# A Cross-Sectional Study on Interprofessional Practice of Health Professionals in Oropharyngeal Dysphagia Management among Acute-Care Inpatients in a Kenyan Level – Six, Research Hospital

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## ABSTRACT

**Introduction:** An Interprofessional Collaboration (IPC) practice approach to oropharyngeal dysphagia (OPD) management is vital to enhance the outcomes of patients with this condition. Effective practice requires health professionals (HPs) from different specialties to be involved in OPD management. This study assessed HPs' involvement in OPD management in the acute-care facility (ACF) of a level-six research hospital in Kenya.

**Methodology:** The study employed a descriptive, cross-sectional design. The target population comprised HPs from different work units (medical officers and specialists, nurses, nutritionists, physiotherapists, and Speech therapists-SLP/Ts) attending to inpatients in the hospital's medical and surgical wards (ACF). A previously validated multiple-choice questionnaire was adapted and administered to a purposive sample of 16 HPs. The questionnaire assessed respondents in three involvement aspects: level of involvement, management considerations, and OPD traits for bedside swallowing safety. Responses to the questionnaires were entered into the Statistical Package for Social Sciences (SPSS) and then coded into quantitative values using appropriate scales. Frequencies, percentages, and means were used to summarize patterns in the dataset, while the independent samples t-test and one-way ANOVA were used to compare participants' OPD involvement by their demographic and general characteristics. Tests of significance were at the 95% confidence level.

**Results:** The majority (87.5%, n = 14) generally managed adult OPD inpatients, 75.0% (n = 12) had been in an OPD management team, and 81.3% (n = 13) referred inpatients with swallowing issues. The mean correctly matched management consideration items was 61.3% (SD = 17.08), showing moderate appropriate selection of OPD management considerations during practice. None of the selected demographic and general characteristics significantly influenced their choice of OPD management considerations ($p > 0.05$). On average, each participant matched 60.8% (SD = 16.12) of the bedside swallowing safety items correctly, suggesting that the sample had, on average, moderate appropriate considerations for bedside swallowing safety among OPD patients. None of these selected characteristics significantly influence the levels of bedside swallowing safety considerations among HPs. On a high positive, almost all HPs (93.8%, n = 15) demonstrated interest in further involvement in the care of OPD patients in their ACF.

**Recommendations:** The hospital's management should develop strategies to increase inter-professional collaboration among all HPs who should be involved in OPD management. Training programs to increase dysphagia awareness among the hospital's HPs could help enhance their involvement in its management.

**Index Terms:** Oropharyngeal dysphagia, collaboration, management, bed-side swallowing, screening.

## INTRODUCTION

Swallowing difficulties due to oropharyngeal dysphagia (OPD) are leading concerns among health professionals

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in various healthcare settings. It is estimated that over two-fifths of the global population has OPD, with the highest presence occurring among senior adults (Rajati et al., 2022). The burden due to OPD is highest in sub-Saharan Africa, where the prevalence is over 64% (Rajati et al., 2022). In Kenya, generally the available estimates show most of the country's adults diagnosed with stroke are at risk of developing dysphagia (Oduor et al., 2015; Omondi, 2017; Ndiema et al., 2023). The high prevalence of OPD and its associated healthcare burden call for effective management strategies. Traditionally, swallowing difficulty management is performed primarily by speech-language pathologists/therapists (SLP/Ts). Their roles generally include identifying, assessing, treating swallowing difficulties and preventing secondary complications (Hady et al., 2023). According to ASHA (2003), SLP/Ts trained in swallowing disorders are the primary caregivers of dysphagic patients. The framework for quality dysphagia management services includes client background, clinical observation, appropriate functional swallowing tests, and feeding attempts on liquids and solids. In the absence of a speech therapist, nurses may conduct screenings (Hinchey et al., 2005). Assessment findings could guide clinical labeling, target behavior, and identifying swallowing therapy to determine duration and needed referrals (Shipley & McAfee, 1998). Education and counseling for OPD clients, families, and caregivers, referrals, and research are also SLP/Ts' responsibilities (Kamal et al., 2012).

The role of SLP/Ts in providing quality care for OPD patients cannot be overemphasized. However, swallowing disorders present themselves in several clinical settings and co-occur with varied health conditions, while their symptoms and associated complications cut across many healthcare domains (Rivelsrud et al., 2023). Therefore, there is an increasing recognition of the need for a multi-disciplinary approach to OPD management, considering the complex nature of today's healthcare delivery systems. In their discussion paper, Dondorf et al. (2015) pointed out that due to the high number of individuals diagnosed with dysphagia in many healthcare facilities, it is paramount that SLP/Ts and nurses collaborate during clinical practice to enhance patient outcomes. According to the authors, such an interdisciplinary approach should become a standard for training all healthcare professionals (HPs). Similarly, Heritage (2001) concluded that effective collaboration between SLP/Ts, nurses, and other professionals combines in-depth experience, leading to holistic care of swallowing disorder patients. Wilkinson et al. (2021) also noted that high-level cooperation between SLP/Ts, other specialists, and family physicians is vital for structured assessments and appropriate recommendations for safe palliative care, swallowing, or rehabilitation. Empirical evidence shows that the expertise of interdisciplinary practice of health professionals (HPs) in improving dysphagia inpatients' health is needed, as suggested for South African nurses and speech therapists (Knight et al., 2020).

The World Health Organization's Inter-professional Collaboration (IPC) model recommendation offers a valuable framework for a multi-interdisciplinary approach to OPD management. The IPC is a team-based model that advocates for varied disciplines to join forces in an open-team practice to facilitate interprofessional knowledge sharing (WHO, 2010). The framework emphasizes the importance of collaboration between health professionals (HPs) from varied specialties to deliver effective and comprehensive care (Reeves, 2017). The model is valuable for addressing swallowing problems due to their complex and multifaceted nature. By promoting collaboration and communication among diverse professionals, IPC may facilitate holistic care to patients with dysphagia, and ultimately, improve their outcomes (Johnson, 2016). The World Health Organization has developed guidelines for OPD management that emphasize the importance of collaborative care involving HPs from several specialties. The guidelines provide recommendations for swallowing disorder prevention, assessment, diagnosis, and treatment, as well as patient and caregiver education (Oduor et al., 2015). Taken together, empirical findings that support the IPC model highlight the need for HPs from different specialties to be highly involved in OPD management and reduce its associated burden.

Head et al. (2007) recommend that dysphagia screening be performed on patients at risk of swallowing disorders, such as individuals diagnosed with stroke, within 24 hours of admission to ensure their nutrition and hydration are managed appropriately. Nevertheless, there are concerns of low HP involvement in the treatment and care of OPD patients. Instead, in most healthcare facilities, OPD management is primarily the role SLP/Ts (Hady et al., 2023; Hinchey et al., 2005). This situation denies practitioners opportunities to offer holistic care to patients with swallowing difficulties. Past research has attributed the low involvement of nurses and other HPs in dysphagia management to their low awareness of swallowing disorders (Rhoda & Pickel-Voight, 2015; Robbertse & de Beer, 2020; Sánchez-Sánchez et al., 2021; Ndiema et al., 2024). In Kenya, low dysphagia screening and consideration have been reported in various hospitals in the country (Ngaruiya et al., 2021; Oduor et al., 2015;

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Omondi, 2017). Still, there is inadequate research on HPs' involvement in the management of OPD in Kenya, a gap that motivated this study. Drawing on the IPC model, this cross-sectional study aimed to establish HPs' involvement in OPD management among adult inpatients in the acute-care facility (ACF) of a level-six research hospital in Kenya.

**Research Objectives**

To establish the level of health professionals' participation in oropharyngeal dysphagia management among adult inpatients in the acute-care facility of a Kenyan level-six research hospital.

