Genes may influence leadership in the workplace, research finds

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A Kansas State University researcher has found that the dopamine transporter gene DAT1 can have both positive and negative effects on leadership in the workplace. Credit: Kansas State University

The right genes may help you become an organization's next president or CEO. But the same genes may also hinder your leadership path,

according to Kansas State University psychological sciences research.

Wendong Li, assistant professor of psychological sciences, and collaborators have found a "mixed blessing" for workers who hold workplace leadership positions, from the formal leader of a CEO to an informal group leader. Their study focused on the dopamine transporter gene DAT1, which can influence leadership and is important for reward and motivation systems in humans.

"It's like a mixed blessing—this gene can have both positive and negative effects on leadership," Li said. "An implication is that it really depends on environmental factors to determine if overall it is a positive or negative."

On the positive side, the researchers found that people who had the 10-repeat allele in the dopamine transporter were most likely to engage in adolescent mild rule-breaking behavior, which is positively associated with leadership, Li said. Such mild rule-breaking behavior may include actions such as skipping class, but it is not serious deviant behavior such as shooting.

"Mild rule-breaking is actually positively correlated with the chance for you to become a leader in adulthood," Li said. "These kinds of behaviors can provide you with an advantage because they allow adolescents to explore boundaries and learn something new."

On the negative side, the researchers found that people with the dopamine transporter gene scored lower on proactive personality, which can lead to positive changes at work and is important for leadership emergence.

"These people were less likely to regulate their own behaviors to make a positive change," Li said. "It can be very difficult to make a positive

change because it involves mobilizing resources to overcome difficulties and obstacles so that the change can happen. These people were not good at regulating behaviors such as being persistent."

The takeaway from the study? To become a leader and be a good leader involves multiple factors—genes and the environment—working together, Li said. Some influential environmental factors—though not studied in this research—can include democratic parenting, a supportive family, and a challenging and cultivating workplace.

Managers cannot assume that changing one aspect of the work environment will be beneficial for all individuals, Li said, because employees bring individual characteristics to the organization. Some individual differences can't be ignored because they are rooted in genetic makeup and enhance the chance for individuals to engage in certain types of behaviors, either positive or negative.

"In the long run, we are advocating more individualized and customized management practices, which allow people to choose the type of work environment that fits their individual characteristics," Li said. "Customizing workplace practices is good for employee learning, development and leadership potential. Ultimately, it is good for employee performance and well-being, which in turn may enhance organizational effectiveness."

The researchers used two sets of data for the study: The National University of Singapore's Strabismus, Amblyopia, and Refractive Error Study, or STARS, which includes 309 people, and the National Longitudinal Study of Adolescent Health, which includes more than 13,000 individuals. The researchers had similar results with both samples, Li said.

More information: The researchers recently published their research,

"A mixed blessing? Dual mediating mechanisms in the relationship between dopamine transporter gene DAT1 and leadership role occupancy" in The *Leadership Quarterly*. www.sciencedirect.com/science/ … ii/S1048984315000028

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