

Information Literacy and Information Acquisition Pathways: Associations with Information Processing and Judgment Ability

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정보 획득 경로가 정보문해력에 미치는 영향:
정보 이해의 매개효과를 중심으로

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Abstract

Background: Information literacy plays a critical role in how individuals access, understand, and evaluate information in the digital era. However, differences in information acquisition pathways and their relationship with information-related competencies remain insufficiently explored. Methods: A cross-sectional analysis was conducted to examine differences in information literacy according to information acquisition pathways (traditional media, digital media, and face-to-face/offline sources). One-way ANOVA was used to compare group differences, Pearson correlation analysis assessed relationships among variables, and mediation analysis (PROCESS Model 4) evaluated the mediating role of information comprehension. Results: Digital media was the most commonly used information source across all demographic groups. No significant differences were observed in information-seeking ability across pathways ($p = 0.544$), while judgment ability differed significantly ($p = 0.041$). Information-seeking, comprehension, and judgment showed strong positive correlations (all $p < 0.001$), whereas age was not significantly associated with these variables. Mediation analysis revealed that information comprehension partially mediated the relationship between information-seeking and judgment ability (indirect effect = 0.223, 95% CI [0.187-0.259]). Conclusion: Information acquisition pathways are associated with higher-order cognitive processing, particularly judgment ability. Enhancing information comprehension may strengthen individuals' capacity to evaluate information effectively.

1. Introduction

In the digital information environment, individuals are exposed to diverse information sources, and information literacy is essential for effective decision making [1,2]. However, differences in information processing based on acquisition pathways remain underexplored, despite their potential influence on comprehension and judgment [3]. Information literacy consists of interrelated components seeking, comprehension, and judgment and understanding these relationships is important for effective interventions [2,4].

2. Methods

2.1 Study Design and Participants

Cross-sectional design; participants categorized by information acquisition pathways: Traditional media, digital media, and face-to-face/offline sources.

2.2 Variables

Independent variable: Information acquisition pathway. Dependent variables: information seeking, comprehension, and judgment.

Covariate: age.

2.3 Statistical Analysis

Descriptive statistics, one-way ANOVA, Pearson correlation, and mediation analysis (PROCESS Model 4) were conducted ($p < 0.05$).

3. Results

3.1 Sociodemographic Characteristics and Information Acquisition

Digital media was the most commonly used source across all age groups, with higher usage among younger individuals and lower usage among older adults.

3.2 Differences in Information Literacy by Acquisition Pathway

No significant differences were observed in information seeking ($p = 0.544$) or comprehension ($p = 0.076$), while judgment ability differed significantly ($p = 0.041$).

3.3 Correlation Analysis

Age was not significantly associated with information literacy variables. Strong positive correlations were observed among seeking, comprehension, and judgment ($r = 0.677$ - 0.695 , all $p < 0.001$).

3.4 Mediation Analysis

The results of the mediation analysis are summarized in Table 1. Information seeking significantly predicted comprehension ($p < 0.001$), and comprehension significantly predicted judgment ($p < 0.001$).

The indirect effect was significant, indicating that information comprehension partially mediated the relationship between information seeking and judgment.

[Table 1] Mediation analysis of information literacy (PROCESS Model 4)

Path	B	SE	t	p	95% CI
X → M (a path)	0.418	0.014	29.31	<0.001	[0.390, 0.446]
M → Y (b path)	0.533	0.035	15.28	<0.001	[0.465, 0.602]
X → Y (direct, c')	0.285	0.022	13.27	<0.001	[0.243, 0.327]
Total effect (c)	0.508	0.018	29.05	<0.001	[0.474, 0.542]
Indirect effect (a×b)	0.223	0.018	—	—	[0.187, 0.259]

Standardized indirect effect:0.297 [0.251-0.342]

4. Conclusion

Information acquisition pathways are associated with differences in judgment ability, while no significant differences were found in information seeking and comprehension. Information seeking, comprehension, and judgment were strongly interrelated, with comprehension partially mediating the relationship between seeking and judgment.

References

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