To identify health professionals' considerations during intervention of impaired deglutition among adult inpatients diagnosed with oropharyngeal dysphagia in the acute-care facility of a Kenyan level-six research hospital.

To identify health professionals' identification levels of traits and screening tests used for bed-side swallowing safety among adult inpatients before introducing an oral diet within their ACF.

# LITERATURE REVIEW

To develop patient-personalized interventions due to the intricacy of OPD, a multimodal approach to diagnosis is necessary (Caya et al., 2022). Screening, clinical non-instrumental assessment, or instrumental tests utilizing methods like Videofluoroscopic Swallowing Study (VFSS)/ Modified Barium Swallow (MBS) or Fiberoptic Endoscopic Evaluation of Swallowing (FEES) can all be used to detect OPD (Caya et al., 2022). When deciding whether additional clinical non-instrumental or instrumental testing is required, a screening test is utilized to distinguish between those at risk for OPD and those who are not (Cichero et al., 2009).

Al-Khabbaz et al. (2018) emphasized that nurses are responsible for assessing patients' swallowing abilities, developing individualized care plans, implementing interventions, and monitoring patients' progress in the United States. Nurses, unfortunately, noted that most instances of poor management of patients swallowing difficulties have currently been rising. A qualitative study by Linderholm et al. (2019) among African countries, explored the experiences of nurses in managing dysphagia in a stroke unit. The nurses were found participating in the decision-making process regarding the mode of swallowing and taking into account a variety of factors, such as the patient's swallowing ability, medical history, and social situation, by the researchers. To make well-informed decisions, the nurses also worked with other healthcare professionals like speech therapists and dietitians. The literature, however, contains insufficient details regarding the status of other HPs in collaborative expertise in the management of OPD among inpatients in Kenya.

According to Cheng et al. (2022), neurologists play vital roles in OPD management, especially in inpatients with neurogenic causes of dysphagia in the United States. The study also found that neurologists are involved in the diagnosis and assessment of dysphagia, determining the underlying cause, and developing a comprehensive management plan. The study recommends that multidisciplinary teams, including neurologists, speech-language pathologists, and dietitians, should work together to manage OPD effectively. The involvement of neurologists in OPD care across multiple cases can improve patient outcomes and reduce the risk of complications. Similarly, Kumar et al. (2017) did a study on the role of neurologists in the management of dysphagia in stroke among inpatients across African countries. According to the study, neurologists are essential to the treatment of dysphagia in stroke patients. They are involved in the diagnosis of dysphagia, determining the severity of the condition, and deciding the appropriate intervention/management plan. The study also found that early involvement of neurologists in the management of dysphagia leads to better outcomes for stroke patients.

Hana and Mohammad (2018) explored the role of gastroenterologists in the management of OPD among inpatients in Ethiopia. After considering diagnostic evaluation, the study highlighted the role of gastroenterologists in the assessment of patients with suspected OPD and the performance of diagnostic tests like esophageal manometry, endoscopy, and esophageal acid level (pH) monitoring, to determine the underlying causes of OPD and thus be able to address the current issues. This study focused on HPs' involvement in the care of OPD across multiple conditions. Similarly, Saito et al. (2013) studied the role of gastroenterologists in

the management of OPD in patients with head and neck cancer in Kenya. Their survey found that gastroenterologists played an important role in assessing swallowing function and recommending appropriate interventions, such as the use of a Percutaneous Endoscopic Gastrostomy (PEG) tube or Nasogastric (NGT) feeding tube. The study also highlighted the need for close collaboration between gastroenterologists and other professionals in healthcare who were involved in the management of OPD.

Bakhtiyari et al. (2019) hypothesized that minimal awareness of OPD, speech therapy functions, or identifying the need for swallowing therapy affected referrals. Poor knowledge of collaborative roles was clear among Iranian physicians. The researchers proposed that for impactful awareness of risks, etiologies, and management of OPD, collaborative teamwork is unavoidable. Although, only 53% of clinicians engaged in referrals, a remarkable 50% reported patients' overt health improvement through speech therapy. It was further suggested that incorporating seminars and continuous learning programs on dysphagia, to develop knowledge and the importance of teamwork among Iranian physicians, would positively impact earlier identification and care to improve client health quicker.

Overall, there is evidence of low interprofessional collaboration in the management of OPD and other swallowing problems in many clinical institutions globally (Bakhtiyari et al., 2019; Saito et al., 2013). Much of this low inter-disciplinary involvement may be attributed to HPs' low awareness of swallowing disorders (Rhoda & Pickel-Voight, 2015; Robbertse & de Beer, 2020; Sánchez-Sánchez et al., 2021). For instance, Sánchez-Sánchez et al.'s (2021) descriptive cross-sectional study in Spain found that HPs' awareness of the description, diagnosis, and therapeutic management of liquid dysphagia was either moderate or low. The findings showed that 62.3% of 396 healthcare providers understood dysphagia as a swallowing disorder. However, up to 39.2% and 49.1% of the participants respectively, did not know the dysphagia screenings, and the instrumental tests used in their clinics.

In another study, Obembe et al. (2017) assessed HPs' awareness of OPD management in Nigeria. They found that healthcare providers had low awareness levels of OPD-related services, leading to inappropriate referrals and overcrowding in tertiary hospitals. Similarly, a survey carried out by (Sharma et al., 2020) in India reported that HPs lacked knowledge about the role of OPD care in the healthcare system, leading to suboptimal referral practices and an overburdened secondary healthcare system. In contrast, other studies have found that HPs have a good understanding of OPD and their role in the healthcare system. A survey done in Pakistan by Khan et al., (2021) revealed that the majority of HPs were aware of the OPD treatments available and the referral procedure, albeit there were some knowledge gaps about the accessibility of certain swallowing therapy services. Another research done in South Africa established that HPs had a good understanding of the purpose and benefits of OPD care, but identified challenges in clients accessing and utilizing these high-demand services, with minimal staff, and funding (Kater et al., 2022).

In Kenya, studies involving 199 HPs from Moi Teaching Referral Hospital (MTRH) and 176 acute ischemic stroke cases from Kenyatta National Hospital (KNH) indicated that dysphagia screenings in the first 24 hours were at an average of only 5% (Oduor et al., 2015; Omondi, 2017). A systematic review of studies on nurses involved in caring for stroke inpatients by Ngaruiya et al. (2021) indicated a very low general consideration for intake of dysphagia screenings, leading to mostly undone procedures at MTRH. Omondi (2017) recommended the importance of conducting simple bedside swallow tests before oral trials. Still, there is limited research on HPs' involvement in the management of OPD in Kenya, a gap that motivated this study.

According to Omondi (2017), 60 stroke-based questionnaires that highlighted dysphagia screening were administered to Kenyan nurses. The researchers received 71% (43) of feedback from 20 – 34-year-old nurses at KNH, with 60% of them female. Although 41% (18) of the nurses reported knowledge of the need to request dysphagia screening before oral feeding among stroke patients, only 14% (6) participated in swallowing therapy to prevent aspiration pneumonia and to ensure nutritional intake. Nurses reported that they forgot to scan for dysphagia as a necessary procedure among minor stroke patients. Additionally, due to the low Glasgow Comma Outcome (GCO) scale presented by the 12 inpatients identified as at risk of dysphagia at KNH, physicians recommended Nasogastric Tube (NGT) enteral feeding for all of them without prior swallow test. From the 21% (3) inpatients that were fitted with NGT, there were no clinical records of any prior bedside swallow tests conducted. The current study focused on all involved HPs in the management of OPD, secondary to multiple

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clinical conditions.

