

# Detecting depressive states in the elderly with on-line monitoring devices

October 10 2014

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Specialists at the Autonomous Metropolitan University (UAM) of Mexico developed a system that detected depression in older adults through monitoring their daily routine. This technology can be used as an auxiliary tool for the care of elderly people, who for various reasons such as family abandonment or a chronic condition, tend to fall into a depressed state.

According to Edwin Almeida Calderón, researcher in the area of Industrial Design at UAM and head of the project, [elderly people](#) (over 70 years) tend to have well-defined behavior patterns. "They get up, get clean, exposed to the sun, eat and rest in very specific places at the household."

The researchers used a device placed on the forearm of the older person and a webcam that records movement patterns, which are then plotted by software. In case of any anomaly in the activities course of the person, or the time in which they are positioned at a certain location, the system issues an on-line alert that can reach any device of a relative or a physician.

"The sensor is connected to a modem using radio frequency systems. The processed information from the elder's [movement pattern](#) may include factors such as temperature, heart rate and deviations in the usual activity path," Almeida Calderón explained.

The specialist in [industrial design](#) at UAM has forged alliances with psychologists, geriatricians and system engineers in order to optimize and streamline the system for detection of a depression state. Currently, Almeida Calderón has successfully conducted the first tests of the system in movement and on-line interconnection.

However, the researcher does not rule out adding more possibilities for this type of monitoring device. For this purpose, the specialist will meet with experts from multiple disciplines to achieve the most for this artifact.

Provided by Investigación y Desarrollo

Citation: Detecting depressive states in the elderly with on-line monitoring devices (2014,

October 10) retrieved 30 April 2024 from <https://medicalxpress.com/news/2014-10-depressive-states-elderly-on-line-devices.html>

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