

SELF-CARE: How Much Do You Commit?

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IMPLEMENTATION:



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Implementation:



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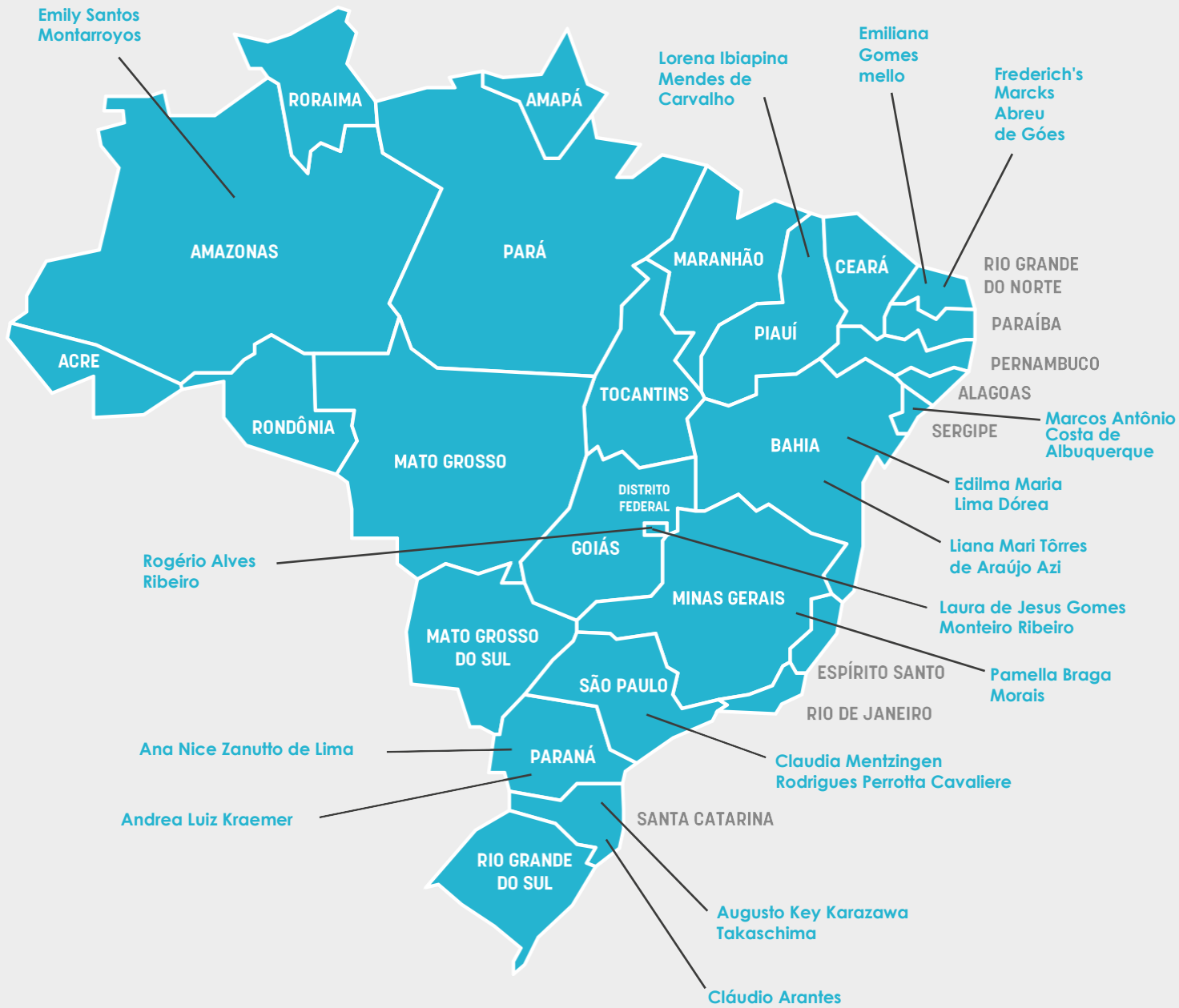
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PRESENTATION



This work, entitled “Self-care: How much do you commit?”, is the result of the work of fellow volunteers, who gave their time to contribute with knowledge, practices and development to, in the pursuit of our purpose, finding our best version or that version we want and will struggle to be. We are shadow and light, attachments and detachments, and for this we need to put what really matters to highlight the silent encounter of our SELF.

Reporting that this e-book is part of the SELF management project, which has in its main scope the Núcleo do EU.

The “Núcleo do EU” was launched on April 18, 2020, as part of a project called “Self Management”, promoted by SBA and conceived with former deputy scientific director of the SBA of 2020’s management, Dr. Marcos Antonio Costa de Albuquerque. We were living in a moment of uncertainty and fear, represented by the SARS-CoV-2 (COVID-19) pandemic arrival in Brazil.

Having completed the postgraduate degree in Positive Psychology, wellness science and self-fulfillment by PUCRS, Dr. Marcos Albuquerque found the opportunity to help other anesthesiologists find their personal and professional balance in that moment of crisis. A webinar focused on self-care was held and the invitation was launched for those colleagues who wanted to participate in the Núcleo do EU’s project. Other colleagues were invited, and so a group of “selfless” anesthesiologists began to hold weekly virtual meetings to study topics of psycho-emotional aspects, financial management and spirituality. Initially with a large number of colleagues, who, due to the moment experienced, were no longer participating, at the end of the training, the “Núcleo do EU” was made up of 15 anesthesiologists colleagues and with the special featuring of Dr. Laura Ribeiro, who was the protagonist in contributing with her knowledge in the financial field. The core’s goal is “to take care of itself to improve the quality of life, and in this way to be able to take better care of the other”.

In a virtual meeting, on the Zoom platform, on April 18, 2020, the Núcleo do EU’s “initial cell” was gathered for the Workshop on “Transition Management – the inner process of adapting to a new reality” (Image 1). The meeting

surprised everyone, with expectations positively exceeded, simply by a clear exposure of the changes and the personal impact of that moment then experienced by colleagues.

The meetings went on throughout 2020, and in 2021 a face-to-face meeting was held in immersion, which took place in Campinas.

The core's goal is to develop the purpose in physicians undergoing specialization and anesthesiologists to find motivation to work on their self-care, because in this way, taking care of themselves, they will have the opportunity to take better care of others.

We wish everyone to seek to find their best version and stay well, be well and keep being well.

Marcos Antonio Costa de Albuquerque



Image 1: Photo record of the first meeting of the Núcleo do EU, on April 18, 2020, held on the Zoom Virtual Platform. Source: WhatsApp Group File "Núcleo do EU".

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PREFACE



On September 15, 2018, during the VI Symposium on Occupational Health, the Brazilian Society of Anesthesiology (SBA) prepared a document called the "Recife Booklet - for the well-being of the anesthesiologist." It was considered a paradigm shift, as it aimed to recognize that "to take good care, (...) the anesthesiologist must be in his best physical, mental and social condition, because a healthy professional increases the safety of the medical act and the quality of care. In this sense, education has a main role in improving the anesthesiologist's quality of life, so we support the development, dissemination and training of this professional in this field". Thus, this has led to a view that occupational health is inseparable from the physical, mental and social well-being of the human being, starting a pioneering movement of care and health promotion of the anesthesiologist in Brazil. Therefore, SBA fostered a commitment to the life and well-being of its partners, with action plans focused on the physical, educational and social levels, as well as monitoring the morbidity and mortality records of anesthesiologists.

The relevance of this initiative is even more evident with the alarming rates of Burnout Syndrome, chemical dependence and psychiatric disorders, such as anxiety and depression, ending in the tragic outcome of suicide in the most severe cases. According to data presented in the Latin American Congress of Anesthesiology (CLASA, 2001), latin anesthesiologists have a prevalence of 11% of depression, 44% of alcoholism, 16% of pharmacological dependence and 1.7% of illicit substances abuse. A study with 241 anesthesiologists from the Distrito Federal (Brazil) revealed a prevalence of Burnout Syndrome of 56% in 2015. National studies on this topic are still lacking in the literature.

Indeed, such developments are the reflection of a high occupational risk profession, at the psychic, physical, chemical, biological and organizational levels, associated with high workloads since medical residency and/or specialization. A mistaken idea prevails that "the anesthesiologist cannot make mistakes", resulting in external and internal pressures of perfection, with fear for the integrity of patients and possible medico-legal repercussions. This ends up generating a negative feeling of loss and imminent personal and professional ruin, if any failure happens during the work.

