

## Hula helps heart, soul, isle study discovers

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The dance benefits cardiac patients and people with high blood pressure

By Susan Essoyan

Learning hula can lower blood pressure for people with persistent hypertension and help rehabilitate patients after heart attacks or cardiac surgery, according to research presented Thursday in Hono-lulu.

And people tend to like it better than running on a treadmill.

"It is both appealing as well as effective," said Mele Look, an investigator on two hula-based studies by researchers at the University of Hawaii medical school and the Queen's Medical Center.

"We found that they were affected not only on the physical front — by all that movement — but there was evidence of emotional and maybe even spiritual benefits that participants were getting," she said.

Look, director of community engagement for the medical school's Department of Native Hawaiian Health, presented the research results at the American Psychological Association's convention at the Hawai'i Convention Center.

The research aimed to evaluate how hula might be harnessed to improve health among Native Hawaiians, whose death rate from heart disease is roughly twice that of the general population in Hawaii.

"Hula has never been used before as an intervention in a scientific research study," Look said. "We wanted to understand it both from the cultural side as well as from the Western scientific side."

One randomized controlled trial, Ola Hou i ka Hula: Hypertension & Hula Pilot Study, enrolled 45 people diagnosed with hypertension who had failed to control it with diet, exercise or medicine. Hypertension, or high blood pressure, is the leading cause of stroke and an early indicator of heart disease.

Half of the subjects took hula classes twice weekly for 12 weeks, including culturally tailored heart health education. That group saw their blood pressure drop by 20 points on average, compared with a 9-point drop for the control group, and the improvement continued for another three months, Look said. The study was conducted in Papa-ko-lea and Kalihi, and 90 percent of participants were Native Hawaiian or Pacific Islander. Data collection was completed in March, and results are still being analyzed and have not been submitted for publication, Look said.

"It's very strong," she said. "It's a very small sample — a pilot study. It's really indicating that there is something important there."

The other study, known as Hula Empowering Lifestyle Adaptations, offered hula as a form of rehabilitation for patients leaving the hospital after cardiac events such as heart surgery or heart attacks. Its 58

subjects, both men and women, were assigned either to usual care or to 12 weeks of hourlong hula classes, three times a week. The principal investigator on the study was Dr. Todd Seto, a cardiologist at Queen's.

The trial showed that hula improved physical functioning, such as peak oxygen consumption, and boosted social support for participants, which the scientific literature indicates is important in cardiac recovery, Look said.

"People in the group often felt no one else really understood what they went through or how they were feeling, how vulnerable, facing their mortality," Look said. "In the environment of a hula class, they felt supported, and it happened very fast and it lasted."

Mapuana de Silva, kumu hula of Halau Mohala Ilima, taught the cardiac patients, 95 percent of whom had no hula experience. She said the cultural immersion had "amazing effects."

"Most of them are older, they think, 'I'm too old, it's too late,'" said de Silva. "Because they were getting hula as a result of their heart incident, I think it just helped them relax and enjoy the exercise and the atmosphere of hula. Through that, they almost didn't realize how much their health was improving."

"We weren't sure, going into the study, if the students were going to be able to have a halau kind of family, spiritual, emotional experience, but they all did," she added.

An earlier stage of the research, reported last year and recently accepted for publication in the International Journal of Sports Medicine, measured energy expended in dancing hula. The researchers found that low-intensity hula was slightly more energetic than fast ballroom dancing, while high-intensity hula took more energy than a pickup game of basketball.

The hypertension and cardiac studies used low-intensity hula, such as "Kawika," a traditional dance, and "Pua-mana," a modern one, commonly taught to beginners, Look said. The research was funded by the National Institute on Minority Health and Health Disparities, through the medical school's RMATRIX grant and the Center for Native and Pacific Health Disparities Research.

De Silva said one woman came out of a deep depression during the hula course, while another participant, who had been in hospice, had a remarkable recovery.

"He could barely walk from the drop-off at Queen's to the (nearby) health room, without stopping three or four times along the way," she said. "By the time we got to the end of the session, he was actually going on walks in his own community."