

## Introduction

Oral intake is important for humans to live and make physiological, psychological, and social adaptations. However, the current situation in Japan indicate that the number of elderly people with impaired swallowing will increase. Because, Japan population is aging fast. In addition, it has been reported that 80.1% of pneumonia patients aged 70 and older were diagnosed with aspiration pneumonia (Teramoto et al, 2008). Therefore, nurses are required to make accurate clinical judgment for impaired swallowing. It is necessary to use defining characteristics (DCs) of the nursing diagnosis with tested content validity to make accurate clinical judgment for impaired swallowing.

## Study Gap & Study purpose

There are many DCs for impaired swallowing. However, the content validity of DCs for nurses to diagnose impaired swallowing has not been verified in Japan. In addition, the level of evidence of nursing diagnosis "impaired swallowing" had not shown by NANDA-International (Herdman & Kamitsuru, 2017). Therefore, the purpose of this study is to examine content validity of DCs for impaired swallowing in Japan, as well as the major and minor DCs.

## Method

- This study uses the diagnostic content validation model by Fehring (1987).
- The subjects were 672 expert nurses who are trained and certified for impaired swallowing nursing in Japan.
- The method utilizes questionnaire surveys created from NANDA-DCs (Herdman & Kamitsuru, 2017) and literature review of DCs (Fukada et al, 2006; Takahashi, 2005; Belafsky et al, 2008; Jeng et al, 2001).
- DCs of the questionnaire were classified as: Oral phase (26DCs), Pharyngeal phase (27DCs), Esophageal phase (21DCs), and Other (4DCs).
- The one-to-five Likert Scale was used to examine the extent to which 78 DCs indicated impaired swallowing (1=not at all indicative of the diagnosis, 2=slightly indicative, 3=somewhat indicative, 4=considerably indicative, 5=very indicative).
- For each DC, response was scored (1=0, 2=0.25, 3=0.5, 4=0.75, 5=1) and DCV score (average) was calculated.
- DCs were classified as: major, if the DCV score was  $\geq 0.80$ , minor, if  $< 0.80$  but  $> 0.50$ , or discard, if the DCV score was  $\leq 0.50$ .

#NANDA2020

www.bc.edu/2020nandaconference

# Content validation of the nursing diagnosis, impaired swallowing in Japan.

Kazuyoshi Nishizawa<sup>1)\*</sup>, Yumiko Oshima<sup>1)</sup>

1) TOYOHASHI SOZO UNIVERSITY,  
School of Health Science, Department of Nursing, Japan  
\* E-mail : k-nishizawa@sozo.ac.jp



Table 1. Background of the experts

		n=327	
Years of experience		Mean(SD)	
Experience as a nurse		19.7(6.76)	
Experience after certified for impaired swallowing nursing		5.4(2.92)	
Frequency of contact with patients with impaired swallowing	Period		
	Past 6 months ~ Present	Prior to past 6 months	
Always	276(84.4%)	277(84.7%)	
Frequently	40(12.2%)	42(12.8%)	
Occasionally	6(1.8%)	6(1.8%)	
Never	4(1.2%)	0(0.0%)	
Non-response	1(0.3%)	2(0.6%)	

Table 2. The major Defining Characteristics (0.8≤DCVscore)

Phase	Defining Characteristics	DCV score	SD	n
1 Pharyngeal	Cyanosis during the meal	.92	.16	326
2 Pharyngeal	Respiratory distress after swallowing	.91	.15	327
3 Pharyngeal	Abnormal pharyngeal phase of swallow study	.90	.15	321
4 Pharyngeal	Wet respiratory sounds after swallowing	.88	.16	323
5 Pharyngeal	Choking	.87	.17	327
6 Pharyngeal	Muddy sounds during or after a meal	.87	.16	327
7 Pharyngeal	Inadequate laryngeal elevation	.86	.18	324
8 Pharyngeal	Delayed swallowing	.84	.18	327
9 Oral	Choking prior to swallowing	.83	.20	325
10 Pharyngeal	Gargling breath sounds after swallowing	.82	.20	322
11 Pharyngeal	Nasal reflux	.81	.20	325

Table 3. The discarded Defining Characteristics (DCVscore≤0.5)

Phase	Defining Characteristics	DCV score	SD	n
1 Esophageal	Hurtburn	.50	.26	325
2 Other	Limited socialization	.50	.27	322
3 Oral	Inefficient suck	.50	.28	308
4 Pharyngeal	Food refusal	.48	.24	326
5 Esophageal	Vomiting	.47	.28	327
6 Esophageal	Vomiting on pillow	.47	.28	327
7 Esophageal	Volume limiting	.47	.26	325
8 Oral	Inefficient nippleing	.43	.27	309
9 Esophageal	Food refusal	.42	.26	326
10 Esophageal	Unexplained irritability surrounding marlimes	.35	.25	324
11 Esophageal	Nighttime awakening	.34	.27	322
12 Esophageal	Epigastric pain	.31	.25	326
13 Esophageal	Shortened sleep time	.30	.25	327
14 Esophageal	Hematemesiis	.25	.28	322
15 Esophageal	Bruxism	.23	.25	325

## Results

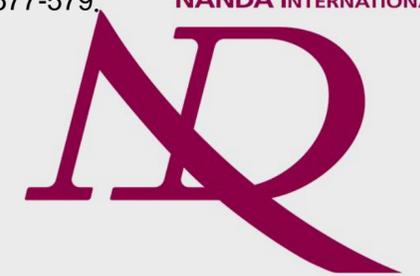
- There were 327 valid responses (48.7%).
- Background of the experts is shown in Table 1.
- Eleven major DCs (Table 2), 52 minor DCs, 15 discarded DCs (Table 3) were identified.
- Of the major DCs, Pharyngeal phase was the most frequent with 10 DCs.
- Of the minor DCs, Oral phase was the most frequent with 23 DCs.
- Of the discarded DCs, Esophageal phase was the most frequent with 11 DCs.

## Discussion

We consider that it is essential to check the major DCs when making clinical judgment for impaired swallowing. For nurses who are not experts of impaired swallowing, the major DCs make clear the DCs that should be used when making a clinical judgment. In addition, the major DCs can be used as focus points for observing the swallowing state of a patient. This classification of major and minor DCs permits accurate clinical judgment for impaired swallowing.

## References

- Belafsky,P.C., Mouadeb,D.A., Rees,C.J. et al (2008) . Validity and reliability of the Eating Assessment Tool (EAT-10). The Annals of otology, rhinology, and laryngology, 117(12), 919-924.
- Fukada,J., Kamakura, Y., Manzai, T. et al (2006). Development of Dysphagia Risk Screening System for Elderly Persons. The Japanese Journal of Dysphagia Rehabilitation, 10(1), 31-42.
- Herdman, T. H., & Kamitsuru, S. (2017). Nursing diagnoses: Definitions and classification, 2018–2020 (11th ed.). Thieme.
- Jeng, C, Sheu, P.Y, Chen, C.M, et al. (2001) . Clinical validation of the related factors and defining characteristics of impaired swallowing for patients with stroke. The journal of nursing research, 9(4), 105-115
- Takahashi, K. (2005). Cervical Auscultation-Clinical Tool for Detecting Dysphagia-. The Journal of Showa University Dental Society, 53(4), 167-171.
- Teramoto, S., Fukuchi, Y., Sasaki, H. et al. (2008) . High incidence of aspiration pneumonia in community and hospital acquired pneumonia in hospitalized patients: a multicenter prospective study in Japan. Journal of the American Geriatrics Society, 56(3), 577-579.



BOSTON COLLEGE  
Connell School of Nursing