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Essay

# Clown Doctors in the Lento Tempo of Pediatric Oncology: A Dialogue between Psychology and Art on the Meaning of an Encounter When Life Meaning Is Disrupted

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**Abstract:** Using a humanistic and qualitative approach, the present study aims to (1) bring light on the impact of clown doctors' artistic work in pediatric oncology and, as a consequence, (2) contribute to the refinement and improvement of the clown doctors' intervention quality, in the context of pediatric oncology, bringing hypotheses of reflection hardly met with quantitative approaches. We are interested in the subjective experience of the artists, and the perceived subjective experience of the child as reported by the clown doctors. The present analysis was developed from the clown doctors' final reports, their narrative, after visiting the pediatric oncology ward in a Portuguese public hospital, for a continuous period of six months. The visits were performed by a clown doctor dyad, and the audience was a young adolescent girl, with cancer, and her constant mother.

**Keywords:** pediatric oncology; artistic clown doctors; narrative analysis

## 1. Introduction

### *Pediatric cancer as life disruption*

Each childhood cancer diagnosis has its own story. A number of singularities might change and determine the future possibilities of living and surviving. Each story has a name, the name of the child, their identity, their social, cultural, and economic context. It matters the age of the child, the precocity of the diagnosis, and the geography. The place in the world where the diagnosis took place, defines the treatments, and varies the survival rates (Bhakta et al., 2019). The relationships network and love bonds matter. The family context, specifically, the quality of family relationships, is a variable that diminishes or increases the weight and impact of the disease, and the treatments for the disease (Kurtz and Abrams, 2011; Robinson et al., 2009). Whatever the type or nature of the cancer, it is always a diagnosis that contains a possibility of death. Like other diagnoses containing this announced frontier of an end, it is almost always a situation that, when discovered, brings with it despair, fear, anxiety, in quantities that are hard to manage, to metabolize from a bio-psycho-physiological perspective (Gurevich et al., 2002). The initial shock, compounded by pain and the fear of enduring one mutilating invasive procedure after another, is almost always overwhelming. This is both for patients, in this case children or adolescents, and for those who constitute their core affective network; parents, siblings, grandparents. Added to this scenario of chaos, there is also the fear of recurrence, relapse, and death, again. Reactions can range from transient symptoms of post-traumatic stress disorder to full-blown post-traumatic stress disorder (PTSD) (Phipps et al., 2014).

*The reconfiguration of time and uncertainty*

A diagnosis of cancer, not only in childhood, but perhaps more so in childhood, due to its potentially developmental nature, results in interference in the perception of time, the perception of uncertainty, the ability to anticipate, predict, imagine, dream. Cancer diagnosis interferes with the ability to feel a subjective power to control some dimensions of our life. According to the neuroscientific theory of predictive processing (see Clark, 2016 and Köster et al. 2020), our body, in which the brain represents the central structure, is designed to solve a basic question: to minimize surprise during our interactions with the world. The more unpredictable the environment, that is, the more volatile, the less effective this basic strategy is, which results in anxiety, stress, and a feeling of loss of control (Clark, 2013, 2016). However, not all uncertainties are created equal.

According to the literature on this topic, there are at least three major types of uncertainties: (a) expected uncertainty; (b) unexpected uncertainty and; (c) volatility (Soltani & Izquierdo, 2019). The expected uncertainty is the one for which we already have a set of answers, and which, despite being unexpected, allows us to generate forecasts and have the situation under control (e.g., encountering a sign of a deviation from a usual path). Unexpected uncertainty arises when a change in environment makes us doubt the effectiveness of our ability to generate responses (e.g., our favorite restaurant changed hands and since we were never there after the change, we cannot predict whether we will find an option as satisfactory as the previous one).

Volatility, in turn, happens when changes in the environment (and in oneself) are in such a high number, or in an intensity far above the usual, in such a way that it generates uncertainty about uncertainty itself. A traumatic situation, that cannot be anticipated, and in which the diagnosis of cancer can be included, constitutes an uncertainty of this type – volatility. There are no previous references, there is no mental or bodily model to answer. And in the absence of benchmarks, in continued exposure to volatile situations, in which the consequences of our movements are inherently unpredictable, confidence in our ability to control or influence what happens to us is likely to diminish abruptly (Soltani & Izquierdo, 2019).

According to the model, under these circumstances, our predictive brains and bodies begin to infer an inability to exercise control effectively, giving rise to a new model of relationship with the world and with oneself, a model incapable of guiding our future actions (Clark, 2013). Ultimately, the systematic experience of a volatile environment or circumstances can result in a state of learned helplessness (a concept brought by Maier & Seligman, 1976). Specifically, a state that results from exposure to unavoidable adversity and that leads the organism to learn that its behavior and the consequences that result from it, are independent (Fincham & Cain, 1986; Maier & Seligman, 1976).

Although childhood cancer survival rates have increased significantly in recent decades (e.g., in the mid-1970s, the 5-year survival rate was 58% for children younger than 15 years, and 68% for adolescents between 15 and 19 years old, currently 85% for children and 86% for adolescents (Cancer Statistics, 2023; data for the American population; European Commission, 2021; data for the European population), prognosis and survival are often associated with complicated, intensive, and prolonged treatment protocols. Treatments usually involve several hospitalizations and/or several days in outpatient care, for a period of time that can last between 1 and 2 years (Long & Marsland, 2011). Simultaneously, the response to treatments also implies several medical monitoring procedures, many of which are invasive, with various side effects of treatment, physical and emotional, which have a direct impact on the quality of life of the young person and his/her family.

In summary, a cancer diagnosis is a moment in the life of the child/adolescent and the family that requires a reconfiguration of the lives of all those involved. A cancer diagnosis is an open and usually long-lasting entrance door to a new place of living – the hospital. A cancer diagnosis is the *lento tempo*. This new place, for obvious reasons of survival, is first and foremost the place that takes care of the child's illness and where, perhaps, it is more difficult to take care of the children and their family as a whole, in their most essential human dimension. It is a place where

it is more difficult to meet the needs of the children, and their family system as a fundamental ecology in child development (Bronfenbrenner, 1977).

#### *A word on Operação Nariz Vermelho organization*

Clown doctors' artistic interventions directed to hospitalized children and adolescents (up until 18 years of age) in Portuguese public hospitals have been performed uninterruptedly over the last 21 years by Operação Nariz Vermelho (Red Nose Operation), a non-profit and non-governmental community-funded organization. Nowadays, the organization visits 17 hospitals, covering approximately 51% of all children and adolescents hospitalized in Portugal.

