

CAN WE BE "OUT" OF OUR BODY? CHARACTERIZATION AND CLINICAL IMPLICATIONS OF OUT-OF-BODY EXPERIENCES DURING SLEEP PARALYSIS: PRELIMINARY RESULTS.

Herrero Nerea^{1,2,3}, Gallo Francisco^{1,2}, Forcato Cecilia^{1,2}.

1 Laboratorio de Sueño y Memoria, Depto. de Ciencias de la Vida, Instituto Tecnológico de Buenos Aires (ITBA).

2. Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET).

3. ENYS-CONICET, Universidad Nacional Arturo Jauretche, Hospital de Alta Complejidad en Red El Cruce "Néstor Kirchner", Argentina.

INTRODUCTION

Sleep paralysis is a period of transitory immobility which occurs during sleep onset or offset¹. It is characterized by the inability to perform voluntary movements when the person feels awake and conscious about the environment². During an episode of sleep paralysis can occur different types of hallucinations: The **Intruder**, characterized by the sense of an evil and threatening presence, visual and tactile hallucinations. The **Incubus**, characterized pressure on the chest and other body parts, breathing difficulties, feelings of suffocation, choking, pain and morbid thoughts of imminent death. Unusual body experiences which includes **Illusory Movement Experiences** (IMEs) and **Out of Body Experiences** (OBEs). IMEs are vestibular sensations such as the sensation of rolling or floating, and/or motor sensations of displacement without a visual component³. The OBEs are an altered state of consciousness, defined as the experience in which an observer perceives the world from a point of view outside of their physical body^{3,4,5}. Unlike the other two components (incubus and intruder), during IMEs and OBEs the person may not feel body paralysis, and they are considered as more pleasant⁶. OBEs during sleep paralysis can occur spontaneously or it can be induced with training by the recognition of an aura that precedes the experience^{7,8}. Here, we will discuss preliminary results of an online survey with subjects who had unusual sleep experiences, such as OBEs and Sleep Paralysis and its clinical implications.

METHODS

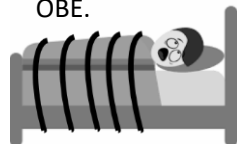
ONLINE SURVEY



- SLEEP PARALYSIS
- OUT-OF-BODY EXPERIENCES DURING SLEEP
- LUCID DREAMING

EXPERIMENTAL GROUPS

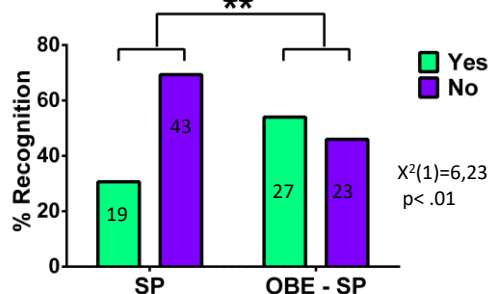
- **SP.** Subjects who had sleep paralysis without OBE.



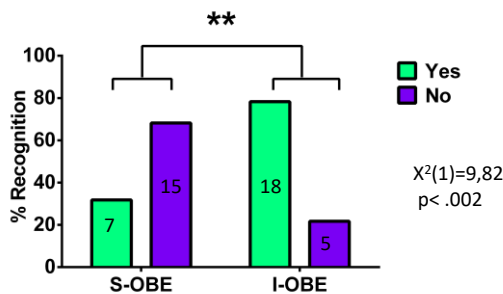
- **I - OBE** Subjects who can induce OBE
- **S - OBE.** Subjects who had spontaneous OBE during sleep
- **OBE-SP.** Subjects who had Sleep Paralysis and OBE.
- **OBE Only.** Subjects who had OBE during sleep without feeling the Sleep Paralysis

RESULTS

SLEEP PARALYSIS AURA

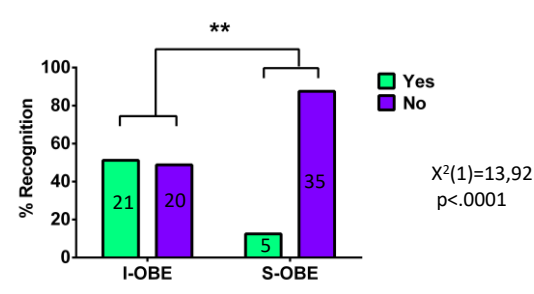


OBE-SP group recognizes significantly better both signs of aura: sounds and vibrations.



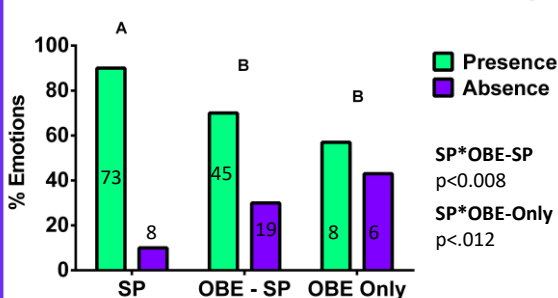
OBE-I group recognizes significantly better both signs of aura: sounds and vibrations.

OBE AURA

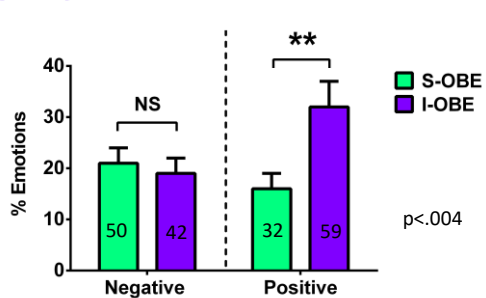


OBE-I group recognizes significantly better both signs of aura: sounds and vibrations.

EMOTIONS

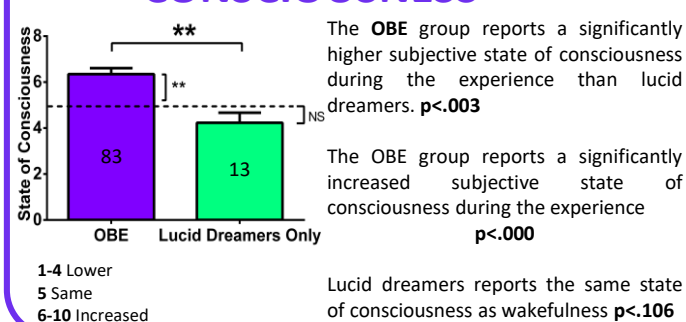


The SP group has a significantly higher presence of negative emotions during the episodes.



The I-OBE group has a significantly higher presence of positive emotions during OBE episodes.

SUBJECTIVE STATE OF CONSCIOUSNESS



CONCLUSIONS

We propose that out-of-body experiences during sleep represent a state of consciousness which differs from lucid dreaming and more studies would be carried out in order to characterize this state. Furthermore, due to: **1)** Sleep Paralysis and OBE aura share the same components; **2)** subjects with OBE who do not feel sleep paralysis recognize the OBE aura; **3)** OBE can be induced using techniques such as lucid dreaming induction; we propose that the OBE aura is the same that Sleep Paralysis aura, and this is the key for inducing an OBE before an episode of Sleep Paralysis. We suggest that, recognizing the OBE aura subjects can avoid the sensation of body paralysis reducing the negative symptoms. Also, since OBE subjects have more positive experiences than subjects with SP, we propose the OBE induction as a clinical tool for treatment of recurrent sleep paralysis.

REFERENCES