

Near-Death Experiences - Scientific Evaluation of the Phenomenon

Francesco Sepioni¹

¹Emergency Department - AUSL UMBRIA1 Ospedale di Gubbio – Gualdo Tadino, (Perugia), Italy Lipid BioPathology, Centro Ricerche Analisi Biochimico Specialistiche, Perugia, Italy

***Corresponding Author:** Dr. Francesco Sepioni Medico di Emergenza - Urgenza

Received date: April 17, 2024; **Accepted date:** June 06, 2024; **Published date:** June 10, 2024

Citation: Francesco Sepioni¹(2024), Near-Death Experiences - Scientific Evaluation of the Phenomenon 1(1). *Immunology Advances and Infectious Pathways (IAIP)* DOI: [10.1875/iaip.2024/002](https://doi.org/10.1875/iaip.2024/002)

Copyright: © (2024) Francesco Sepioni¹, this is an open-access article distributed under the terms of The Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract:

Pre-mortem experiences are defined, on a scientific level with the acronym NDE, Near-death experiences.

They are known in particular for the tunnel of light that people see when their lives are in danger or emotionally perceived as such. NDE phenomena have been described in every historical period, from the first document in 300 BC. of Plato in the dialogues on Phaedo up to the present day where the psychiatrist Dr. R. Moody addressed the phenomenon in a scientific way in the 1970s.¹ Since 1978 there has been a scientific society, the International Association for near-death studies, which is dedicated to the study of near-death, similar experiences and their relationship with consciousness Human. The results of research and articles regarding NDEs are published in the «Journal of near-death studies».¹⁰

Key Words: consciousness, connection, near-death experience, coma.

Introduction

Epidemiology

These are experiences described in all age groups from 4-year-old children to 95-year-olds, which have occurred in every era, culture and religion.² It is a sign that the phenomenon has been described by both non-believers (atheists) and believers, with the same characteristics and methods. The most recent and authoritative study regarding NDEs was presented in 2022 during a scientific conference of the American Heart Association by Dr. Parnia of the AWARE3 project where it was shown that out of 567 patients who survived cardiac arrest and underwent cardiopulmonary resuscitation (CPR), 102 patients, 18% i.e. 1/5 recounted an NDE experience with awareness, of these 46% had detailed memories where 95% remembered feeling a sense of joy, peace and the experience caused positive changes, 1'86% saw the light and 54% saw the main events of their lives again.

What is it'?

An NDE experience includes the memories of all the impressions experienced by a person, once he has resumed the vital functions, described after having lived in a "particular" state of consciousness.

These are phenomena that occur mostly after serious damage to brain function, generally in patients who have emerged from a state of coma or who have resumed vital functions after a cardiovascular arrest, caused by serious pathologies or traumatic events (incidence from 11% to 18%) but all of them, in an extraordinary way, have memories and describe the experience in a similar,

structured and coherent way, mostly occurring in critical clinical conditions.¹⁰

On a scientific level, we should expect the near-death experiences of patients who have had brain lesions to be inconsistent or not similar to each other given that portions of brain function have been damaged or rendered non-functional but in NDEs this occurs the opposite, that is, as previously mentioned, they are all similar, structured and coherent.⁸

The near-death experience is an extracorporeal experience, known as OBE (Out of Body Experience): we speak of OBE whenever a person perceives that he is "going out", that he is projecting the one's consciousness beyond one's body. 20% of the Italian population claims to have had an OBE in their lifetime.¹⁰

In the table below, the research carried out highlights that NDE experiences can occur during various extremely different circumstances.⁵

BRAIN FUNCTION SERIOUSLY DAMAGED 5

- Cardiac arrest in a patient with myocardial infarction or severe arrhythmia
- Coma caused by brain damage following a road accident or caused by cerebral hemorrhage
- Coma due to semi-drowning, especially in children
- Coma due to diabetes
- Asphyxia or apnea

- Coma due to poisoning or attempted suicide
- Unconsciousness due to shock (e.g. severe allergic reaction, severe infection (sepsis) or

low blood pressure levels due to severe bleeding during or after childbirth or in course of surgery)

- Surgical complications
- Electric shock

PRESERVED BRAIN FUNCTION

- Serious illnesses with high fever
- Extreme dehydration or hypothermia
- Meditation (mystical and religious experiences) / Hypnosis
- Depressions or existential crises
- Experiences similar to the so-called fear of dying, reported after a road accident or Mountain

Classification and Quantification

Being subjective experiences, the Greyson scale is used in international literature to analyze phenomenology, intensity and to allow a comparison of different cases.⁶

This consists of a questionnaire of 16 questions relating to the different elements of the near-death experience, each with three possible answers and a total score ranging from 0 to a maximum of 32: conventionally the threshold value of NDEs is considered to be a higher score at 7.

