


MONITOR ON PSYCHOLOGY

In Brief

October 2017

Right-pawed, left-pawed



Cats, like people, often favor one side over their other—some are left-pawed, some are right-pawed and some are ambilateral. Now, a study in the [Journal of Comparative Psychology](#) suggests that these preferences may be linked with the animals' temperament. Researchers surveyed the owners of 30 right-pawed, 30 left-pawed and 30 ambilateral cats about their pets' traits, including affection, obedience, friendliness and aggression. Then, the researchers observed and rated the cats' temperaments as the pets interacted with a stranger. **Compared with cats with a clear paw preference, the ambilateral cats were rated less affectionate, obedient and friendly by their owners and also scored lower on desirable temperamental traits when interacting with a stranger** .

Mind over motion

Just thinking that you're a couch potato could hurt your health, suggests a study in [Health Psychology](#). Researchers analyzed data from three longitudinal surveys that followed more than 61,000 participants for up to 21 years. They found that people who believed that they were less physically active than their peers were up to 71 percent more likely to die during the survey's follow-up period than people who believed that they were more physically active than their peers. This held true even after controlling for participants' actual levels of physical activity. The results could be due to a placebo

effect, or because believing that you're an exercise slacker could cause harmful stress, the researchers suggest.

Fresh air



Lengthy bouts of exercise feel easier and more pleasant when done outside, suggests a study in [PLOS One](#). Each of 42 healthy participants engaged in three types of activities on different days: a three-hour mountain hike, a three-hour session on an indoor treadmill, and three hours relaxing in a room with computers and magazines. Participants took part in all activities in groups of between three and eight members, and the order of the activities was varied across participants. They wore heart monitors during the activities and answered survey questions about their moods and anxiety levels at the beginning and end of each session. The researchers found that although the mountain hike was more strenuous than the treadmill walk—participants' heart rates rose higher on the hike—the participants reported that the treadmill walk felt more strenuous. Also, **participants reported better moods after the hike than after the treadmill session, and better moods after either bout of exercise than after relaxing with computers and magazines.**

Behavioral expectations

How your emotions shape your behavior may depend in part on how you expect them to shape your behavior, finds a study in [Emotion](#). Researchers asked 182 participants to listen to either exciting or calm music. Then, they told some of the participants that the music would help their performance on a test of creativity (coming up with unusual uses for common objects), told another group that the music would hurt their creativity and told a control group that it would have no effect. Participants who listened to exciting music were significantly more creative than calm participants when they expected excitement to be useful, while participants who listened to calm music were more creative when they expected calmness to be useful.

Bulimia and the brain

When under stress, women with bulimia respond to food cues differently than stressed women without the eating disorder, finds research in the [Journal of](#)

[Abnormal Psychology](#). Researchers asked 27 women with bulimia nervosa and 10 women without it to solve a complex math problem while the women were in an fMRI scanner. Then, they showed the women pictures of high-fat, high-calorie food. After attempting the math problems, both women with bulimia and the control group reported their stress level went up, and after seeing the food photos, both groups reported it went down. But the brain scans showed a difference: In women with bulimia, blood flow to a region called the precuneus—involved in self-reflection and rumination—decreased, while for the control group it increased. **This supports the idea that binge-eating may allow bulimic women to avoid negative thoughts about themselves brought on by stress**, the researchers say.

Hot and bothered?

A study in the [European Journal of Social Psychology](#) finds that **when people are too hot, they're less likely to help those around them**. In one field experiment, researchers analyzed data from a Russian retail chain store and found that when clerks were uncomfortably hot, they were only half as likely to volunteer to help customers. In a follow-up online study, the researchers found that even thinking about being too hot could affect behavior. They paid online participants to recall a time when they were too hot and then complete a survey about their feelings and emotions. Then, the researchers asked them to fill out another questionnaire for free. Only 34 percent were willing to help with the free survey, compared with 76 percent of a control group who had not been asked to recall a time when they were uncomfortably hot.

Emotional range



Experiencing diverse positive emotions—not only happiness, but also enthusiasm, excitement, amusement, calmness and others—could have health benefits, suggests research in [Emotion](#).

Researchers asked 175 middle-aged adults to provide daily reports of their emotional experiences for 30 days. Six months later, the researchers tested participants' blood samples for biomarkers of inflammation, which have been associated with many physical health problems. **People who reported more different types of positive emotions had less inflammation** than people who experienced fewer types, even after controlling for the total amount of positive emotion, the researchers found. There was no significant association between health and the diversity of negative emotions.

Stressed out and underslept



Getting enough sleep could help buffer workers from some of the harmful effects of workplace stress, suggests research in the [Journal of Applied Psychology](#). Researchers surveyed **125 Chinese information technology workers**. Four times per day for three weeks, participants answered questions about their sleep duration, workplace stress and eating habits. On days when the workers experienced more stress, they ate more types of unhealthy food at night. However, when the workers had slept better the night before, this effect of stress on diet was reduced.

Cognitive decline

Healthy middle-aged and older adults who have more amyloid in their brains are more likely to experience cognitive decline in ensuing years than those with less amyloid, finds a study in [JAMA Neurology](#). Researchers used PET scans to measure amyloid amounts in the brains of 184 cognitively healthy participants, ages 40 to 89. They found that those with more amyloid showed greater declines in episodic memory, processing speed and vocabulary over the next four years. That suggests that PET scans that measure the amount of amyloid, and not just its presence or absence, could eventually be used to help patients and physicians predict future cognitive decline, the researchers say.