In sum, the IPP model emphasizes high-level collaboration between professionals from different specialties to facilitate swallowing disorder management. However, few studies have reported on the levels of HPs' involvement in the treatment and care of individuals diagnosed with swallowing difficulties in Kenya hence the need for this study. The status of HPs involvement may provide useful inputs in developing strategies to facilitate a multidisciplinary, collaborative approach to OPD management for improved patient outcomes in the hospital. Prior to the present study, no research had been done on dysphagia management practices in the hospital.

## RESEARCH METHODOLOGY

The study adopted a cross-sectional descriptive design using quantitative techniques. The observational nature of the cross-sectional descriptive design as studied by (Setia, 2016) allowed the researcher to create a comprehensive understanding of the status, and a realistic impression of HPs. care of OPD inpatients in the hospital. Quantitative methods as suggested by (Creswell & Creswell, 2017) were used to generate and analyze numerical data on HPs' inclusion in OPD care in the ACF. The study was conducted at a level-six referral hospital in Nairobi City County, Kenya. The hospital is equipped to offer specialized rehabilitation medicine, oncology, trauma and orthopedics, renal, accident and emergency, and other acute care services.

The target population comprised 63 HPs attending to inpatients at the hospital's acute-care facility (ACF). A purposive procedure was used to sample only HPs dealing with OPD inpatients in the ACF. Purposive sampling was used to maximize the use of all available and accessible HPs, particularly, in the hospital's medical and surgical wards. The researcher selected samples by choosing specific units with the assumption that the small mass is a representative of the whole target population (Ary et al., 2014). The study sampled 30% of the 63 HPs according to Mugenda and Mugenda (2013)'s suggestion, making up a sample of 19 individuals. They were distributed proportionately across the various categories, as shown in Table 1.

Table 1: Sample Matrix

| Category | Population Size (N) | Sample Size (n) | n/N (%) |
|---|---|---|---|
| Medical officers and specialists | 12 | 4 | 33.3 |
| Nurses | 18 | 6 | 30.0 |
| Nutritionists | 4 | 1 | 25.0 |
| Physiotherapists | 25 | 7 | 28.0 |
| SLP/Ts | 2 | 1 | 50.0 |
| Total | 63 | 19 | 30.2 |

A close-ended, multiple-choice questionnaire was administered to participants to generate data from the sample. The questionnaires were delivered online through Google Forms following approvals and formal consent from the Kenya National Commission for Science Technology, and Innovation (NACOSTI), the Ethics Review Committee- Kenyatta University (KU-ERC), and individual participants. The stability of the questionnaire was attained by employing the test-retest procedure within 15-days window to assess the consistency of the test results (Streiner et al., 2014). Pearson's product moment correlation coefficient showed a high test-retest reliability ($r = .834$). Responses to the questionnaires were entered into the Statistical Package for Social Sciences (SPSS) and then coded into quantitative values using appropriate scales. Two statistics experts entered and coded the data independently. Their datasets were then compared for inconsistencies and adjustments made as appropriate. Next, the records were checked manually and suing stem-leaf diagrams for missing data and anomalies. Descriptive summaries, including raw frequencies, percentages, means, and standard deviations were used to summarize the data and identify key patterns in variables of interest. Independent samples t-test and one-way ANOVA were used to compare participants' OPD involvement levels across categories of selected

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demographic and general characteristic variables. Tests of significance were performed at the 95% confidence level.

### Patient and Public Involvement

The first author conducted a pre-visit to the facility with a concept to conduct this study, as guided by the first co-author, TOA, to seek permission for research. Prior to the study, based on the first author's graduate-speech clinician experience at the ACF which was supervised by the second co-author, KM, findings indicated that a high frequency of inpatients referred to SLT clinic were impacted by dysphagia and were cared for by multiple health professionals (HPs) due to the primary comorbid conditions. (Ndiema et al., 2023). To address this gap, this study sought to identify HPs' involvement in OPD management among adult inpatients in the medical and surgical wards (acute-care facility) of a level-six research hospital in Kenya.

There were no standardized questionnaires on OPD involvement available in Kenya at the time of the study. The study adapted a previously validated survey by (Rhoda & Pickel-Voight, 2015; Yong et al., 2018) which was validated to be relevant by two research supervisors. The questionnaire assessed participants on three involvement aspects: participation levels, selection of: OPD management considerations, and traits or screenings used to identify bed-side swallowing safety before oral diet introduction. A pilot study was conducted in the same referral hospital with participants of similar features but excluded from the main study, to assess the questionnaire's suitability. To ensure the tools measured the variables under examination, the instruments were probed and individual items reviewed. Two experts were constantly consulted in-depth to judge research instruments' relevance, clarity, and adequacy. Due to time conflict in responding to physical questionnaires at work, the participants suggested submission of online forms, which they were able to respond quicker at their ample time, and also reduced the time spent in sharing the questionnaires. The participants were and continue to be enlightened and involved in the study through open access published articles, seminar and conference presentations, and trainings.

## RESULTS

### General Information and Participants' Characteristics

The sample comprised 19 HPs, including speech therapists, medical officers and specialists, nurses, physiotherapists, and nutritionists attending to inpatients in medical and surgical wards of a level-six research hospital in Kenya. They had been reached through online questionnaires completed within eleven days. No unique difficulty was encountered during the data collection exercise. All were involved in the treatment and management of OPD. Of the 19 HPs, 16 completed the questionnaires, translating into an 84.2% return rate, which was considered adequate (Mugenda & Mugenda, 2003). Table 2 summarizes their characteristics.

Table 2: Participant Demographic and General Characteristics

| Characteristic | Category | n | % |
|---|---|---|---|
| Gender | Male | 8 | 50.0 |
| | Female | 8 | 50.0 |
| Age group | 25-30 years | 6 | 37.5 |
| | 31-35 years | 5 | 31.3 |
| | 36-40 years | 5 | 31.3 |
| Educational attainment | Diploma | 4 | 25.0 |
| | Bachelor | 8 | 50.0 |
| | Master's | 3 | 18.8 |
| | Other | 1 | 6.3 |

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|---|---|---|---|
| Experience | 4-6 years | 5 | 31.3 |
| | 7-9 years | 5 | 31.3 |
| | > 9 years | 6 | 37.5 |
| Specialization | Neurologist | 1 | 6.3 |
| | Oncologist | 1 | 6.3 |
| | Nurse | 5 | 31.3 |
| | Physiotherapist | 7 | 43.8 |
| | Nutritionist | 1 | 6.3 |
| | Speech therapist | 1 | 6.3 |
| Pathologist present | No | 1 | 6.3 |
| | Yes | 15 | 93.8 |
| Training | No | 10 | 62.5 |
| | Yes | 6 | 37.5 |

Demographic data included participants' gender, age, education attainment, work experience, and area of specialization (work units). Participants were also asked to indicate whether they had ever observed or had to use another language other than Kiswahili or English with an inpatient to facilitate bed-side swallowing. The sample had an equal number (n = 8) of male and female participants. Their ages ranged between 25 and 40 years and were almost equally distributed across three age groups: 25-30, 31-35, and 36-40. Half had a bachelor's degree, a quarter had at least a master's degree, and the remaining quarter had diploma certificates. All had been practicing for at least four (4) years, with 38% (n = 6) having been in their profession for over ten (10) years. Nearly three-quarters were physiotherapists (43.8%, n = 7) and nurses (31.3%, n = 5). The other represented professions were neurology, oncology, nutrition, and speech therapy. Nearly all (93.8%, n = 15) indicated the presence of an SLP/T within their ACF unit.

**Health Professionals' Levels of Involvement in the Management of Oropharyngeal Dysphagia**

The first objective was to assess HPs' involvement in OPD management among adult inpatients in the hospital's medical and surgical wards. Respondents were first asked four questions that would reflect on their involvement levels: whether they generally managed adult OD inpatients in their ACF, they had been involved in team management of adult OPD inpatients in their ACF, they refer adult ACF inpatients with swallowing issues, and whether they were satisfied with their involvement with OPD inpatients. The results were as presented in Table 3.

