

Study links athletic performance to mortality

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UA doctoral students Colin Zestcott (left) and Uri Lifshin (right) conducted two studies showing that athletes are subconsciously motivated by reminders of death. The skull shirt worn by Lifshin served as one of those reminders. Credit: University of Arizona

It's not the locker room pep talk you'd expect, but new research from the University of Arizona suggests that athletes might perform better when reminded of something a bit grim: their impending death.

In two studies, the results of which will be published in a forthcoming issue of the *Journal of Sport and Exercise Psychology*, basketball-playing [participants](#) scored more points after being presented with death-related prompts, either direct questions about their own mortality or a more subtle, visual reminder of death.

Researchers say the improved performance is the result of a subconscious effort to boost self-esteem, which is a protective buffer against fear of death, according to psychology's terror management theory.

"Terror management theory talks about striving for self-esteem and why we want to accomplish things in our lives and be successful," said UA psychology doctoral student Uri Lifshin, co-lead investigator of the research. "Everybody has their own thing in which they invest that is their legacy and symbolic immortality."

The reason people don't live in constant fear of their inevitable death is because they have this system to help them deal with it, Lifshin said.

"Your subconscious tries to find ways to defeat death, to make death not a problem, and the solution is self-esteem," he said. "Self-esteem gives you a feeling that you're part of something bigger, that you have a chance for immortality, that you have meaning, that you're not just a sack of meat."

Participants in the studies were male college students who indicated that they enjoy playing basketball and care about their performance in the sport. None of them played for a formal college basketball team.

"Our idea was that the study effect should only work for people who are motivated to perform well in sports. For individuals that derive less self-esteem from sport, whether they win or lose shouldn't matter as much,"

said UA doctoral student Colin Zestcott, the other lead investigator.

The Proof Is on the Court

In the first study, 31 participants played a pair of one-on-one basketball games with Zestcott, who posed as another study participant. In between the two games, which lasted about seven minutes each, participants were randomly assigned questionnaires to complete.

Some participants received packets that included prompts about death: "Please briefly describe the emotions that the thought of your own death arouses in you," and, "Jot down, as specifically as you can, what you think will happen to you as you physically die and once you are physically dead."

Others were asked instead to think about playing basketball: "Please briefly describe the emotions that the thought of playing basketball arouses in you," and, "Jot down, as specifically as you can, what you think will happen to you as you play basketball."

The questions were followed by several delay tasks to allow death thoughts to work outside of conscious attention. Researchers were blind to which prompts each player received.

Those asked about death improved their personal performance in the second game by 40 percent, while those asked about basketball saw no change in performance.

Those who thought about death also performed 20 percent better as a whole in the second game than those in the other group. Before the questionnaires, the performance of both groups was roughly even.

"When we're threatened with death, we're motivated to regain that

protective sense of self-esteem, and when you like basketball and you're out on the basketball court, winning and performing well is the ultimate way to gain self-esteem," Lifshin said.

The researchers' second study looked at how participants performed in an individual basket-shooting challenge when presented with a more subtle reminder of death.

For the study, Lifshin wore a black T-shirt emblazoned with a large white skull, made up of several iterations of the word "death."

Study participants were brought one-at-a-time onto the court, where Lifshin gave each person a 30-second description of the challenge and rules. He wore the skull T-shirt in front of half of the participants. With the other half, he had his jacket zipped up to cover the shirt. A coin flip was used to randomly determine which participants saw the skull.

Participants then completed a one-minute basket-shooting challenge, in which they could score one point for a layup, two points from the free-throw line and three points from the three-point line. To ensure that they kept moving, they were told they couldn't attempt the same types of shots back-to-back. They were scored by a different experimenter, who didn't know who saw the shirt.

Participants who saw the shirt outperformed those who did not by approximately 30 percent. They also attempted more shots—an average of 11.85 per minute versus an average of 8.33 by those who did not see the shirt.

"They took more shots, better shots, and they hustled more and ran faster," Lifshin said.

UA psychology professor Jeff Greenberg, one of the originators of

terror management theory, said the research provides important new support for the theory.

"We've known from many studies that reminders of death arouse a need for terror management and therefore increase [self-esteem](#) striving though performance on relatively simple laboratory tasks. However, these experiments are the first to show that activating this motivation can influence performance on complex, real-world behaviors," said Greenberg, who was another co-author of the studies, along with UA psychology doctoral student Peter Helm.

Coaches Already Tap Into Death

While it may seem strange that something as dark as [death](#) could be motivating, coaches have in some ways intuitively known this for years, the researchers note.

For example, a coach at halftime who says, 'You win this and they'll remember you forever,' plays into the human desire for immortality, Zestcott said.

And while the researchers looked specifically at basketball, they think the effects aren't limited by sport.

"There's no reason why it shouldn't work in soccer as it does in [basketball](#). We don't believe this is sport-specific and we don't believe this is gender-specific," said Zestcott, a former student-athlete who played football as an undergraduate at Macalester College in St. Paul, Minnesota.

Zestcott and Lifshin hope future research might replicate their studies in collegiate or professional athletes and look at other sports, as well as possible effects on team performance.

They say that their findings might be applied in other areas as well.

"This is a potentially untapped way to motivate athletes but also perhaps to motivate people in other realms," Zestcott said. "Outside of sports, we think that this has implications for a range of different performance-related tasks, like people's jobs, so we're excited about the future of this research."

Provided by University of Arizona

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