#### *The hospital context*

Clown doctors perform in a context of pain, bustle, fear, daily struggles with hope, and lack of it. Their mission is to favor or facilitate the children and young people's right to play, feel and imagine themselves happy, being able to say "no", if that is the case. In a context where patients have lost most of their control over so many limits, including the limits of their bodies (medication and intervention needs are, mostly, non-negotiable), clown doctors provide the patients with a symbolic key: the key to the bedroom door. Theirs is the power to decide, the child or adolescent; whether or not they want to open the(ir) door and receive the visit. Whether or not they want to play. Whether or not they want clowning in their bedrooms. And this capacity, given back to them, is undoubtedly an enormous contribution for the child and young person in regaining some control over their space, time, and body, even if just for a while (Haque & Waytz, 2012; Wilson, 2017).

The clown doctor enters this setting as a living symbol of humanity, in its naked form, stripped from the many masks that keep separating us. The clown doctor is a tailor, glue, elastic. He opens possibilities for communication and expression (Dionigi, 2017). Clown doctors, in the hospital setting, validate laughter, play, the absurd, imagination, dreams, and emotion, all kinds of emotions. This is done there, in these moments of greater fragility and vulnerability, in the lives of these children and adolescents, and oftentimes, in the lives of these young patients' caregivers, frequently deprived of their greatest powers to nurture, protect, and resolve (Bowlby, 1983). For the really young children, this is the power of the caregiver's kiss. Sometimes, the clown doctor serves as a symbolic kiss to caregivers.

Overall, the "Stories of the stories" have the purpose, from beginning to end, to (1) unveil the more subtle language and its possible impact on the overall patients' subjective well-being (Dionigi & Canestrari, 2016) and (2) contribute to refining or improving the quality of the artists' intervention, bringing hypotheses of thought impossible during their improvised performance. This is to go beyond the obvious, bringing a kind of counter-thought, a "what if?"; in particular, regarding borderline themes (situations) such as childhood and adolescence cancer, the story that was the theme for the present study, as well as the emotions many young people experience during hospitalization, regardless of the reason for their admission. Unfortunately, it is not unusual that these experiences are frequently lived in a very silent and silenced way, especially if the hospitalization is due to physical causes, as opposed to mental health issues, and the social and emotional aspects are not core to the treatment (Rokach, 2016). We do not know all the details in each story, particularly the clinical file of patients; it is not relevant for the case being made. Nor is there, at any moment of this writing-analysis, the intention to judge or decide rigorously anything, even less the decisions each participant in this complex scenario has/had to make, be it the clown or any other hospital professional.

Based on the clown doctors' narratives and data on the specific health issue of hospitalization, we aim to shed light on the power of the encounter. In the present case, the story was written after a full year visit period, reflecting on the relationship that was created between the clown doctors' dyad and a 14-year-old girl.

Theoretically, a humanistic approach was used, in particular, the assumptions that (a) a person is best understood as a whole and unique being, developing within a life-world context

(May, 1983); (b) the subjective experience in understanding the world (Rogers, 1961) as well as the embodied non-mnemonic processes (Campbel, 1974), are paramount in accounting for the person understanding of the world. William James (Taylor, 1991), viewed this subjectivity as essential to understanding human possibility.

### *The stories' context*

The present work is embedded in a larger project named “Stories of stories”, developed with the intention of opening a dialogue between the artistic team of clown doctors from Operação Nariz Vermelho, and the lens of humanistic psychology, through the narratives written by the artists after visiting hospitalized children and adolescents in Portuguese public hospitals. At the base of this dialogue, there is also the intention, transversal to the different hospital contexts in which clown doctors perform, of affirming their work as deep play or play consequences, in opposition to superficial entertainment.

Besides the scientific literature, demonstrating a positive impact from the encounter between hospitalized children and the clown doctors (e.g., Caires & Ribeiro, 2016; Fernandes & Arriaga, 2010; Sridharan & Sivaramakrishnan; 2016), what interests us the most, in this project, and in each story in particular, is the subjective experience of the artists: their narratives, hardly to measure and evaluate without losing valuable meaning. Departing from clown doctors' written reports, the analysis is embedded into a humanistic approach, namely, the assumptions of (1) understanding the person as whole and unique (Maslow, 1962) and (2) considering the person's subjective experience or perception as more important in understanding the world, than objective reality (Rogers, 1961). Furthermore, also aligned with the humanistic approach, close attention is given to nonverbal bodily experiences, that is, non-mnemonic processes, or non-mnemonic problem solving (Campbel, 1974). This type of processing is thought to provide extremely important information regarding the way a person perceives events, being evolutionarily wired as a strategy to gather information about the world, through an embodied response to it (Raskin, 2012).

In this case in particular, the encounter with the clown doctors, given its artistic nature, the use of strong nonverbal communication, music, and performance, is thought to elicit this type of embodied knowledge, namely, through feelings of surprise and shock, that go along, for example, with physical changes in skin conductance, muscle tone, and heart rate (Thomson, 2007).

As such, this exploratory paper assumes its non-normative form, accounting for a strategy of narrative analysis and writing that approximates autoethnographic approach (Hill & Knox, 2021). We expect to offer compelling and evocative tales from the encounters between clown doctors and their audience – hospitalized children and adolescents – by bringing strong images and feelings in developing creative narratives (Hill & Knox, 2021).

## **2. Materials and Methods**

This exploratory study assumes its non-normative form. The method, clearly qualitative, might be framed under the umbrella of the autoethnographic approach (Hill & Knox, 2021), as the organization is reflecting on its own practice. Qualitative methods are more adaptable when dealing with multiple realities, favoring a more immediate or direct exposure of the nature of the transaction between the investigator and the object of research, and contributing to a more complete assessment, including subjectivity, of the extent of the phenomenon (Guba & Lincoln, 1994).

Autoethnography, briefly, is a qualitative research method that is based on the researcher's personal experience to describe and analyze practices and experiences. Through deep and careful self-reflection – usually referred to as “reflexivity” – the researcher identifies and interrogates the intersections between self and society, the particular and the general, balancing intellectual and methodological rigor, emotion, and creativity” (Adams et al., 2015, p. 2).



### *Data collection*

Over the last years, an effort has been made to collect data that makes it possible to proceed with this self-reflexive task of analyzing the artists' narratives. For that, clown doctors are invited to use logbooks to catch impressions, reflections, and all kinds of material about their daily work, as part of their professional routine.

After each visit, clown doctors were required to provide a written report on the encounters during each day's round. The report is written by the clown doctor dyad, and there is absolute freedom in style, details provided, and structure. There is, consequently, great diversity in depth, with some artists being able to depict very rich pieces of information, whereas others mainly focus on contextual and more pragmatic features (e.g., who was staying with the child, the child's age, and overall reaction to the visit). Based on the richness of the reports and, in line with our interest in the major project, we selected a number of stories that would, we hypothesize, cover specific themes of general relevance for any artist visiting the distinct services or pediatric wards.

The next step involved collecting data and theoretical approaches or analyses regarding the theme in each story, in the present case, pediatric cancer. The visits that resulted in the story under analysis were not specifically created to approach patients with cancer. Instead, as usual, each visit results in an improvisation based on the clues provided by the child, the context, and the artistic and human abilities of the clown doctors. The clown doctors' dyad performs the visits on a regular basis, for a consecutive period of six months, which allows them to progressively integrate specificities of the context. In the case of cancer patients, the continuity of the visits also allows, sometimes, for the development of an affective relationship between the children/adolescents, and the clown doctors.

