which has been adapted to Indonesian by (Novrianto et al., 2019). The dysphagia knowledge questionnaire developed by Andrea consisted of 25 question items, 10 questions for signs and symptoms, 8 questions for complications and 7 questions for dysphagia management (Rhoda & Pickel-Voight, 2015). Respondents can choose 3 alternative answers, namely Agree, do not know and disagree, with a score of 1 when the answer is correct and if the wrong score is 0. Classification of knowledge is high dysphagia when the score range is 75 and above, knowledge is medium if the score is 50-74 and low if 1 – 49. This questionnaire has conducted a validity test with a table value of R all question items > 0.291. In this study, the internal consistency of the questionnaire based on Cronbach's Alpha value was 0.870.

Modified Nursing Dysphagia Screen is a Questionnaire to assess knowledge dysphagia screening using 6 questions with 3 alternative answers, namely Agree, do not know, and disagree, with a score of 1 when the answer is correct and when the wrong score is 0 (Osmanovic, 2018). Classification of knowledge is high dysphagia when the score range is 75 and above, knowledge is medium if the score is 50-74 and low if 1 – 49. Questionnaire to measure the level of knowledge screening dysphagia has also been conducted validity test with a table value of all question items >0.291 and reliability based on Cronbach's Alpha of 0.798. GSE-10 developed by Mathias Jerusalem and Ralf Schwarzer in 1981 contains 10 questions consisting of Dimension Level 4 questions, Dimension Strength 3 questions, Generality 3 questions (Jin & Lv, 2018). Alternative 4 answer options; Very inappropriate, not appropriate, appropriate, very appropriate. It says High efficacy if = 30 < x < 40, Medium if = 20 < x < 30 and Low if = 10 < x < 20 with the validity and reliability of the questionnaire has been determined. The data is entered into SPSS for the calculation of statistical analysis required, i.e. using T-test dependent samples. Normality data was also tested with the Kolmogorov-Smirnov test and its significance was <0.05.

## 3. RESULT AND DISCUSSION

### Results

The majority of respondents who participated in the study were 27 (77.14%), the majority age characteristics in the 26–35-year-old range with total 22 (62.86%) respondents and the majority of Diploma III Nursing education level with total 21 (60.00%) Respondents. More details can be found in Table 1.

**Table 1.** Percentage of Respondents by Gender, Age and Level of Education

| Characteristic | control | | video | | Total | % |
|---|---|---|---|---|---|---|
| | F | % | F | % | | |
| **1. Gender** | | | | | | |
| **man** | 4 | 11.43 | 4 | 11.43 | 8 | 22.86 |
| **woman** | 14 | 40.00 | 13 | 37.14 | 27 | 77.14 |
| **Total** | | | | | 35 | 100 |
| **2. Age** | | | | | | |
| **17 – 25 Years Old** | 6 | 17.14 | 1 | 2.86 | 7 | 20.00 |
| **26 – 35 Years Old** | 9 | 25.71 | 13 | 37.14 | 22 | 62.86 |
| **36 – 45 Years Old** | 3 | 8,57 | 3 | 8.57 | 6 | 17.14 |
| **Total** | | | | | 35 | 100 |
| **3. Level of Education** | | | | | | |
| **Diploma III** | 10 | 28.57 | 11 | 31.43 | 21 | 60.00 |
| **Ners** | 8 | 22.86 | 6 | 17.14 | 14 | 40.00 |
| **Total** | | | | | 35 | 100 |

As for the results of the normality test, it is known that the data that has a value of α above 0.05 or normal distribution in the video group is dysphagia knowledge, in the online group is knowledge of dysphagia and self-efficacy and in the control, group is self-efficacy. Others are not normally distributed. Complete details can be found in Table 2.

**Table 2.** Normality Test Using Kolmogorv-Smirnov

| Group | Variable | α |
|---|---|---|
| **video** | Dysphagia knowledge | 0.200 |
| | Dysphagia Screening Knowledge | 0.002 |
| | Self-efficacy | 0.015 |
| **control** | Dysphagia knowledge | 0.00 |
| | Dysphagia Screening Knowledge | 0.00 |
| | Self-efficacy | 0.200 |

Results of statistical analysis with paired test in control group (Table 3.) before treatment the value was 69.33 and after 74.44 with an average difference of 5.11. From the results of statistical tests it can be known that H0 was received because there was a significant difference between the level of knowledge of dysphagia before and after in the control group, namely p value = 0.017 (p < α). The average level of knowledge of dysphagia screening before was 85.19 and after 88.89 with an average difference of 3.70. From the results of statistical tests on the level of knowledge of dysphagia screening it is known that H0 is rejected because there is no significant difference, where the value of p value = 0.260 (p > α). While in self-efficacy nurses before was 33.94 and after 34.11 with an average difference of 0.17. From the results of statistical tests it is known that H0 is rejected because it does not have a significant difference between before and after because the value of p value = 0.903 (p > α).

