

One Thing At A Time! The Effect of Repetitive Interruption on a Surgeon's Dexterity, Cognitive Functioning, and Mood

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Introduction

Neurosurgeons are often subjected to a barrage of clinical and administrative questions, simple and complex, while operating. We evaluated the impact of such interruptions on an individual's dexterity, cognitive functioning, and mood.

Methods

We evaluated the dexterity, cognition, and mood of 30 subjects, using standardized testing. We then repeated the testing while subjecting the participants to two separate batteries of questions in an attempt to simulate the effects of a busy day of fielding calls and questions by a surgeon engaged in an operative procedure. The first battery involved simple questions that could be answered reflexively. The second involved questions that required higher processing.

Results

Persistent interruptions via questioning affected participants' dexterity, cognitive performance, and mood. Effects were most marked when participants had to field serial complex questions. Cognitive processing was particularly degraded.

Conclusions

This study demonstrates that a surgeon's performance and mood may be significantly affected by repetitive interruption. Even simple questions requiring reflexive answering (such as inquiries about sutures to be employed, or laxatives for floor patients) may decrement a surgeon's performance and mood. Complex questions requiring higher processing (e.g. ICU patient care questions, or new patient consultations) may be particularly disruptive. What is more, all forms of interruptions affect mood, and might therefore erode resilience and contribute to burnout. This study suggests that surgeon interruptions should be held to a minimum while the surgeon is engaged in an operative procedure.

Learning Objectives

Understand the effects of repetitive interruptions on a surgeon's performance and mood.

Understand that subjecting an operating surgeon to multiple complex questions may be particularly detrimental to performance and mood (and thus resilience).

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