Characteristic

Most people who have an NDE are in a state of "clinical death" where consciousness, cardiac and respiratory activity are canceled and the electroencephalogram is flat. A shocking feature in the stories of people who have had NDEs when they experience an out-of-body experience (OBE) is the richness and quantity of details and remembered details that they could not have known given their state of consciousness. These were subsequently confirmed with amazement by witnesses present at the event.⁷

The phenomenon

All the experiences recounted have a fundamental characteristic: they are similar, structured and coherent with each other with some characteristic "elements" that constantly recur.

Their stories are never identical to each other, but have numerous elements in common that systematically recur in every NDE (even if not always all at the same time)

The Dr. Moody has classified them into 12 elements of which 6 - 7 are more frequent than the others. They are the memories of Extraordinary, Subjective, Intense and Profound experiences. 8

-Ineffability and uniqueness of experience

All patients say that the experience is indescribable, it is outside the sphere of our usual experiences. About 60% of people who have had an NDE report it this characteristic.

"I don't have adjectives or superlatives to describe it, there are no words or it's difficult to talk about it, I have to describe it to you using

three-dimensional words. This is the best I can get, but it is completely inadequate."⁹

- Feeling of peace and serenity, absence of pain

The sense of peace, happiness and bliss are the first and best remembered element after the NDE: patients even report that the sense of well-being and pleasure on earth – compared

to the sensations they felt - "it's a drop of water in the middle of the sea"

A unique and singular characteristic is intense pain following an accident or a myocardial infarction which disappears suddenly and completely.

«These are sensations I have never felt before where the excruciating pain suddenly disappeared and I had a sense of peace I had never experienced before»¹⁰

- Awareness of being dead, sometimes followed by noise or music

Patients feel extremely alive and intact even if, at times, they perceive that they are deceased when looking at their body from above.

I just thought, "hey, I'm dead now. So is this what we call death?"

Sometimes they hear a noise or a majestic and beautiful music or the presence of bells at the moment when they are "clinically dead" and are in the process of or have already exited their body (OBE)⁸

- Out-of-body experience (OBE)⁸

It is the best known element and in general NDEs almost always begin with an OBE. Patients report "leaving their bodies" and seeing themselves as third-person spectators, above their lifeless body, from a stretcher or an operating bed at ceiling level.

They claim to have 360 degree vision. They see the scene happening beneath them where the testimonies are verifiable and verified with a very detailed vision. The subject's senses in this state of consciousness are exceptionally "heightened".

An example is better vision and hearing, even if they wore glasses or they had hearing impairments.

They recount facts, situations or dialogues that occurred at a considerable distance from them while they were unconscious or in a coma. They are able to report, almost verbatim, some of the conversations had not only around them, but also outside the room where they are hospitalized, along the corridor or in the hospital waiting rooms. The conversations were confirmed by witnesses with great amazement.⁸

From the study of Dr. Parnia the story of an NDE: "I suddenly lost consciousness but then I vividly heard an automatic voice say: «Shock the Patient», «Shock the Patient» I was up there...looking down at Me, the Nurse and a Man with the bald head and stocky, he had a blue coat and cap but I could tell he was bald by the way the capfit."

The medical record confirmed the use of the Automatic Defibrillator (DEA), the Medical Team present during the cardiac arrest and the role of the Man identified in the treatment of Cardiac Arrest. The resuscitation protocol for cardiac arrest is two minutes of cardiac massage/ventilation (CPR) and one minute of time for rhythm analysis by the DEA in deciding whether to carry out defibrillation

