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Sex differences in distance running participation disappears, study says

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Even among contemporary U.S. distance runners, men are still much more likely than women to have a competitive orientation, according to researchers at Grand Valley State University in Allendale, Michigan. The findings were published in the online journal, *Evolutionary Psychology*.

The new research, led by Robert Deaner, associate professor of psychology at Grand Valley State, shows that, on average, American men participate at track meets about three times as often as American women , and this difference has been consistent since the late 1990s. By contrast, at road races, the sex difference in participation has disappeared.

"The differing pattern of results at track meets and road races is remarkable," said Deaner. "Road races have grown tremendously in popularity in the past few decades but most runners have a recreational orientation, not a competitive one. This is shown in how they answer questionnaires and in their generally slow performances. They run for their mental and physical well-being and to socialize. Track meets are completely different—there aren't medals for every finisher, they haven't become popular, and the runners that do show up almost always run fast.

Deaner said the results are interesting because they support the idea that the disappearance of sex differences in sports motivation in the U.S. is a myth, not reality. Since the passage of Title IX in 1972, girls and women have grown to comprise nearly half of participants in organized high

school and collegiate sports. However, little research has tested whether this pattern reflects a decreasing gap in sports motivation.

"When we look more closely at the data, there are still clear indications that some sex differences in sports interest and motivation remain large," said Deaner. "Distance running is a perfect example. Yes, women now participate in road races as much as men do, but our results indicate that the small number of runners who have a competitive orientation are still much more likely to be men."

The new research focused on masters runners, who are defined as being at least 40 years old. Deaner said masters runners were ideal for the study because, unlike many distance runners in high school and college, they aren't motivated by external incentives, such as earning a scholarship.

In Study 1, the researchers assessed participation and the occurrence of relatively fast performances by masters runners at hundreds of road races and track meets in the U.S. Fast performances were defined relative to sex-specific, age-specific world records. Fast performances occurred more than 20 times more often at track meets than at road races. This pattern held for both male and female runners, and it shows that participating at a track meet, but not a road race, is usually a good indicator of having a competitive orientation. Study 1 also found that women comprised 55 percent of participants at road races but only 15 to 28 percent of participants at track meets.

In Study 2, the researchers used data from national championship meets and yearly rankings lists to test whether the sex difference in masters track participation decreased from 1988 to 2012. Across all years, women comprised 27 percent of participants in the national championship meets and 22 percent of those individuals who appeared in the yearly rankings. In both data sets, the sex difference decreased

across all 25 years, but only slightly. More crucially, there was no evidence of a decreasing sex difference since the late 1990s.

Deaner acknowledged that the new studies have a major limitation because they are based on patterns of participation, rather than direct measures of motivation. He pointed out, however, that previous studies support their interpretation that there is a sex difference in competitiveness in distance runners.

"We actually have quite a bit of converging evidence. Questionnaire studies find that, although most distance runners in the U.S. do not have a competitive orientation, the ones who do are more likely to be male," said Deaner. "Other studies show that men are roughly three times as likely as women to run fast relative to sex-specific world class standards, and this is likely due, in part, to their greater competitiveness and willingness to maintain large training volumes. Also, we recently published a study demonstrating that there is a robust difference in pacing in the marathon—men are about three times more likely than women to slow down dramatically and this probably reflects men's greater inclination for risk taking, and risk taking is a big part of being competitive.

"The take home message is that this new research complements several other studies in showing that, although men and women are now similar in terms of overall participation in distance running, they still differ, on average, in their motivation. The most exciting aspect of the new research is that we were able to test whether the sex difference has changed over time."

More information: www.epjournal.net/articles/u-s … -in-competitiveness/