In terms of analysis, we aimed for a balance between scientific data-based premises, and more philosophical, artistic, and poetic ones, as much as possible, as a way of creating a dialogue between languages and perceptions.

Each story of the story was written by the psychologist from the Studies and Research Centre in the organization, reviewed and thoroughly discussed by the Studies center coordinator, and by an independent researcher invited to work on this project, an experienced and recognized psychologist and researcher, working on the field of performative arts and expressive therapies.

The story, and the story of the story, presented below, resulted from the encounters between the clown doctors (Dr. Xabregas and Dr. Ginjão, also known by her nickname Ginja), and a 14-year-old girl with cancer, Maria (a fake name), during a period of one year. The clown doctors' story, as written by the clown doctors (Dr. Xabregas and Dr. Ginjão) "The three of them, Maria, Dr. Xabregas and Dr. Ginja, consider themselves "triplets" from different mothers. During the visits, the clown doctors are constantly challenged to dance with Maria in her TikTok videos. They gladly accept all musical and choreographic suggestions. Sometimes they also make up some. The dances performed by the three transform the corridors of IPO (the Portuguese Institute of Oncology) into a party scene and lots of fun. Maria bursts out laughing. Her mother, moved, observes her daughter's joy, and the energy that is born in her for these meetings, even on very difficult, very tiring and painful days, which are many.

Wise and brilliant, Maria reveals, one day, that she had discovered her twins' birthday which, curiously, it was not the same as hers. On that day, her sisters' birthday, she offered them a giant, round bread, filled with whipped cream, coming from her homeland. On June 15th, Maria's birthday, the clown doctors recorded a surprise video, and immediately received Maria's response video.

And that was how, in many ways, over several encounters throughout 2021, because of the continuous hospitalizations, the "triplets" invented the suspension of time.

Already in residency in other hospitals, and in new artist dyads, the sisters eventually separate. Even so, they learn that Maria's hair is growing, a sign that the disease is in the process of being cured. In January 2022, the clown doctors receive the sad news of Maria's death

from Teresa, her mother. Even today, from time to time, Dr. Xabregas and Dr. Ginja receive messages from her mother. The bond between these people overflowed the walls of the hospital.”

### 3. Results

The story of the story: Clown doctors in the lento tempo of pediatric oncology.

This is the story of a story of loss. The story of a love story. Will there be one without the other? A progressive affective web, between three people, who throughout that time of encounters, Maria, Dr. Xabregas, and Dr. Ginja, became sisters. It is also the story of a mother's story. This mother, Teresa, who thus adopted, without any bureaucracy, two daughters in the right tone to be Maria's sisters. That (tone) of jazz, of improvisation, of communication that is done more through the eye than through the mouth.

It is a love story. Yes. Of the space that love occupies in people, where there is a big empty space afterwards, when people separate, by the many ways in which people can separate. But, above all, when the separation, at least like this, in the quality of the body's existence, is irreversible.

A heavy and empty – never again. A void to lose sight of, which can have a giant force inside. As if the experiences that are woven together, were designing dwellings in the bodies of each one and, later, the departure of one of these people, without obvious announcement, or even announced, leaves the house empty, the inside house in ruins. A gale passed through. As if the memories, collective, in a triangle here, despite still being there, had lost a certain quality of color, glow, light. A quality of organization. Like an old photograph, everything is a bit yellow and pink. Mixed. A last sunset. Which, sometimes, seems like the beginning of something else. Another tone.

*But the only rule about grief is that there are no rules. We muddle through death as we muddle through life, each scrambling in the dark for a way through. Baggini (2023).*

Let us dwell somewhat on time.

And that was how, in many ways, (...) the triplets invented the suspension of time. Let's think about the time(s). The setting: IPO – where, often, the first visit is rarely the last. A place where, almost always, children, teenagers and their companions will stay long enough for interactions to turn into relationships. The place where the game of probabilities played the cards of uncertainty and the limits of existence without the obvious arguments. There are still, oftentimes, no lifestyles or habits that can receive the pointing finger of blame.

According to the latest data provided by the Portuguese Pediatric Cancer Registry (ROPP, October, 2022), on the epidemiology of pediatric cancer in Portugal, between 2010 and 2019, the global incidence rate of pediatric cancer was at 180.7/1,000.000 children/year, which represents, on average, 370 new patients per year. In Portugal, the most common types of tumors in children are leukemias, central nervous system tumors and lymphomas, and the most frequent age period is the first year of life.

It is relatively random, unlikely (Steliarova-Foucher, et al., 2005) but, even so, when it happens during childhood and adolescence, like other diseases that bring with it a need for major changes in the family's daily life, it affects the experience of time. Ultimately, it affects the experience of life's meaning, a certain direction, that is, a minimally predictable rhythm that places things and events in some place. It also alters the physical experience, of the body, of time. The proprioceptive experience (Tuthill & Azim, 2018; World Health Organization, 2021). This sixth sense, which allows us to perceive the position of the body, the movement, and the way in which the different parts of the body coordinate, in balance, or get in the way, in instability. Time, for a time that is still unknown, will possibly tend to take longer than before. Or speed up without warning. Dilating and contracting in other units of measure. This is the context that the clown doctors visit when they visit the IPO. A Bermuda triangle. Also known as the Devil's Triangle. The suspension of breath. It was in this context that Dr. Xabregas and Dr. Ginja met Maria. And in that a-logical, a-linear time, they invented another suspension of time.

The psychological impact of cancer and the sequelae that can arise and last, are different at different times in a person's development. For example, when children are still very young, still babies, the weight of all these changes falls mainly on caregivers. And in that fall, it jeopardizes the quality of the connection – the bond – between caregivers and their babies (Hersch & Wiener, 2002). During the preschool period (between 3 and 5 years old), cancer interferes with children's ability to "master" the environment and if, on the one hand, compared to adolescents and adults, at this stage, they are less likely to develop symptoms of post-traumatic stress, on the other hand, they are more vulnerable to neuropsychological damage (e.g., in terms of memory, attention, integration visual motor, and executive function; Wolff & Shepard, 2013). Sometimes, children regress in their abilities, which were still new in their history, as if in this temporal-developmental regression, without conscious awareness, they could find a safe and predictable place, resembling how the world was, before cancer.

Time again.

A little further on, more or less from the age of 6 or 7, when the presence of peers and their importance begins to be greater in the child's social life, cancer brings with it the very great possibility of social isolation (Pahl et al., 2021). A little further on, when the body in metamorphosis, child-adolescence, acquires an (even more) central place in the construction of identity, the impact of cancer on the body (or cancer treatments), on the image of the person, violently opens the door of vulnerability. During this phase of development, there is an increase in self-awareness and, therefore, it also increases the intensity of the reflection in the mirror, bringing this desire to withdraw which, in turn, inhibits social experiences, raising the propensity for personality disorders related to social adjustment (Schultz, et al., 2007). Or at least, of a certain social adjustment. Because the hospital, the clown doctors' hospital, is always a place full of life.

