13th HTAsiaLink 2026
September 01 - 04

國立臺北護理健康大學
National Taipei University of Nursing and Health Sciences

Can Medication Literacy Ease Hospital Overload? Insights for NHI Policy Reform in Taiwan

1Tzu-Yun Hsiao, 1Yi-Ling Tsai
1 Department of Health Care Management, National Taipei University of Nursing and Health Sciences, Taiwan

Introduction

Taiwan's National Health Insurance faces rising financial pressure, making OTC self-care a vital alternative for mild symptoms. This study assessed OTC medication literacy among Taiwanese adults and its impact on clinic visits, outpatient department (OPD), and emergency department (ED) utilization.

Methods

This study surveyed NHI-covered Taiwanese adults ≥ 20 years using quota sampling and post-stratification weighting. Guided by Andersen's Behavioral Model, we controlled for predisposing, enabling, and need factors. Over-the-counter medication literacy was measured via the 13-item Chinese Medication Literacy Measure (ChMLM-13), while past-year healthcare utilization was analyzed using chi-square tests and multivariate logistic regression.

Results

A total of 355 participants were included in the analysis. The mean ChMLM-13 score was 11 out of 13.

Figure 1.Distribution of Participants' ChMLM-13 Scores

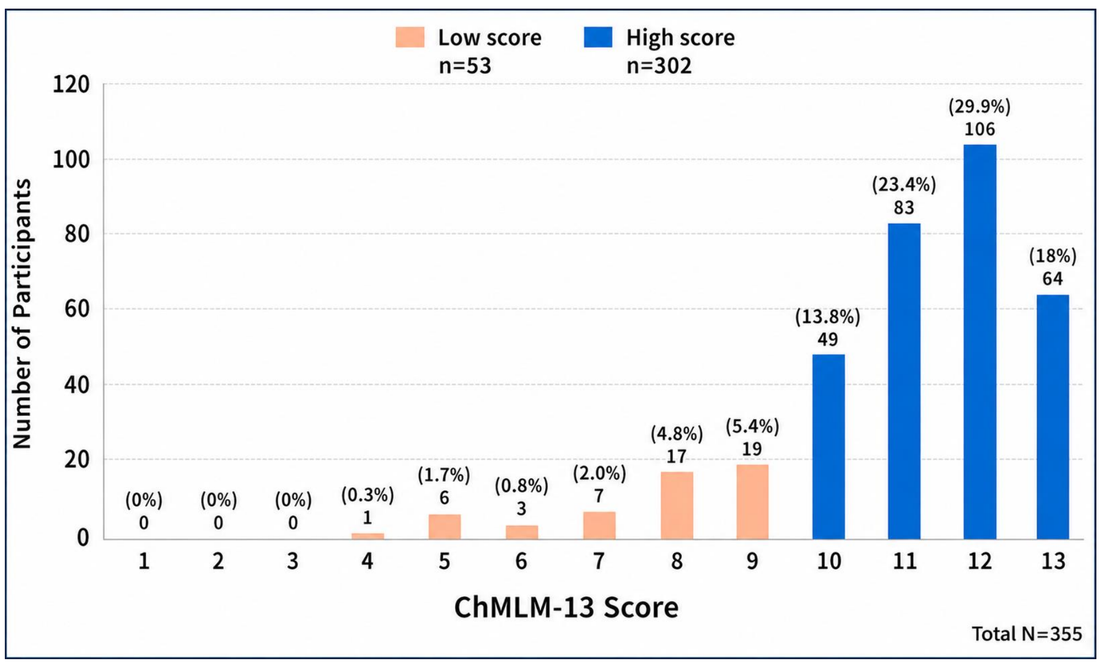

Table 1. Correct Response Rates by ChMLM-13 Section

Section	Mean Accuracy	Range
Vocabulary of medications	84.8%	64.5 – 92.6%
Over-the-counter medication labels	94.1%	89.3 – 97.7%
Dietary supplement commercial advertisement	68.8%	47.1 – 87.3%

Participants performed well in vocabulary of medications and over-the-counter medication labels, but struggled with dietary supplement commercial advertisements, particularly side-effect information.

Chi-square analysis showed that low OTC medication literacy was significantly associated with age ($p<.001$), education level ($p=.005$), household income ($p=.007$), and chronic disease status ($p < .001$).

Table 2. Multivariable Logistic Regression of Having Clinic Visits

Significantly predicted by higher OTC, lower income and no chronic disease.

Predictors	OR	95% C.I.	*p*-value
OTC medication literacy *(reference: low)*			**0.002****
High	3.35	[1.55, 7.27]	
Household annual income *(reference: NT$0-699,999)*			**0.044***
NT$700,000-1,199,999	1.45	[0.70, 3.00]	
NT$1,200,000-1,649,999	0.94	[0.39, 2.24]	
NT$1,650,000 and above	0.36	[0.13, 1.01]	
Chronic disease *(reference: No)*			**0.009****
Yes	2.54	[1.26, 5.13]	

- **OPD :** Driven by chronic disease (OR=2.94,p<0.001) and lower self-rated health (OR=0.71,p<0.001).
- **ED :** Driven by poor self-rated health (OR=0.76,p=0.019).

Note. *Guided by Andersen's Behavioral Model, the model adjusted for predisposing factors (age, sex, and education), enabling factors (household annual income, industry, and region), and need factors (chronic disease and self-rated health).*

Discussion

OTC Literacy & Behavior : Higher OTC literacy increases the likelihood of clinic visits, reflecting a benefit-driven preference for professional care, whereas OPD/ED visits depend on health needs.

System & Policy Insights : Although Taiwanese adults showed good overall medication literacy, education should focus on critical appraisal of health ads, especially among older adults, low-SES groups, and chronic patients.

Conclusion

Higher OTC medication literacy was associated with a greater likelihood of clinic visits. However, this study did not show a reduction in overall healthcare utilization. Future policies should strengthen support and incentives for self-medication to narrow the decision gap between clinic visits and self-purchasing OTC medicines.

HTAsiaLink
First Author Tzu-Yun,Hsiao j132116007@gmail.com
Corresponding Author Yi-Ling,Tsai yilingtsai@ntunhs.edu.tw