Table 3: Participants' Involvement in Oropharyngeal Dysphagia Management

| Item | No/Yes | n | % |
|---|---|---|---|
| Do you generally manage adult inpatients with oropharyngeal dysphagia in ACF? | No | 2 | 12.5 |
| | Yes | 14 | 87.5 |
| Have you ever been involved in the team management of an adult inpatient(s) with a swallowing disorder in ACF? | No | 4 | 25.0 |
| | Yes | 12 | 75.0 |
| Do you refer ACF adult inpatients with swallowing issues? | No | 3 | 18.8 |
| | Yes | 13 | 81.3 |
| Are you satisfied with your involvement in care for | No | 6 | 37.5 |

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| | | | |
|---|---|---|---|
| swallowing difficulties among adult inpatients in ACF? | Yes | 10 | 62.5 |
| Would you like to receive further practice in care of swallowing disorders among adults in ACF? | No | 1 | 6.3 |
| | Yes | 15 | 93.8 |

The majority indicated that they were involved in all the three aspects of OPD management within the their ACF. Specifically, 87.5% (n = 14) indicated that they generally managed adult OPD inpatients, 75.0% (n = 12) had been involved in an OPD management team, and 81.3% (n = 13) referred ACF inpatients with swallowing issues. However, when asked whether they were satisfied with their involvement with OPD inpatients, only 62.5% (n = 10) were positive. When asked the reason for the satisfaction or dissatisfaction, each provided a different response. They were as presented in Table 4. Nearly all (93.8%, n = 15) were willing to receive further practice in the care of OPD patients in their ACF.

Table 4: Reasons for Satisfaction or Dissatisfaction with Management's Involvement

| **Not satisfied** | **Satisfied** |
|---|---|
| Late diagnosis | Patients get proper nutrition through care |
| Not being involved in the process | I get to offer direct care to affected patients |
| Being unsure of the procedures to follow | I am satisfied with patients' improvement. |
| Cases not filtered well | Positive prognosis |
| I wish I knew more | I help in decision-making, best for my patients |
| I need some training on this area | Early identification of the issues |

Those satisfied with their involvement mostly mentioned factors directly or indirectly related to patients' well-being. They included ensuring their patients improve, having to offer direct care to patients, and knowing that their involvement allowed them to offer the best for their patients. Having an active role in decisions about OPD management was also mentioned as a factor leading to satisfaction. On the other extreme, not being involved in the OPD management process, inadequate knowledge or training, and late diagnoses were among the reasons for dissatisfaction.

**Health Professionals' Identification Levels of Oropharyngeal Dysphagia Management Considerations**

Participants were assessed on their management considerations during OPD management in their ACF. They were first to identify OPD inpatient management considerations. Table 5 shows their responses.

Table 5: Responses to Oropharyngeal Dysphagia Management Considerations

| **Management considerations** | **Agree, n (%)** | **Undecided,n (%)** | **Disagree,n (%)** |
|---|---|---|---|
| Patients with a feeding tube need daily oral hygiene (mouth washing/ teeth brushing) | 16 (100) | 0 (0.0) | 0 (0.0) |
| Thickened liquid should be avoided | 6 (37.5) | 1 (6.3) | 9 (56.3) |
| Watery liquids are the safest substances to drink | 8 (50.0) | 1 (6.3) | 7 (43.8) |
| All patients with difficulty in swallowing need a feeding tube | 4 (25.0) | 2 (1.5) | 10 (65.2) |

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|---|---|---|---|
| The best position while feeding the patient is when the patient lies flat on his back | 1 (6.3) | 1 (6.3) | 14 (87.5) |
| Patients can always eat normal hospital food | 2 (12.5) | 0 (0.0) | 14 (87.5) |
| Feeding tube is only indicated in patients with impaired consciousness | 0 (0.0) | 0 (0.0) | 16 (100) |
| A patient can feed orally with a fitted tracheostomy | 5 (31.3) | 3 (18.8) | 8 (50.0) |
| Oral diet can be offered to a patient who has a plastic cannula with inflated balloon | 6 (37.5) | 6 (37.5) | 4 (25.0) |
| Patients with silent aspiration can be identified by signs like coughing or choking | 13 (81.3) | 0 (0.0) | 3 (18.8) |

All agreed that swallowing disorder patients with feeding tubes require daily oral hygiene, and half mentioned that watery liquids are the safest substances for OPD patients to drink. Although the statement that patients with silent aspiration can be identified by observing relevant signs, such as coughing and choking was incorrect, 81.3% (n = 13) picked it as an OPD management consideration. The remaining items had less than 50% "agree" responses. All disagreed that feeding tubes are only recommended for patients with impaired consciousness. The majority (87.5%, n = 14) disagreed that laying an OPD patient flat on their back is the best feeding position and that OPD patients can eat normal hospital food. A slight majority disagreed that all patients with swallowing difficulties need a feeding tube, 56.3% (n = 9) disagreed that OPD patients should avoid thickened liquids, while half disagreed that an OPD patient can feed orally with a fitted tracheostomy. The item with the most unable-to-decide responses was whether an oral diet could be offered to patients with a plastic cannula with an inflated balloon (37.5%, n = 6).

For additional insights into their identification of consideration factors during swallowing disorder management, the number of correct responses was computed for each participant and item. Table 6 shows the results. A score above 75% was considered high, while 25% and below was considered very low. Averagely, each participant matched 61.3% (SD = 17.08) of the items correctly, showing moderate appropriate OPD management consideration factors. Participants highly identified only four (4) of the ten OPD management considerations. Over 87% of the sample matched these items correctly. On the other end, low or very low scores were obtained in four (4) items. Less than half matched the four correctly. Although 50% (n = 8) disagreed and 18.8% (n = 3) were undecided on whether a patient could feed orally with a fitted tracheostomy, this trait is in-fact true.

Table 6: Number (%) of Correct Responses to Management Considerations

| **Management considerations** | **n** | **%** | **Interpretation** |
|---|---|---|---|
| Patients with a feeding tube need daily oral hygiene (mouth washing/ teeth brushing) | 16 | 100 | High |
| Thickened liquid should be avoided | 9 | 56.25 | Moderate |
| Watery liquids are the safest substances to drink | 7 | 43.75 | Low |
| All patients with difficulty in swallowing need a feeding tube | 10 | 62.50 | Moderate |
| The best position while feeding the patient is when the patient lies flat on his back | 14 | 87.50 | High |

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| | | | |
|---|---|---|---|
| Patients can always eat normal hospital food | 14 | 87.50 | High |
| Feeding tube is only indicated in patients with impaired consciousness | 16 | 100 | High |
| A patient can feed orally with a fitted tracheostomy | 5 | 31.25 | Low |
| Oral diet can be offered to a patient who has a plastic cannula with inflated balloon | 4 | 25.00 | V. Low |
| Patients with silent aspiration can be identified by signs like coughing or choking | 3 | 18.75 | V. Low |

The study then assessed whether participants' considerations during involvement in OPD management varied with their characteristics. Shapiro-Wilk's test revealed that the scores did not deviate significantly from the normal distribution (SW = .951, p = .498). Hence, independent samples t-tests and one-way ANOVA were used to compare mean considerations scores across the categories of selected variables. The results are in Table 7.

