The impact of goal setting and goal orientation on performance during a clerkship surgical skills training program

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Introduction: Acquiring basic surgical skills before beginning a surgical clerkship rotation ensures that medical students can participate in important patient care activities and feel like a valued member of the surgical team. The purpose of this study was to integrate relevant goal setting theory and to identify if trainees’ goal orientations have an impact on the assigned goals→performance relationship.

Methods: Third-year medical students (MS3s) participated in surgical skills training prior to beginning their clerkship rotation. All MS3s underwent baseline knot tying (KT) and camera navigation (CN) skill assessment and completed a demographics/goal orientation questionnaire. MS3s then participated in one of three one-hour training programs according to their rotation schedule. All began with the same video tutorial, but were provided with no specific goals and told to “do your best” and to make the most of the training time (DYB group); provided with performance goals regarding time to completion and metrics to achieve (performance group); or provided with learning goals in which they were encouraged to develop personal goals for mastering the processes required to perform well (mastery).

Skills tests were again completed after training. Pre/post tests were video-recorded and de-identified for evaluation by a single blinded instructor under an IRB-approved protocol.

Results: 127 MS3s (Age: 25 ±2.6; 54% women) participated in the training program. Pre- to post-training performance changes were significant for all groups on both tasks (p<.01), but the increase was significantly greater (p<.01) for the Mastery group (DYB KTΔ=2.14, CNΔ=1.69; Performance KTΔ=2.49, CNΔ=2.24; Mastery KTΔ=3.04 CNΔ=2.76, on a 1-5 Likert scale). Hierarchical regression analyses were used to examine the interaction of goal orientation and goal condition. Results indicate that individuals endorsing a learning goal orientation perform significantly better in the mastery goal condition (p<.01), worse in the performance condition (p<.05), and exhibited no significant difference in the DYB condition. Performance-oriented individuals performed worse in the DYB condition (p<.05), but exhibited no significant difference in the performance or mastery conditions.

Conclusions: These data indicate that ample consideration of goal type and trainee goal orientation must be considered during curriculum development in order to maximize educational value.