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Carnegie Mellon led research to help prevent lung function decline amongst Qatar's elderly

Data collection in Qatar to begin in Fall 2014

DOHA, QATAR –New research led by Crista Crittenden, visiting assistant professor of psychology at Carnegie Mellon University in Qatar, will for the first time show the impact of social integration on pulmonary function and aims to improve lung capacity among Qatar's elderly population.

Crittenden is planning to implement a study that will look at the health outcomes of daily prayer, exploring the correlation between health, lung function and stress.

If a link to lung capacity is found, there would be further exploration on the social and psychological pathways that could connect daily prayer to better health such as stress reduction, mindfulness, purposefulness and life meaning. All of these factors have been seen to influence health, especially among the elderly.

Led by Crittenden, a team of undergraduate students from Carnegie Mellon Qatar will begin their preliminary data collection and develop a study design.

Lung function, which decreases with age, is an important physiological quality that affects cardiovascular disease, asthma and other lung disorders.

Doha was recently included in the Top 15 world's most polluted cities by the World Health Organization (WHO), which makes the Carnegie Mellon research to improve lung function amongst the elderly particularly relevant for local communities.

A similar study was previously conducted in the United States with a data sample of 1,147 healthy adults between the ages of 70 and 79 and was also led by Crittenden and included researchers from the University of California at Irvine, University of New Mexico and University of California at Los Angeles.

The research team found that the more social roles people engaged in, the better their lung function. While analysis of specific social roles indicated that marriage was the strongest positive connection to lung function, greater numbers of roles also were associated with better lung function even in those who were not married. Being a relative or a friend were also individually linked to improved lung function, but more social roles also were associated with better lung function independent of being a relative or a friend.

The data included a measure of the participants' social roles and assessed their pulmonary function according to peak expiratory flow rate (PEFR); the measurement of air flowing out of the lungs.

Crista Crittenden, the study's lead author said: "Older people need to get out because any sort of social interaction will improve their health."

Carnegie Mellon University Qatar

“I am really interested in how social and psychological factors influence lung health, and not only have we shown that more social roles, like being married or having friends, improve lung function, we found a link between more social roles and increased happiness and physical activity that could also help with lung function and overall health,” Crittenden added.

Carnegie Mellon prides itself on identifying and solving practical real-world problems through its research activities. The research approach at Carnegie Mellon is collaborative and involves teams composed of faculty, post-doctoral fellows, and students.

The university’s research agenda embodies the principles of the Qatar National Vision 2030, and are aligned with the country’s fundamental pillars of developing society, the economy and the environment.

Earlier this year, Carnegie Mellon Qatar was awarded 6 grants for the National Priorities Research Program (NPRP) on behalf of the Qatar National Research Fund (QNRF).

For more information on Carnegie Mellon Qatar’s research activities, visit: <https://www.qatar.cmu.edu/a-leader-in-research>

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About Carnegie Mellon University in Qatar

As a global leader in education, Carnegie Mellon University is known for its creativity, collaboration across disciplines, and top programs in business, technology and the arts. The university has been home to some of the world’s most important thinkers, among them 19 Nobel Laureates and 12 Turing Award winners.

In 2004, Qatar Foundation invited Carnegie Mellon to join Education City, a groundbreaking center for scholarship and research. The campus continues to grow, now providing a prestigious education to more than 400 students from 40 countries. The university offers five undergraduate degree programs in Biological Sciences, Business Administration, Computational Biology, Computer Science and Information Systems.

Students in Qatar join more than 12,000 Carnegie Mellon students across the globe, who will become the next generation of leaders tackling tomorrow’s challenges. The university’s 95,000 alumni are recruited by some of the world’s most innovative organizations.

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