Table 7: Oropharyngeal Dysphagia Management Considerations status by Participant Characteristics

| **Characteristic** | **Category** | **n** | **M** | **SD** | **t/F (p)** |
|---|---|---|---|---|---|
| Gender | Male | 8 | 55.00 | 17.728 | -1.528 (.149) |
| | Female | 8 | 67.50 | 14.880 | |
| Age group | 25-30 years | 6 | 60.00 | 12.649 | 0.883 (.921) |
| | 31-35 years | 5 | 60.00 | 29.155 | |
| | 36-40 years | 5 | 64.00 | 5.477 | |
| Education | Diploma | 4 | 63.33 | 15.275 | 0.043 (.958) |
| | Bachelor | 8 | 63.75 | 24.458 | |
| | Post-graduate | 4 | 67.50 | 22.174 | |
| Experience | 4-6 years | 5 | 58.00 | 13.038 | 0.139 (.871) |
| | 7-9 years | 5 | 64.00 | 23.022 | |
| | > 9 years | 6 | 61.67 | 17.224 | |
| Specialization | Nurse | 5 | 56.00 | 15.166 | 3.086 (.080) |
| | Physiotherapist | 7 | 55.71 | 13.973 | |
| | Other | 4 | 77.50 | 17.078 | |
| Training | No | 10 | 56.00 | 13.499 | -1.681 (.115) |
| | Yes | 6 | 70.00 | 20.000 | |

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All the models showed significant homogeneity in their variances based on Levene's test ($p > .050$). The tests revealed no significant difference in the consideration scores between any two categories for all the variables. Thus, none of these variables influenced the HPs' consideration of factors during OPD management at their ACF. The implication is that the OPD management considerations by HPs at the hospital's medical and surgical wards is independent of their characteristics.

**Health Professionals' Identification Levels of Traits and Screening Tests for Bed-side Swallowing Safety**

The study also evaluated HPs' identification level of traits and screening tests used in their ACF during bedside swallowing safety among adult inpatients before introducing an oral diet. Participants' considerations in this area were assessed using 15 trait/screening items (Table 8).

Table 8: Responses to recognition Oropharyngeal Dysphagia Trait/Screening Items used in ACF

| Traits/screenings items | Yes, n (percent) | No, n (percent) | Don't know, n (percent) | Don't know procedure, n (percent) | Total (N) |
|---|---|---|---|---|---|
| Alertness level | 16 (100) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 16 |
| Dry swallow test | 9 (56.3) | 3 (18.8) | 3 (18.8) | 1 (6.3) | 16 |
| Cough reflex | 15 (93.8) | 1 (6.3) | 0 (0.0) | 0 (0.0) | 16 |
| Secretions management | 14 (87.5) | 1 (6.3) | 1 (6.3) | 0 (0.0) | 16 |
| Water swallowing | 15 (93.8) | 1 (6.3) | 0 (0.0) | 0 (0.0) | 16 |
| Food Swallowing | 14 (87.5) | 2 (12.5) | 0 (0.0) | 0 (0.0) | 16 |
| Tolerance (safety meals) | 13 (81.3) | 1 (6.3) | 2 (12.5) | 0 (0.0) | 16 |
| Palatability (tastiness) | 4 (26.7) | 6 (37.5) | 5 (33.3) | 0 (0.0) | 15 |
| EAT-10 swallow screen | 10 (62.5) | 1 (6.3) | 3 (18.8) | 2 (12.5) | 16 |
| Cranial nerve exam | 10 (62.5) | 3 (18.8) | 3 (18.8) | 0 (0.0) | 16 |
| The OHAT checklist | 10 (62.5) | 2 (12.5) | 2 (12.5) | 2 (12.5) | 16 |
| IDDSI framework | 12 (75.0) | 1 (6.3) | 2 (12.5) | 1 (6.3) | 16 |
| FEES test | 9 (56.3) | 2 (12.5) | 4 (25.0) | 1 (6.3) | 16 |
| The VFSS/MBS test | 6 (37.5) | 1 (6.3) | 7 (43.8) | 2 (12.5) | 16 |
| Thickeners used as required by patient | 3 (18.8) | 4 (25.0) | 7 (43.8) | 2 (12.5) | 16 |

All participants identified alertness level as a deglutition disorder trait or screening test. No other item was selected by all the participants as an OPD trait or screening test. The majority of the participants (over 81%) also correctly indicated each of the five items (dry swallow test, cough reflex, secretions management, water and food swallowing trials) as OPD traits or screening tests used in their ACF. In total, over 62% did not consider ten (10) of the 15 items as OPD traits or screening tests. The number of correct answers were then computed for each participant and item. The mean score was 60.8% (SD = 16.123). In other words, on average, each participant matched 60.8% of the items correctly. Thus, the sampled HPs had, on average, moderate consideration of OPD traits and screening tests. Participants with the highest and lowest scores attained 40.0% and 100%, respectively.

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The results for individual items are in Table 9.

Table 9: Number (%) of Correct Responses to Bed-Side Safety Traits/Screening

| Traits/Screenings Tests | n | percent | Interpretation |
|---|---|---|---|
| Alertness level | 16 | 100 | High |
| Dry swallow test | 9 | 56.25 | Moderate |
| Cough reflex | 15 | 93.75 | High |
| Secretions management | 14 | 87.50 | High |
| Water swallowing | 15 | 93.75 | High |
| Food Swallowing | 14 | 87.50 | High |
| Patient tolerance (safe meals) | 13 | 81.25 | High |
| Palatability (tastiness) | 4 | 25.00 | V. Low |
| Eat Assessment Tool (EAT-10) swallow screen | 10 | 62.50 | Moderate |
| Cranial nerve exam | 10 | 62.50 | Moderate |
| The Oral Health Assessment tool (OHAT )checklist | 2 | 12.50 | V. Low |
| International Dysphagia Diet Standardization Initiative (IDDSI) | 12 | 75.00 | Moderate |
| Fiberoptic Endoscopic Evaluation of Swallowing (FEES) test | 2 | 12.50 | V. Low |
| The Videofluoroscopic Swallow Study/Modified Barium Swallow (VFSS/MBS) test | 6 | 37.50 | Low |
| Thickeners used as required by patient | 4 | 25.00 | V. Low |

From Table 9, all participants appropriately identified alertness level as a trait for identifying the bed-side swallowing safety of adult OPD inpatients. Apart from alertness level, they scored highly in five (5) other items. The five included cough reflex, secretions management, water swallowing, food Swallowing, patient tolerance, and palatability. Over 81 percent participants matched each of the five items as true traits. The most mismatched items were the Oral Health Assessment Tool (OHAT) checklist, Fiberoptic Endoscopic Evaluation of Swallowing (FEES) test, VFSS/MBS test, and thickeners. Although none of these three are currently used at the ACF during bed-side swallowing safety with only Barium Swallowing test used as clarified by the speech therapist, on average - 87.5 percent (n = 14) identified OHAT, FEES, and VFSS/MBS as bed-side swallowing safety screening tools used for OPD inpatients in their ACF, while 75 percent (n = 12) isolated thickeners as a safety trait.

The study also evaluated whether participants' consideration of OPD bed-side safety traits and screening tools varied with their individual characteristics. Shapiro-Wilk's test showed that participants' bed-side safety scores were normally distributed (SW = .921, p = .173). Independent samples t-tests and one-way ANOVA were used

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to compare the mean bed-side safety knowledge scores across their gender, age, education, experience, specialization, and training attendance categories. The results are in Table 10.