The presence of the clown doctors is always an event for this teenager. The presence of the clown doctors, their regular and predictable presence, has the effect of a counterbalance, *demi contretemps*. According to Einstein's General Theory of Relativity (Phillips, et al., 2021), time moves more slowly as we get closer to Earth because the gravity of a large mass like Planet Earth distorts space and time around it. The same law, I venture, could apply here. Time moves more slowly as we approach a cohesive triangular structure, Maria-Xabregas-Ginja, in joint orbit, because the energy of these elements of enormous magnitude disturbs the space and time around them.

The dances performed by the three transform the corridors of the IPO into a party scene and lots of fun. Maria bursts out laughing.

The phenomenon had already been observed on a cosmic scale, when a star rushes past a black hole. In 2010, space-time metamorphosis was observed again. Two clocks of extreme atomic precision are placed 33 centimeters apart, one higher than the other. On the clock placed in a lower position, time would advance more slowly. The difference is tiny. But the implications, according to several physics experts, are gigantic: Absolute time does not exist (Rovelli, 2018). Does not exist.

For every watch in the world, and for every person in the world. In the corridors of the IPO, when the clown doctors orbited there, the phenomenon was observed multiple times. The dance, performed by the three – Maria-Xabregas-Ginja –, transforms the corridors of the IPO into a party scene and lots of fun (Operação Nariz Vermelho, 2021a).

Absolute time does not exist. Does not exist.

There is not only cancer. There is not only the disease. There is always a healthy place in anyone for as long as that person exists. There is always some dimension of the person, which preserves itself, perseveres.

The absolute body does not exist.

It is always an image, a psychological experience, with multiple dimensions of corporeity (Cash, 2002). Images of the body, which change between people and within the person. From each person. Body images that go beyond physical appearance, diving into the deep waters of



subjective bodily experience. Cancer alters the subjective bodily experience. Clown doctors, in the hospital, can alter the subjective bodily experience, also. The mother, moved, observes her daughter's joy, and the energy that is born in her for this meeting, even on very difficult, very tiring and very painful days, which are many. Cancer is not just a disease with a high risk of life (or death?). Cancer is also a disease whose treatments modify the body, the body image (Annunziata, et al., 2011). In a study investigating, in detail, the perception of body images of five adolescents undergoing active treatment against cancer (between 12 and 18 years old), and the impact of their perception on their daily life (Larouche & Chin-Peuckert, 2006), a main "theme" emerged: I don't look normal. This theme was then divided into 356 two sub-themes: I look ugly and people look at me.

Absolute time does not exist. Does not exist.

Everyone feels vulnerable and exposed. People look. The mirror too. But, in this relationship, Maria-Xabregas-Ginja, in the communication and encounter between the child or adolescent and the pair of clown doctors who visit them in the hospital, when this encounter takes place, the clown doctors do not look at the sick person. And the person, who has a sick part of him/herself, very sick, perhaps, in that suspended time, manages to see him or herself from another perceptual reference.

The absolute body does not exist. Does not exist.

At this moment in life, adolescence, when there is this impetus to be able to take care of yourself, to separate yourself from your primary caregivers, to be part of a group of others, more or less the same age, or others of any age, but of enormous orbital proximity in terms of interests, musical, for example, at that moment, it seems, cancer, transforms this desire, this ideation into something of utopia. Impossible to reach. Except, perhaps, through the clown doctors. Or other experiences that bring to the forefront this ability to be, to laugh, to improvise, to co-exist. Even if ephemeral. It's real. And it is big and powerful. When adolescents (people, we would say) don't have a healthy body image, there is a tendency for them to avoid social situations.

The absolute body does not exist.

Adolescents whose cancer treatments have a clear impact on the body – falling out hair, weight loss or weight gain, grayish-yellow skin, tiredness, sleep disturbances, scars, nausea, nausea, pain, sadness (Apter, et al., 2003; Linder & Hooke, 2019), might somehow abandon this developmental desire of individuation. As if the clock was too high, or too deep, and stopped, just like that. Waiting. These changes often interfere with self-esteem, and are a reason for shame, an obvious reason to suspend interactions and relationships with typical peers (Apter, et al., 2003).

This is also the story of a mother's story.

The family functions as a focal point. A bridge. Attenuating or aggravating this movement of guilt, shame, withdrawal of self-love. In families with higher levels of conflict, tormented by guilt (we always need a finger to point, right?) cancer leaves its marks, forever (Chanock, et al., 2002). A time that seems eternal. Mothers, many mothers, get depressed. The content of depression, centered in the inability to care for, to protect, the primal maternal function. And yet.

The mother, moved, observes her daughter's joy, and the energy that is born in her for this meeting, even on very difficult, very tiring and painful days, which are many.

And yet, some families become denser in the invisible bonds of affection, redefining the family's strengths and positive dimensions, the values of cohesion, sharing, compassion, unity, core (Hersch & Wiener, 2002).

Siblings, when they exist, can also be affected, experiencing ambivalence, intense fear of pain, suffering, the possibility of the death of their sick brother or sister. And, at the same time, the secret and silent rage at loss of attention from caregivers, even a feeling of abandonment. A shame, a guilt, for the negative feelings, and for being a healthy child (Alderfer, et al., 2010).

At the limit of the body, when it is evident that we are sitting at the window of the great abyss, legs dangling and eyes wide open or deeply closed, the brain releases large amounts of adrenaline, which accelerate the internal clock, making our perception of the external world as if the world were on slow motion (Stetson, et al., 2007). Suspended time. Or perhaps, still, when the stars hurriedly passed through the black hole, in an attempt to, like this, in trio, that no one would be swallowed.

Let's linger, just a little longer, in human-clown-doctor-astronomical declension.

The three, Maria, Dr. Xabregas and Dr. Ginja, consider themselves "triplets" from different mothers.

How lucky they found each other. There are alignments that are so incredible, so unlikely, so ephemeral, too, that it's as if somehow the entire universe and all of existence depends on them. During that triangulated time, just like Maria, Dr. Xabregas and Dr. Ginjação, the planets Jupiter, Saturn and Mercury aligned their orbits (Gamillo, 2021). This alignment is called a planetary conjunction, and it is a rare event.

(...) Maria's joy, and the energy that is born in her for the encounter, even on the very difficult, very tiring and painful days, which are many (Operação Nariz Vermelho, 2021b).

Sometimes, the child or adolescent hides the pain (Slater, 2002), pretending it is minor, a capacity to regulate emotions, inhibit the impulse, preventing the fall. So as not to worry the others, to avoid confrontation, acute pain announcing the precipice. On the days when the clown doctors visited the pediatric oncology ward, Maria would wake up from her sleep, perhaps the only place where she was still allowed to dream, surprising her mother, surprising the team of health professionals, surprising the clown doctors, who did not see that day arrive, the delusion of Maria's hair trying to grow.

