

CYBERTHERAPY 2007
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Description of a multicomponent program including Virtual Reality for the treatment of Fibromyalgia

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PAIN

An unpleasant sensory and affective
experience induced by the exposure to
noxious stimuli (i.e. injury incipient or
substantive in nature)

(International Association for the Study of
Pain)

- Perceptive experience
- Indicates that there is a physical threat
for the body
- Function of pain: Protection

PAIN

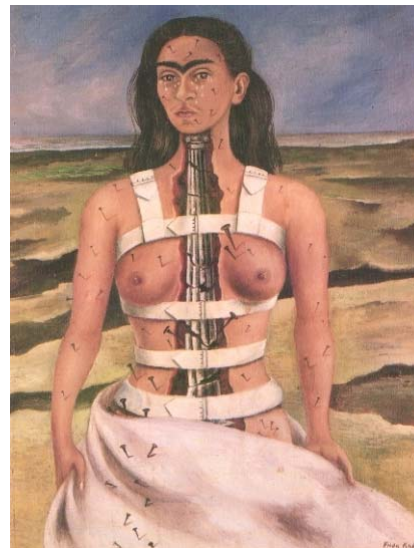
ACUTE PAIN



PAIN

CHRONIC PAIN

Pain that persists longer than the temporal course of natural healing that is associated with a particular type of injury or disease process.



PAIN

CHRONIC PAIN

Economic costs of chronic pain in Spain:

13.000-16.000 millions of euros a year.

High absenteeism from work and impairment in work productivity.

4,5 millions of Spanish suffer chronic pain (population: 45 millions).



Healths Economics
Outcomes Research
Europe

CHRONIC PAIN

FIBROMYALGIA:

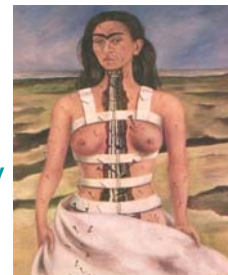
Widespread musculoskeletal pain.

FM affects 2% of the population, mostly women.

Patients complaint about generalized and disturbing chronic pain in several parts of the body.

Other symptoms include sleep problems, depression, and anxiety.