Regarding psychological risk, the main stressful events in the specialty of anesthesiology are:

- Dealing with critical and severe patients;
- Involvement in complex surgeries;
- Difficult airway situations;
- Performing anesthesia outside the operating room;
- Problematic relationships at work;
- Precarious working conditions;
- Excessive workload;
- Sleep deprivation and fatigue;
- High academic requirement;
- Lack of time and difficulty of organization;
- Preparation for title tests.

Thus, the challenges, occupational risks and difficulties that get along the anesthesiologist's daily life are recognized, and it is essential to be well to provide the best care to the patient and develop a healthy workplace. SBA understands that its partner is its cornerstone, and any initiative aimed at the aforementioned purposes is valid.

Thus, as a continuation of the work started by SBA with the Recife Booklet, in 2018, the Núcleo do EU conception emerged. The Núcleo do EU is a pioneering project developed by SBA, whose objective is based on the self-knowledge, self-care and self-management of the anesthesiologist, integrated and supported by other peers of the same specialty, as a way of promoting health and well-being.

This e-book is a pioneering initiative, which was conceived and prepared by SBA's Núcleo do EU members, and offers to the doctors in specialization, to anesthesiologists and to the general public a content on many topics that can contribute to self-care. It does not intend to replace classic works on the topics, nor

the search for expert care, but rather to contribute with a light and fundamentally important reading on the pillars of psycho-emotional aspects, financial management and spirituality.

All chapters were written by anesthesiologists, except for finance, which was cordially written by Dr. Laura Ribeiro, with training in the field of law and with a deep knowledge of the topic addressed.

Each of the authors sought, in their conception, to provide the reader with scientific evidence linking their professional experience, which brings the author closer to the reader, as they are chapters written from anesthesiologist to anesthesiologist.

Each chapter was designed on axes that guide well-being and self-fulfillment, which are essential for us to achieve our completeness.

According to Paul Valéry, disruption, incoherence and surprise are usual conditions in our lives, and are real needs for many people whose minds are no longer nourished.

And since impermanence is our only certainty, we need to take care of our highest good which is our peace, our integrity and completeness.

Have an excellent reading.

Marcos Antonio Costa de Albuquerque

chapter 1

Paradigm shifts for the anesthesiologist with self-care appearance

by **Augusto Key Karazawa Takaschima**

“The aim of positive psychology is to catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life.”

- **Martin Seligman**

The contemporary model of self-care is inserted in two movements: Positive Psychology and the management of large companies and high performance teams^{1,2}. Both have the goal of achieving better results and personal satisfaction based on practices of proven effectiveness. Developing and promoting self-care is essential for businesses and individuals.

“Life takes on greater meaning when we work for a purpose beyond simple technical execution and financial survival. This meaning motivates and allows attention to personal care.”

In this new model, one of the key elements of companies's debates in their strategic planning is the Purpose. What is the Purpose that moves us? What's the Reason Why of my work? These questions bring built-in motivation to companies as a whole, as well as to the individuals who compose it. Simon Sinek, one of the great authors of personal management, proposes the golden circle technique to set purposes³. This circle contains 3 elements. The most central and most important is Why, followed by How and finally What.

Life takes on greater meaning when we work for a purpose beyond simple technical execution and financial survival. This meaning motivates and allows attention to personal care. We will analyze throughout this review how we came up with this concept, what are the challenges of self-care and how the interaction between self-care and management generates better individual and collective results.

I – HISTORICAL AND SOCIAL EVOLUTION

The concern about working conditions and the health of anesthesiologists is not recent. Within the history of occupational health, the initial approach in anesthesia focused on the risk of fires and explosions by flammable inhaled anesthetics. After the appearance of agents without this risk, the focus was directed to the chronic exposure of professionals to inhaled anesthetics, as well as to the effects of radiation, infectious agents and noise pollution within the surgical environment⁴.

These occupational care initiatives for the hospital environment have not been isolated. In 1971, the Occupational Safety and Health Administration (OSHA) was created in the United States. It was responsible for monitoring the

application of american standards to ensure the safety of professionals in the workplace⁵. In Brazil, in 1978, the Ministry of Labor published the Regulatory Standards (NRs) that deal with safety and Occupational Medicine⁶.

Such actions showed the zeal to standardize preventive measures in the workplace. It was the beginning of important achievements, but as changes in technology, labor relations and social models advanced, it became clear that simple regulation would not be enough to promote the anesthesiologist's health.

The baby boomer generations (born in the post-World War II era), as well as the X ones (born in the 60s and 70s), were featured by a search for professional, family and financial fulfillment based on a career where a doctor is expected to pose as a hero⁷. Personal sacrifice, with countless hours worked and family absence, was considered natural in the 70s, 80s and 90s, but in the same period indications began to emerge that this extreme dedication to work wasn't harmless⁸.

In 1974, the Burnout concept was first published⁹. Cases of depression, suicide and drug addiction involving doctors began to raise debate in specialty societies from the 80s. In an editorial of the Brazilian Journal of Anesthesiology, in 1984, SBA took a stand against cases of suicide of



Figure 1 - Brazilian Review of Anesthesia editorial; 1984.

anesthesiologists who happened in that year⁸ (Image 1). Worrying about mental health has become part of the occupational care of anesthesiologists⁴.

In 1984, the death of a 21-year-old woman in New York, Libby Zion, publicly showed society's concern for medical self-care and patient safety⁹. After a long 36-hour shift, two residents prescribed meperidine and haloperidol to a patient using an MAO inhibitor, triggering a serotonergic crisis that ended up in the death of the young woman. After the publicity of the case, it's set by law in the United States the maximum number of hours that a resident can work during the week¹⁰.

This regulation of hours worked by residents in the United States echoed in Brazil, where we also set a maximum limit for doctors in specialization in the country (60 hours), as well as the post-shifting creation^{11,12}. This healthy rest practice after a night shift was embedded by some Brazilian anesthesia groups.

If at first the focus of occupational health was directed to the physical risks of the workplace, at this second moment "taking care of those who take care" becomes important. Labor regulations in health now take into account the causal link between the well-being of health professionals and patient safety⁴.

To develop and promote actions in favor of occupational health, SBA created a special commission aimed at this end. Among the leaders of the movement, Dr. Gastão Duval Neto, SBA chairman in 2001, stands out. Dr. Gastão was the chairman of SBA's Occupational Health Commission and the



Image 2: "Occupational well-being in anesthesiology" manual. SBA/CFM.

World Federation of Societies of Anesthesiology (WFSA). He was also editor of the most important occupational health work in our field, "Occupational Well-Being in Anesthesiology"⁴, translated into English, Spanish and Mandarin (Image 2).

Among SBA's actions, the annual Symposiums on Occupational Health and the publication of the Recife Booklet (Image 3) in 2018 stand out, which sets the commitment of our Society and the signatories who adhere to this document with self-care and occupational health¹³. The Recife Booklet established goals and objectives to be met annually, as well as an annual report of the actions that are disclosed at the Occupational Health Symposiums, held annually by SBA. Another initiative in the same year was



Image 3: Recife Booklet

the drug addiction in anesthesia debate, with the recording of a video with Drauzio Varella, which now has more than 105,000.00 views (<https://www.youtube.com/watch?v=ZIGAVuB2XL4>).

Alongside these initiatives, self-care reached a third stage, focusing on actions not only to prevent problems, but to improve performance. Psychology has begun to study the factors that contribute to personal and team success, not only for mental health problems. Thus arises the field of Positive Psychology¹ and a new model of self-care.

II – NEW PARADIGM OF SELF-CARE AND PERSPECTIVES

As mentioned in the introduction, the contemporary model of self-care is inserted in two movements: Positive Psychology and the management of large

companies and high-performance teams^{1,2}. We can include a third element, that of value-based health¹⁴. The high cost of health with results delivery below expectations raises questions about the efficiency and effectiveness of the care system as a whole.

In order to achieve better results, authors such as Michael Porter advocate the change of the health system with integration of care in coordinated carecenters¹⁴. These integrated units would work as single-budget teams, seeking to employ resources in the best possible way, evaluating and improving patient outcomes.

This integration requires health managers to work with different health professionals as a high-performance team². High performance is featured by constant delivery of excellent results, in a complex environment, by a defined processes team, good internal communication and continuous learning. To this end, developing the situational awareness of its members is essential¹⁵.

Situational awareness allows us to understand the context in which we're inserted and the best route for our actions. Communication is clearer and results tend to be more efficient. Situational awareness is the opposite of the disconnection generated by burnout, which leads to a lack of empathy with patients, colleagues and the workplace¹⁶.

Full development of situational awareness requires the self-care of the professionals responsible for performing the tasks. Having a personal purpose aligned with the group is a source of balance and motivation for physical, mental and psychic care. It's a virtuous circle where personal well-being improves the performance of the company, which motivates individuals to seek their best.

