

Skilled workers more prone to mistakes when interrupted

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A study by Erik Altmann, Michigan State University psychology professor, finds that skilled workers could actually be at higher risk of making mistakes when interrupted. Credit: Michigan State University

Expertise is clearly beneficial in the workplace, yet highly trained workers in some occupations could actually be at risk for making errors

when interrupted, indicates a new study by two Michigan State University psychology researchers.

The reason: Experienced workers are generally faster at performing procedural tasks, meaning their actions are more closely spaced in time and thus more confusable when they attempt to recall where to resume a task after being interrupted.

"Suppose a nurse is interrupted while preparing to give a dose of medication and then must remember whether he or she administered the dose," said Erik Altmann, lead investigator on the project. "The more experienced nurse will remember less accurately than a less-practiced nurse, other things being equal, if the more experienced nurse performs the steps involved in administering medication more quickly."

That's not to say skilled nurses should avoid giving medication, but only that high skill levels could be a risk factor for increased errors after interruptions and that experts who perform a task quickly and accurately have probably figured out strategies for keeping their place in a task, said Altmann, who collaborated with fellow professor Zach Hambrick.

Their study, funded by the Office of Naval Research, is published online in the *Journal of Experimental Psychology: General*.

For the experiment, 224 people performed two sessions of a computer-based procedural task on separate days. Participants were interrupted randomly by a simple typing task, after which they had to remember the last step they performed to select the correct step to perform next.

In the second session, people became faster, and on most measures, more accurate, Altmann said. After interruptions, however, they became less accurate, making more errors by resuming the [task](#) at the wrong spot.

"The faster things happen, the worse we remember them," Altmann said, adding that when workers are interrupted in the middle of critical procedures, as in emergency rooms or intensive care units, they may benefit from training and equipment design that helps them remember where they left off.

Provided by Michigan State University

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