



THE ANALOG AND DIGITAL IMAGE IN PHOTOTHERAPY

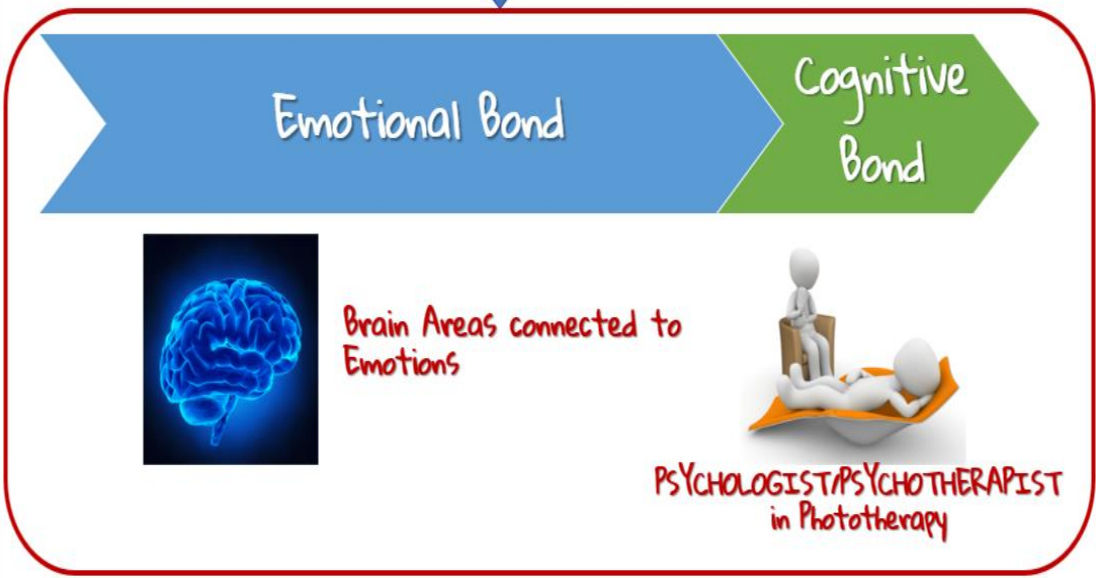
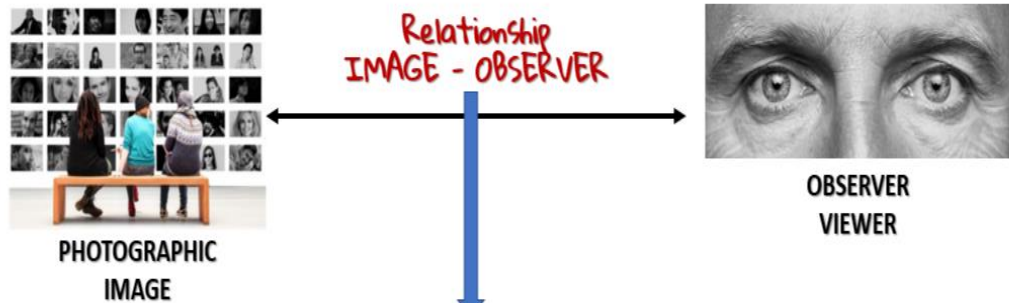
Daive Susa

Photography is probably the most powerful artistic medium from an emotional point of view.

She is a travel companion during a person's life (Valtorta R., 2016).



PHOTOTHERAPY – according to Judy Weiser, represents a:
"[...] articulated system of psychotherapy techniques based on the use of photography ... within their therapeutic activities [...]" (Weiser J., 2006).



PHOTOTHERAPY

In phototherapy:

- ✓ the **patient**, with the photographic image, which acts as a "stimulus", is activated through perceptions, emotions, and reactions (**Emotional Bond**) recorded and used by the psychologist;
- ✓ the **psychologist-psychotherapist** helps the patient in "conscious investigations" about himself (**Cognitive Bond**) with respect to the emotional content that the photographic image arouses in him.