Important impairment and distress



PAIN

CHRONIC PAIN

One of the most important causes of disability



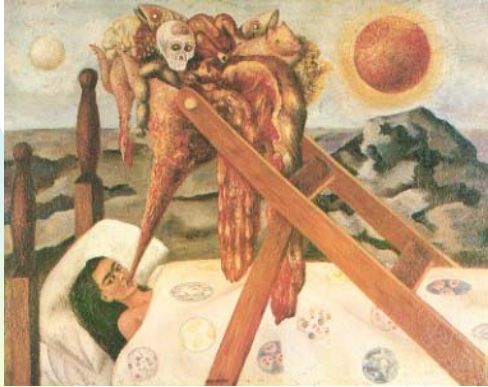
NEED

Study of pain

Develop effective interventions

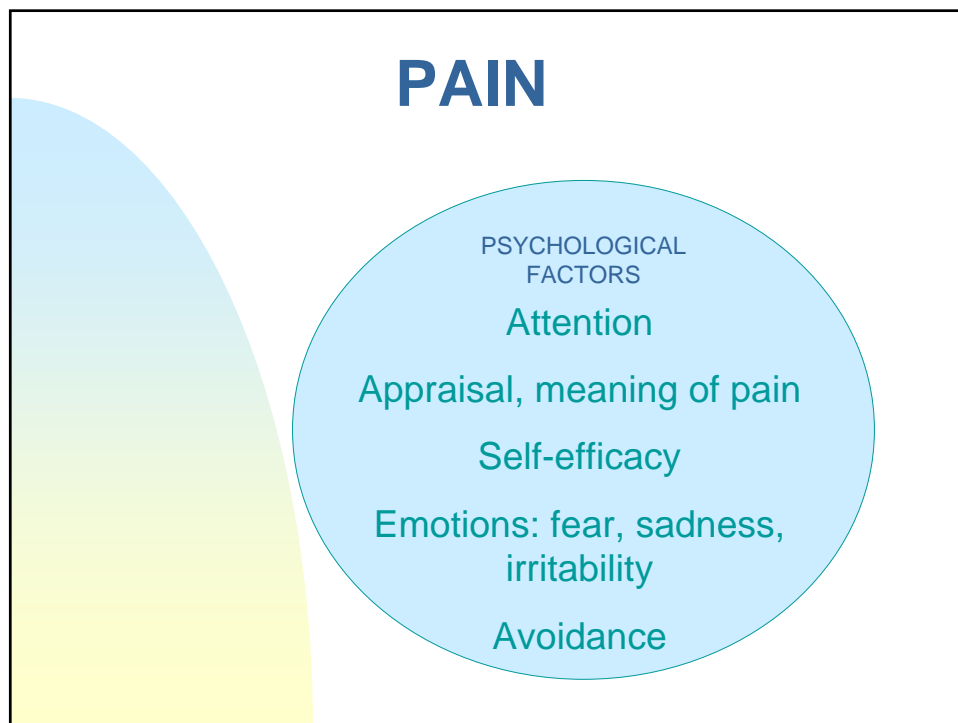
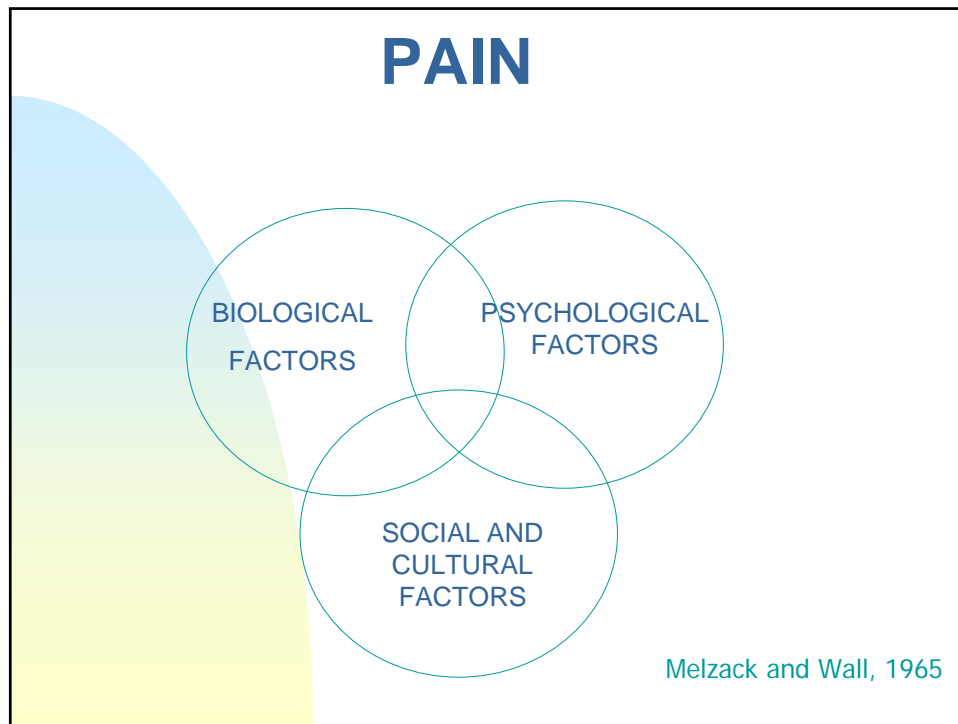
The slide features a decorative background on the left with a light blue and yellow gradient and a blue curved arrow pointing from the 'CHRONIC PAIN' text towards the 'NEED' box. The text 'PAIN' is at the top, 'CHRONIC PAIN' is below it, and the descriptive text 'One of the most important causes of disability' is to the right. The 'NEED' box is a light blue rectangle containing the text 'Study of pain' and 'Develop effective interventions'. The painting 'Self-Portrait with Broken Heart' by Frida Kahlo is on the right, showing her in a red dress with a broken heart on her chest, sitting in a wheelchair.