This movement can be featured as the third stage of occupational health, where the simple preventive concept is overreached to avoid damage. The goal is to achieve excellence through personal care and collective motivation. Hospitals, companies and specialty societies seek to develop purpose as a driver for a quality leap.

SBA embraced this trend and included two actions within this new model: Núcleo do EU and the Nucleus of Work Management in Anesthesiology (NGTA). The two cores have different goals, but are complementary in purpose. Núcleo do EU has roots in Positive Psychology and seeks to develop tools for excellence in personal care. NGTA takes care of management and work topics, aiming to improve the performance of the anesthesiologist as leader of his company, group and health institutions.

The new model of self-care requires institutions' ripening. If the company's culture where the anesthesiologist is inserted is not guided towards institutional professional improvement, self-care will not be encouraged. The road to change is long and requires commitment. SBA is aware of its role in this scenario. Debating and promoting self-care is not just an individual cause. It's a collective movement. We need to take care of each other.

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chapter 2

Human Factors and the Anesthesiologist's Self-Care

by **Rogério Alves Ribeiro**

“Let no one ever come to
you without leaving better
and happier.”

**- Mother Teresa
of Calcutta**

An anesthesiologist is assigned to join a laparoscopic inguinal herniorrhaphy. This is something usual, in which he's used to work on, he's been properly trained for this in medical residency, he's performed the same procedure several times, he's a professional with more than 10 years of experience, he's analyzed the patient's clinical conditions and he found that everything is pretty normal. So nothing can go wrong, right?

Normality doesn't always prevail... Something unexpected occurs and a serious adverse event comes up. In everyday medical activity, many adverse events and failures in care are perceived that are responsible for serious and tragic outcomes. Human factors stand out in the cause of sentinel events and account for more than 50% of adverse drug reactions during anesthesia¹.

By definition, human factors are the science of analyzing information about behavior, skills and limitations that generate outcome in activities². Human performance deficiencies are presented as cognitive mistakes in the planning, execution of care or the problem solution³. Fallibility as a human condition has already been addressed by James Reason⁴ and, regardless of the titles, training and technical skills that individual has, there won't be no change in the imperfections found in humans⁵. Understanding human factors means optimizing performance, better understanding the individual's behavior and recognize their limitations, seeking to minimize human frailty and reduce their mistakes and consequences.

The anesthesiologist is inserted in an extremely complex and challenging environment: the hospital. In this environment, there's a multidisciplinary interaction with many interrelated processes, it intermingles in the organizational culture to comply with standards and instant results are expected during the technical exercise of its specialty. As if that wasn't enough, situational pressure still occurs at certain times, intercurrents and often organizational limitations, such as lack of inputs, beds and human material. All this arises as an

"The importance of knowing, analyzing and mitigating the action of human factors in health care appears in order to minimize the patients' risk. Therefore, the following statement is reached: one must be well to be able to take care of the other. The importance of self-care related to anesthesiologists then comes up."

interference factor in human ability, since it directly relates to fatigue, stress, distraction, cognitive and emotional overloads.

In this scenario, the importance of knowing, analyzing and mitigating the action of human factors in health care appears in order to minimize the patients' risk. Therefore, the following statement is reached: one must be well to be able to take care of the other. The importance of self-care related to anesthesiologists then comes up. Going back to the first paragraph, many situations and interferences change normality and make a simple and common procedure in an unexpected situation, with the possibility of a serious adverse event. Next, there are some examples of human factors and a quick debate.

FATIGUE: Tiredness makes thinking slower, decreases peripheral vision and creates a longer reaction time, a similar description to the alcohol effect on an individual. This was the conclusion of two studies^{6,7} that showed the relationship between moderate sleep deprivation, tiredness, alcohol intake and impairment in cognitive and motor performance.

DISTRACTION: In his pre-induction tasks, it's quite common for the anesthesiologist to come across with some distracting situation: scattered conversations at high volume, several openings of the operating room door, cell phones ringing, music on and colleague coming to talk about a certain matter. These distraction moments and the conversation called "not relevant" are important factors of inattention and they can promote serious failures such as wrong dosages, medicine exchange, untimely maneuver, among others. These distractions are extremely common, they can interrupt the surgical procedure and result in damage to the patient^{8,9}.

COMMUNICATION: Communication failure is an important factor in the genesis of adverse events, and a clear example of this in anesthesiology is the shift change, in which a lot of information is transmitted verbally and there's a great risk of forgetting and confusing the data. At this time, the professional who took over the procedure may not remember any patient's allergy or doesn't have information on how the intubation went on, for example. There are data showing that the transfer of the anesthetic act increased hospital morbidity and mortality by 8%¹⁰.

DECISION FATIGUE: The anesthesiologist work generates a huge amount of information with consequent need for concentration and subsequent decision-making. They're information from the monitor, the anesthesia device, other devices installed and the observation of the surgery itself. In addition to all this cognitive overload, in the event of a complication, a process of analysis

and attempt of solution begins. As the situation is postponed and negotiations are not effective, reasoning becomes more difficult and there's a blockage of thought and interpretation. At this moment a brain "bug" occurs, a sensory saturation that triggers a kind of "tunnel vision", with the professional overwhelmed and mentally unable to see around him, think and even act.

UNINTENTIONAL BLINDNESS: Everyone has heard the expression: "the brain sees what it wants to see." This derives from preconscious perception and makes someone fail to notice the obvious when sticking to a certain task. This selective attention occurs due to a temporary nullification of our peripheral perception. A practical example of this is the anesthesiologist's focus on oxygen saturation in cases of difficult airway and not paying attention to severe hypotension during intubation attempts. Proof of this topic arose from work in which specific activities were assigned to professionals who could easily comply with the request, but they didn't notice coarse changes or apparently obvious discrepancies¹¹.

ALARM FATIGUE: The devices' alarms exist to draw attention of caregivers. However, it's natural to get used to the sounds and verify that most of the time they're due to simple conditions or discrete changes such as poor positioning, interference from other devices, that is, they don't generate an immediate action. This situation leads to an accommodation and a desensitization of the team. One study revealed that an alarm goes off every 92 seconds, but that about 90% went unresponsive immediately.¹²

NORMALITY BIAS: It's the nature of human beings not to think that situations unexpected or even tragic events may occur. A disaster is often underestimated despite optimistic interpretation of the warnings. Thus, one doesn't prepare and doesn't believe when some warnings or abnormalities begin to arise and takes time to act.

COGNITIVE BIAS: There are several types of cognitive biases to which a professional may be exposed¹³ and they're largely responsible for most of the care failures involved in patient safety¹⁴. Maybe one of the most emblematic is the overconfidence bias, when a professional already experienced by the years of training, with the wrong impression of having already tried many hard events, starts to act with undue daring, or doesn't recognize the need to request help or even believe in technical infallibility. This type of action delays the call for help, it delays the making of assertive decisions and results in losses in care.

NON-TECHNICAL SKILLS: These are the behavioral skills of a professional in his workplace or even in personal life. We live in a fragile, anxious, non-linear and unfathomable world and these skills shows that it's impossible to leave emotions at home and go to work performing only technical skills. Non-technical skills are directly related to technical skills in outcomes in crisis situations and interfere with daily professional behavior. Many of these skills are sought and highly valued nowadays, such as the ability to work as a team, show situational awareness, perform emotional intelligence, have cognitive flexibility, practice decision making, develop resilience, among others.

PSYCHO-EMOTIONAL FACTORS: Once understood that any professional may be exposed to all human factors listed above (and even others not presented in this chapter), it becomes clear the interference of these factors altering relatively usual situations and increasing the chance of negative outcome. In addition to this reasoning, the question is: what would be the performance of this same professional if he was affected by any emotional or even psychic overload or dysfunction? What would this whirlwind of conflicts and difficulties be like with an anesthesiologist who isn't well? There may be a direct relationship between fatigue, distress, low quality of life and Burnout Syndrome with failures in care and adverse events^{15,16}. There's also a relationship between low level of financial well-being and Burnout Syndrome among anesthesiologists¹⁷.

Thus, seeking tools to relieve tensions, reduce anguish and know ways to practice self-care can be very useful in psycho-emotional control. There are records stating that self-knowledge can reduce cognitive biases¹⁸ and that self-care should be a personal imperative, and the doctor should give himself the same care that he prescribes to the patient¹⁹. Self-care, mindfulness and Positive Psychology positively impact in improving professional well-being²⁰.

