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# E-Motion: Soothing the Patients' and Caregivers' Mood by Rebuilding the Spatial Entities of Care Infrastructures

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## **Abstract**

Environment is having an important impact on human emotion with a wide range of Influence factors. In particular, viewing nature is frequently applied for soothing the human emotion to maintaining the mental health. By breaking down the common natural environment, we tried to figure out to analyzes how these elements will influence and transform our emotion based on self-report and physiological measurement, and what we can do with it to expand the possibility of spatial design for individuals' and health professionals' experiences.

## **Author Keywords**

Motion; Shape; Color; Scale; Affect; Emotion; Flower

## **ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## **Introduction**

Many patients and their families have to face all kinds of tremendous mental stresses. For medical caregivers, heavy workload is accompanied by greater mental load. However, most of the care settings often ignore these needs. When patients are lying in emergency room, they are in uncertainty and wonder what's going on



Figure 1: The subject is taking the experiments with a head-mounted EMOTIV equipment and the tests in the browser. Every test takes about 1 hour, including the self-assessment manikin (SAM) and the EEG data by EMOTIV EPOC+ for the same content. These 10 tests include the number, morphology, hue, saturation, brightness, scale, rotation and motion speed to test their effects of the petals on people.

while all they can see is a pale, boring ceiling, but the doctors and nurses are dealing with some other cases elsewhere. However, the environment, especially the natural scenes, has proved to be beneficial to people's spiritual recovery [1][2]. Merely of them analyses how the certain vision & motion elements and will construct their functions to influence our mood.

### Case Description

Spatial elements in healthcare system are also a part of medical structure that cannot be ignored. We need to take into account the areas that are easily ignored in spatial design. To date various methods have been developed and introduced to measure the emotion [3]. In order to find out how the influence factors in nature, like flowers, have the subjective and objective influence on human beings' mood separately, we invited 8 students, 21-28 years, 4 males and 4 females, to take 10 tests. Finally, we aggregated and averaged all the data we collected.

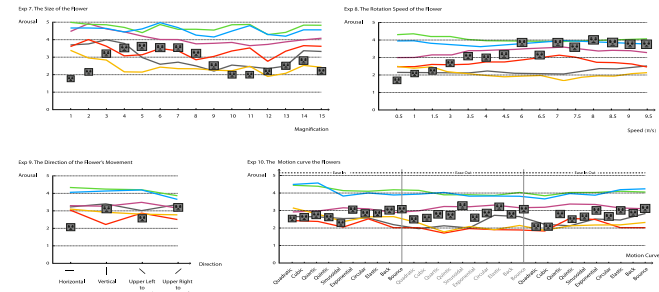
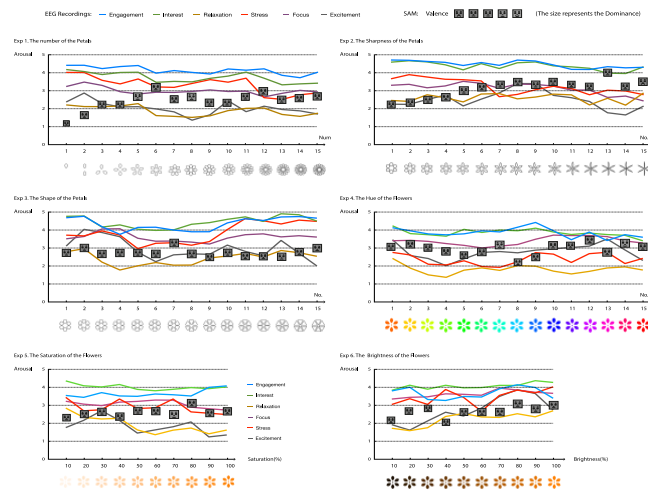


Figure 1: The experiments' results of the Self-reports and Emotiv recordings. Different color represents the different performance of the recordings. Each block represents the valence of the SAM, their sizes are related to the dominance.

On the basis of these results, we can find that the shape and the speed of these objects can significantly affect the objective emotional index and subjective emotional feelings, and there are some relationships between the different emotional curves and the questionnaires' results. So we can build a cyber-physical care environment with dynamic interface based on the certain value and both the patients' and caregivers' statue to affect their emotion, or ease their stress to promote the patients recover quickly.

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