Superstition proved to improve performance

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(PhysOrg.com) -- Superstitions are often regarded as irrational and inconsequential, but researchers in Germany have been taking them seriously, trying to identify the benefits of superstitions, if any, and their underlying psychological mechanisms.

Social psychologist Lysann Damisch, who is interested in sports, noticed that many players have lucky charms or engage in superstitious behavior before their events. She realized the players thought they were gaining some benefit from the superstition, but as a scientist, Damisch wondered what benefits were gained and how the superstitions worked.

Damisch teamed with colleagues Barbara Stoberock and Thomas Mussweiler, also from the University of Cologne, to design four experiments to test the effectiveness of good-luck superstitions based on a common saying (such as saying “break a leg” to an actor before a performance), an action (such as crossing the fingers), or a lucky charm. The superstitions were tested to see whether or not they improved subsequent performance in motor dexterity, memory, solving anagrams, or playing golf.

In the first experiment subjects were given either a “lucky golf ball” or an ordinary golf ball, and were then given a golf task to perform. In the second experiment subjects were given a motor dexterity task to perform, in which they had to tilt a cube to get 36 ball bearings into a grid of 36 holes. Half the subjects were told to simply start the game, while for the other half the researcher told them “I press the thumbs for you,” which is the German equivalent of crossing fingers.

In the third and fourth experiments the subjects brought their own lucky charms, which the researchers took away to be photographed. Only half the subjects had their lucky charms returned, while the rest were told there were problems with the camera and the charm would have to remain in the other room. The subjects were then given a questionnaire to gauge their degree of confidence and optimism for the task ahead. They were then asked to complete a memory task in which they had to match pairs of face-down cards in an array of 18.

In the fourth experiment the subjects again brought their own lucky charms and only half were allowed to keep them. They also completed a questionnaire, but this time were given an anagram task to complete, in which they had to make as many words as possible from a group of eight letters. They also had to set a goal for themselves.

The results of all four experiments showed the superstition did improve performance. In the golf task those with the “lucky ball” performed significantly better than the control, and those doing the motor dexterity test were faster and better if the researcher wished them luck.

The third and fourth experiments showed the improvements were brought about by changes in “perceived self-efficacy,” with those keeping their lucky charms reporting they felt confident and competent to carry out the task. The fourth experiment also indicated performance was improved because the superstitious belief led them to try harder and be more persistent, because those who kept their lucky charms set higher goals for themselves and kept working longer on the puzzle.

The research is the first time superstitions associated with good luck have been demonstrated to affect future performance beneficially. It also showed the superstition worked even if it was activated by someone else (as in the first and second experiments).

The research also gives some insight into how superstition works. In each case the superstition was essentially found to boost a participant's confidence in their own abilities, and this resulted in enhanced performance. The increased confidence also encouraged them to work harder at the task and to persist until they succeeded.

Damisch and her colleagues plan to test negative, or bad-luck, superstitions next and see if they also affect performance.

The paper, entitled "Keep your Fingers Crossed! How Superstition Improves Performance" was published in the journal *Psychological Science*.

More information: Lysann Damisch et al.: Keep Your Fingers Crossed! How Superstition Improves Performance, Psychological Science, Published online before print May 28, 2010, doi:10.1177/0956797610372631

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