Table 10: Bed-Side Safety Consideration Levels by Participant Categories

| Characteristic | Category | n | M | SD | t/F (p) |
|---|---|---|---|---|---|
| Gender | Male | 8 | 57.50 | 16.304 | -.818 (.427) |
| | Female | 8 | 64.17 | 16.305 | |
| Age group | 25-30 years | 6 | 56.67 | 13.824 | 0.711 (.509) |
| | 31-35 years | 5 | 68.00 | 22.309 | |
| | 36-40 years | 5 | 58.67 | 11.925 | |
| Education | Diploma | 4 | 55.00 | 6.382 | 3.398 (.065) |
| | Bachelor | 8 | 55.83 | 15.091 | |
| | Post-graduate | 4 | 76.67 | 16.778 | |
| Experience | 4-6 years | 5 | 60.00 | 12.472 | 0.419 (.698) |
| | 7-9 years | 5 | 66.67 | 24.036 | |
| | > 9 years | 6 | 56.67 | 11.736 | |
| Specialization | Nurse | 5 | 58.67 | 9.886 | 3.721 (.053) |
| | Physiotherapist | 7 | 53.33 | 14.401 | |
| | Other | 4 | 76.67 | 16.778 | |
| Training | No | 10 | 57.33 | 14.469 | -1.131 (.277) |
| | Yes | 6 | 66.67 | 18.377 | |

All the models showed significant homogeneity in their variances based on Levene's test ($p > .050$). The tests indicated no significant difference in bedside safety knowledge scores between any categories of any variable at the 95% confidence level ($p > .050$). In other words, keeping all factors constant, none of these variables influenced participants' considerations of OPD bed-side safety traits and screening tests used in their ACF. Thus, the selection of traits and screening tools for bedside swallowing safety by HPs at the ACF are independent of an individual's characteristics.

## DISCUSSION OF FINDINGS

The study obtained data from HPs in different specialties working in the ACF of a Kenyan level-six research hospital to establish the state of their involvement in OPD management among adult inpatients in the facility. Overall, the majority of the participants were well-educated and experienced practitioners. Besides, all worked in professions that required them to interact regularly with OPD patients. Hence, they were expected to have high involvement in OPD management, considering the high presentation of this condition in the facility, as was evidenced by the archival records (Ndiema et al., 2023). Consistent with this expectation, the majority were involved in an OPD management aspect. There are increasing calls for a multi-disciplinary, collaborative

approach toward OPD management (Miles et al., 2020; Omondi, 2017). Such an approach is vital to provide optimal care for OPD patients while promoting HPs' safety (Miles et al., 2020). Given that the study's participants were of varied specialties, the fact that the majority were involved in OPD management may suggest that the hospital's management emphasizes or prioritizes collaboration and is focused on promoting a multi-disciplinary approach to managing the condition.

While such a collaborative approach is commendable, the fact that over a third were unsatisfied with their current involvement (Table 3) may suggest that many desired more involvement. This observation becomes apparent when examining Table 4. Low involvement was identified among the factors associated with low satisfaction. These findings concur with past research suggesting that minimal guidance and training may hinder HPs from being fully involved in OPD management (Anderle et al., 2017; Oduor et al., 2015). Although the influence of these variables was not assessed in this study, the responses in Table 4 indicate that these two factors could be contributing to the low satisfaction levels among the sampled HPs. Some respondents stated that they were unsure of OPD management procedures, while others mentioned they had minimal training in this area. Such observations emphasize the role of well-established OPD management guidelines and regular training in increasing HPs. satisfaction. Notably, despite their dissatisfaction, the majority (over 93%) were willing and interested in being engaged in the management of OPD among inpatients (Table 4), which could be a signal for the management to incorporate them in key decision-making processes about OPD management.

The analysis also established that the majority of HPs at the hospital's medical and surgical wards only moderately appropriately identified OPD management consideration factors. These results are similar to the findings of various studies that have reported notable OPD management knowledge gaps among HPs (Bakhtiyari et al., 2019; Khan et al., 2021). Effective OPD management requires HPs to be have adequate knowledge on all facts about this condition. Research shows that HPs' comprehension of these factors is significantly related to their ability to provide optimal care to their OPD clients (Sharma et al., 2020). Health professionals' knowledge may also predict their involvement and participation (Nepal & Sherpa, 2019). Therefore, the knowledge gaps observed in this study could be compromising the quality of care for OPD adult inpatients at the hospital in this study. As Khan et al. (2021) concluded, low knowledge hampers' HPs' ability to identify appropriate procedures, recommend referrals, and offer effective treatment. There is a need for the hospital's leadership to develop and implement appropriate interventions to enhance OPD management knowledge among HPs in its medical and surgical wards.

The identification of OPD traits and screening tools is vital for effective screening. The above analysis revealed that HPs at the hospital's ACF had only moderate identification level of OPD traits and screening tests. Comparable findings were reported by Sánchez-Sánchez et al. (2021), who found that the knowledge of OPD screening among the majority of HPs in Spain was either low or moderate. Similarly, in South Africa, Blackwell & Littlejohns (2010) established that minimal guidance on screening and inadequate test resources resulted in missed OPD referral opportunities. In Kenya, Omondi (2017) found that nurses at KNH rarely administered dysphagia screening because they did not consider it essential. Therefore, the results in this study are comparable to those reported elsewhere.

This trait and screening identification gap may have drastic implications for OPD management on client outcomes at the hospital's medical and surgical wards. Swallowing screening procedures indicate the presence of clinical manifestations that could be used to diagnose dysphagia (Andrade et al., 2018). According to Hana and Mohammad (2018), healthcare settings should prioritize dysphagia screening as a crucial tool for preventing or mitigating future complications. Screening for dysphagia and malnutrition should be introduced in hospital routines to avoid or minimize damages caused by dysphagia or malnutrition, especially among older people. Andrade et al. (2018) also recommended that hospitals introduce dysphagia screening as a routine practice to minimize or avoid dysphagia-related damage, especially among older adults. The moderate identification level of OPD traits and screening among the hospital's HPs, as reported in this study, may mean that some OPD patients are not identified or referred as required.

According to Sivertsen et al. (2017), highly trained and experienced HPs are more likely to employ appropriate swallow screening procedures than those with low training or experience. In contrast to such findings, the present analysis could not establish significant training, experience, or educational attainment effects on HP's

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identification level of bedside swallowing and safety traits/screening. This inconsistency may be due to sample bias or other factors, such as participants' involvement with OPD patients, which were not controlled in the study.

The above findings are subject to various limitations, including respondents failing to honestly share information, given that OPD diagnosis is a matter on health issues. The researcher handled this by building rapport with the participants and assured them that the information would be kept private and used for academic research purposes only. Time constraints due to busy schedules were addressed by the researcher being flexible and discussing availability with respondents during preliminary visits. The limitations notwithstanding, the results offer vital insights into the state of HPs' involvement in OPD management in the hospital's medical and surgical wards.

## CONCLUSION

There are increasing calls for a multi-disciplinary, collaborative approach to OPD management. Meeting this goal requires HPs in different specialties to be highly involved in dysphagia identification, screening, and treatment. The study analyzed responses from 16 HPs working in the ACF of a level-six research hospital in Kenya to establish their involvement in OPD management. Three (3) major conclusions can be drawn from the findings. Firstly, while the majority of HPs attending to inpatients in the hospital's medical and surgical units are involved in various aspects of OPD management, only a slight majority are satisfied with their current involvement levels. Secondly, HPs working in the hospital's medical and surgical units have, on average, moderate identification levels of OPD management considerations and traits/screening tests used during bedside swallowing safety procedures. Finally, increased involvement of HPs in OPD management may result in improved patient outcomes and high professionalism among HPs. The combination of these factors could translate into overall improvement of the entire healthcare system. The hospital's management should develop strategies to increase inter-professional collaboration among all HPs who should be involved in OPD management practice. Training programs to increase dysphagia awareness among the hospital's HPs could help enhance their involvement in its management.