Once the human factors are understood and the debate about their influence on the professional's daily life begins, the importance of practicing self-care becomes clear as a way to minimize the negative influence of these factors on patient outcomes. Anesthesiologists daily live with stressful situations, they're often challenged in terms of situational pressure and they're exposed to many multiprofessional and multivariable situations. Once self-care is practiced (physical, mental, financial health care), human factors will certainly be worked on and the outcome will be the adverse events reduction for each professional. It's urgent that the caregiver take care of himself and be taken care of. One must be well to take care of the other!

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chapter 3

Commitment at work from the perspective of self-care

by **Marcos Antonio Costa de Albuquerque**

“Choose a job you
love, and you will
never have to work
a day in your life.”
- **Confucius**

1- INTRODUCTION

Working has an essential importance for all human beings, because through it we can find the completeness needed for our existence. The work allows the balance that's given to us, from supplying our basic needs, but, in addition to the financial return, it can provide the development of capacities, skills and attitudes essential for our personal growth.

Commitment at work has motivated researchers to produce studies to understand what can best translate to the individual and to the community.¹

According to Schuck, commitment at work is seen as positive mental commitment, the levels of which are susceptible to the influence of contextual and interpersonal factors.^{1,2} According to the research in the field of Positive organizational and work psychology, *flow* and commitment are related to well-being and success.³

More and more organizations, companies and governments have been seeking to relate work to quality of life, and this has an essential importance, because when we seek specific literature on the subject we see an important growth of publications, demonstrating the importance of commitment at work as

"Commitment at work is about our well-being and self-fulfillment. When we develop activities that bring us joy, satisfaction and commitment to what we perform, the release of substances that can provide better levels of happiness."

an important facet of the construction of the individual history, his family and the community.

If we consider that many of us spend more time in our work than in our homes and with our families, satisfaction and involvement in work becomes a necessary condition, which may end up in better blooming, better results in our tasks, better productivity and positive results in our psycho-emotional aspects.

Commitment at work is about our well-being and self-fulfillment. When we develop activities that bring us joy, satisfaction and commitment to what we perform, the release of substances that can provide better levels of happiness becomes more pressing.

Separating work from people's existence is very hard, if not almost impossible, given the importance and impact that work has on them. Thus,

people depend on the organizations in which they work to achieve their personal and individual goals.⁴

2- HUMAN NEEDS AND COMMITMENT AT WORK

The hierarchy of human needs has its basis towards the pyramid in the following aspects: physiological, security, social, esteem and self-fulfillment.⁴

2.1 Physiological

They're the basic needs for sustaining one's own life, such as: food, shelter, sleep, sex, which according to Maslow, as long as these needs aren't met, others couldn't motivate the individual.

2.2 SECURITY

It refers to being free from physical danger and fear, loss of employment, shelter and sustainability.

2.3 – Social or acceptance

The human being feels the need to be accepted in society, belonging to a social class, feeling included in a group, a nucleus or a community.

2.4- Esteem

Everyone needs recognition, power, prestige, status and needs to be respected by society.

2.5 – Self-realization

Potential, creativity – according to Maslow, this is the highest need in its hierarchy. It's the desire to be the best at what you do, fulfilling all your desires.

Self-fulfillment has an intimate relationship with our level of competence in relation to our self-confidence. The more we're challenged to perform activities that require our competence at higher levels, and have a high self-confidence, more blooming we'll have in these activities, with results that exceed our expectations and that more commit us at work.

3 - COMMITMENT COMPONENTS⁴

Commitment is a positive state of “self” at work, while a state of dissatisfaction implies loss of motivation and separation of self from work. When the employee is in a state of involvement, the work absorbs him and contributes to his activities being positive experiences, this is the definition of the level of commitment at work

Commitment at work is made up of a behavioral-energetic component (vigor), an emotional component (dedication) and a cognitive component (absorption):

3.1 – Behavioral- energetic component

This component, also known as vigor, is translated by the following assumptions:

- High energy levels;
- Persistence;
- Desire to work hard;
- Mental resilience, considering work activities.

Observing the premises of this type of component, we can understand that it's the motivating factor for the full execution of the work activity, as it involves our well-being associated with our psycho-emotional aspects.

3.2 Emotional component

It's a component of essential importance, which translates the way we dedicate ourselves to perform our work activities. It involves the following aspects:

- Being fully focused on getting the job done;
- Inspiration;
- Pride;
- Challenge;
- Goal;
- Meaning;
- Excitement.

By analyzing its premises we can observe that it's a component that provides us with maximum involvement, mindfulness of what we're performing, triggering a series of feelings that strengthen the work delivery

with continuous improvement in its quality aspects.

3.3 – Cognitive Component

It's the defining component of blossoming, of ecstasy, of the maximum involvement of our surrender to what we're performing. It consists of:

- Being fully focused on getting the job done;
- Feeling that time passes by "flying";
- Difficulty disconnecting from work.

There's no dissociation between these components, as they complement each other and are defining for our commitment at work, providing our well-being in the accomplishment of what we're delivering and, with this, improving our performance with less energy consumption.

4 - FINAL ASPECTS

Committed employees show positive emotions more often – such as happiness, joy, and enthusiasm – experience higher levels of health, are able to create their own personal resources, and transfer commitment to others.⁵

Since "commitment at work" is the variable that has the greatest impact on the "creative suggestions" dimension, the literature points to the need for organizations interested in awakening this type of behavior in their employees to provide them with work resources, such as social support, autonomy and feedback. Good recruitment and selection practices are also important, as the literature points out that employees' internal resources, such as resilience, intrinsic motivation and life satisfaction are also needed.⁵

According to the theoretical concepts and the evidence that have been shown in behavioral studies of commitment at work, we must evolve to guidance from early childhood in the development of skills, abilities and attitudes that can contribute to the training of future professionals committed in their work delivery proposals.

We're living in an increasingly complex and fragile world, with high competitiveness and urgent needs for a review in personal, interpersonal and professional relationships to enable workplaces to be lighter, pleasurable, instigating and provide satisfaction to workers in all their aspects of needs, whether they're psycho-emotional, spirituality and handling in financial management.

In psycho-emotional aspects, we need an understanding of patience, resilience, gratitude, compassion, solidarity and an understanding of the resources ending.

We need to focus on serious work on sustainability in all its aspects, be it environmental sustainability, economic sustainability and, even more, humanitarian sustainability.

In the aspects of spirituality we need belief, whether in ourselves, in others, in life, in the universe or in a greater being who rules the unknown aspects of universal history.

In the aspects of finance we must work the collaborative economy, save resources for non-stagnation of work and rule our personal finances so as not to enter a state of exhaustion, seeking more and more hours of work to meet our needs.

5 - CONCLUSION

The world needs citizens compromised to ethics, honesty, commitment and an expert eye in taking care of themselves, caring for others, caring for our own, caring for the community, our agricultural, energy, water reserves, and any and all resources needed to keep our best purpose, which is to properly use our work to enable future generations to ensure it.

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chapter 4

Gratitude

by **Lorena Ibiapina Mendes de Carvalho**

“Gratitude is not only the greatest of virtues, but the parent of all others.”

–Cicero

(roman philosopher - 106 BC - 43 BC)

INTRODUCTION

“Let us rise up and be thankful, for if we didn't learn a lot at least we learned a little, and if we didn't learn a little, at least we didn't get sick, and if we got sick, at least we didn't die; so, let us all be thankful” (Siddhartha Gautama, the Buddha, which means “the shining”).¹ Siddhartha’s example, who abandoned a prince's life to understand the pain and suffering of the other, and to experience mindfulness of the present as a path to serenity and happiness, inspires gratitude on us.¹ Gratitude tightens bonds, makes us feel good, and leads us to do good. It has the power to heal, enlighten and change lives.²

Studies relate gratitude to empathy, forgiveness, and a willingness to help others. Grateful people show appreciation for their lives, they’re loving, they’re able to forgive, and feel happy and motivated. On the other hand, they’re seen as optimistic, expansive, enthusiastic and trustworthy.²

The goals of this chapter are to understand the concept of gratitude, its basis in neuroscience, how to overcome obstacles and seek ways to live it.