RESEARCH IDEA

Check whether the **digital image**, as part of a Phototherapy exercise, can be **physiologically and emotionally “activated”** like the **analog image**.

For the research, the exercise "**The Space Station**" was chosen, J. Weiser, "Phototherapy" (2013) was chosen, as:

- ✓ It can evoke strong physiological and emotional reactions,
- ✓ It allows you to explore the emotional bond that binds the individual to the images chosen by him.

The activity was divided into **2 distinct phases** to explore:

- ✓ the feeling linked to the "**loss of something**", the photographic image;
- ✓ **awareness** of the **most dear image** to the person.



SELF REPORT

It has been prepared for the detection of the emotional bond of the participant in the photographic image, with two different indices:

Physiological Activation

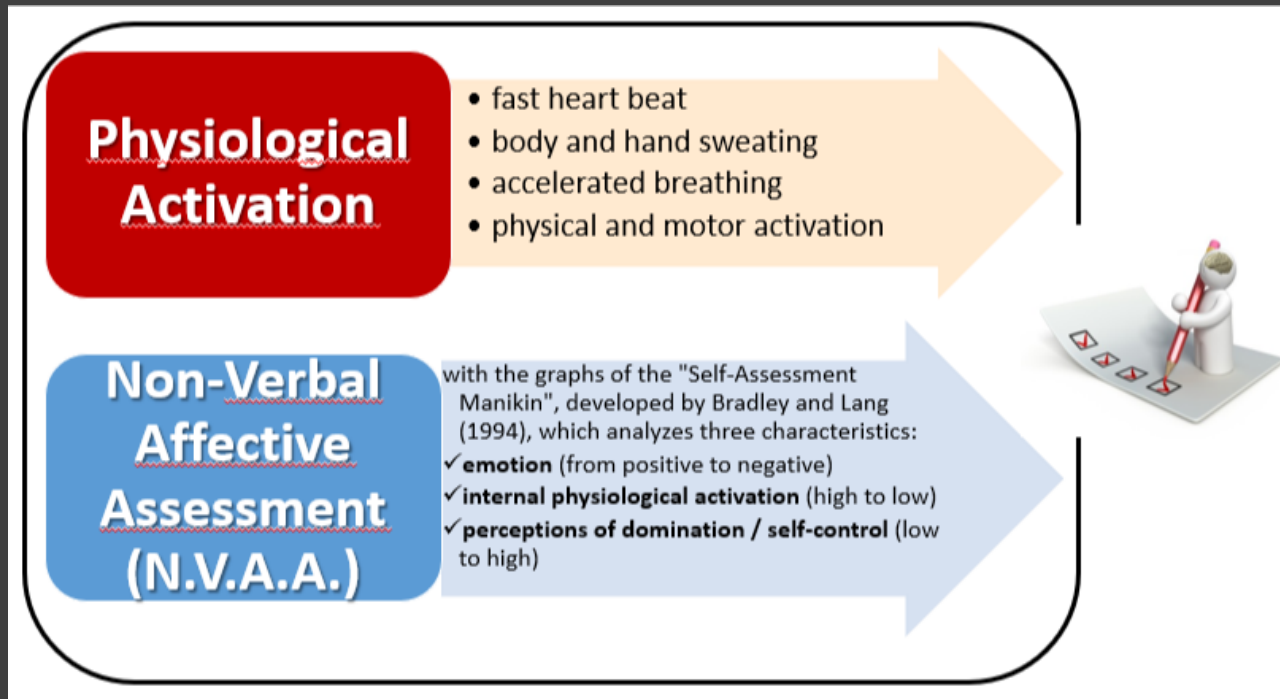
- fast heart beat
- body and hand sweating
- accelerated breathing
- physical and motor activation

Non-Verbal Affective Assessment (N.V.A.A.)

