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LETTER TO THE EDITOR

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Do medical students differ according to preclinical or clinical access to undergraduate research?

Os estudantes de medicina diferem de acordo com o acesso pré-clínico ou clínico à iniciação científica?

Dejano Tavares Sobral[1] | dtsobral@gmail.com; dtsobral@unb.br

I enjoyed reading the interesting study by Santos et al. on undergraduate scientific research[1]. The authors applied a relevant questionnaire to a representative sample of students from seven medical schools in Salvador. They aimed to verify the multiple factors involved in medical students' research exposure[1].

Among the findings, the authors confirmed the high prevalence of interest in (and motivation for) research involvement in samples of Brazilian medical students, as reported in previous studies[2,3]. They also noticed no variation in motivation for research between pre-clinical and clinical students and offered desirable evidence of program productivity in terms of student-co-authored publications[1]. Again, this study registered the hindrances, as perceived by medical students, on time availability, faculty guidance, and institutional opportunities and resources, for their engagement in adequate and productive research[1-3].

My further remarks pertain to differentiating between early-entry (pre-clinical) and late-entry (clinical) research exposure based on students' motivation and expectations. This distinction was undisclosed in that study[1].

In contrast, I offer below findings about antecedents, experiences, and outcomes of undergraduate research exposure at a public university medical program. Those findings stem from data compilation involving the 55 semi-annual classes in three decades of the medical program intermediate curriculum.

Thus, referring to undergraduate research, 112 early-entry students – compared with 572 late-entry students – displayed the following differences, expressed in percentages, odds ratios (OR), and confidence intervals (CI):

A. Higher frequency of second-semester peer tutoring in basic science courses (28.2% vs. 12.5%, OR = 2.8, 95% CI = 1.8; 4.2).
B. Stronger research career attraction (27.0% vs. 15.3%, OR = 2.0, 95% CI = 1.1; 3.7), after the first year of medical studies.
C. Longer durations (two years or more) of undergraduate research (28.0% vs. 10.7%, OR = 3.3, 95% CI = 2.1; 3.9).
D. Higher productivity, in terms of co-authored publications (20.6% vs. 13.6%; OR = 1.6, 95% CI = 1.1; 2.6).
E. Higher acceptance in (and conclusion of) a PhD program at top universities (11.5% vs. 4.4%, OR = 2.8, 95% CI = 1.1; 7.6).

Likewise, analysis from a stratum (N= 1307) with data on the Academic Motivation Scale[4], revealed that early-entry – compared to late-entry – students showed a lower index of controlled motivation (M= 3.65 SD= 1.31 vs. M= 4.01 SD= 1.34; d= .266, 95% CI= .040; .492). However, they showed an equally superior index of autonomous motivation. Moreover, early entrants were a majority in the (minority) student cluster featuring higher levels of autonomous motivation, paired with lower levels of controlled motivation. In contrast, there were no notable distinctions in admission age, sex distribution, and grade-point average between early- and late-entry students (All $p > .14$).

In conclusion, contrary to hints given by Santos et al.[1], the findings above denote noteworthy differences between research exposure early and late entrants, which may relate to diverse backgrounds, mindsets, or mentorship influences.

AUTHORS' CONTRIBUTION

Dejano Tavares Sobral was responsible for the letter design, analysis, and interpretation of data, writing of the draft and submitting this letter to Revista Brasileira de Educação Médica

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

[1] Universidade de Brasília, Brasília, Distrito Federal, Brazil.

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