**Table 3.** Analysis of Differences in Average Knowledge Level of Dysphagia, Knowledge Level of Dysphagia Screening and Self-Efficacy of Nurses Before and After Intervention in the Control Group

| Variable | | N | Mean | Mean different | SD | t | P *value* |
|---|---|---|---|---|---|---|---|
| Dysphagia knowledge | before | 18 | 69.33 | 5.11 | 6.44 | -2.64 | 0.017 |
| | after | | 74.44 | | 7.15 | | |
| Dysphagia screening knowledge | before | 18 | 85.19 | 3.70 | 15.00 | -1.17 | 0.260 |
| | after | | 88.89 | | 15.13 | | |
| Self-efficacy | before | 18 | 33.94 | 0.17 | 3.81 | -0.12 | 0.903 |
| | after | | 34.11 | | 3.41 | | |

While the average level of knowledge in the video group (Table 4) before intervention was 70.12 and after intervention 76.71 with an average difference of 6.59. From the results of statistical tests can be known H0 received because it has a significant difference between the level of knowledge dysphagia before and after intervention in the video group, the value of p value = 0.002 (p < α). The average level of knowledge of dysphagia screening before intervention was 76.47 and after intervention was 89.22 with an average difference of 12.75. From the results of statistical tests the level of knowledge of dysphagia screening is known that H0 is received because it has a significant difference between before and after intervention, where p value = 0.028 (p < α). While in self-efficacy nurses before intervention was 31.88 and after intervention 32.59 with an average difference of 0.71. From the results of statistical tests it is known that H0 is rejected because it does not have a significant difference between before and after intervention because the value of p value = 0.124 (p > α).

**Table 4.** Analysis of differences in Average Knowledge Level of Dysphagia, Knowledge Level of Dysphagia Screening and Self-Efficacy of Nurses Before and After Intervention in Video Groups.

| Variable | | N | Mean | Mean different | SD | t | P value |
|---|---|---|---|---|---|---|---|
| Dysphagia knowledge | before | 17 | 70.12 | 6.59 | 9.81 | -3.77 | 0.002 |
| | after | | 76.71 | | 9.30 | | |
| Dysphagia screening knowledge | before | 17 | 76.47 | 12.75 | 22.87 | -2.43 | 0.028 |
| | after | | 89.22 | | 15.52 | | |
| Self-efficacy | before | 17 | 31.88 | 0.71 | 3.81 | -1.62 | 0.124 |
| | after | | 32.59 | | 4.30 | | |

**Discussion**

This study aims to see if there is an influence of dysphagia education through video on the level of knowledge, level of knowledge screening and self-efficacy of nurses. The analysis showed that the knowledge level about dysphagia was significant in the control group (p-value = 0.017) and the video group (p-value = 0.002). As shown in this study, dysphagia education through video can affect the level of knowledge and knowledge of dysphagia screening. In the video group the level of dysphagia knowledge has a significant influence, this is in accordance with in the study recommended to take advantage in the implementation of educational programs using video to improve nursing knowledge in pain assessment (Clarke & Schine, 2016). Other research shown a significant relationship between knowledge level and years of experience where they have discussed that higher knowledge among nurses with more years of experience could be due to their accumulated clinical experience (Clavé & Shaker, 2015; Sinaga et al., 2020). This contrasts with the findings of our study where there is no association between knowledge and years of experience, which may be due to poor standards of care for the majority of patients with dysphagia as most of them are not diagnosed or treated.

