



PimaCommunityCollege

The Effects of Laboratory Skills on Performance on a Summative Paramedic Exam



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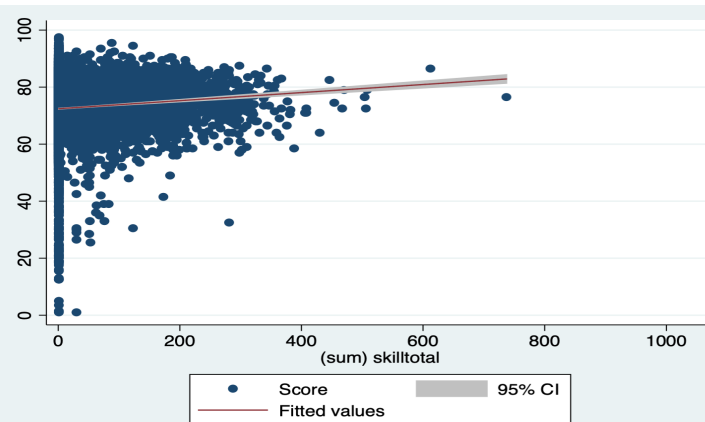
Introduction

Paramedic programs spend a considerable amount of time and resources ensuring successful completion and documentation of individual laboratory skills for their students. The Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) lists the minimum recommended number of individual skills evaluated in the laboratory setting. This study was designed to determine if the number of successful individual skills in a laboratory setting correlates to performance on the Fisdap Paramedic Readiness Exam 4 (PRE4).

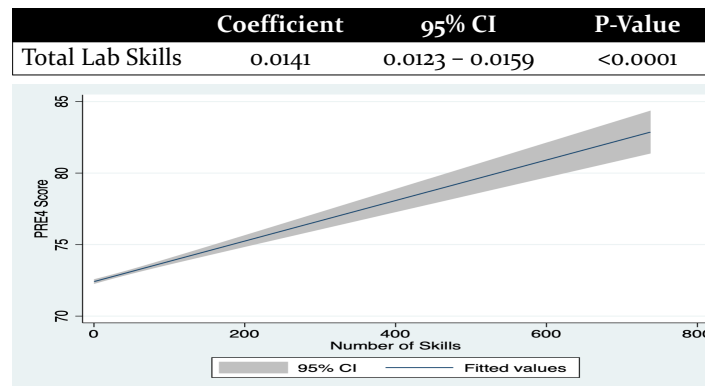
Methods

A retrospective analysis was conducted using Fisdap educational data from July 2017 through December 2019. This study used student performance on the summative PRE4 as well as PRE4 topic subscores. Student records and individual skill completion were analyzed. Linear regression analyses were conducted using robust standard errors.

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Results

Drawing from Fisdap educational data, 17,149 student records were analyzed, including 2.7 million lab skills. The total number of skills performed in the lab setting were positively correlated with PRE4 score (β : 0.024, $p < 0.0001$). The summative effect of lab skills were also positively correlated with PRE4 subscores (Airway β : 0.132, $p < 0.0001$; Cardiology β : 0.045, $p < 0.0001$; Medical β : 0.051, $p < 0.0001$; Obstetrics β : 0.408, $p < 0.0001$; Pediatrics β : 0.461, $p < 0.0001$; Trauma β : 0.132, $p < 0.0001$).

Conclusion

No clinically significant correlation was found between the number of successful individual laboratory skills completed and PRE4. While psychomotor skills are important to the development of a paramedic, programs should consider completing the recommended minimum number of individual laboratory skills and providing supplemental instruction in other key areas.