**Relevant support material summary: Selected data from OPD management considerations and selection of bedside swallowing safety traits:**

| ID | Age | Gender | Specialization | Experience | Educ. | Cons. | Trait/ Screen |
|---|---|---|---|---|---|---|---|
| 1 | 36-40 | Male | Physiotherapist | 10-Above Years | B Sc | 60.0 percent | 40.0 percent |
| 2 | 25-30 | Male | Physiotherapist | 4-6 Years | B Sc | 50.0 percent | 80.0 percent |
| 3 | 31-35 | Male | Physiotherapist | 10-Above Years | B Sc | 30.0 percent | 46.7 percent |
| 4 | 31-35 | Male | Neurologist | 10-Above Years | Other | 80.0 percent | 73.3 percent |
| 5 | 25-30 | Male | Physiotherapist | 7-9 Years | B Sc | 70.0 percent | 40.0 percent |
| 6 | 31-35 | Female | Physiotherapist | 7-9 Years | B Sc | 50.0 percent | 46.7 percent |
| 7 | 36-40 | Female | Physiotherapist | 10-Above Years | B Sc | 60.0 percent | 60.0 percent |
| 8 | 25-30 | Male | Nurse | 4-6 Years | Diploma | 40.0 percent | 46.7 percent |
| 9 | 31-35 | Male | Nurse | 7-9 Years | B Sc | 40.0 percent | 73.3 percent |
| 10 | 25-30 | Female | Nurse | 4-6 Years | Diploma | 60.0 percent | 53.3 percent |
| 11 | 36-40 | Male | Physiotherapist | 10-Above Years | B Sc | 70.0 percent | 60.0 percent |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 12 | 25-30 | Female | Nurse | 4-6 Years | Diploma | 70.0 percent | 60.0 percent |
| 13 | 25-30 | Female | Nurse | 4-6 Years | Diploma | 70.0 percent | 60.0 percent |
| 14 | 31-35 | Female | Speech Therapist | 7-9 Years | M Sc | 100.0 percent | 100.0 percent |
| 15 | 36-40 | Female | Oncologist | 7-9 Years | M Sc | 60.0 percent | 73.3 percent |
| 16 | 36-40 | Female | Nutritionist | 10-Above Years | M Sc | 70.0 percent | 60.0 percent |

**Ethics Approval**

This study involves human participants and was approved by Ethics Review Committee of Kenyatta University, Kenya (Ref: PKU/2809/I1933).

Participants gave informed consent to participate in the study before taking part.

**Conflict Of Interest Statement**

The authors declare no conflicts of interest.

**Contributors**

DCN (guarantor) conceptualized, developed the research proposal, collected data and conducted analysis, reported findings and submitted the final research project. TOA critically supervised and edited the entire research process. KM was a validator of the research content. FR was the primary clinical advisor and mentor during development of the research topic and reviewed the relevance of the purpose and objectives of this study

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**Competing Interests**

None declared.

**Patient Consent for Publication**

Not applicable.

**Patient And Public Involvement**

Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

**Data Availability Statement**

The data that supports the findings of this study are available in the supplementary material of this article.

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## REFERENCES

1. Al-Khabbaz, M., Al-Jumaili, O. A., Al-Ani, Y. K., & Al-Taee, W. K. (2018). The impact of a nurse-led education program on knowledge and adherence to dysphagia management strategies among patients and caregivers: A randomized controlled trial. Clinical Nursing Research, 27(4), 406-424
2. Anderle, P., Rech, R. S., Pasqualeto, V. M., & de Goulart, B. N. (2018). Knowledge of the medical and nursing teams about the management of oral medications in hospitalized adult dysphagic patients. Audiology: Communication Research, 23(1), e1933 http://dx.doi.org/10.1590/2317-6431-2017-1933
3. Ary, D., Jacobs,L. C., & Sorensen,C. K. & Walker,A. (2014). Introduction to research in education. Wadsworth Cengage Learning.
4. Bakhtiyari, J., Ghorbani, R., Salmani, M., Asadi, M., Irani, S., & Esmaee, A. R. (2019). Physicians' perspective on a multidisciplinary approach to dysphagia management. Iranian Journal of Otorhinolaryngoly, 31(104), 141-146.
5. Blackwell,Z., & Littlejohns, P. (2010). A review of the management of dysphagia: A South African perspective. Journal of Neuroscience Nursing, 42(2), 61-70.
6. Caya, M., Lena, H. & Liza B. (2022). Prevalence of oropharyngeal dysphagia in adults in different healthcare settings: A systematic review and meta-analyses. Dysphagia, 38(1), 76–121. https://doi.org/10.1007/s00455-022-10465-x
7. Cheng, I., Hamad, A., Sasegbon, A., & Hamdy, S. (2022). Advances in the treatment of dysphagia in neurological disorders: A review of current evidence and future considerations. Neuropsychiatric Disease and Treatment, 18(1), 2251-263. https://doi.org/10.2147/NDT.S371624
8. Cichero, J. A., Heaton, S., & Bassett, L. (2009). Triaging dysphagia: nurse screening for dysphagia in an acute hospital. Journal of Clinical Nursing, 18(11), 1649-1659.
9. Creswell, J. W. (2016). Reflections on the MMIRA the future of mixed methods task force report. Journal of Mixed Methods Research, 10(3), 215-219
10. Dondorf, K., Fabus, R., & Ghassemi, A. K. (2015). The interprofessional collaboration between nurses and speech-language pathologists working with patients diagnosed with dysphagia in skilled nursing facilities. Journal of Nursing Education and Practice, 6(4), 17-20. http://dx.doi.org/10.5430/jnep.v6n4p17
11. Hady, A. F., Farag, H. M., & Sheikhany, A. R. (2023). The awareness and knowledge of dysphagia among health care practitioners in Egypt. Egyptian Journal of Otolaryngology, 39(25), 1-18. https://doi.org/10.1186/s43163-023-00387-2
12. Hana, M., & Mohammad, Y. N. (2018). Registered nurse's competency to screen dysphagia among stroke patients: Literature review. The Open Nursing Journal, 12(1), 184-194. http://dx.doi.org/10.2174/1874434601812010184, 2018, 12, 184-194
13. Head, K., Weeks, K., Stroud, A., & Coll, A. M. (2007). A survey of dysphagia screening practices across England and Wales International Journal of Therapy and Rehabilitation, 14(9), 409-417. http://dx.doi.org/10.12968/ijtr.2007.14.9.24582
14. Heritage, M. (2001). A collaborative approach to the assessment and management of dysphagia. International Journal of Language & Communication Disorders, 36(1), 369-74. http://dx.doi.org10.3109/13682820109177913
15. Hinchey, J. A., Shephard, T., Furie, K., Smith, D., Wang, D., & Tonn, S. (2005). Formal dysphagia screening protocols prevent pneumonia. Stroke, 36(9), 1972-76. https://doi.org/10.1161/01.str.0000177529.86868.8d
16. Johnson, Alex. (2016). Interprofessional education and interprofessional practice in communication sciences and disorders: An introduction and case based examples. American Speech-Language-Hearing Association.
17. Kamal, R., Ward, E., & Cornwell, P. (2020). Levels of awareness, involvement and training in dysphagia management among other health professionals in Malaysia. Dysphagieforum, 3(1) 4-15. https://doi.org/10.2443/skv-s-2013-55020130101
18. Kater, K-A. (2022). Triage and dysphagia: Are hospitals in the South African public health sector ready? South African Journal of Communication Disorders, 69(1), a852. https://doi.