As in so many situations, it is the uniqueness of things that makes them precious. Its scarcity. Its quality of fragility. The possibility of loss. The transition. Disappearance. Few human beings live these Great Maria-Xabregas-Ginja Alignments. When they happen, those who have had the privilege of observing, knowing, feeling them, also experience the cutting and shattering pain, from which one only recovers at a certain temporal distance from that moment of lethal shattering.

Time again.

Could it be that if we are always jumping very high, or going to the top of the mountain, the time of pain passes faster? Do very tall people suffer less because they always have their heads held high? And what about giraffes? Or is it that, sometimes, it's better to open a crack in a deep floor, and go inside, making time yawn, a big yawn, and maybe, who knows, that's a form of celebration, and of recognition, of gratitude, a celebration of life and alignments, because there are things that can only be achieved slowly? And for which knowledge is of no use. And the sensible justifications. Sometimes appeasing is all we don't need. When people connect like this, in circumstances of vulnerability, which are always the circumstances of the clown doctors in the hospital, because it's always the circumstances of the children they encounter, with greater or lesser proximity to the abysmal window, legs dangling and a current of air that makes teeth ache, when they line up like that, I thought, in a great mass full of internal force, which interferes with the running of the clock, it's useless to give explanations.

At such times, the poetry of paradox comes closer than the deracinated prose of consistency.

Baggini (2023).

Explain what?

(...) They learned that Maria's hair was growing, which is usually a sign that the disease was in the healing phase. Remission, in the language of experts.

But it wasn't.

Suspended time.

The question, or one of the questions, because there is never just one, is that clown doctors are professionals of emotions and relationships. And, when they are good hospital clowns, they know how to translate and interpret all the emotional diversity that exists in the human emotions chart. The clown doctors deal, in the day to day of possible encounters with their main audience, the children at the center and, soon after, their parents and, later, the hospital professionals, with an overflowing number of emotions from the shadow side (recalling that no flower grows on a skewer in the uninterrupted sun).

Those emotions are always there, in concentrated doses, enough to misalign planets and break clocks. And they, Dr. Xabregas and Dr. Ginja, in this story, have the responsibility of allowing space to be made for other emotional tones. It also happens that, sometimes, there are these people, like Maria, who despite everything to the contrary, much less than 33 centimeters away from any window of the great abyss, the wind coming in like a hurricane, it seems that they know better than all, that past, present and future, do not exist. Like Saint Augustine in his *Confessions* (2008). Everything is nothing more than memory, attention and expectation. It is possible that each inter-planetary-Maria-Xabregas-Ginja encounter, had this quality of attention, and that, therefore, from this Great Alignment, dances and feats were born, and those jokes between people who are involved in a tune that is so much theirs, that those who are outside have only two possibilities: (a) either they let themselves be attracted by this gravitational force and get lost (or found?), making discoveries that are later celebrated with giant, round loaves of bread filled with whipped cream, and lots of excitement or, (b) they run quickly, moving far enough away to preserve his/her emotional state, which is another state and which, sometimes, cannot be any other.

They invented the suspension of time.

This is the story of a story that is difficult to write, to read, to appraise. Because it is very painful to understand that a person who is still small, with all his/her dreams yet to be unwrapped, has such a huge unforeseen event happen to him/her. But, even so, it is also a story that tells how, in an environment like the hospital, and in the circumstances of a disease like cancer, a space can be born, an interaction that becomes related, from these artists who meet the person in their healthy place. The whole person. In the whole that can be each life. A person with cancer is not a completely sick person. And even if a body is very sick and ends up letting itself fall through the window of the great abyss, in a final fall, it is possible to take care of what exists from childhood, from joy, from imagination, from oblivion, in a time that is suspended from different ways: both through pain and through music, invented or reinvented by the trilogy of this narrative.

We walk above all in uncertainty. Elastic, circular time. And clinical, pharmacological, chemical, psychological intervention is so necessary, as well as other interventions coming from other fronts, increasingly present in the process of responding to cancer, such as, perhaps, metaphysics. This domain of knowledge, so feared by science, is beyond the current tools of science, and the ways in which we access the truth, showing more the limits of the tools, than the limits of the truths of nature. Especially when there is no longer any answer. Erwin Schrödinger (2009), father of quantum mechanics and winner of the Nobel Prize, in his view of the world, argues that it is relatively easy to get rid of all metaphysics (and it seems that this is exactly what Kant did). But, he adds, metaphysics has not been, and cannot be, eliminated from the empirical content of human knowledge. Because if it were, it would be very difficult, even impossible, to produce any intelligible description, even in those ultra-specialized areas of science. Metaphysics, explains Erwin, includes, among other things, the unquestioned acceptance of a more-than-physical, that is, transcendental, meaning. To eliminate metaphysics is to take the soul out of both art and science, transforming them into skeletons incapable of any development.

To eliminate metaphysics is to eliminate the possibility that a story of loss, death, pain, illness, suffering is also a story of conquest, life, health, joy.

It is because of art, and the power of the encounter (metaphysics at its limit?), that

(...) Even today, from time to time, the dyad Dr.<sup>a</sup> Xabregas and Dr.<sup>a</sup> Ginja receive messages from Teresa. Messages from Maria, in a way.

The bond between these people overflowed the walls of the hospital.

The bond between these people measures, more or less, 33 centimeters, and it has the power to suspend time, throwing it free, out the window, into the great abyss.

*The opposite of death is not life, it is love. Freire (2002).*

#### 4. Discussion

*Lento tempo: An analysis departing from a humanistic approach and auto ethnographic method*

The analysis-narrative presented above was based on the story provided by the clown doctors. Their story is already formulated using a subjective language, with many details regarding the encounters between the clown doctors and Maria (a false name) and the relationship they developed after a long period of hospitalization and visits that resulted in very meaningful encounters between these people. From this story, a new story was created, and a new name or concept arose - Lento tempo. In terms of narrative analyses, the resulting story is consistent with the "holistic-content perspective" (Lieblich et al., 1998). In sum, this type of perspective, in contrast with categorical approaches, involves the exploration and establishment of associations and connections across the complete story. According to Lieblich et al. (1998), the core, within this type of analysis, is the fabula (i.e., the thematic content of a narrative), but also the sjuzet (i.e., the chronological structure of the events within the narrative). In accordance, a main theme was identified – the change of perception regarding time, the change in openness to connect or relate with significant others –, and the whole story, including the time sequence of events, was explored and navigated in a dialogue that goes back and forth between the content of the story, and data and documentation researched for the theme. Ultimately, we aim to create a narrative that integrates a particular individual or group experience with a body of knowledge that, so often, appears detached from real life.