WHAT’S GRATITUDE AND WHY IT MATTERS

Gratitude is recognizing that we’ve received something valuable from someone, that is, we understand that other people have done something for us that we wouldn’t be able to accomplish alone. We claim, then, that good exists, and we recognize that the source of that good is out of us.³

Gratitude involves a **giver** who offers a **gift**, or **donation**, to a receiver (Image 1). It’s necessary, however, for the giver to have the surrender intention, selfless and usually with some personal sacrifice, in order to bestow something valuable to the other person. Whoever receives the gift recognizes it as something good and freely given.⁴

In this way, gratitude relates to three aspects of the mind: **cognition** (we recognize the benefit), **will** (we accept the benefit), and **emotion** (we emotionally appreciate both the gift and the giver). The **present** term is important because it refers to the undeserved benefit, not linked to debt or merit. When grateful, we understand that the gift received was given out of compassion, generosity or love. Gratitude allows a person to feel good and do good.⁴

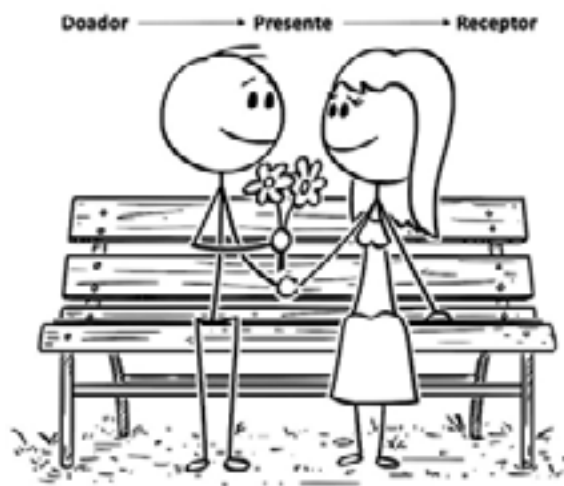


Image 1 – Key elements of gratitude: giver, gift and receiver. Source: Image got on the website www.alamy.com. 30 April 2022 Image ID - W4FFAY.

In a pioneering experimental study on gratitude, Emmons and collaborators performed an intervention with a **gratitude diary**. They divided two groups: one with individuals who wrote in a diary **5 things they were grateful for that day**, for 3 weeks, versus controls, who wrote neutral facts of the day. The **gratitude diary** group had **psychological benefits** (positive emotions); **physical** (in physical exercise and sleep); **interpersonal** (they felt more willing to help, connected, appreciated by peers, and less alone); and **spiritual** (more religious, giving, humble, and inclined to forgive). After 6 months, 50% voluntarily kept their diaries because they recognized these benefits.⁵

Other benefits were: depression improvement; blood pressure and heart rate; stress reduction and chronic pain.³

GRATITUDE: PERSONALITY, EMOTION AND LIFESTYLE

The famous quote is from the Roman philosopher Cicero: "gratitude is not only the greatest of virtues, but the parent of all others."¹ It's known that there are people who are grateful by nature. They're emotionally more resilient and have a more permanent sense of gratitude and less reliant on particular situations.⁶ But is gratitude a genetically inherited trait? Or is it possible to cultivate a gratitude behavior? Recent studies show that it's possible to learn to be grateful by making it a daily habit, a workout, and even a lifestyle.⁶

Gratitude can be considered an emotional experience with three levels:

personality, mood and emotion. The affective trait or personality is a stable predisposition that generates a certain emotional response (it's who I am: "I'm grateful"). But the mood, fluctuating, changes according to the days and situations. Emotions, in turn, are short-term reactions to specific events ("I feel grateful to receive this gift").⁶

On the other hand, it's comprehensive that being grateful isn't only an inherent individual feature, but a **positive mental state**. This generates a dynamic of **give and take**, and creates reciprocity and sets new bonds and relationships. Therefore, being grateful can be a choice, performed with some discipline, with attention to the moments and people around us and in what way they convey something good.

SCIENTIFIC BASES AND NEUROSCIENCE OF GRATITUDE

Thank you is one of the most spoken words in everyday life, and one of the first expressions taught by parents to their children. Indeed, gratitude seems to be instilled in our biological roots.

Studies in primates to assess reciprocity have shown that a chimpanzee is more likely to help another in a task, such as getting food, if he had received help before the same animal, regarding strangers.⁸ This **altruistic reciprocity** lies on the benefits exchange between two individuals over time, strengthening bonds between them and highlighting an evolving mechanism of gratitude. This is because mutual favors between animals generate benefits for both parties and increase the chances of both surviving. That is, help builds a bond and shows that gratitude is a pro-social behavior that connects and brings both animals and beings closer together.⁸

In addition, studies with functional magnetic resonance imaging have identified brain fields that become more active in the face of gratitude feeling. It would be like a **gratitude center**, which corresponds to the fields of the medial prefrontal cortex and anterior cingulate gyrus cortex (Image 2). Interestingly, these fields also relate to social interactions and positive reward reaction.⁹

Genetic studies are the future prospects for the neurobiological study of

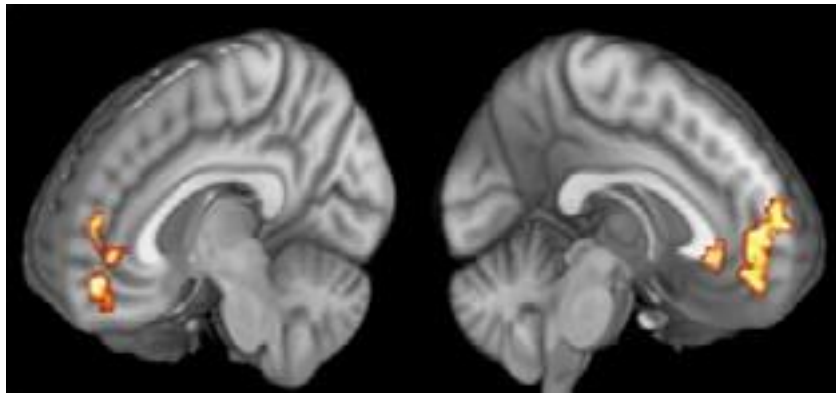


Image 2 - Medial prefrontal activity correlated with gratitude feelings. Source: Fox GR et al. Neural correlates of gratitude. Front Psychol. 2015. 30;6:1491

gratitude. In this context, a polymorphism in the gene of Catechol-O-Methyltransferase (COMT) has been studied, an enzyme that degrades **dopamine** and whose polymorphism correlated with negative features (less well-being, happiness, gratitude, forgiveness, and more stress and depression).¹⁰ Polymorphisms in oxytocin genes, in studies with couples, also showed greater satisfaction of the couple, solid bonds of love and gratitude, and positive perception of the partner's attitudes.¹¹



Image 3 - In the negativity bias, there's a distorted perception of the lived experience and obstacle to gratitude. Source: image got on the website www.alamy.com. 30 April 2022 Image ID - RA7KEW.

OBSTACLES TO GRATITUDE AND HOW TO GET OVER THEM

These are obstacles to gratitude: conflicting emotions, difficulty or inability to accept a gift or receive something from someone, the negativity bias, the sense of entitlement and worthiness, narcissism, and the deep suffering state (such as **grief**).³

Gratitude can generate **conflicting emotions**, such as debt sense or

obligation to the benefactor. To deal with it, it's advisable to: focus more on others than on yourself, practice gratitude consciously, do something for others with no expectations, and open yourself to the joy of giving and receiving.⁶

There may also be distorted perception of a particular experience, which would normally generate gratitude and well-being, but it's interpreted by the brain as negative: the **negativity bias** (Image 3). Then, a vicious cycle of stress, negative memory, anxiety, and anticipation occurs. It's advisable: try to see the good, change to an optimistic perspective and open yourself to new experiences.

Another case is the **entitlement and worthiness sense**, in which the person sees himself too much, in narcissistic behavior. With this, the person has difficulty seeing that others can give him something altruistically, instead of always relating what's received with suspicion and debt feeling. Overcoming this obstacle involves just seeing the other, observing and recording key moments of the personal life journey, since no one gets anything alone. Therefore, we can't be grateful to ourselves.

LIVING GRATITUDE

Ways of living and practicing gratitude, according to Positive Psychology:^{2,4}

1. Let go of negative thoughts before bed, replacing them with positive facts that happened. Write something you were grateful for that day (gratitude diary);

2. Focus less on yourself and more on the other.

3. Focus your attention on something you've received from someone.

4. Practice self-knowledge and connection with your own emotions.

5. Don't compare yourself to others. Making comparisons creates insecurity, sadness, and anxiety. It's better to think about what your life would be like without something or someone specific, creating an absence. Thus, you can value and see the good in what you have;

6. Don't be jealous or try to live a life that's not your own;

7. Don't isolate yourself from people;

8. Get close to someone you like, say how grateful you are, and specify what good that person has brought you. Make physical contact, hug the person, touch the person, if that's possible

9. Think of someone important. What did I get from this person?

What did I give to this person? How could I have caused difficulty for this person? These questions are Naikan's basis, a meditative practice of Buddhism developed in Japan, by Yoshimoto Ishin. This reflective practice takes attention away from yourself and puts it on the other, setting a sense of gratitude for what the other has done, even with the difficulties I may have caused to the person;

10. Celebrate achievements and good things. Think of 3 good things that happened to you yesterday. Why did you feel good? How much did they make you feel grateful? Did you mention it to anyone?

