Assessing Health Literacy in Patients Attending a Specialized Head and Neck Surgery Clinic

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Introduction

Head and neck surgery (HNS) clinics require patients to understand complex information about diagnosis, treatment, and long-term outcomes—often under emotional stress. Effective participation depends on adequate health literacy (HL), yet limited HL remains common and is linked to poorer outcomes and decision-making.

Studies in general otolaryngology clinics report 10–15% of patients with inadequate HL Data in cancer-focused HNS settings are scarce.

Objective

1.Quantify the prevalence of inadequate Health Literacy in a tertiary-care, cancer-focused setting

2.Characterize demographic, linguistic and socioeconomic correlates of limited Health Literacy, including neighborhood deprivation

Methods and Materials

- Retrospective chart review.
- Single tertiary care academic center.
- Cancer-focused head and neck surgery clinic
- Between September 2024 and March 2025

Health Literacy was assessed using the Brief Health Literacy Screen (BHLS)

1. "How often do you have someone help you read hospital materials?"
2. "How often do you have problems learning about your medical condition because of difficulty understanding written information?'
3. "How confident are you filling out medical forms by yourself?"

<10 indicates inadequate HL.

Results

Table 1. Patients' characteristics by level of Health Literacy

	Overall	Adequate Health Literacy N (%)	Inadequate Health Literacy N (%)	P-value
Number of patients	149	131	18	
Age				
Age (y), mean ± SD	62.21 (13.00) 23-85	61.23 ±1.13	69.33 ±2.65	**0.013**
Sex				0.223
Female	71 (47.7)	60(45.8)	11 (61.1)	
Male	78 (52.4)	71 (54.2)	7 (38.9)	
Race/Ethnicity				**0.005**
Asian	5 (3.4)	5 (3.8)	0	
Black	10 (6.7)	8 (6.1)	2 (11.1)	
White	114(76.5)	105 (80.2)	9 (50.0)	
Unknown/Other	20 (13.4)	13 (9.9)	7 (38.9)	
Hispanic				**<0.001**
Yes	11 (7.4)	4 (3.1)	7 (38.9)	
No	130 (87.3)	120 (91.6)	10 (55.6)	
Unknown	8 (5.4)	7 (5.3)	1 (5.6)	
English Proficiency				**<0.001**
High	141 (94.6)	130 (99.2)	11 (61.1)	
Low	8 (5.4)	1 (0.8)	7 (38.9)	
Marital Status				0.856
Married/Partnered	92 (61.7)	81 (61.8)	11 (61.1)	
Single/Divorced/Widowed	52 (34.9)	46 (35.1)	6 (33.3)	
Other/Unknown	5 (3.4)	4 (3.1)	1 (5.6)	
Median Income (USD/year)				**0.002**
Low (<60,000)	17 (11.4)	11 (8.4)	6 (33.3)	
High (>= 60,000)	132 (88.6)	120 (91.6)	12 (66.7)	
% High school degree or lower				0.159
< 25%	18 (12.1)	14 (10.7)	4 (22.2)	
>=25%	131 (87.9)	117 (89.3)	14 (77.8)	
National Area of Deprivation Index				
Mean ± SD	27.1 ± 21.2	25.9 ± 1.9	35.6 ± 5.2	**0.048**
T stage at diagnosis				0.077
T1-T2	38 (54.3)	26 (41.9)	6 (75)	
T3-T4	32 (45.7)	36 (58.1)	2 (25)	

*P values calculated using chi2 test for the categorical variables, and T test for continuous variables

Table 2. Univariable Logistic Regression of Potential Predictors of Inadequate Health Literacy

	Odds ratio (95% CI)	p-value
Age	1.05 (1.01-1.1)	**0.020**
Sex (Male vs Female)	2.5 (0.37-16.89)	0.223
Hispanic (Ref Non-Hispanic)		
Hispanic	19.11 (5.07-72.1)	**<0.001**
Unknown	2.29 (0.36-14.8)	0.382
English Proficiency (Low vs High)	0.02 (0.01-0.11)	**<0.001**
Median Income (High vs Low)	5.45 (1.8-16.8)	**0.003**
National Area of Deprivation Index	1.02 (1.00-1.04)	0.069

Table 3. Multivariable Logistic Regression of Potential Predictors of Inadequate Health Literacy

	Odds ratio (95% CI)	p-value
Age	1.06 (1.01-1.1)	**0.026**
Race (Non-White vs White)	0.18 (0.05-0.62)	**0.007**
Median Income (High vs Low)	3.52 (0.94-13.15)	0.061

- Inadequate HL were **older** (69.3 vs 61.2 years, *p*=0.013), more often **Hispanic** (38.9% vs 3.1%, *p*<0.001), had **low English proficiency** (38.9% vs 0.8%, *p*<0.001), and more frequently lived in **lower-income areas** (<$60K: 33.3% vs 8.4%, *p*=0.002). They also resided in **more deprived neighborhoods** (mean ADI 35.6 vs 25.9, *p*=0.048).
- There were **no differences** in sex, marital status, education level, or tumor stage.
- On **univariable analysis**, inadequate HL was associated with **age**, **non-White race**, **Hispanic ethnicity**, **low English proficiency**, and **lower income**. In **multivariable regression**, only **age** and **non-White race** remained significant.

Discussion

- 12.1% had inadequate HL, and nearly one-quarter reported difficulty with at least one BHLS item.
- Prior otolaryngology studies reporting 10–12% inadequate HL, confirming persistent disparities even in highly educated, urban populations. Patients with low HL lived in areas with higher ADI.
- In oncology, low HL contributes to diagnostic delays, poorer adherence, and decisional conflict. Routine HL screening using the BHLS can help clinicians tailor communication, simplify materials, and engage interpreters or care coordinators to support patient understanding and navigation.

Conclusion

Routine HL screening should be integrated into cancer-focused otolaryngology clinics. The BHLS provides a practical method to identify patients who may need additional communication or navigation support.

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