INTRODUCTION

Metacognition—the ability to reflect upon, understand, and control one's learning—is an essential characteristic of the modern healthcare professional. Metacognition may be conceptualized as consisting of 2 major components: knowledge of cognition (KC) and regulation of cognition (RC), each with several constituents. Knowledge of cognition includes self-awareness in learning and using metacognitive strategies. Regulation of cognition is the ability to plan, monitor, evaluate, and adjust one's learning strategies to best meet the challenges of a particular learning situation.1

The Metacognitive Awareness Inventory (MAI), a 52-item self-reporting instrument developed by Schraw and Dennison,2 is a classroom-sized meter of metacognitive awareness. Its bona fides were established among a group of 110 undergraduate educational psychology students, who showed statistically significant relationships between the MAI KC and RC sub-scores and reading comprehension test performance, as well as the association between pre-test estimation of monitoring ability and subsequent MAI and test scores. The MAI has subsequently been used to assess metacognitive awareness among health care professional students in nursing2,3 and medical/surgical schools. To date, although some attempts have been made to assess self-awareness among professional pharmacy students,3 there is scant information about the development of metacognitive skills during the education of these students.

The objectives of this study were to extend the work of Schraw and Dennison to a pre-pharmacy program student population and to determine if metacognitive awareness could be predicted using other standard measures of student academic aptitude such as the ACT exam composite and sub-scores, which are routinely used as admission criteria at least in part because of their general association to College GPA results.3

METHODS

The purpose of this study was to ascertain whether differences in metacognitive awareness were associated with performance on the commonly used index of college preparedness. Our data consistently showed no relation between MAI performance and academic preparedness as measured by ACT scores. These findings are in agreement with those of Doyle,2 who reported a lack of relationship between the MAI and several indices of academic performance, including GPA and the Test of Essential Academic Skills (TEAS) among 102 pre-nursing students.

It must be emphasized that these findings are preliminary, and not definitive. There are, for example, several factors that may account for these results. One is that the current sample of pre-pharmacy students was quite small, with a score of 26 (±0.05) may not be sufficiently diverse to display detectible differences in preparedness or metacognitive awareness. Additionally, students' self-identification as “good students” may lead them to identify with those responses assessed to correspond to the qualities of good students. Finally, it has been widely reported that metacognitive skills and ability to predict academic performance can be overestimated by learners who mistake fluency for understanding.8

An intriguing alternative is that, given the age of these students, the metacognitive abilities are nascent. Our plan is to continue to monitor KC and RC throughout the education of these students in order to detect, characterize and foster the development of metacognitive awareness.

REFERENCES

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