Finally, even though we did not adopt any prior guidelines regarding the narrative's structure, we believe our narrative mostly fits Labov's proposal (1972), namely: (1) abstract, providing the reason of stating the narrative, and capturing the listener/reader's attention (e.g., "This is the story of a story of loss. The story of a love story. Will there be one without the other?"); (2) orientation, providing clues on the time, place, persons, and their activity or situations (e.g., "According to the latest data provided by the Portuguese Pediatric Cancer Registry, between 2010 and 2019, the global incidence rate of pediatric cancer was at 180.7/1,000.000 children/year, which represents, on average, 370 new patients per year."); (3) complicating action, tells the actual events of the story, moving the narrative ahead keeping the listener's attention and interest (e.g., "How lucky they found each other. There are alignments that are so incredible, so unlikely, so ephemeral, too, that it's as if somehow the entire universe and all of existence depends on them."); (4) result or resolution, depicts what finally happened, and how it worked in the end (e.g., "Maria would wake up from her sleep, perhaps the only place where she was still allowed to dream, surprising her mother, surprising the team of health professionals, surprising the clown doctors, who did not see that day arrive, the delusion of Maria's hair trying to grow."); (5) evaluation, clarifies the point of the story (e.g., "This is the story of a story that is difficult to write, to read, to appraise. Because it is very painful to understand that a person who is still small, with all his/her dreams yet to be unwrapped, has such a huge unforeseen event happen to him/her."), and (6) coda, indicates that the narrative has ended, illustrating that the narrative is no longer necessary and that whatever it follows is unimportant (Labov, 1972). E.g., "It is because of art, and the power of the encounter (metaphysics at its limit?), that (...) Even today, from time to time, the dyad Dr.<sup>a</sup> Xabregas and Dr.<sup>a</sup> Ginja receive messages from Teresa. Messages from Maria, in a way. The bond between these people overflowed the walls of the hospital."

Clown doctors' visits to hospitalized children have an impact that goes beyond amusement. Regarding children and adolescents in pediatric oncology, we believe there are benefits, harder to measure when compared with children hospitalized for non-chronic diseases. That is why we think it is critical to use different approaches to these settings that make it possible to construct knowledge, illuminating the many layers of clown doctors' intervention and the (possible) resulting encounter. Santarpia and colleagues (2019), for example, have analyzed hospital clown doctors' narratives in pediatric palliative care, with the aim of achieving a deeper psychological understanding of clown doctors working in specific settings with children and adolescents (e.g., Santarpia et al., 2019). Some of the children and youngsters, the main characters in these narratives, are deprived of their ability to communicate, both with their surroundings and themselves. Clown doctors can here be their/our Her-mes, our gods and goddesses of communication among realms; those realms of the phenomenology of suffering and of scientific knowledge that can be shared with the community of practitioners, caregivers and theoreticians.

Overall, prior studies have demonstrated a positive effect in reducing children's and adolescents' stress, fear, and receptivity to treatments (e.g., Fernandes & Arriaga, 2010). Our aim with the present project is to reflect on the narratives of the artists, on their experiences, with the expectation that these stories will have the power to bring light on the meaning of their performance and, with time, contribute to an increased awareness and quality of their work, and the meaningful impact of each unique encounter between them and their vulnerable young audience. Moreover, using a humanistic approach and a qualitative method that also aligns with this conception – autoethnography –, we expect to produce a type of analyses that is based on the lived experience, the subjectivity, and meaning within certain contexts (Spry, 2001); in the present case, the specific hospital context where the clown doctors perform their visits. We aim to bring a poetic language, as a way of reaching a perception, both from the lay reader, and the reader inside the clown doctor, who possibly emerges more from the body - the embodiment (Rogers, 1999), the right hemisphere, from where emotional stimuli quickly reach the amygdala (Gainotti, 2012), than from the prefrontal logical brain.

### *Strengths and Limitations*

Overall, we believe that the resulting analysis might contribute to a broader, but also detailed comprehension, of the outcomes resulting from the encounter between the clown doctors and their young audience.

The strength of this type of analysis, we propose, is that it enables the description of a phenomenon at the level of personal reality, that is, the individual psychological perception. At the same time, because a more idiosyncratic language is used, it might also promote the establishment of a more powerful relationship with the theme under exploration, in this case, both the clown doctors' artistic performance, and the experience of having lived (or still live) with cancer.

As argued by Jerome Bruner, at least two modes of thought exist, one being the reasoning, logical thought, the other being the narrative mode, which considers the context and intentions, and the subjectivity in making sense of human experience (Bruner, 1962). As such, we believe this study could enrich the perceived meaning of clown doctor's intervention, and also increase awareness regarding the specific psychological situation of the visited child or adolescent.

These strengths, however, might also be recognized as limitations, if we aim to explain or account for outcomes of objective measurable nature, as we did not use any measures to assess those. For example, contrary to other studies on the impact of clown doctors' visits on pain and/or anxiety (e.g., Dionigi, 2017; Dionigi et al., 2014; Fernandes & Arriaga, 2010), we did not assess the perceptions of children and adolescents following the clown doctors' intervention regarding those variables. As such, it is not possible to generalize our results, which can be understood as a problem in research.



According to Smith (1975, p. 88), ‘the goal of science is to be able to generalize findings to diverse populations and times’. The question of whether qualitative case studies contribute to the general knowledge, is a classic issue on qualitative methodology (Mjøset, 2009). Contrary to the prevailing view that generalization constitutes a problem, some authors argue that generalizability is not a legitimate criterion in evaluating case studies (Lincoln & Guba, 1985). Instead of perceiving single case studies as being limited in terms of generalizability, results from this type of studies should be assessed on the basis of 612 other criteria, namely, credibility, transferability, trust, and confirmability (Lincoln & Guba, 1985).

We believe our results could at least attain credibility and confirmability criteria. Credibility is provided by the participants. The clown doctors that provided the story support the analysis that was developed. We also believe that other researchers, using a similar theoretical approach, could reach the same interpretation as we did. Again, this is an open question, as the narrative was developed by a single researcher, and only afterwards given to a second researcher, who then critically reviewed the analyses. Future studies could include a prior step such as providing the original narrative (as written by the clown doctors), to the two researchers, and later compare the main issues and interpretations that each depicted from the story. Nonetheless, having these criteria in mind, we fully trust that the essence of our work opens a venue for communication, understanding, and debate, that significantly contributes to building knowledge on the field of artistic clown doctor intervention within the hospital context, in this case, when clowns doctors and audience meet regularly, building a relationship that clearly might have an impact that is beyond measurement.

## 5. Conclusions

In summary, the present study, following a humanistic approach in psychology, and a method that resembles autoethnographic in narrative analysis, aimed to provide a detailed description of an encounter between a clown doctors’ dyad and a 14-years-old adolescent with cancer. This description, using a subjective language, intertwined with data from, mostly, psychological research on childhood/adolescence cancer, resulted in a story, written on the basis of the original story provided by the clown doctors’ dyad.

