

Using Self Efficacy to Measure Undergraduate Students' Confidence with Otorhinolaryngology, Head and Neck Surgery (ORLHNS)

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INTRODUCTION

Otolaryngology, Head and Neck Surgery (ORLHNS) makes up a significant proportion of non-ORLHNS specialist practice.¹ Many doctors report feeling unprepared when managing ORLHNS conditions.²

Limited training opportunities at undergraduate level may result in inappropriate management of common ORLHNS conditions, over-referral to specialty services, and difficulty attracting high calibre doctors to the specialty.³

Self efficacy is a concept used in medical education, defined as people's domain-specific perceptions of their ability to perform the actions necessary to achieve desired outcomes.⁴

AIM

To develop a scale to measure the self efficacy of year 4 medical students with ORLHNS.

METHOD

Year 4 medical students completed a 30-item self efficacy questionnaire prior to commencing their ORLHNS Module. (Table 1) Self efficacy ratings were analysed to determine if they established a self-efficacy scale.

RESULTS

Eighty students completed the pre-module questionnaire (100% response rate). The self efficacy statements were found to be highly reliable (Cronbach alpha = .916).

A factor analysis (principal component, varimax rotation) indicated that a one-factor solution was optimal.

The mean self efficacy score for all items was low with larger standard deviation. (M=32.61, SD=25.97)

DISCUSSION

Prior to their ORLHNS teaching, students' confidence to manage these conditions is low, with a wide standard deviation. Understanding the variability in students' confidence about managing ORLHNS conditions is valuable when planning teaching within a limited time schedule.

Higher average self efficacy scores for the Rinne and Weber tests suggest that assessment is guiding student learning, as during the previous year, this skill was assessed in an OSCE.

FURTHER STUDY

Further study will include measuring post-module self efficacy and, through clinical vignettes, will relate self efficacy to performance.

TABLE 1. MEAN AND STANDARD DEVIATION OF THE SCORE OF EACH SELF EFFICACY ITEM FOR YEAR 4 MEDICAL STUDENTS (N = 80)

Self Efficacy Statement	Mean	Standard Deviation
1 When I see a patient with recurrent ear infections in clinic, I can take a history and present it to the supervising registrar.	50.48	25.83
2 When I see a patient with ear pain in clinic, I can take a history and present it to the consultant.	49.26	24.01
3 If I am examining a patient's ear with the otoscope, I can spot a perforation.	29.9	24.01
4 When asked to perform an ear exam on a patient in clinic, I can hold the otoscope so as to minimise patient discomfort.	41.47	27.42
5 I can examine the oropharynx and get a good view of the tonsils.	33.87	33.40
6 If presented with a patient with a neck lump, I have a systematic way to examine the patient while keeping them comfortable.	39.7	27.27
7 When asked to explain the anatomy of the thyroid gland to a patient, I can explain confidently in a way they will understand.	53.3	27.06
8 If a patient asks me to explain grommets, I can explain how they work using everyday language.	39.6	33.45
9 In a child who has stuck something up their nose, I can help keep them calm while the doctor examines them.	44.1	29.25
10 When examining the ear, I can identify features of otitis media.	25.2	24.45
11 When my consultant shows me a picture of the eardrum, I can point out the anatomical landmarks.	28.6	26.1
12 If a patient asks me to explain how hearing works, I can give an answer that they will understand.	55.8	28.01
13 In a patient attending the emergency department with dizziness, I can take a history of their acute presentation.	59.5	23.57
14 When asked to interpret and audiogram in clinic, I can identify a conductive hearing loss pattern.	20.6	24.05
15 I can recognise stridor if I hear it on the ward and call a senior colleague for help.	24.8	28.77
16 When examining a patient, I can differentiate between a quinsy and tonsillitis.	5.6	11.6
17 If given a diagram of the neck in an exam, I can label the triangles of the neck.	48.2	29.75
18 If a patient on the ward needs nasogastric tube placed for feeding, I can insert it with house surgeon supervision.	9.7	19.85
19 In a patient with a fractured nose attending the emergency department, I can diagnose a septal haematoma.	5.2	9.93
20 When examining the neck, I am confident that I can feel enlarged lymph nodes if they are present.	46.3	23.48
21 If a child in clinic is anxious, I have techniques I can use to allow me to examine their ear.	16.9	23.23
22 After observing the registrar performing the Rinne and Weber tuning fork tests on a patient, I can interpret the result.	62.7	29.93
23 In a patient presenting to the GP practice with sinusitis, I can ask them about the cardinal symptoms.	19.0	25.53
24 In an elderly patient presenting with hoarseness, I can ask them about red flag symptoms in a way they will understand.	31.7	26.63
25 In a patient with a facial droop, I can examine the patient and present the relevant findings to the registrar.	43.2	23.80
26 In a child presenting with snoring, I can take a history from the child's parent and present it to the registrar.	28.6	26.79
27 When a patient asks what happens when they get their tonsils out, I can give a reasonable explanation of a tonsillectomy that they will understand.	16.4	21.93
28 If seeing a patient in clinic who has a nosebleed, I can manage the patient until I can get more senior help.	36.5	28.57
29 I can differentiate a nasal polyp from the inferior turbinate on examination.	8.7	1.90
30 I can demonstrate the basic steps involved in fiberoptic laryngoscopy on a manikin.	3.6	8.2

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Acknowledgement: This study has been partially funded by the NZOHNS Linsell Richards Education Foundation

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