



KEY POINT SUMMARY

OBJECTIVES

To examine whether the use of nature sights and sounds during FB reduces anxiety and pain

To examine whether the use of nature sights and sounds during FB improved patient satisfaction with the procedure

DESIGN IMPLICATIONS

The study clearly showed that nature based positive distractions can positively impact patient perception of pain.

The study suggests that nature based visual art, and nature based sounds can have healing impact.

Depiction of running water in sounds (and potentially visual scenes) should be carefully considered if patients are confined to the bed, since it may lead to adverse events.

Distraction Therapy With Nature Sights and Sounds Reduces Pain During Flexible Bronchoscopy: A Complementary Approach to Routine Analgesia

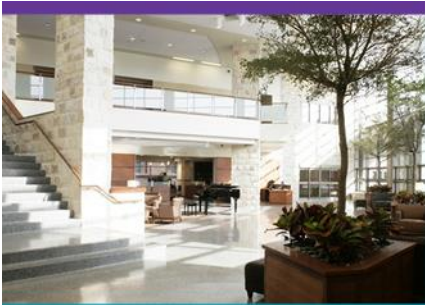
Diette, G.B., Lechtzin, N., Haponik, E., Devrotes, A., Rubin, H.
 2003 / *Chest*
 Volume 123, Issue 3, Pages 941-948

Key Concepts/Context

The demand for better healthcare includes the demand for proper treatment of pain. Joint commission standards for maintaining accreditation also apply to chronic medical conditions and the management of pain. Non-pharmacological methods of managing pain have gained popularity because patients can continue to experience pain despite the use of premedication analgesics and sedatives. Besides there are often side-effects associated with any use of medication. This is of particular concern for invasive procedures such as Flexible Bronchoscopy (FB) that can be frightening and painful for patients. Arguably, use of non-pharmacological approaches can speed the recovery and thereby discharge from the hospital. A common nonpharmacological approach is distraction therapy - "a technique in which sensory stimuli are provided to patients to distract their attention from an unpleasant experience". This paper looks at the efficacy of distraction therapy on the pain and anxiety perception of patients undergoing FB. The use of nature images and sounds is supported by previous literature on the healing impact of nature.

Methods

Adult patients undergoing FB in the endoscopy suite at the John Hopkins Hospital who met the inclusion criteria outlined in the protocol were offered the possibility of viewing nature scenes and listening to nature sounds at their bedside before, during and after their procedure. The nature scene consisted of a 42X52" mural



The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research providing the value of design in improving patient and performance outcomes in healthcare facility planning, design, and construction, optimizing the healthcare experience and contributing to superior patient, staff, and performance outcomes.

Learn more at
www.healthdesign.org

suspended from the ceiling so patients could view it while supine and a portable tape recorder with headphones that played nature sounds- patients could change the volume on, or turn it off if they wanted. Patients were not told about the purpose of the study. Patients in the control group were not given any intervention. FB procedures and administering of medication was done by the bronchoscopists based on their usual practices.

Primary outcomes were patient reported anxiety and pain during the procedure. Pain was measured by a question “how well was pain controlled during the procedure”. Anxiety was measured by a six-item short version of the State-Trait Anxiety Inventory (S-STAI). Secondary outcomes included the ability to breathe during FB, willingness to return for another FB, and rating of the bronchoscopy area (privacy, safety and overall assessment). Patients completed a survey with baseline information before the procedure, and a follow-up survey administered on the following day.

Findings

A total of 80 patients participated in the study (41 in the intervention group, and 39 in the control group). Multi-variate analysis of the data revealed that reported pain control was significantly better in the intervention group (with nature based distractions) compared to the control group during the procedure, but there was no apparent difference in the anxiety levels of the two groups.

Limitations

Author introduced limitations include:

- Perception of pain and anxiety were collected solely by self-report surveys, on the day following the procedure- this implies that patient experience was determined based on patient recollection. Use of additional physiological outcome measures during the procedure would help robustness of the study.
- Study was conducted at a single center- multi-center study would increase generalizability
- Due to minimal instructions given to patients, some patients struggled to manipulate volume on the tape recorder which frustrated them.
- Study did not look at the impact on the staff.

Additionally, the study does not give enough information on how and why a specific scene was selected. Study reports that one patient urinated on the bed, reportedly due to the sound of flowing water. This has significant implications that have not been explored. Also, the paper does not clearly explain differences in inpatient and outpatient responses although it alludes to difference in follow-up survey return time.