11. Our language reflects our thoughts. Grateful people often use words such as "gift, donate, blessing, blessed, abundance;"

12. Even if **bad things or facts** happen, they can have positive consequences, for which we can be grateful. What kind of things do you feel you could be more grateful for in your life? What are your strengths and how have you grown with this experience? How has this event made you better to face challenges in the future? Have you benefited in any way from this bad experience? How has it helped you see your life from another perspective?

13. Exploit gratitude in spirituality and religion. They're intrinsically related and people with higher scores on gratitude quizzes are also more religious and attribute their thanks to God. For these people, there's a relationship of feeling grateful for everything, for everything is from God, life itself being a gift;

14. The 3 Pillars of Gratitude: Joy (seek the good), blessing (receive the good) and love (return the good, be mutual).

CONCLUSION

Gratitude is, first of all, a choice. A choice to see the good, even in hard times, and be linked to others, recognizing all the good they've done to you. Focusing attention on the other and less on yourself helps to connect us and set true bonds. Thus, it's always possible to be and feel grateful, in order to live fully, never alone. Besides being a virtue and a lifestyle, it's a path to happiness."

"it's always possible to be grateful, and to feel grateful, in order to live fully, never alone. Besides being a virtue and a way of life, it's a path to happiness."

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chapter 5

Do you practice forgiveness?

by **Claudia Mentzingen Rodrigues Perrotta Cavaliere**

“If you want to be happy
for a moment, take
revenge. If you want to be
happy all your life, offer
forgiveness.”

- **Tertullian**

*Some questions may arise when it comes to forgiveness.
Is forgiving the same as justifying the attack?
Is forgiving to apologize?
Is forgiving to accept?
Is forgiving to have mercy?
Does forgiving require reconciliation?
Is forgiving to be indifferent to the fact?
Is everything forgivable?
And more...What's the purpose of forgiveness?*

CONCEPT

Forgiveness is one of the subjects that make up Positive Psychology, a scientific movement within traditional psychology started by Dr. Martin Seligman in the 90s, focusing on the enhancement of positive emotions avoiding or minimizing illness, since treating the disease decreases unhappiness but doesn't imply a happiness increase¹.

Within etymology, the word Forgiveness comes from the Latin PERDONARE, in which PER is total and whole and DONARE is to donate, so, PERDONARE is to donate oneself whole, first of all to ourselves, and not to others.

According to Helder Kamei, forgiveness is the release of negative emotions.

So when we brood over anger and bitterness for answers and revenge, we channel our energy into negative emotions.

The duality of forgiving or not, and how much we remain trapped in bad feelings, suffering, anguishing and eating us up represent obstacles for life to flow in all aspects with excellence, lightness and peace².

There's evidence that people with greater capacity to forgive are more likely to build and keep good relationships (the number one predictor of healthy longevity), that is, the quality time we spend in full, in the moment, with people we want well and who want us as well, be spouses, family and friends.

On the contrary, loneliness has been shown to be toxic, deteriorating our health as a whole.

These claims are made by Dr. Robert Waldinger, professor of psychiatry at Harvard Medical School and fourth director of the largest and longest study to date on human development, and what gives long-term happiness.³

Forgiving or not is a personal choice, a process, a training and an autonomy of feelings without victimization, since Forgiveness is one of the 24 character strengths within Positive Psychology⁴.

A word so simple and at the same time so complex, inserted in our daily lives and related to the surrender and conscious liberation of something that primarily consumes us.

Because of this, there's no agreement if everything can be forgiven, because it depends on each one of us to reframe the fact.

CONDITIONS FOR FORGIVENESS TO HAPPEN

Forgiving is not a synonym of denial, oblivion, indifference, agreement, justification, acceptance, justice surrender, or a religious experience.

Let alone reconciliation with the attacker (coexistence) and the presence of positive affection for him.

What's mandatory for Forgiveness to happen is the remembrance of the unpleasant situation without the negative emotions.

There can be Forgiveness with reconciliation, this being the best situation, there can be Forgiveness without reconciliation, there can be neither Forgiveness nor reconciliation, and there can be reconciliation without Forgiveness, this being the most deleterious situation because it implies the suffering perpetuation.

FORGIVENESS AS A SCIENCE AND ITS RESEARCHERS

More than powerful, over time Forgiveness has become a Science.

And since 90s, when an american investor and philanthropist named John Templeton fostered the first observations, many scientists and researchers around the world have studied this feeling, with increasingly robust and expressive data.

In 1997, the Templeton Foundation launched the "Campaign for Forgiveness Research," encouraging and funding those interested in taking Forgiveness out of the religious fold by conferring a severe scientific protocol to determine the effects of Forgiveness on the body and mind.

There were four main researchers, with different definitions and points of view.

- **Robert Enright**, american psychologist and pioneer, created a scientifically validated forgiveness program, and in 1994 founded the International Institute of Forgiveness.

He argues that forgiving is a moral attitude and a personal decision, in which a person chooses to free himself from hurt, resentment, judgment and negative emotions, replacing them with positive affections such as compassion and mercy⁵.

•**Michael McCullough**, another american psychologist, brought up questions such as retaliation, revenge, reparation, punishment, justice, and how all this impacts happiness.

He argues the reflection of forgiveness in prosocial motivation, that is, how forgiving increases the chance of positive behaviors regarding others, and again here the replacement of negative emotions by positive ones.

According to him, there are two different behaviors when we suffer an attack: revenge and avoidance. Forgiveness relieves any of them, since the Forgiveness instinct is as intrinsic to human nature as the desire for revenge. Each one chooses which path to follow, as it's a freewill⁶.

•**Everett Worthington**, leader of the Forgiveness Research Campaign also an american psychologist, he was one of the first to create therapeutic tools for forgiveness, arranging the "Forgiveness Manual".

In his conception, there are only two types of Forgiveness: the cognitive (faster, a deliberate and rational decision to forgive), and the emotional (slower, a substitution of negative emotions for positive ones), both being beneficial⁷.

•**Fred Luskin**, director of the Stanford University Forgiveness Project, one of the largest practical research and training projects for Forgiveness ever undertaken to date.

According to his reports, there are three basic components responsible for creating a lasting hurt: thinking the attack is personal, blaming another person for their feeling, and telling the hurting story repeatedly in the victim role⁸.

FORGIVENESS AND NEUROSCIENCE

Inevitably all of this has repercussions on the brain.

The limbic system plays an important role in emotional forgiveness, and the neocortex is related to cognitive forgiveness.

It's known that prefrontal cortex is activated when practicing Forgiveness, promoting states of empathy, relief, well-being and better quality of life, besides the impact on other positive effects - such as sleep.

The involvement of the insular cortex in some functions related to Forgiveness and anger is also already described.

BENEFITS OF FORGIVENESS

Countless scientific data are available on the main physical and mental benefits of Forgiveness, as well as its correlation to longer life expectancy.

In 2001, British researchers Peter Woodruff and Tom Farrow captured, through Nuclear Magnetic Resonance, neuroimaging suggesting that the fields of the brain associated with Forgiveness are deeper in the emotional centers of the limbic system than in the fields of the cortex associated with rational judgments, and that forgiving others is neurophysiologically distinct from having empathy for the attacker because it activates other fields⁹.

American psychologist Charlotte vanOyen Witvliet conducted another laboratory study monitoring patients' body physiology (such as blood pressure, heart rate, facial muscle tension, and sweat gland activity) while these same patients were subjected to memories of attacks.

She observed that when resentment was recalled, there was an activation of the sympathetic nervous system, with secretion of high doses of cortisol and increased blood pressure, heart rate and sweating.

Similarly, when patients were asked to empathize with the attackers, physiological arousal decreased, showing that the main feeling involved in Forgiveness is resentment.

In other words, echoing resentment is a toxic stress, because it keeps us in a negative emotional state of anger, sadness, anxiety, and less control.

Brazilian psychoanalyst Suzana Avezum analyzed 130 patients between December 2016 and December 2018, concluding that, among those analyzed, the group that suffered Acute Myocardial Infarction (AMI) showed a greater tendency to not forgive hurts suffered during life¹¹.

HOW TO MEASURE FORGIVENESS

Scientifically, objective criteria are made within the subjectivity for the Forgiveness metric, with four most used main scales as tools for measuring Forgiveness¹².

CONDITIONS FOR FORGIVENESS

Some of the most relevant hierarchies for Forgiveness to happen are: the attacker suffers the same intensity pain as he caused, when the victim is rewarded, social pressure from friends and family to forgive, when the victim follows moral and religious beliefs, harmony in shattered or undone social relationships restoration, and unconditional forgiveness.