PAIN



COMPLEX

The slide features a decorative background on the left with a light blue and yellow gradient. The text 'PAIN' is at the top. The painting 'My Birth' by Frida Kahlo is in the center, depicting her lying in bed with a large, bloody, and skeletal figure of a bull or animal on top of her. The text 'COMPLEX' is at the bottom. The painting shows a woman lying in bed, looking up at a large, bloody, and skeletal figure of a bull or animal that is draped over her. The background of the painting shows a landscape with mountains and a sun.



PAIN

Psychological factors
among the best
predictors of disability
caused by chronic pain

Turk and Okifuji, 2002

NEED TO INCLUDE
PSYCHOLOGICAL
PROGRAMS IN THE
TREATMENT OF
CHRONIC PAIN

CHRONIC PAIN

TREATMENT

MULTIDISCIPLINARY PROGRAMS:

Medical treatment

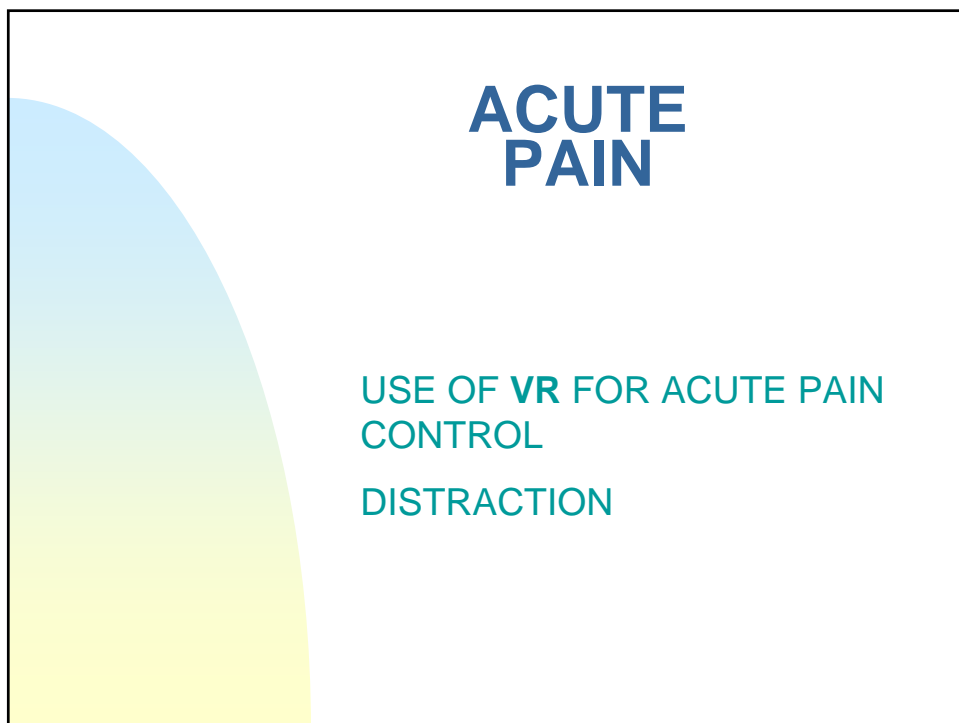
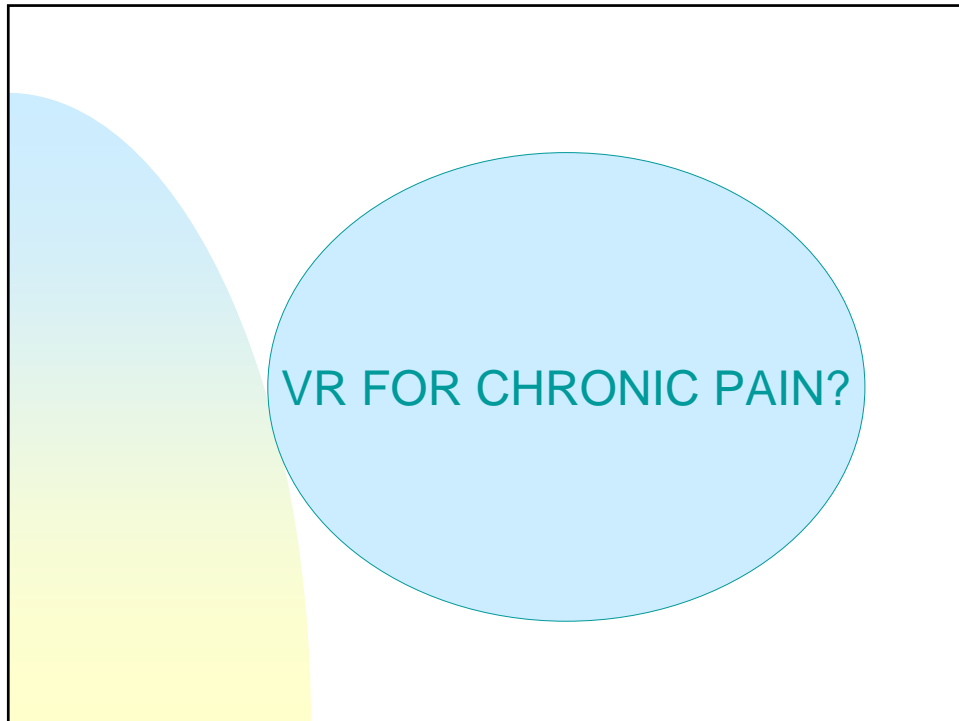
Psychological treatment