This study also shows that the care of stroke patients is a significant predictor of increased level of knowledge and it does not depend on initial qualifications or years of experience. The same can happen to nurses with a higher level of experience. This study shows a significant relationship between the level of knowledge and care for patients, which is supported by a study conducted by (Mailinda & Lestari, 2019; Pickel-Voigt, 2016; Sinaga et al., 2020). This can be due to the fact that more involved in caring for stroke patients with dysphagia conditions, will increase the frequency of providing appropriate care to patients which can significantly increase nurses' knowledge. Therefore, nurses' moderate level of knowledge implies that their understanding of dysphagia is still uncertain and lacking. In a study, it was shown that although most of the nurses in that study had treated patients with dysphagia, there were still many of them who had never received formal training on dysphagia (Clavé & Shaker, 2015; Nepal & Sherpa, 2019). This results in sometimes inappropriate handling of certain patients with dysphagia. This shows the importance of the nurse's role for patient care along with the importance of the need for proper training of nurses on dysphagia.

As a result, the level of dysphagia knowledge in the control group, video and online had significant results. This can be due to the influence of age and length of work that affects the experience in treating patients, because in line with Potter's opinion that a person's age range of 20 - 30 years (old adult) more directs his energy to achievement and mastery and attention to his work (Jin & Lv, 2018). This is supported by the results of research Susanti age affects motivation in providing nursing care but increasing age does not guarantee motivation will rise or fall depending on each individual (Diana & Prasetyo, 2020). In line, The research which tested three learning methods, namely traditional lectures, electronic learning and independent learning, the result was that there was no significant difference in the acquisition of nurse knowledge between the three learning methods and in this study recommended hospitals to formulate policies on learning methods taking into account the use of nurse time and available institutional resources (Soper, 2017).

The results of the data analysis showed that the average level of dysphagia screening did not change much in the control group (not significant) compared to the average level of dysphagia screening in the video group (significant). With the results of this study, dysphagia education through video can affect the level of knowledge of dysphagia screening. The results of the study showed that nurses had moderate knowledge about the signs, symptoms, and complications of dysphagia; but their knowledge is bad about the management (Govender et al., 2017; Rhoda & Pickel-Voight, 2015). Training and experience in the care of dysphagia patients were stronger predictors of knowledge than initial qualifications or years of experience as a nurse. After basic dysphagia training, it is believed that it will better equip nurses in managing patients. Early identification of dysphagia is necessary to improve the patient's health condition and avoid adverse health consequences. Nurses have a special opportunity that has an impact on patient care, namely by increasing evidence-based knowledge of dysphagia treatment in patients. Educational activities are believed to have a positive impact on students' knowledge. The education module promotes positive social change which will increase the knowledge, confidence, and competence of nurses when caring for patients, thereby improving the quality of care (Brumm, 2020; Rhoda & Pickel-Voight, 2015). Meanwhile, education affects the knowledge and performance of nurses in screening for dysphagia in patients with cerebrovascular accidents (Bagheri et al., 2021). Implementing an education program for nurses caring for these patients can help prevent pneumonia and improve patient safety.

In the control group there is no influence, this can be related to behavior or action because a person seeks information around him and in adult learning with independent concepts through experience as an exercise is then implemented in the learning materials taking into account past experiences so that individuals can be more advanced (Hartman, 2018; Kenney et al., 2020; Whitehead,

2018). In the video group there is a significant influence, It is according to the research (Hébert et al., 2020) about the use of video as a means of transferring public health knowledge about dengue fever explained that videos effectively transfer science to health workers, because they prefer watching videos than reading written documents because it is considered exhausting. In addition, the video also effectively influences the interests of trainees by considering the narrative delivery of information, choosing a good communicator, creating visual instruments that amplify the message and adapt the message to the local cultural and social context. More reviews explains that video use helps develop clinical skills, and video is more effectively used on online strategies and *blended learning* (Downer et al., 2021; Jowsey et al., 2020; Massey et al., 2019; McInerney & Green-Thompson, 2019).

The results of this study indicate that self-efficacy did not occur in the control group nor in the video group. With this, it can be said that dysphagia education through video is not able to affect nurses' self-efficacy. This result is not in line with research, which showed that understanding and mastery of knowledge in the observation group was better than the control group, and the difference was statistically significant (P 0.05) (WU et al., 2018). Comparison of four dimensions, namely perceived susceptibility, belief, and behavioral change gains as well as action instructions were statistically significant (P 0.05). The application of health education mode can be used to guide health education for dysphagia patients, and can increase understanding and mastery of relevant knowledge about aspiration pneumonia (Mandysová et al., 2016; Zhang et al., 2022). This will strengthen the patient's confidence in rehabilitation, actively promote self-management of behavior for patients with dysphagia, so as to achieve the effect of preventing aspiration pneumonia and improving the patient's quality of life. Based on the Jonckheere-Terpstra test; SEAC and OSEC tend to increase along with the development of the FOIS category (Matsuda et al., 2020). In conclusion, self-efficacy plays an important role in dysphagia and can influence the severity of dysphagia of patients. This behavior change technique can increase the difference between objective and subjective evaluation in cases of dysphagia. In particular, a gradual trend between self-efficacy and FOIS exists and is emerging but is evaluated on a case-by-case basis. Thus, further studies are needed to verify the gradual relationship between self-efficacy and FOIS using a longitudinal study design (Govender et al., 2017).