Our primary aim is to return the “story of the story” to the clown doctors working with patients with cancer, opening a discussion on the themes explored, and assessing their own judgements over the analyses. Simultaneously, we consider that this type of work contributes in a more comprehensive manner, to increase awareness regarding the profundity of clown doctors’ artistic intervention, as opposed to a perception of shallow entertainment (Simonds, 1999). As such, we believe that our study, even though in a very singular and modest way, is significant in promoting (and provoking) thought, reflection, and dialogue in the disciplines of psychology, especially, humanistic psychology, and clown performative arts, in the context of vulnerable populations or settings, such as the hospital.

Being aware that the nature of the work, its structure and language are far from being consensual from a strict scientific perspective, we believe that the richness of scientific inquiry is also to use the diversity of lenses, and senses.

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**Abbreviations:**

<b>The following abbreviations are used in this manuscript:</b>	
<b>MDPI</b>	<b>Multidisciplinary Digital Publishing Institute</b>
<b>PTSD</b>	<b>Post-Traumatic Stress Disorder</b>
<b>IPO</b>	<b>Instituto Português de Oncologia</b>

**References**

1. Adams, T., Jones, S. L. H., & Ellis, C. (2015). *Autoethnography: Understanding Qualitative Research*. Oxford University Press.
2. Alderfer, M. A., Long, K. A., Lown, E. A., Marsland, A. L., Ostrowski, N. L., Hock, J. M., & Ewing, L. J. (2010). Psychosocial adjustment of siblings of children with cancer: A systematic review. *Psycho-oncology*, 19, 789-805. <https://doi.org/10.1002/pon.1638>
3. Annunziata, M. A., Giovannini, L., & Muzzatti, B. (2011). Assessing the body image: Relevance, application and instruments for oncological settings. *Supportive Care in Cancer*, 20, 901-907. <http://doi.org/10.1007/s00520-011-1339-x>
4. Apter, A., Farbstein, I., & Yaniv, I. (2003). Psychiatric aspects of pediatric cancer. *Child and Adolescent Psychiatric Clinics of North America*, 12, 473-477. [https://doi.org/10.1016/s1056-4993\(03\)00026-9](https://doi.org/10.1016/s1056-4993(03)00026-9)
5. Augustine, A. (2008). *The Confessions of Saint Augustine*. Revell.
6. Baggini, J. (2023). The death of my father. *Aeon Magazine*. <https://aeon.co/essays/would-philosophy-help-me-to-deal-with-my-fathers-death>
7. Bhakta, N., Force, L. M., Allemani, C., Atun, R., Bray, F., Coleman, M. P., Steliarova-Foucher, E., Frazier, A. L., Robison, L. L., Rodriguez-Galindo, C., & Fitzmaurice, C. (2019). Childhood cancer burden: a review of global estimates. *The Lancet Oncology*, 20, e42-e53. [https://doi.org/10.1016/S1470-2045\(18\)30761-7](https://doi.org/10.1016/S1470-2045(18)30761-7).
8. Bowlby, J. (1983). *Attachment and loss*. Basic Books.
9. Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513-531. <https://doi.org/10.1037/0003-066X.32.7.513>
10. Caires, S. & Ribeiro, S. (2016). Laughing is the best medicine? *Operação Nariz Vermelho*. 685
11. Campbell, D. T. (1974). Evolutionary epistemology. In P. A. Schilpp (Ed.), *The philosophy of Karl Popper* (Vol. 14, Book I, pp. 413-463). Open Court.
12. Cancer Statistics (2023). *CA: A Cancer Journal for Clinicians*. 73, 17-48. <http://doi.org/full/10.3322/caac.21763>
13. Cash, T. F. (2002). *Body image: A handbook of theory, research, and clinical practice*. Guildford Press.
14. Chanock, S. J., Kundra, V., Johnson, F. L., Douglas, O., & Singer, M. (2002). The other side of the bed: What caregivers can learn from listening to patients and their families. In: Pizzo, P. A., Poplack, P. G., (Eds.). *Principles and Practice of Pediatric Oncology* (4th ed., 1393- 1410). Williams and Wilkins.
15. Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral and Brain Sciences*, 36, 181-204. <http://doi.org/10.1017/S0140525X12000477>
16. Clark, A. (2016). *Surfing uncertainty: Prediction, action, and the embodied mind*. Oxford University Press.
17. Dionigi, A. (2017). Clowning as a complementary approach for reducing iatrogenic effects in pediatrics. *AMA Journal of Ethics*, 19, 775-782. <https://doi.org/10.1001/journalofethics.2017.19.8.stas1-1708>.
18. Dionigi, A. & Canestrari, C. (2016). Clowning in health care settings: The point of view of adults. *European Journal of Psychology*, 12, 473-488. <http://doi.org/10.5964/ejop.v12i3.1107>
19. European Commission (2021). A new tool to monitor childhood cancer in Europe. Retrieved in 12 Abril, 2023, from: <https://joint-research-centre.ec.europa.eu/jrc-news/new-tool-monitor-childhood-cancer-europe>