- with the graphs of the "Self-Assessment Manikin", developed by Bradley and Lang (1994), which analyzes three characteristics:
- ✓ **emotion** (from positive to negative)
 - ✓ **internal physiological activation** (high to low)
 - ✓ **perceptions of domination / self-control** (low to high)



SELF REPORT



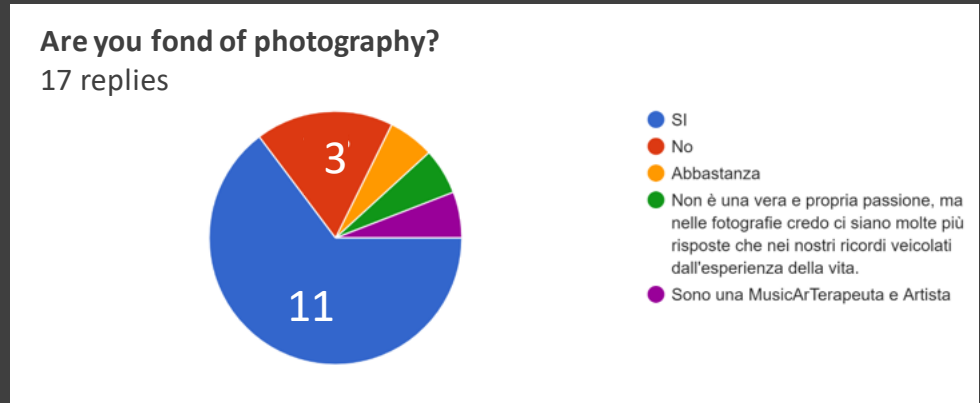
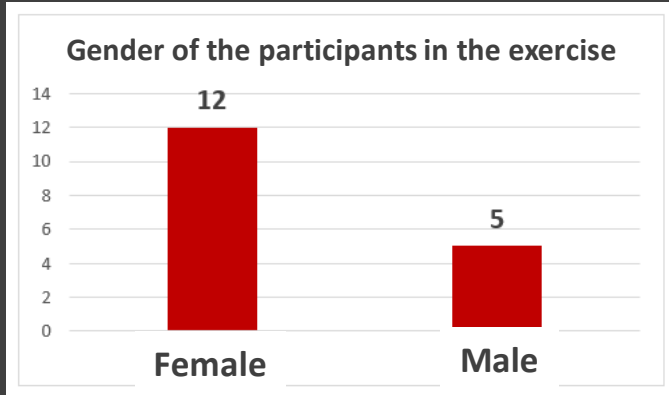
The SELF-REPORT can be used as a tool for assessing the patient's emotional bond in a phototherapy exercise.

In the Sector Literature there are no such tools



PARTICIPANTS GROUP

The research was carried out thanks to the support of 17 participants. These people are between 29 and 66 years old, 12 participants are women.



The **group** was divided as follows between **Analog** (paper) and **Digital** images:

- 9 participants** carried out the exercise with **paper images**;
- 8 participants** performed the exercise with **digital images**.



Self-Report Results

Physiological Activation

- fast heart beat
- body and hand sweating
- accelerated breathing
- physical and motor activation

Non-Verbal Affective Assessment (N.V.A.A.)

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The survey revealed that the **Phototherapeutic Exercise** has a **low impact** on the "**Physiological Activation**" level regardless of the type of images (analog and digital) used and settings, in the presence or digital environment.

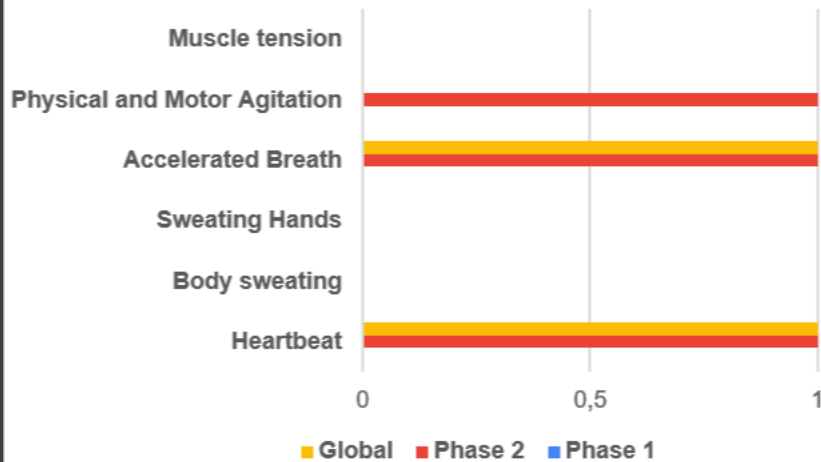
Globally, the same N.V.A.A. both in analog and digital mode.

