



Momentum:

Research & Innovation



COVER STORY

NEW FRONTIERS IN ARCHAEOLOGY

featured inside

WHAT DO ARTISTS DO?

HELPING CHILDREN
OVERCOME ANXIETY

LIVES IN THE BALANCE:
PROTECTING OUR PLANET'S
COASTAL COMMUNITIES

Spring | 2015

What's inside



Welcome to the latest edition of *Momentum: Research and Innovation*, the magazine covering advances in scholarly activity and research at the University of Rhode Island. We are pleased to offer this platform to you to explore the activities of University of Rhode Island faculty, staff and students to expand knowledge in diverse areas of study. The magazine is meant to include stories about work and people involved in all the disciplines of study at the University over time. We are also including stories about how applied research can enhance the economic development of Rhode Island, the United States and the world. We hope that you will enjoy this issue and also come back to examine future editions. Thanks for sharing these adventures with us.

Sincerely,

Gerald Sonnenfeld, Ph.D.
Vice President for Research
and Economic Development



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ACKNOWLEDGEMENTS

THE UNIVERSITY OF RHODE ISLAND

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Momentum: Research & Innovation is published by the Vice President for Research and Economic Development, with editorial assistance, graphic design, and production by the Office of University Research External Relations.

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BORN TO CARE

Studying the Link Between Genes and Empathy

by Dara Chadwick

Katheleen Hawes' research started with two simple questions: Can the ability to recognize how someone else is feeling help you manage stress? And is the ability to put yourself in someone else's shoes, so to speak, a learned behavior or is it rooted in physiology?

The answers to those questions are exactly what Hawes hopes to garner from her study *Neuroendocrine Correlates of Empathy and Stress Reactivity in Registered Nurses*. She's looking at how the presence—or lack—of a particular oxytocin receptor gene in nurses relates to their individual empathy levels and how they react to stress. Hawes, an assistant professor in the University of Rhode Island's (URI) College of Nursing, says nursing provides an ideal environment to ask these questions.

"There's a lot of workplace bullying," she says, noting that this behavior also is known as lateral violence. "I experienced this as a new nurse and I also teach registered nurses coming back to get their bachelor's degree. Nine out of 10 say they've been bullied, and much of that has to do with how people react to stress."

For the exploratory one-year pilot study funded by the URI Council for Research, Hawes and a graduate assistant went to Women & Infants Hospital and told nurses they were looking at the relationship between oxytocin receptors and reactions to stress.

"Anytime you start talking to nurses in a unit about stress, there's a line out the door," she says.

A cheek swab was taken from 20 nurses during the summer of 2014 and those same nurses answered a series of standardized questions about their stress levels and how they react to stress. Participating nurses were asked about stress, burnout and bullying, and administered a test similar to the "Eyes of the Mind" test, which measures the ability to recognize emotion by looking at faces.

The swab samples will tell Hawes and her team which of the nurses have the oxytocin receptor gene polymorphism, which is associated with higher levels of self-reported empathy and lower levels of stress reactivity.

The next step, Hawes says, is a correlational analysis of which nurses were positive for the oxytocin receptor genotype, how they answered the questions, and how they performed on the test.

Hawes, a psychiatric clinical nurse specialist who also



Katheleen Hawes

Assistant Professor, Nursing

works as a research scientist at the Brown Center for Children and Families, in Providence, R.I. says she hopes the preliminary data gleaned from this study will lead to a larger study that could ultimately result in the development of workplace interventions and improved patient safety.

"We know that stress and burnout are highly correlated," she says, adding that lateral violence in the workplace can result from what she calls "kick the dog" syndrome, as nurses who feel stressed and burned out may take out their aggression on fellow nurses.

Workplace bullying also can have a profound effect on care and safety when nurses feel that they can't speak up, Hawes says.

"If you're being bullied, you're silenced. You may not speak up for yourself," she says.

Traditionally, according to Hawes, nurses have not done a good job with talking about what they do, why their work is important, and why it matters.

"This study can help us understand how — who you are physiologically and how you respond to stress interacts with what your workplace is like," she says.

Hawes says she further believes this study can be a first step in helping the changing health care industry better understand the impacts of stress, burnout, and workplace bullying on job turnover, employees happiness, patient safety and patient satisfaction.

"I believe that empathy can be taught," Hawes says. "And I believe that we can develop workplace interventions that can improve performance and patient outcomes."



Oxytocin receptor genotype



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