20. Fernandes, S. C. & Arriaga, P. (2010). The effects of clonic intervention and emotional responses in children on surgery. *Journal of Health Psychology*, 15, 405-415.
21. Fincham, F. D., & Cain, K. M. (1986). Learned helplessness in humans: A developmental analysis. *Developmental Review*, 6, 301-333. [https://doi.org/10.1016/0273-2297\(86\)90016-X](https://doi.org/10.1016/0273-2297(86)90016-X)705
22. Freire, R. (2002). Eu é um outro. *Maianga*.
23. Gamillo, E. (2021). A rare astronomical phenomenon of three planets aligning occurs this week. *Smithsonian Magazine*. Retrieved from: <https://www.smithsonianmag.com/smart-news/rare-astronomical-phenomenon-three-planets-aligning-occurred-week-180977211/>
24. Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of Qualitative Research*, 2, 163-194, 105.
25. Gurevich, M., Devins, G. M., & Rodin, G. M. (2002). Stress response syndromes and cancer: conceptual and assessment issues. *Psychosomatics*, 43, 259-281. <https://doi.org/10.1176/appi.psy.43.4.259>
26. Haque, O. S., & Waytz, A. (2012). Dehumanization in medicine. *Perspectives on Psychological Science*, 7, 176-186. <http://doi.org/10.1177/1745691611429706> <https://doi.org/10.1176/appi.psy.43.4.259>
27. Hersch, S. P. & Wiener, L. S. (2002). Psychiatric and social support for the child and family. In: Pizzo, P. A., Poplack, P. G., (Eds.), *Principles and Practice of Pediatric Oncology* (4th ed., 1365-1392). Williams and Wilkins.
28. Hill, C. E. & Knox, S. (2021). *Essentials of consensual qualitative research*. American Psychological Association.
29. Köster, M., Kayhan, E., Langeloh, M., & Hoehl, S. (2020). Making sense of the world: infant learning from a predictive processing perspective. *Perspectives on Psychological Science*, 15, 562-571. <http://doi.org/10.1177/1745691619895071>
30. Kurtz, B. P. & Abrams, A. N. (2011). Psychiatric aspects of pediatric cancer. *Pediatric Clinics*, 58, 1003-1023. <http://doi.org/10.1016/j.p72c11.201>
31. Larouche, S. S., & Chin-Peuckert, L. (2006). Changes in body image experienced by adolescents with cancer. *Journal of Pediatric Oncology Nursing*, 23, 200-209. <http://doi.org/10.1177/1043454206289756>
32. Lindahl Norberg, A., & Boman, K. K. (2008). Parent distress in childhood cancer: A comparative evaluation of posttraumatic stress symptoms, depression and anxiety. *Acta Oncologica*, 47, 267-274. <https://doi.org/10.1080/02841860701558773>
33. Linder, L. A., Hooke, M. C. (2019). Symptoms in children receiving treatment for cancer-Part II: Pain, sadness, and symptom clusters. *Journal of Pediatric Oncology Nursing*. 36, 262-279. <http://doi.org/10.1177/1043454219849578>
34. Long, K. A. & Marsland, A. L. (2011). Family adjustment to childhood cancer: A Systematic Review. *Clinical Child and Family Psychological Review*, 14, 57-88. <http://doi.org/10.1007/s10567-010-0082-z>
35. Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: theory and evidence. *Journal of Experimental Psychology: General*, 105, 3-46. <https://doi.org/10.1037/0096-3445.105.1.3>
36. Maslow, A. H. (1962). *Toward a psychology of being*. Van Nostrand.
37. May, R. (1983). *The discovery of being*. Norton.
38. Operação Nariz Vermelho [@operacaonarizvermelho\_oficial]. (2021a, March 10). Untitled, [Video]. Instagram. <https://www.instagram7m34.com>
39. Operação Nariz Vermelho [@operacaonarizvermelho\_oficial]. (2021b, March 10). Como fazer sorrir em simples passos... de dança (How to create smile in simple dance steps), [Video]. Instagram. [https://www.instagram.com/reel/CKoaBrMJdk2?utm\\_source=ig\\_7w36eb\\_c](https://www.instagram.com/reel/CKoaBrMJdk2?utm_source=ig_7w36eb_c)
40. Pahl, D. A., Wieder, M. S., & Steinberg, D. M. (2021). Social isolation and connection in adolescents with cancer and survivors of childhood cancer: A systematic review. *Journal of Adolescence*, 87, 15-27. <https://doi.org/10.1016/j.adolescence.2020.12.010>
41. Phillips, N. S., Duke, E. S., Schofield, H. T., & Ullrich, N. J. (2021). Neurotoxic effects of childhood cancer therapy and Its potential neurocognitive impact. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, 39, 1752-1765. <https://doi.org/10.1200/JCO.20.02533>
42. Phipps, S., Klosky, J. L., Long, A., Hudson, M. M., Huang, Q., Zhang, H., & Noll, R. B. (2014). Posttraumatic stress and psychological growth in children with cancer: has the traumatic impact of cancer been overestimated?. *Journal of Clinical Oncology*, 32, 641-646. <http://doi.org/10.1200/JCO.2013.49.8212>

43. Raskin, J. D. (2012). Evolutionary constructivism and humanistic psychology. *Journal of Theoretical and Philosophical Psychology*, 32, 119-133. <http://doi.org/10.1037/a0025158>
44. Robinson, K. E., Gerhardt, C. A., Vannatta, K., & Noll, R. B. (2009). Survivors of childhood cancer and comparison peers: the influence of early family factors on distress in emerging adulthood. *Journal of Family Psychology*, 23, 23-31. <https://doi.org/10.1037/a0014199>
45. Rogers, C. R. (1961). *On becoming a person*. Houghton Mifflin.
46. Rokach, A. (2016). Psychological, emotional and physical experiences of hospitalized children. *Clinical Case Reports and Reviews*, 1, 399-401. <http://doi.org/10.15761/CCRR.1000227>
47. ROPP. (2022). Dados estatísticos. Retrieved from: <https://www.pipop.info/pais-e-amigos/cancro-pediatrico/dados-estatisticos/>
48. Rovelli, C. (2018). *The order of time*. Riverhead Books.
49. Schrödinger, E. (2009). *My view of the world*. Cambridge University Press.
50. Slater, J. A. (2002). Psychiatric aspects of cancer in childhood and adolescence. In: Lewis, M., (Ed). *Comprehensive Textbook of Child and Adolescent Psychiatry* (pp. 1035-1046). Williams and Wilkins.
51. Sridharan, K. & Sivaramakrishnan, G. (2016). Therapeutic Clowns in pediatrics: a systematic review and meta-analysis of randomized controlled trials. *European Journal of Pediatrics*, 175, 1353-1360. <http://doi.org/10.1007/s00431-016-2764-0759>
52. Steliarova-Foucher, E., Stiller, C., Lacour, B., Kaatsch, P. (2005). International Classification of Childhood Cancer: Third Edition. *Cancer*, 103, 1457-67. <http://doi.org/10.1002/cncr.20910>
53. Stetson, C., Fiesta, M. P., & Eagleman, D. M. (2007). Does time really slow down during a frightening event? *PLoS ONE*, 2: e1295. <https://doi.org/10.1371/journal.pone.0001295>
54. Soltani, A., & Izquierdo, A. (2019). Adaptive learning under expected and unexpected uncertainty. *Nature Reviews Neuroscience*, 20, 635-644. <https://doi.org/10.1038/s41583-019-0180-y>
55. Schultz, K. A. P., Ness, K. K., Whitton, J., Recklitis, C., Zebrack, C. B., Robison, L. L., Lonie Zeltzer, L., & Ann C. Mertens, A. C. (2007). Behavioral and social outcomes in adolescent survivors of childhood cancer: A report from the childhood cancer survivor study. *Journal of Clinical Oncology*, 25, 3649-3656. <http://doi.org/10.1002/pon.4881>
56. Taylor, E. (1991). William James and the humanistic tradition. *Journal of Humanistic Psychology*, 31, 56-74. <https://doi.org/10.1177/070629216>
57. Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Belknap/Harvard.
58. Tuthill, J. C., & Azim, E. (2018). Proprioception. *Current Biology*, 28, R194-R203.
59. Wilson, M. A. (2017). Medical clowning: An embodiment of transgressive play. *Journal of Childhood Studies*, 42, 53-61. <https://doi.org/10.18357/jcs.v42i3.17894>
60. Wolff, P. & Shepard, J. (2013). Causation, touch, and the perception of force. *Psychology of Learning and Motivation*, 58, 167-202. <https://doi.org/10.1016/B978-0-12-407237-4.00005-0>
61. World Health Organization. (2021). Childhood cancer. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/cancer7-76-in-children>.

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