or not. When the order went via the automatic voice ("Shock the Patient") to carry out defibrillation by the Goddess, the patient perceived it clearly and it had been a minute since the cardiac massage. It can be estimated that the patient had at least 3 minutes of preserved awareness and correct perception of reality (veridical perceptions). The most anomalous thing from the scientific medical point of view is the fact that the patient in addition to having clearly perceived the automatic voice of the DEA (auditory perception) recognized medical personnel (visual perception) in a situation of ventricular fibrillation, in one unconscious state and where his electroencephalogram was flat because there was no circulation.³ In a review of 93 reports of verifiable, nonphysical potential perceptions during NDEs, it was found that 86% of the reports were very detailed and were confirmed by a witness, while only 14% were based solely on the patient's story (without confirmation by third parties). Of these perceptions, 92% were absolutely accurate, 6% they contained some errors and only 1% were completely incorrect. This proves that an out-of-body experience is experienced as real.²³ Fundamental in OBE are the verifiable and verified testimonies. It cannot be a drug hallucination, nor an illusion, nor an incorrect interpretation of a real perception, nor a fake sense of reality.³

- Perception of a dark space, dark tunnel with or without light at its end

It is the element best known by most people and one of the most recurring during an NDE.

"It was like being sucked away, I entered a narrow, dark, spiral-shaped tunnel. In the distance I saw a bright light where the further or higher I went, the brighter and more intense it became."

The journey through the tunnel appears to be the passage from our physical world to another

dimension, where time and distance no longer have any meaning. The tunnel where the

person has the sensation of moving towards the light has become almost synonymous with NDE.⁴

- Perception of an otherworldly environment

They find themselves in an amazing landscape with fantastic colors, flowers, extraordinary and even wonderful music in a state of absolute well-being.

The sensations are reported as very amplified; the intensity and range of colors and shades appears greater than ordinary perceptions.¹⁰

- Meeting and communicating with deceased people

There are encounters with deceased people described as "beings of light" that patients clearly recognize. They are the closest relatives or friends who are in perfect health. They generally exude unconditional love towards them. There is a strong connection with the thoughts and feelings of people who have passed away in the past. Communication occurs telepathically in a practically instantaneous process

"I met my grandmother who I was deeply attached to in life as well as other long deceased friends, she was also real and alive... she told me I couldn't stay here, I had to go back to raise her children"⁹

- Perception of a bright light or being of light

The light is described as extremely bright, non-blinding, non-dazzling and non-dazzling

prevents you from seeing other things. People who are attracted to it are generally completely enveloped by it: in it they feel a sense of great bliss, of peace, of unconditional, absolute and pure love from it.

They communicate with them and the object of communication is often events from the subject's past life or sometimes future events.

The patient can acquire a new awareness of the meaning of his life and his future mission.

"I remember with great amazement meeting an entity that I vaguely associate with Lucia of Fatima. He read me a passage from the Gospel. My life began again with new horizons and a new inner awareness"

- Panoramic view of your life

You review the simple daily facts (actions, words and thoughts) of your life. You realize that

everything is an energy that influences yourself and others. Patients review their lives in an instant like spectators: everything is very similar to a film at increased speed.⁹

During this overview, you do not relive important facts of life, but simple everyday facts (actions, words and thoughts), good and bad: you realize that everything is an energy that influences oneself and others. Patients review their lives in an instant like spectators: everything is very similar to a film in increased speed. People know thoughts and their own and other people's feelings and are able to understand if - in the moments recalled from the past life - love was shared or denied.

People understand how they lived there their life and how it has affected others. A person's entire experience comes to the surface, in one instant review where the perception of time and distances seem not to exist. Past life moments are real, three-dimensional, in color and are relived in first place person.⁸

- Foresight or vision of the future

A small percentage of people report this.⁴

- Perception of a boundary

People see a thick fog, a wall, a valley, a river, a hedge, a bridge or a gate and are aware that once they cross that border they will no longer be able to return to their bodies and resume their lives. Here there may be communications with a deceased relative or a being of light. People are told that they are not welcome because their time has not yet come. They need to return to their bodies because they have a purpose in life (e.g. caring for a child or relative).⁸

- Conscious return to the body

It's definitely abrupt. Sometimes people feel a great life force sucking them back through the tunnel. Some describe being

pushed back into their body through their head after seeing the nurse or doctor place defibrillator pads for resuscitation on their body. Returning to a sick, suffering or damaged body is an unpleasant experience because patients feel denied something beautiful and unique. People don't want to leave this place of absolute peace and love.¹⁰

Changes following an NDE

An NDE represents both an emotional and psychological shock for the patient similar to a Post Traumatic Stress Disorder where people, following the event, need about 7 years to metabolise it. All patients report being better after this experience and have both psychological and physical changes: greater interest in both spiritual topics and compassion towards others, new goals in life, they are no longer afraid of death.