Different are the activation phases depending on the mode:

- ✓ **Phase 2**, when the participant remains with a single image, for the activity with **analog photographs**
- ✓ **Phase 1**, when the first image is removed from the person, due to the way it is done with **digital images**.

Self-Report Results: Physiological activation

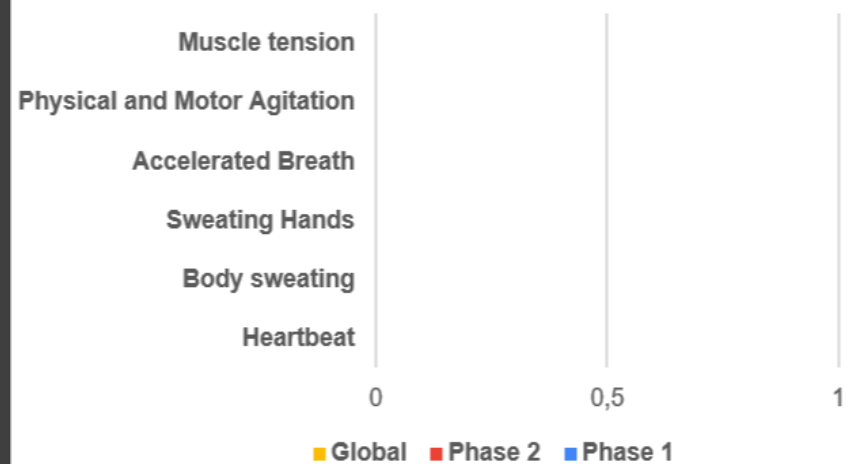
Physiological Activation "Analogue Exercise"



Analogue Exercise:

- ✓ no physiological activations were detected during **Phase 1**
- ✓ 3 parameters detected during **Phase 2** (accelerated heartbeat, accelerated breathing, physical and motor activation)
- ✓ 2 parameters detected on **Global evaluation** (accelerated heart rate, accelerated breathing)

Physiological Activation "Digital Exercise"



Digital Exercise:

- ✓ no physiological activations were detected, either globally or in the individual phases of the exercise

NOTE: despite the MODE detected is "0", 3 out of 8 subjects were found physiological activations of at least 3 parameters both in Phase 1 and globally. Phase 2 did not register these exceptions to the value of MODE.

Self-Report Results: Non-Verbal Affective Assessment (N.V.A.A.)

Analogical Exercise:

- ✓ no relevant elements of N.V.A.A. during **Phase 1**
- ✓ **Phase 2** highlighted strongly negative emotions and significant physiological activation, albeit with strong self-control
- ✓ The **Global evaluation** was medial, Mode value "3" on all parameters

Digital Exercise:

- ✓ during **Phase 1** of the slightly negative Emotions and relevant physiological activation, with a discreet self-control by the subjects
- ✓ no elements of N.V.A.A. relevant during **Phase 2**, here the emotion turned from negative to positive
- ✓ The **Global evaluation** was medial, Mode value "3" on all parameters

NEXT STEPS

- ✓ Insights on physiological and emotional activations with more complex and sophisticated tools (e.g. biofeedback, neurofeedback, etc.).
- ✓ Possibility to standardize the Self-Report for the analysis and evaluation of the perception of the emotional bond of a patient with respect to a photographic image and a phototherapy activity.