Other professionals: physical therapy, occupational therapy, etc.

(i.e. Nelson & Jensen, 2004; Turk, Okifuji, Sinclair & Starz, 1998).

PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

- EDUCATIONAL COMPONENT
- RELAXATION
- BEHAVIOR THERAPY
- COGNITIVE THERAPY
- RELAPSE PREVENTION





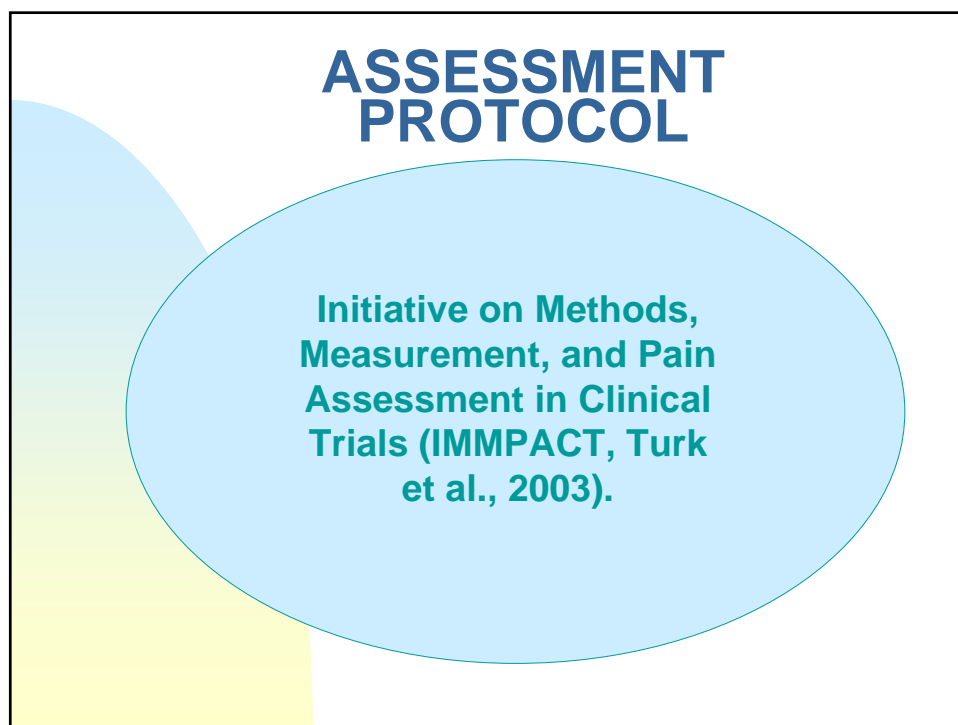
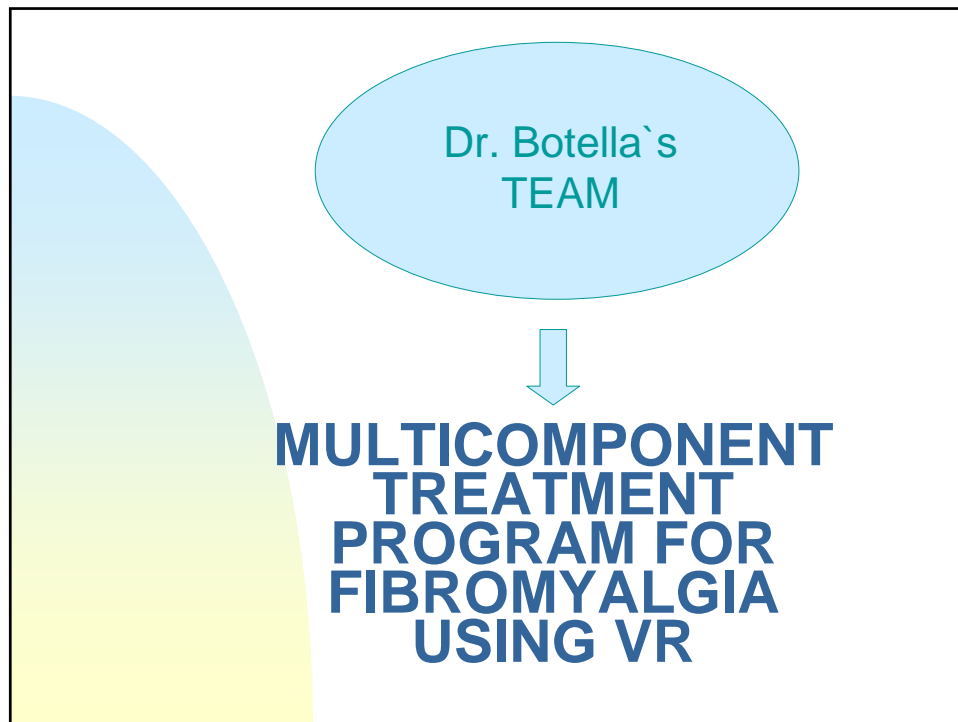
VR
VIRTUAL REALITY

PAIN CONTROL
HARBORVIEW BURN CENTER

The U.W. Human Interface Technology Lab
The Paul Allen Foundation for Medical Research,
www.VRpain.com

The poster features a wireframe graphic of a hand on the left side. Below the main title, there is a horizontal strip of small images showing various people using the VR system in a clinical setting.





ASSESSMENT PROTOCOL

Short-Form 36 (Ware & Sherbourne, 1992): Physical functioning

Brief Pain Inventory (BPI, versión breve, Cleeland & Ryan, 1994): Pain Intensity and impairment. (WEEKLY)

Fibromyalgia Impact Questionnaire (Burckhardt, Clark & Bennet, 1991).

Cronic Pain Coping Inventory (CPCI Jensen et al., 1995). Coping skills.

Profile of Mood Status (POMS, McNair, Loo & Droppleman, 1971): anxiety, depression, anger, etc.

Satisfaction Questionnaire (Borkovec & Nau, 1972).

MULTICOMPONENT TREATMENT PROGRAM FOR FIBROMYALGIA

Based on Turk's and Jensen's programs.

Group therapy.

10 sessions.

2 sessions per week: session 1 to 6.

1 session per week: session 7 to 10.



MULTICOMPONENT TREATMENT PROGRAM FOR FIBROMYALGIA



TREATMENT
COMPONENTS



PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

EDUCATIONAL COMPONENT:

- Explanation about chronic pain: medical, psychological, and social factors.
- Factors involved in the maintenance of pain.
- Rationale of treatment.

PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

RELAXATION COMPONENT:

Learning relaxation techniques is an effective way to reduce the high levels of **negative affect**.

Relaxation alleviates **emotional distress** and **muscular tension**. It also helps to improve **sleeping**. Relaxation helps to reduce **pain** and promote **wellbeing**.

PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

BEHAVIORAL THERAPY: ACTIVITY PROGRAM:

- Increment of **physical activity**, including activities that provoke positive emotions (gradually)
- Treatment of **avoidance** of activities due to fear associated with pain;
- Treatment of **sleeping, eating, or sexual** problems.
- Improvement of **interpersonal communication** skills.

The increment in **pleasurable activities** can help the patient to reorganize priorities in life (family, work, leisure, etc).

Promoting **self-efficacy**.



PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

COGNITIVE THERAPY:

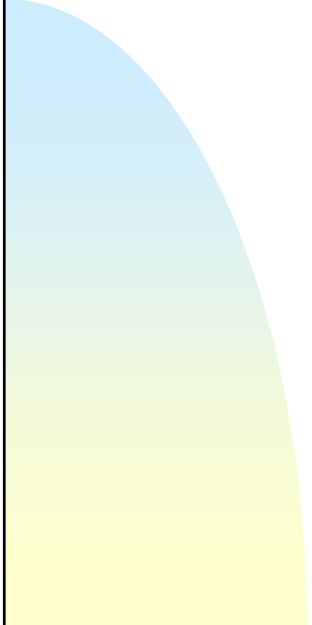
- Relevance of **thoughts, expectations, attitudes**, etc. in the maintenance of pain.
- **Decatastrofization** (reappraisal of pain), refocusing **attention**.



PSYCHOLOGICAL TREATMENT OF CHRONIC PAIN

RELAPSE PREVENTION:

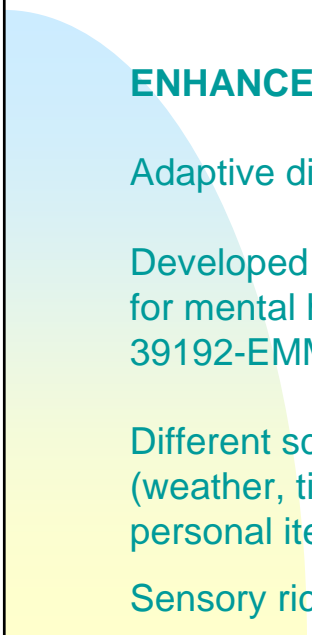
- Programming the use of the learned skills to cope with pain once the treatment ends.
- Programming follow-up sessions to strengthen the achieved outcomes.
- Identification and coping plan in high risk situations or times.



VR

Enhance relaxation

- Increase positive emotions
- Cognitive therapy: changing the meaning of pain in patient's life



