Comparison of Reading Levels of Pharmacy Students and Reading Level of Primary Literature

Cathy H Ficzere  
Belmont University College of Pharmacy

Angela Hagan  
Belmont University College of Pharmacy

Genevieve Lynn Ness  
Belmont University College of Pharmacy

Elisa M. Greene  
Belmont University College of Pharmacy

Kayla Hill  
Belmont University College of Pharmacy

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abstract

Objectives: The project purpose was to evaluate pharmacy students’ reading levels using the Nelson-Denney Reading Test (NDRT) and compare these results with the reading level of primary literature to investigate incongruities between student’s comprehension ability and the readability level of assigned reading in the curriculum.

Methods: The NDRT was administered to first- through third-year student pharmacists to determine grade equivalents (GE) for vocabulary and reading comprehension. Twenty articles previously identified as Patient-Oriented Evidence that Matters (POEMs) were analyzed to determine the Flesch-Kincaid Grade Level and Gunning-Fog Score. Student demographics, information regarding language spoken, and reading habits, were also assessed. Pearson product moment correlations, t-tests, ANOVA, and descriptive statistics were used to assess relationships between demographic data and NDRT scores.

Results: One hundred students participated. The mean NDRT total grade equivalent (±SD) was 16.95 ± 2.1 (median = 17.3). NDRT grade equivalents were statistically different for students with different racial or ethnic backgrounds (t(98)=3.74, p=0.026), English as a second language (ESL) students (t(98)=5.19, p=0.021), and students that read works of fiction for pleasure (t(98)=4.31, p=0.002). The average Gunning-Fog Score for all primary literature articles was 11.48, with the introduction section being the most complex. The average Flesch-Kincaid Grade Level was 17.04, with the results section scoring the lowest average grade level.

Implications: While the overall reading grade level of our pharmacy students suggests that they are capable of comprehending reading assigned in the pharmacy curriculum, minority students and students for whom English is a second language may struggle with comprehending complex text.

Conflict of Interest

We declare no conflicts of interest or financial interests that the authors or members of their immediate families have in any product or service discussed in the manuscript, including grants (pending or received), employment, gifts, stock holdings or options, honoraria, consultancies, expert testimony, patents and royalties.

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