Medical Education Research

'Media-Multitasking and its Impact on Medical Education'

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Background: The use of multimedia in medical school is encouraged, but previous research has demonstrated that students' learning may be impeded by media multitasking (MM; use of media devices during class for non-class purposes). Though studied in undergraduates, literature is lacking on the degree to which medical students media multitask and how it may impact learning.

Objectives: To characterize the extent of MM during lectures, associated course and cognitive variables, and the possible academic performance effect of MM.

Methods: An online survey completed by 121 MS1s and MS2s at our institution elicited MM behaviors during a randomly selected course block in addition to asking course-related and behavioral belief questions. Course grades were anonymously associated with survey responses.

Results: Texting was the most frequent MM behavior, followed by social media use, and reading online news. MS2s (n=57) reported statistically higher MM times/lecture (7%, none; 42%, 1-3 times; 37%, 4-6 times; 30%, ≥7 times), compared to MS1s (9%, none; 53%, 1-3 times; 20%, 4-6 times; 17%, ≥7 times). Gender and attendance modality (online or in-person) was not associated with MM. Students' belief that they could effectively MM and learn was positively related to amount (r = 40, p < .001) and frequency of MM (r = 32, p < .001). Students with lower self-efficacy about reducing MM also had lower internal locus of control (r = .40, p < .001). Students engaged in less MM in courses important to their future specialty. Those who reported that responding to social media or work-related notifications was important to them, media multitasked more during lecture (r = .19, p = .04; r = .21, p =.02, respectively). Neither amount of time nor frequency of MM during lecture predicted students' course grades across the entire cohort, but trends of possible negative impact of MM were seen in the subset of MS1s attending in-person and MS2s attending online.

Conclusions: We found MM among medical students in lecture was common. Investment in the course content, self-efficacy, and high media use outside of class predicted MM rates. Findings indicated no generalized impact of MM on academic performance but further research is needed to investigate this relationship.