DIRECTIONS TO FORGIVENESS

Based on Jack Kornfield, co-founder of the Insight Meditation Society, Forgiveness has a few key directions: ask forgiveness of those we hurt, forgive yourself, forgive others, and God's transcendental forgiveness.

EMPATHY

An important ally in Forgiveness to the other and to oneself is empathy, the Forgiveness basis, compassion and altruism. From the Greek pathos = pain, suffering.

According to Theresa Wiseman, American researcher, more than being within the other's suffering, empathy involves non-judgment, the recognition of the perspective and emotions of the other with understanding and not necessarily agreement, and the other's awareness about this recognition.

AND HOW DO WE FORGIVE?

Several names mentioned here have devised some powerful programs of interventions on how to forgive.

Besides, there are other tools that help in this process, such as mantras and meditations.

Certain practical and simple interventions are in the book "The Science of Happiness", written in 2007 by Monk Sonja¹³.

The act of forgiving is a possible challenge, considering that Forgiveness is a power that is given to us and cannot be taken away by anyone.

It helps to keep in mind that if we can't change a circumstance in life that somehow hurt us, we need to give it another meaning, reframing that circumstance.

"If you want to be happy for a moment, take revenge.

If you want to be happy all your life, offer forgiveness."

- Tertullian

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chapter 6

Resilience

by **Liana Maria Tôrres de Araújo Azi**

“It is not the strongest or the most intelligent who will survive but those who can best manage change.”

- **Leon C. Megginson**, 1963

RESILIENCE'S MEANING

Resilience is the physical property that some materials possess of absorbing energy when subjected to a stress, and returning to their original form without breaking up.¹ To exemplify the concept, think of a pole vault competition. During the jump, the stick is bent until it almost breaks, but it can return to its previous configuration. It deforms in such a way that the potential energy accumulated in the movement converts into kinetic energy that propels the athlete to heights that would be impossible to reach otherwise. The greater the gain in potential energy, the greater the probability of the jump height.

At the beginning of this century, sticks were made of bamboo, a material that, despite its apparent fragility, is as durable as concrete. Symbolically it represents patience, determination, serenity and origin. It bends in strong winds but it doesn't break (resilience). Much of their resistance comes from their roots, deep and huddled, which take years to form, until some bamboo appears. The height it has up, it also has down. Another lesson to be learned from bamboo is cooperation. It's hardly isolated. Before it even grows, it allows others to be born from their crowded roots, building a collectivity. When cutting a bamboo tree it's hard to tear it from the bamboo grove, such is the entangle between them.

GOING BEYOND THE WORD RESILIENCE

For psychology, a resilient person is one who shows the ability to return to their usual state of health (physical and mental) after going through an adverse circumstance. Faced with critical situations, people can manifest many types of behavior, including regressing to the most primitive ways. The most resilient seek to understand the problem and move resources to overcome it, which doesn't mean it's armored or without weaknesses. The least resilient demonstrate poor adaptability, becoming vulnerable and easily hurtful. These people, overly sensitive, would have little "deformation capacity," breaking apart when subjected to major stresses.²

But resilience doesn't just apply to the harsh trials that life ends up imposing on us. It's also shown in our reaction to small everyday events. For example, when you discover that you'll have to double a shift in the hospital because of the sickness of the colleague's son who was supposed to replace you, what's your reaction? The decision between cursing the child's fever, complaining to the coordination or just asking for a pizza to share with those who are arriving on shift are voluntary choices. They're influenced, of course,

by the circumstances in which they happened, but they're based on the ability to recognize that the fact was opposed to the desire, to accept it consciously and to devise strategies to resignify it. In this case, also, in the capacity of empathy for the colleague's suffering.

BUT WOULD IT BE POSSIBLE TO DEVELOP OR INCREASE MY RESILIENCE?

For Diane Coutu³, the three basis of resilient people are facing reality, searching for meaning and creativity.

In adverse times it's important to ask yourself, "Do I really understand the reality of this situation?" or "Do I accept this situation in the way it presents itself?" Going beyond anger and denial, it would be possible to recognize and confront negative reality and understand that it's only the beginning, not the end, that is, it'll always be possible to get around it and reach a new result. By facing reality head-on, we'll be able to assess the real dimension of the problem and prepare ourselves to act, becoming able to face it and survive it.

At the worst of times, many people wonder why the negative, sometimes even catastrophic, event happens "just to you." But it's important that the focus of energy isn't on questioning the reason whys or hunting down the guilty, but on seeking meaning in events. The voluntary decision to give new meaning to adversity is the main way in which the most resilient people manage to build bridges between the misfortunes of the past and the enigma that is the future. By making this choice, the human being makes the present manageable, taking away from it the feeling that it's unbearable. This way of thinking is reinforced by psychiatrist Viktor Frankl who, after surviving for years in the Auschwitz concentration camp, created "meaning therapy," or logotherapy, a humanistic psychotherapeutic technique that helps people make decisions that will create meaning in their lives. In his own words, "We must never forget that we may also find meaning in life even when confronted with a hopeless situation, when facing a fate that cannot be changed." Logotherapy finds a scientific and philosophical basis in the concrete existential analysis of each being, preparing him autonomously in the search for meaning, for a self-fulfilled life, self-responsible and, above all, human life. For Frankl, the "will to meaning" is the driving force of every human being and, he cannot perceive it in his life, he'll experience the abysmal feeling of emptiness. Frustration from emptiness can lead to depressive, aggressive behaviors, addictive tendencies, and suicidal ideations.⁴ This theory, created by Frankl, is the basis of most

resilience training in the negotiation field.

But finding personal meaning is a challenging task. It involves detecting our own value system, which are a set of ethical and moral principles that guide our behavior, actions and character, tending to change little over the years. In times of crisis, they would be the foundation to support and shape our decisions. This meaning is individual and will help to find the “fiber” needed to overcome calamity. It's about discovering (or rediscovering) the joy within yourself, the search for the spirit that lifts you up and pushes you further. For Martin Seligman in the paper “Building Resilience,” published in the Harvard Business Review,⁵ one of the secrets of resilience is talking to yourself: offering yourself a cognitive intervention to counteract each defeatist thought with an optimistic attitude, replacing dark ideas with positive views. Also for Coutu³ there are two ways to become more resilient, one is to talk to yourself and the other is to educate your brain, that is, resilience could be trained to be better developed.

Finally, creativity is intrinsically linked to our imagination and our aptitudes. Looking at adversity with creativity will make you look for tactics to get out of that situation. Our ability to think and previous experiences will lead us to alternatives and strategies that can be used in the specific case.

When Steve Jobs was fired from Apple in 1985, friends thought he would commit suicide. But just a week later, he went camping in Italy, thinking about his future. After a time of reflection, and already back in California (with renewed passion and ambition), he founded NeXT, purchased by Apple for \$400 million. At this point, Jobs returned to Apple and created products such as iPhone and iMac. This Jobs’ rediscovery comes from an internal enthusiasm, from the search to reinvent oneself, reframing events and finding new paths to recovery. Obviously, no one needs to go camping under the stars of Tuscany to find a new meaning for negative episodes, but self-knowledge and this time for reflection (including for the “grief” of that event, plan or business) is essential to find a new mission, a new purpose.

The time for reflection and rest of the mind is also essential for inner strengthening. The key to resilience is, after exhausting work, to stop, rest, recover, and try again.² Lack of pause impairs our homeostasis, and when there’s a body misalignment due to overwork, too much time and resources are spent to return to balance. Strategic stops are essential to promote internal and external recovery.³

Friedrich Nietzsche said, “That which does not kill us makes us stronger.”

Currently, this phrase fits the concept of post-traumatic strengthening (in contrast to the known post-traumatic stress), that is, negative situations would tend, in the medium/long term, to forge stronger people. But resilience isn't always about leaving a negative situation unscathed, but about articulating ways to deal with this adversity efficiently, leaving, sometimes even stronger. No one can always be well. We can often be vulnerable, in the face of a certain situation or for certain periods, but we cannot remain trapped in frustration, terror or grief. Our brain can use a bad event as a way of learning and self-knowledge, adding this experience to the upper reaches of previous experiences.^{2,3}

Neural circuits involving resilience encompass the limbic system and prefrontal cortex. Affliction causes increased activity on the right side of the prefrontal area, while stimulation on the left side of the prefrontal cortex brings to a point of full energy and focus. The left side represents positive feelings, enthusiasm and humor and the right fear and distress. Each individual has a level of activity on each side, tending the daily mood between anguish and liberation. The neural key to resilience lies in this balance, and the amygdala is largely responsible for the circuits catching, to one side or the other.²).