VR

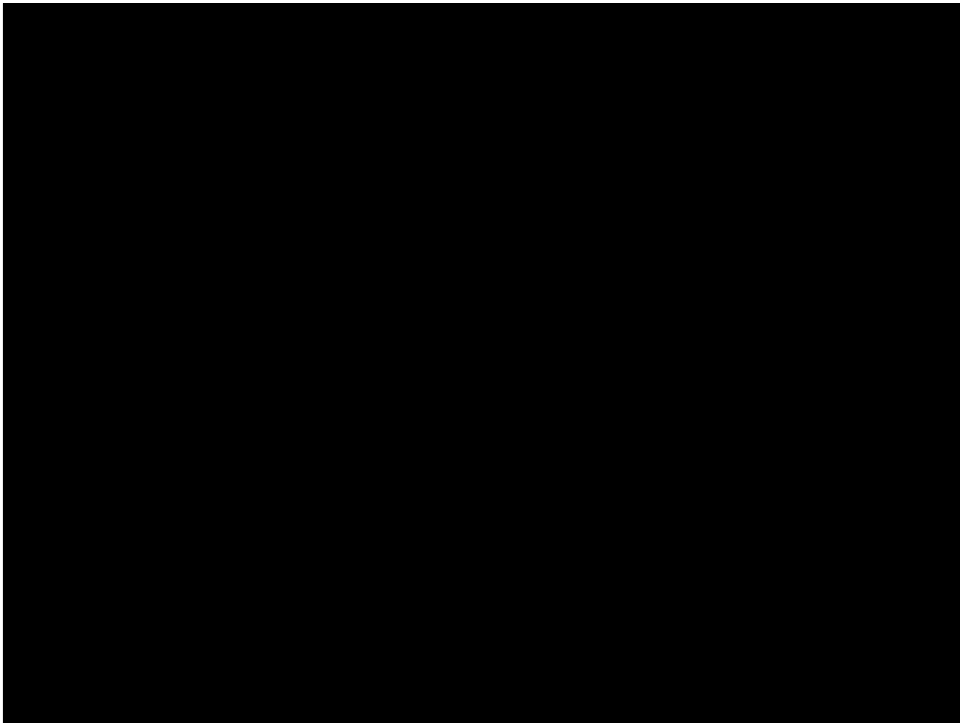
ENHANCE RELAXATION

Adaptive display: EMMA

Developed in the EU Project: “Engaging media for mental health applications” (IST-2001-39192-EMMA).

Different scenarios with different possibilities (weather, time, music, objects, pictures, videos, personal items, etc.)

Sensory rich environment



PILOT STUDY

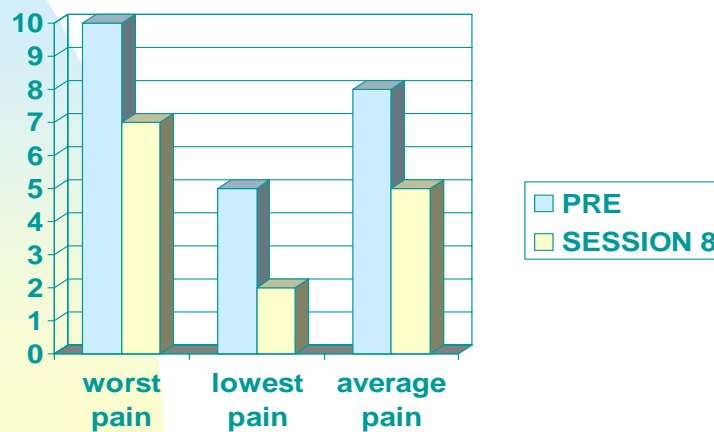
A group of seven patients with a diagnostic of FM (American College of Rheumatology 1990 criteria).