org/10.4102/sajcd.v69i1.852
19. Khan, M. A., Moazzam, M., Qamar, R., Shehzad, A., Fatima, W., & Hassan, S. B. (2021). Assessment of awareness among speech and language pathology regarding dysphagia. Asian Journal of Allied Health Sciences, 6(2), 4-9. https://doi.org/10.52229/ajahs.v6i2.1179
20. Knight, K., Pillay, B., van der Linde, J., & Krüger, E. (2020). Nurses' knowledge of stroke-related oropharyngeal dysphagia in the Eastern Cape, South Africa. South African Journal of Communication Disorders, 67(1), a703. https://doi.org/ 10.4102/sajcd.v67i1.703
21. Kumar, S., Selim, M. H., Caplan, L. R., & Ogilvy, C. S. (2017). Role of neurologists in the management of dysphagia in stroke. Journal of Stroke and Cerebrovascular Diseases, 26(2), 257-263. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2170096/pdf/v064p00569.pdf
22. Linderholm, M., Hjälmhult, E., & Lindberg, I. (2019). Nurses' experiences of managing dysphagia in stroke care: A qualitative study. Journal of clinical nursing, 28(13-14), 2566-73. http://dx.doi.org/10.3233/ACS-220005
23. Miles, A., Connor, N. P., Desai, R. V., Jadcherla, S., Allen, J., Brodsky, M., Garand, K. L., Malandraki, G. A., McCulloch, T. M., Moss, M., Murray, J., Pulia, M., Riquelme, L. F., & Langmore, S. E. (2021). Dysphagia care across the continuum: A multidisciplinary dysphagia research society taskforce report of service-delivery during the COVID-19 global pandemic. Dysphagia, 36(2), 170-182. https://doi.org/10.1007/s00455-020-10153-8
24. Mugenda, A., & Mugenda, O. (2013). Research methods: Quantitative and qualitative approaches. ACTS Press.
25. Ndiema D. C., Abuom T., & Karia M. (2024) Implications of Health Professionals' Awareness and Involvement in Oropharyngeal Dysphagia Management on Inpatient Outcomes in a National Hospital in Kenya: A Case Study. BMJ, Journal of Public Health. http://doi.org/10.1136/bmjph-2023-000871.
26. Ndiema D. C., Abuom T., & Karia M. (2024) The status Of Health Professionals' Knowledge Of Complications Of Impaired Deglutition Among Acute-Care Inpatients In A Kenyan Referral Hospital. International Journal of Research and Innovation in Applied Science. https://www.researchgate.net/publication/381275066.
27. Ndiema D. C., Abuom T., & Karia M. (2024) Health Professionals' Awareness of Signs and Symptoms of Oropharyngeal Dysphagia among inpatients at a Level-six Referral Hospital in Kenya. International Journal of Research and Scientific Innovation https://www.researchgate.net/publication/379668687.
28. Ndiema D. C., Abuom T., & Karia M. (2024) Health Professionals' Identification Levels of Risk Factors: In view of the management of in-patients admitted with Upper gastrointestinal tract swallowing disorders in a Kenyan National Hospital. International Journal of Research and Scientific Innovation. https://www.researchgate.net/publication/379976683.
29. Ndiema, D. C., Abuom, T., & Karia, M. (2023). A descriptive retrospective review on the epidemiology of oropharyngeal dysphagia in the acute-care facility of a Kenyan (level-six) national hospital. IOSR Journal of Nursing and Health Science, 12(6), 20-28. https://doi.org/10.9790/1959-1206062028.
30. Nepal G. M. & Sherpa M. D. (2019). Knowledge of dysphagia in stroke among nurses working in tertiary care hospital. Kathmandu University of Medicine.
31. Ngaruiya, C., Kawira, A., Mali, F., Kambua, F., Mwangi, B., Wambua, M., Hersey, D., Obare, L., Leff, R., & Wachira, B. (2021). Systematic review on epidemiology, interventions and management of noncommunicable diseases in acute and emergency care settings in Kenya. African Journal of Emergency Medicine, 11(2), 264-276. https://doi.org/1016/j.afjem.2021.02.005
32. Obembe, T. A., Adebayo, A. M., Ojo, O. T., & Adebayo, I. A. (2017). Awareness and utilization of outpatient services among residents of Odno West local government area, Ondo State, Nigeria. Annals of African Medicine, 16(1), 10-16.
33. Oduor, C. O., Keter, A., Diero, L. O., Siika, A. M., Williams, L. S. (2015). Stroke types, risk factors, quality of care and outcomes at a referral hospital in Western Kenya. East Africa Medical Journal, 92(7), 324-32. https://www.ajol.info/index.php/eamj/article/view/123808
34. Omondi, G. (2019). A quality audit on the management of acute ischaemic stroke at Kenyatta National Hospital (unpublished thesis). University of Nairobi. http://erepository.uonbi.ac.ke/handle/11295/154214
35. Rajati, F., Ahmadi, N., Naghibzadeh, Z. A., & Kazeminia, M. (2022). The global prevalence of oropharyngeal dysphagia in different populations: A systematic review and meta-analysis. Journal of Translational Medicine, 20(1), 175-190. https://doi.org/10.1186/s12967-022-03380-0

36. Reeves, S., Pelone, F., Harrison, R., Goldman, J., & Zwarenstein, M. (2017). Interprofessional collaboration to improve professional practice and healthcare outcomes. The Cochrane Database of Systematic Reviews, 6(6), CD000072. https://doi.org/10.1002/14651858.CD000072.pub3
37. Rhoda, A., & Pickel-Voight, A. (2015). Knowledge of nurses regarding dysphagia in patients post stroke in Namibia. Curationis, 38(2), 1564-71. https://doi:10.4102/curationis.v38i2.1564
38. Rivelsrud, M. C., Hartelius, L., Bergström, L., Løvstad, M., & Speyer, R. (2023). Prevalence of oropharyngeal dysphagia in adults in different healthcare settings: A systematic review and meta-analyses. Dysphagia, 38(1), 76–121. https://doi.org/10.1007/s00455-022-10465-x
39. Robbertse, A., & De Beer, A. (2020). Perceived barriers to compliance with speech-language therapist dysphagia recommendations of South African nurses. The South African journal of Communication Disorders, 67(1), e1-e6. https://doi.org/10.4102/sajcd.v67i1.68
40. Saito, T., Tohara, H., & Goto, M. (2013). Role of gastroenterologists in the management of oropharyngeal dysphagia in head and neck cancer patients. World Journal Of Gastrointestinal Endoscopy, 5(2), 52-59.
41. Sánchez-Sánchez, E., Avellaneda-López, Y., García-Marín, E., Ramírez-Vargas, G., Díaz-Jimenez, J., & Ordonez, F. J. (2021). Knowledge and practice of health professionals in the management of dysphagia. International Journal of Environmental Research and Public Health, 18(4), 2139-49. https://doi.org/10.3390%2Fijerph18042139
42. Setia, M. S. (2016). Methodology series (module 3): Cross-sectional studies. Indian Journal of Dermatology, 61(3), 261–264. https://doi.org/10.4103/0019-5154.182410
43. Sharma, N., Sharma, R., & Sharma, A. (2020). Awareness and perception of health care providers towards outpatient department services in a tertiary care hospital of Delhi. Indian Journal of Public Health Research & Development, 11(7), 472-477.
44. Shipley, K. G. & McAfee, J. G. (1998). Assessment in speech language pathology: A resource manual (2nd ed.). Singular-Thomson Learning.
45. Streiner, D. L., Norman, G. R., Cairney, J. (2014). Health measurement scales: A practical guide to their development and use (4th ed.). Oxford University Press.
46. Streiner, D. L., Norman, G. R., Cairney, J. (2014). Health measurement scales. A practical guide to their development and use (4th ed.). Oxford University Press.
47. Wilkinson, J. M., Codipilly, D. C., & Wilfahrt, R. P. (2021). Dysphagia: Evaluation and collaborative management. American Family Physician, 103(2), 97–106.
48. World Health Organization. (2010). Framework for action on interprofessional education and collaborative practice. https://interprofessional.global/wp-content/uploads/2019/11/WHO-2010-Framework-for-Action-on-Interprofessional-Education-and-Collaborative-Practice.pdf
49. Yong, X., Affizal, A., & Malarvini V. (2018). Medical officers' awareness, involvement, and training in dysphagia management. Journal Sains Kesihatan Malaysia, 16 (1), 7-16.