



Seeing is believing ... believing in healing



An example of a prospect image fills the frame. It gives people a sense of being aware of their surroundings for a long distance, which is calming to many people.

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Clemson University researcher connects human health and our environment

BY JESSICA SIBLEY
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CLEMSON — The mind is a powerful thing, and so are the things that influence our mind.

When it comes to easing emotional pain, some say laughter is the best medicine.

When it comes to depleting physical pain, a vast array of remedies are within arms reach.

For Clemson University horticulturist, professor and researcher Ellen Vincent, it's more about tapping into our visual aptitude to tackle physiological and psychological pain.

Thanks to an on-going research effort led by Vincent and her students at Clemson, plenty is being discovered about image viewing and stress relief.

"I've always been interested in the power that our environment has on our well-being," Vincent said. "That's why this current research is something I love so much."

Vincent describes the



Vincent

first phases of her on-going research by referring to "Appleton's Prospect Refuge Theory." "Appleton was a geography professor at the University of Hull in England," she said. "He meticulously studied landscape paintings for real and symbolic content. His work resulted in three distinct categories. Prospect, refuge and hazard."

Vincent explained that each image used in her research prompted people in pain to respond in both psychological and physiological ways, depending on which of the three image categories were displayed.

"Prospect views allow the viewer to get a wide or high angle of the object," she said. "Refuge views contain areas where people could seek shelter, and hazard views portray an immediate threat to our

safety. In my research, it was found that a mixed image of both prospect and refuge produced the most healing results."

Vincent and her research team used a "cold pressor" technique on participants where they submerged their hand into ice water for 120 seconds.

She recorded blood pressure and heart rates during the trials while asking participants to fill out surveys about how they were feeling throughout the process as they viewed the images.

Vincent also included a "control" group that was not shown any images.

"The mixed prospect and refuge image treatment showed significantly lower sensory pain responses, and the no-image treatment indicated significantly higher affective pain perception responses," she said. "Although there was no clear 'most' therapeutic image, the mixed prospect and refuge image showed significant potential to reduce sensory pain. The



This is an example of a hazard image. Thanks to research being done by Ellen Vincent, Clemson University professor of horticulture and environmental

landscape specialist, much is being learned about certain images and their effects on stress level and physical well-being of people.

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hazard image was the most effective at distracting participants from pain, but it should not be considered a positive distraction because it also received the highest mood disturbance scores of all groups."

Vincent went on to explain that in many hospitals, much of the art that lines the walls is modern, which could be detrimental to overall healing.

"A patient is already under extreme stress when they are in the hospital," she said. "Many don't want to have to use heavy imagination when they look at things that are abstract. And, too, people who are sick find different things enjoyable versus people who are well and healthy."

That's why her research is near and dear to her heart.

"If we can figure out what people really want to see to help their healing, we can reach out to administrators of hospitals and designers so they can invest in what is most effective."

According to her research, "Views of nature

have been reported to relieve stress and pain, making nature an ideal medium for use in health-care settings. In hospitals whose design does not allow for a view of nature, virtual and surrogate views of nature may be viable therapeutic options."

Vincent added that part of the reason she enjoys this research stems from the data that has already been recorded.

"Hard data will get people listening when they otherwise might not," she

said. "Researchers Ulrich, Lunden and Eltinge found that open heart surgery patients in Uppsala, Sweden, reported less anxiety when a nature photograph dominated by water was present than did patients with a view of an abstract picture or a blank white panel."

For information on Vincent's research, visit <http://features.clemson.edu/creative-services/faculty/2011/the-healing-power-of-nature/>

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This is an example of a mixed image that combines the aspects of prospect and refuge, which allows the viewer to feel safe and secure, as they have a long line of sight

and see areas where they can seek shelter if need be. This type of image produced the strongest positive response from people used in Ellen Vincent's research.



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A mock hospital room is set up for research to show how certain images have an impact on pain and stress level.