Educational video increases knowledge but not behavior

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An educational and motivational video, designed to increase emotional well-being and use of adaptive devices in low vision patients increased knowledge but did not change behavior or emotions, says Schepens Eye Research Institute scientists in a study in the March Issue of *Optometry & Vision Science*.

"While our video clearly succeeded in increasing patients' knowledge of macular degeneration and the availability of adaptive devices and techniques, it did not change their emotional response to their disease or motivate them to make changes that could improve their quality of life," says Dr. Eli Peli, senior scientist at Schepens Eye Research Institute and senior author of the study The Impact of a Video Intervention on the Use of Low Vision Assistive Devices. "These findings suggest that patients need more than a video to encourage them to make changes and improve their feelings about their plight," he adds.

More than one million Americans and millions more worldwide suffer from low vision caused by age-related macular degeneration (AMD), which destroys the tiny center of the retina known as the macula. It is the leading cause of (legal) blindness among European-descended people older than 65 years. Without assistive devices and adaptive behaviors, sufferers of AMD are often unable to perform daily tasks such as reading, writing, driving, and face recognition, which can cause a loss of self-esteem, employment, independence and social interaction. Low vision patients experience emotions ranging from depression to despair and might even entertain thoughts about suicide. "And, while many

useful assistive devices and adaptive techniques exist, patient and physician awareness of these possibilities is alarmingly low," says Peli.

Peli and colleagues from the New England Research Institute joined forces with the National Eye Institute to develop a contrast-enhanced video called "Hope in Sight: Living with Macular Degeneration." The expectation was that a well-designed, inspirational video could impart knowledge and hope, and could stimulate patients to try assistive techniques and devices. The contrast enhancement was specifically designed to improve the visibility of the video for patients with AMD.

After developing and testing a prototype with help from focus groups of patients, caregivers, and experts, the team decided to use a "cognitive restructuring" framework in the video. Cognitive restructuring is an approach that instills adaptive beliefs such as greater perceived control, greater confidence in one's abilities, and more realistic assessment of failures prior to attempting changes in actual behavior. This approach has been used successfully in intervention trials for exercise, fear of falling, and doctor/patient communication.

"Hope in Sight" features three real people with low vision and it vividly portrays how they moved emotionally from initial devastation and despair to acceptance and adjustment. The use of low vision devices by these people was emphasized to illustrate and underscore the adjustments and adaptations that have enabled them to maintain independence.

The video, which eventually won the 2003 Telly Award, also featured a virtual home to which adaptations were made and an educational section on the AMD process itself.

To determine the impact of the video, the research team divided 151 low vision patients into two groups—those (the intervention group) who

viewed the video, and those who did not (the control group). They then interviewed each subject three times: before the video viewing, two weeks after, and three months after. The interviews consisted of questions about emotional responses to AMD, knowledge of their disease and use of assistive devices.

The team discovered that subjects who viewed the video had significantly higher scores than the control subjects on knowledge about their disease and assistive equipment and on their expressed willingness to use such devices. Video viewers also scored higher in their use of books-on-tape. However, there was little change in emotional response to their disease and no significant change in their actual use of adaptive techniques in their homes or actual use of assistive devices.

Peli says that the findings could be a result of the costliness of low vision devices, transportation or the difficulty in obtaining timely appointments with low vision experts. But it could also be, he adds, because patients need more than video and other educational materials to help them cope with emotions and make lifestyle changes.

"The take-home message for this study is that patients may need more interaction with professionals, such as primary care physicians and ophthalmologists, who may need to spend more time and energy helping low vision patients find good low vision experts who can in turn help them in selecting assistive devices and adaptations that work for them," concludes Peli.

Source: Schepens Eye Research Institute