People who have experienced an NDE change their point of view on what really matters in life, accepting it as it is and feeling at peace with themselves: they no longer give value to material things, they are driven by an unconditional love towards others and nature .

On a physical level they report an increased intuitive capacity, greater sensitivity and a marked ability for premonition.⁹

Conclusion

The stories of patients who have experienced an NDE pose serious difficulties for current science due to the fact that despite being in a state of "clinical death" they have clear, structured and truthful memories even if they have had brain damage and suffering cerebral due to lack of oxygen for more than 20 seconds. Furthermore, in neurology studies it has been found that the mechanisms that support memory are damaged when the blood flow to the

brain is interrupted as in the case of cardiac arrest. Memory is the first function brain to be compromised and the last to recover after the patient has been revived.

3 Parnia S, Post SG, Lee MT, Lyubomirsky S, Aufderheide TP et Al. Guidelines and standards for the study of death and recalled experiences of death--a multidisciplinary consensus statement and proposed future directions. *Ann NY Acad Sci.* 2022 May;1511(1):5-21.

4 Martial C, Simon J, Puttaert N, Gosseries O, Charland-Verville V, Nyssen AS, Greyson B, Laureys S, Cassol H. The Near-Death Experience Content (NDE-C) scale: Development and psychometric validation. *Conscious Cogn.* 2020 Nov;86:103049.

5 French CC. Near-death experiences in cardiac arrest survivors. *Prog Brain Res.* 2005;150:351-

6 Greyson B. Persistence of Attitude Changes After Near-Death Experiences: Do They Fade Over Time? *J Nerv Ment Dis.* 2022 Sep 1;210(9):692-696.

The first signs of brain suffering due to oxygen deficiency occur just 6.5 seconds after the heart stops and if the heartbeat is not restored immediately, after ten – twenty seconds, EEG becomes flat.

If cardiac arrest lasts more than thirty-seven seconds, the E.E.G. it does not normalize immediately or afterwards complicated resuscitation with persistent coma may take hours or days before the E.E.G. return to normal. The longer the cardiac arrest, the greater the damage cerebral, the longer the coma and the longer the E.E.G. it will be flat, or highly irregular.

The normalization of the E.E.G. does not in itself indicate complete recovery of the metabolism of the brain, because even when the heart has started beating again and the blood has started flowing, the supply of oxygen to the brain can remain reduced for a long time. Yet incomprehensibly those who they had an NDE during that time they have a perfectly clear recollection (memory).and long-lasting. Furthermore, patients, as reported at the beginning of the article, are in the Obe phase following the experience, they describe details and particulars that can be verified in a state of "clinical death" who could not have known about it. The hypothesis that during these moments various neurotransmitters such as DMT (dimethyltryptamine) can be released at the brain level -endorphins etc. giving rise to the phenomenon are unable to explain the phenomenon in its entirety.

Not even the use of drugs, which in many cases are not administered, can explain it

the phenomenon of the NDE. In recent years other hypotheses have been made such as the theory that consciousness of a subject does not reside at the cerebral level but the body is only ainterface or a transmitter. For further clarification on NDEs and other phenomena extrasensorial we recommend the book "On the border with the Afterlife" Tau editions.

References

- 1 R.A. Moody (Ed.), *Life after Life*, Bantam Books (1975)
- 2 Romand R, Ehret G. Neuro-functional modeling of near-death experiences in contexts of altered states of consciousness. *Front Psychol.* 2023 Jan 18;13:846159
- 7 Cassol H, D'Argembeau A, Charland-Verville V, Laureys S, Martial C. Memories of near-death experiences: are they self-defining? *Neurosci Conscious.* 2019 Mar 1;2019(1):niz002
- 8 Francesco Sepioni "Al confine con l'Aldilà" edizioni Tau 2023
- 9 Greyson B. Persistence of Attitude Changes After Near-Death Experiences: Do They Fade Over Time? *J Nerv Ment Dis.* 2022 Sep 1;210(9):692-696
- 10 Facco Enrico, *Esperienze di premorte. Scienza e coscienza al confine tra fisica e metafisica*, Campo spinoso, Edizioni Ultra vista, 2010.