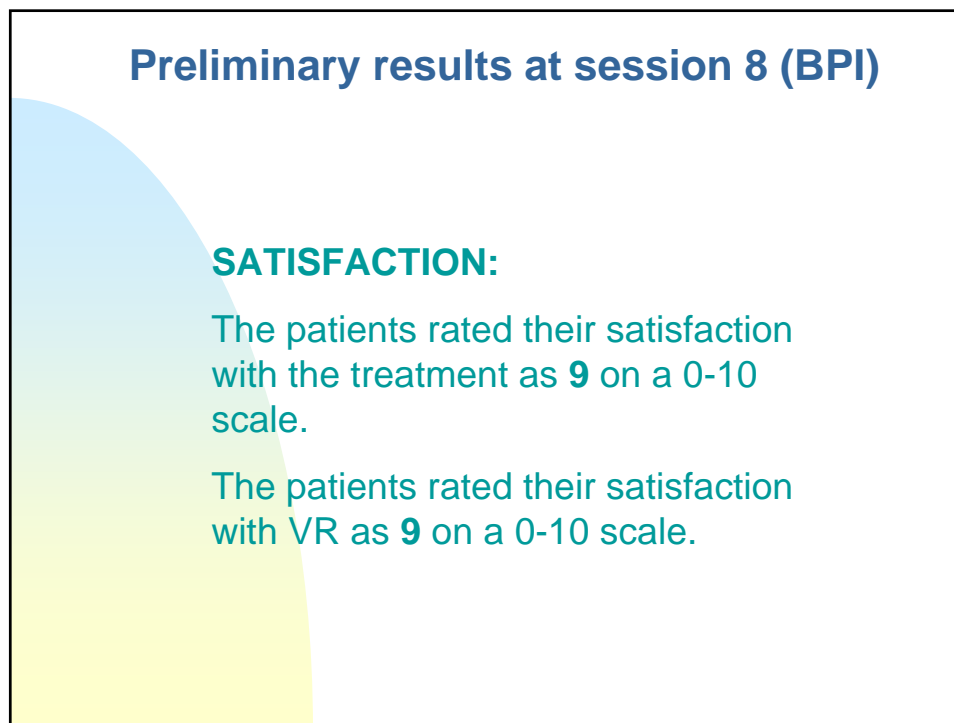
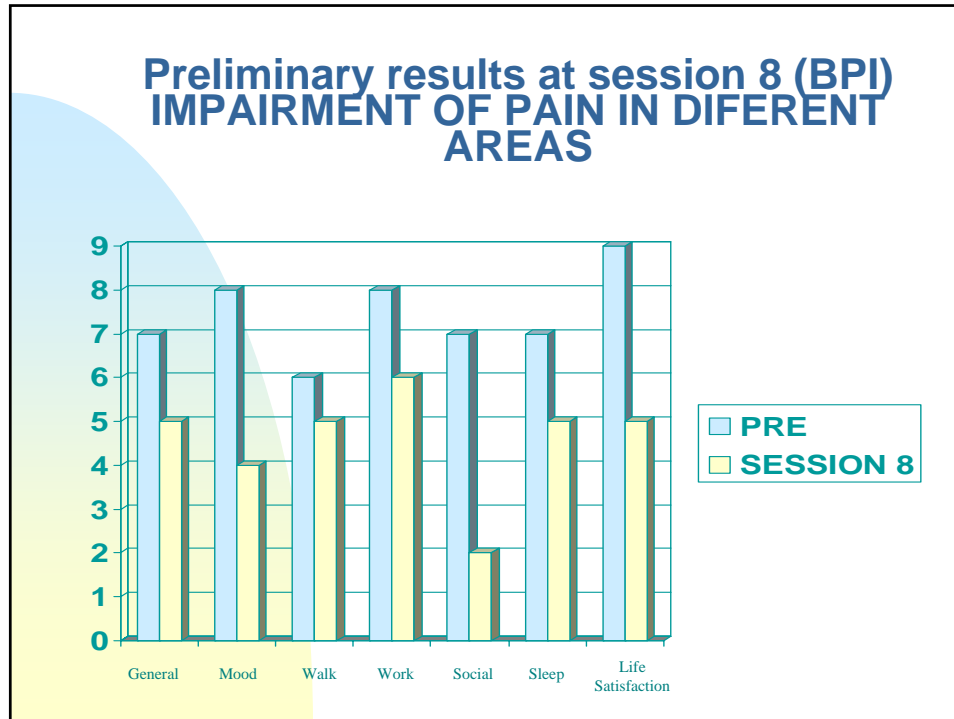
Public care system: General Hospital of Castellon, Rheumatology.

No changes on medication while the study is on progress.

State: In progress

Preliminary results at session 8 (BPI) PAIN INTENSITY





CONCLUSIONS

VR CAN BE USEFUL TO DELIVER
RELAXATION IN A MULTICOMPONENT
PROGRAM FOR FM.

VERY PRELIMINARY BUT ENCOURAGING
RESULTS.

FIRST PATIENTS HIGHLY SATISFIED.

EXPLORE THE USE OF VR TO DELIVER
OTHER THERAPEUTIC TECHNIQUES:
COGNITIVE THERAPY; IMPROVEMENT OF
MOOD.

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