The value of self-efficacy in this study had no significant effect for either the control group or the video group. This can happen because one of the roles in self-efficacy is academic motivation and self-regulation in learning that is influenced by culture, gender, external incentives, individual status in the environment (Bandura, 1986 and Zimmerman, 2000 in (Blackmore et al., 2021). In line with the results of (Thompson, 2019) on self-efficacy of nurse knowledge in stroke disease explained that education about stroke to hospital nurses should be given to all nurses so that learning can provide positive efficacy results, so it is important for managers in hospitals to create educational programs in order to help improve nurse knowledge and promotion of self-efficacy about knowledge of stroke care. This is also the same as the results, increased self-efficacy in line with the improvement of nursing competencies, self-efficacy and professional hospital nurses affect nursing competencies (Tsai et al., 2014). The study also found a positive link between nurse self-efficacy and continuing education, making it important for hospital administrators and appointed officials to facilitate continuing education in the workplace and formulate policies suitable for all nursing staff members.

Another study explains that high efficacy scores are influenced by age, status marriage, job type, professional degree, income, work experience in various departments and positions (Li et al., 2020). The study also recommended that nursing management in hospitals should offer continuing education and for educational institutions to integrate continuing education into hospital services that can ultimately provide improved quality nursing services to patients. The researchers' assumption that efficacy scores have no effect because efficacy at the group level or collectively is already high, this is like the results, on self-efficacy, effectiveness and collective efficacy on the performance of nurses in hospitals known that nursing performance has a positive relationship in individuals related to job position, length of work, experience and employment status (Lee & Ko, 2016; Zarezadeh et al., 2021). So, it is important for nursing managers to handle contextual factors to improve efficacy, because it will affect the performance of nursing at the individual level and nursing service units. The high efficacy value of nurses in this study also gives an idea of the health of nurses in the hospital where the research was conducted,that nurses who have a high score of efficacy, then social function in the context of general health is positive. This is according to the results of the study about the correlation of self-efficacy and general health nurses explain that self-efficacy and social function in general health are significantly correlated which indicates that nurses with positive self-efficacy have high self-efficacy and social function significantly improves the health of nurses, so it is important to anticipate problems related to social functions such as limited support resources and conflicts at work (Dadipoor et al., 2021).

This study proves that video can effectively improve the knowledge of nurses about dysphagia and dysphagia screening, so researchers recommend variations in learning with video media to further improve its use including cases other than dysphagia to transfer knowledge to hospital nurses as a form of continuing education for nurses to maintain their professional competence. This research also proves that nurses can do continuous learning independently, where hospital institutions have previously prepared outlines or learning structures that must be done. In terms of video, online and independent learning, researchers recommend hospital institutions to prepare learning support facilities and certification of learning outcomes recognized by professional organizations to nurses as a form of recognition of the competence of the nurse concerned. In terms of preventing complications of pneumonia in post-stroke dysphagia patients in hospitals, hospital policymakers should involve multidisciplinary science cooperation and facilitate ongoing learning for nurses working in the room that treats dysphagia patients and briefings on the management and complications of dysphagia for new nurses.

## 4. CONCLUSION

The results of this study indicate that the use of video can increase the 'dysphagia knowledge' level, both in control groups and video groups. The use of video can also increase the 'dysphagia screening', but only in the video group and has no effect on the control group. Meanwhile, self-efficacy in this study had no significant effect for either the control group or the video group. This study was conducted at a time when hospitals were implementing a policy of limiting interactions between nurses and patients with people from outside the hospital (because the average daily positive number of Covid-19 is high), so this study is limited to measuring the cognitive of nurses on the level of dysphagia knowledge and dysphagia screening.

## 5. ACKNOWLEDGEMENT

Hereby, the authors wish to express gratitude to the esteemed hospital managers and participating nurses. All authors contributed to writing, revising, and approved the final manuscript. Not using funding from any party. The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

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