What we see



Our genes shape the way we look at the world in the most literal sense, suggests a study in [Nature](#). Researchers recorded the eye movements of 338 toddlers as they watched videos of common scenes, like children playing and adults speaking. Eighty-two of the children were identical twins (who share the same DNA), 84 were fraternal twins (who are no more genetically similar than other siblings), 84 were non-sibling controls and 88 were children diagnosed with autism. **Identical twins were much more likely than fraternal twins to move their eyes at the same time, in the same direction and to the same locations as their twin**. The measure on which the

identical twins were most similar—the amount of time they spent looking at people's eyes and mouths—was the same measure on which the children with autism differed most from the children without autism, suggesting that a behavior linked with autism is directly affected by genetic differences.

Brain training bust

A commercial brain-training game has no effect on brain activity or cognitive performance for young adults, finds a study in the [Journal of Neuroscience](#). Researchers assigned 128 young adults to either 10 weeks of training with the commercial brain-training program Lumosity or 10 weeks of playing web-based video games not aimed at improving cognition. Before and after the intervention, participants completed cognitive assessments and also performed a decision-making task while in an fMRI scanner. The researchers found no difference in cognitive improvement between the participants who completed the Lumosity training and those who played video games. They also found no difference in brain activity between the two groups during the decision-making task.

Early start



Children who start school younger than most of their peers may be at slightly elevated risk for mental health difficulties, suggests a study in [Child: Care, Health and Development](#). Researchers examined data from a survey of more than 2,000 5- to 9-year-old children in the United Kingdom. The results of a teacher and parent questionnaire indicated that children who were at the youngest end of their peer group had somewhat higher levels of emotional, conduct, hyperactivity/inattention and peer relationship problems. The researchers suggest that being younger than peers has little impact for many children but could tip children who face other challenges, such as learning differences, toward mental health problems.

Preventing dementia

Up to one-third of dementia cases are linked to preventable factors such as hearing loss, loneliness and lack of education, finds a report in [The Lancet](#). Members of the Lancet Commission on Dementia Prevention, Intervention and Care

analyzed the literature and concluded that about 35 percent of the world's more than 45 million dementia cases could be prevented: Hearing loss was linked to about 9 percent of cases; hypertension to 2 percent; depression in later life to 4 percent; social isolation to 2 percent; and a lack of high school or higher education to 7.5 percent.

Migraine pain



People who experience migraines find light unpleasant, not only because it increases their migraine pain but also because it triggers other physical symptoms and negative emotions, finds a study in the [Proceedings of the National Academy of Sciences](#)—and a newly discovered brain pathway may help explain why. Researchers exposed 81 migraine sufferers and 17 controls to different colors of light.

Migraine sufferers reported feeling chest tightness, shortness of breath, light-headedness, dry mouth, irritability, sadness and fear when exposed to most forms of the light, both during and between migraine attacks. The control participants reported no such physical symptoms and only pleasant emotions. In a study with rats to explore possible neuroanatomical explanations for the link, the researchers found connections from neurons in the retina to areas of the brainstem and spinal cord that regulate the body's physiological and endocrine responses.

Concussion and young women

Teenage girls and young women who suffer a concussion have increased risk of abnormal menstrual cycles, possibly because the brain injury can affect the hypothalamic-pituitary-ovarian axis that regulates the menstrual cycle, finds a study in [JAMA Pediatrics](#). Researchers followed 129 teens and young women, ages 12 to 21, about half of whom suffered a concussion and half of whom suffered a nonhead orthopedic injury. Within 120 days of the injury, 23.5 percent of the concussion patients experienced two or more abnormal menstrual patterns, compared with only 5 percent of those with nonhead injuries.

Risk factors



Middle-schoolers with chronic depression are at increased risk for cannabis use disorder by age

18, suggests a study in [Addiction](#). Researchers followed more than 521 Seattle-area students for five years. A one-standard-deviation increase in cumulative depression that the students experienced at ages 13 to 15 was associated with a 50 percent greater likelihood that they would suffer from cannabis use disorder at age 18. There was no statistically significant correlation between depression and alcohol use disorder.

Rigged system

By the end of middle school, disadvantaged children who believe that the U.S. social system is fair are at increased risk for low self-esteem and risky behaviors compared with their peers who think the system is rigged, finds a study in [Child Development](#). Researchers followed 257 middle-school students from low-socioeconomic status, mostly ethnic-minority families. When the students began sixth grade, those who believed that the U.S. social system gives everyone an equal chance to get ahead generally had higher self-esteem and better classroom behaviors than those who didn't. But by seventh grade, students with those "system-justifying" beliefs had lower self-esteem and worse classroom behavior than students who didn't believe the system is fair.

The cost of cost sharing



Increasing co-payments and deductibles for mental health care discourages patients from seeking regular mental health care for even serious disorders and may result in a spike in acute and involuntary care later, suggests a study in [JAMA Psychiatry](#). Researchers analyzed almost 1.5 million treatment records collected in the Netherlands between 2010 and 2012, during which time the country's health system instituted a \$226 annual deductible for outpatient mental health care and began charging a \$169 monthly co-pay for inpatient care. Afterward, the number of patients seeking regular mental health care declined by 13.4 percent, resulting in about \$15 million in savings. However, at the same time, the number of patients seeking acute care increased by 25 percent and the number of patients placed in involuntary commitment nearly doubled.

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