WOULD RESILIENCE, THEN, BE THE RESULT OF AN OPTIMISTIC NATURE?

Optimism is defined as willingness to see events from the most positive perspective, expecting favorable evolution/solution, even in difficult situations. In the field of Positive Psychology, Martin Seligman says that optimism is the ability to develop positive perceptions from negative happenings.

"Positive thinking is important, but only hope is not enough to create events. Besides hope, good mood and excitement, attitude and proactivity are essentials. We must act."

So, how does it differ from resilience? Keep believing, even when control isn't in our hands, is, for some, an important part of resilience. However, optimism is passive, a belief that everything will work out. In a shipwreck, sailors may remain optimistic, believing that they will be rescued, or devise strategies so that they can have shelter and supplies during the uncertain time

that is seen. Positive thinking is important, but only hope is not enough to create events. Besides hope, good mood and excitement, attitude and proactivity are essentials. We must act.

A FEW EXAMPLES

In 1980, after a devastating defeat for Ronald Reagan, former U.S. President Jimmy Carter was psychologically and emotionally devastated. In his words: "I came back exhausted to Georgia, slept almost 24 hours and woke up to a new, unwanted and potentially empty life." He had to overcome the humiliation of defeat and the feeling of frustration. Over time, he realized that his activism in the defense of human rights had earned him a global role and created the Carter Center, a non-governmental organization that helps people in conflict situations in more than 80 countries. In 2002, he was awarded the Nobel Peace Prize.

A touching example of resilience is that of the Hönscheid family, described in the book *Resilience (Secret of Psychic Resistance)*.² They were little Denis' parents, who had a brain tumor who died a few months after inadvertent administration of intravenous potassium 80 mL, instead of the prescribed 3mL. After an initial period of anger and sadness, mother Ute Hönscheid describes it: "We decided the grief time had passed." The family decided, together and voluntarily, that they would consciously focus only on the beautiful things in life, and after some time, the good feeling of living got back, according to them: "This is how we were able to stand up." She recounts that she had also forgiven the nurse: "Nurses, doctors and teachers have helped us so many times, and we're infinitely grateful for it." Half of the amount received in the process was donated to the clinic where everything had happened: "It's important to reconcile – with people, with fate," said the mother.

RESILIENCE FOR LIFE

There's deep resilience with the other topics of this book.

Self-knowledge, self-compassion, gratitude, forgiveness and physical, financial and spiritual self-care are tools for people to better cope with critical situations. But being resilient isn't just about enduring failure well, it's about learning from "heartbreak" and developing or creating ways to face it (or avoid it), seeking options that lead to a new path. In movies, an example of resilience is seen in Rocky Balboa's character. In the 2006 movie, he tells his son, "You, me, or nobody is gonna hit as hard as life. But it ain't about how

hard you hit. It's about how hard you can get hit and keep movin' forward. How much you can take and keep movin' forward. That's how winnin' is done. Now, if you know what you're worth, get what you're worth! But you gotta be willin' to take the hits. And not pointin' fingers, sayin' you ain't where you wanna be because of him or her or anybody. Cowards do that. And that ain't you. You're better than that!"

Take care of yourself, recognize your worth, don't blame it on others and focus on alternatives that can lead to a new path, surrounding yourself with those who can help you, if possible. Find your purpose. "Getting hit" by life is unavoidable! But resilience is what will discern between succumbing to the knockout or turning misfortunes into energy to chase victory in the next round. Resilience is the path to triumph.

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chapter 7

Happiness

by **Emily Santos Montarroyos**

“There is no way to
happiness, happiness is
the way.”

-Thich Nhat Hanh

What's happiness? Is happiness a choice? Is it possible to build a happy life? What does it take to be happy? By trying to clear up the topic, I bring scientific progress related to what really positively impacts the meaning of happiness for each of us.

The search for understanding happiness – and all aspects surrounding its definition subjectivity – for a long time has been the target of philosophers, theologians, psychologists, spiritual leaders, many researchers and, more recently, economists. Happiness it's part

"Happiness is a choice. Choose to be happy. Strive yourself, get over yourself, but allow yourself to fail and start over as many times as needed. Allow yourself to rediscover infinitely, be yourself, but not always be the same, prioritize yourself, evolve and be able to be your best version, according to your values."

of the privileged objects of philosophical reflection, one of the most important and constant in the several phases of the world philosophical journey.¹

The earliest philosophical reference to happiness is believed to be a text fragment by Thales of Miletus, the first philosopher born in the city of Miletus, modern Turkey, who stated: "What man is happy? He who has a healthy body, a resourceful mind, and a docile nature." Socrates, Plato, Aristotle, Epicurus, Spinoza, Kant, Diderot, and Alain have made meaningful contributions to the pursuit of happiness, which have vigorously influenced researchers and scholars throughout human existence.¹

In the last 50 years, scientific productions generated from the development of neuroscience and Positive Psychology have lead to significant advances in the understanding of the happiness tools and how to obtain it. Then a renewed prevention science comes up, which promotes positive motivations, strengths and virtues in search of satisfaction, happiness and hope.²

It's not the focus of this chapter to define or limit happiness to a closed concept, but rather to incite reflection and awaken practical attitudes based on the development of Positive Psychology and the discoveries proven by neuroscience.

We can report several definitions of happiness and all of them involve many concurring aspects. Simply put, happiness is a state of a fully satisfied consciousness, a contentment, a sense of well-being and is more related to the

feeling of satisfied or gladdened that happens at certain times than as a consequence of explosive and vibrant joy generated by ephemeral pleasures. Happiness isn't unique, universal and constant, being happy is personal and non-transferable; the aspects that made happiness depend on age, gender, culture, region, vary throughout our life and the knowledge acquired, it's a personal experience in constant changing.³

Being happy involves many aspects, and while the pursuit of happiness is part of our essence, the desperate desire for happiness can be the primary unhappiness tool. It's in fully committing in every detail of our life, good or bad, that we find happiness, and not trying to go directly to seek it.^{1,4,5}

Each person has their own nature, which makes us unique. Being able to discover your own identity and the path that leads you to optimize your potential and contemplate your own truth are the essential tools for important social and personal changes in different contexts.^{5,6}

Happiness is therefore a state of well-being that encompasses living a good life, with a sense of meaning and deep contentment, being the protagonist of your life, being authentic in your choices and developing your positive emotions, virtues and personal strengths.^{2,6,7}

All complexity and individuality relevant to the path of well-being aren't a race to achieve goals and achieve happiness as a trophy, but rather a path trodden by self-knowledge and self-management to intensify the aspects that made happiness, respecting its authenticity through resources proven by science. Happiness is living your own values, it totally depends on the person who lives it.^{2,6,7,8}

Some people are born with a greater ability to feel happy, they have a higher set point for happiness, a higher potential for well-being, they're naturally more inclined to see opportunities and beauty where others see flaws and dangers, they have the ability to cope well with difficulties and vulnerability, they believe in their own worth, and they're able to embrace life from a sense of self-love. These are called "Wholehearted People" by University of Houston professor and researcher Brené Brown, and they show common features related to cultivating authenticity; self-compassion; a flexible spirit; gratitude and joy; intuition and faith; creativity; leisure and rest; calmness and tranquility; relevant tasks; laughter, music and dance.^{9,10}

So, can our genes be what most influences happiness? Behavioral Geneticists and psychologists assign about 50% of happiness to genetics, 10%

to life circumstances, and 40% to personal choices. It's very important that even people who aren't born with a personality developed for the spontaneous sensation of happiness seek to commit to improving their happiness often, as this attitude can make a difference in their well-being, personal fulfillment and productivity.^{10,11,12,13}

The disclosure of evidence that happiness makes the person more productive leveraged the development of techniques of Positive Psychology applied in business activities, leader training and employee training. Employee happiness contributes to business performance by promoting work productivity, creativity, cooperation and the quality of the product and service provided.^{12,13}

Living a good, healthy and happy life are usual desires of human nature and there's a direct correlation between the benefits produced by happiness and our health, ending up in cardiovascular and endocrine stability, decreased stress and its harmful effects on health, immunity and longevity. The reverse is also true: when people take better care of themselves, they feel happier.¹⁴

Many neurotransmitters are involved in keeping the physical, mental and emotional health of our body and, biologically, we can relate their specific aspects to health and well-being, but the best thing about this feature is that through simple lifestyle choices we can improve our brain neuromodulation and enhance its positive effects on general well-being. Endocannabinoids, dopamine, oxytocin, endorphins, GABA (gamma-aminobutyric acid), serotonin and adrenaline are stimulated by regular physical activity; setting goals and achieving them; having physical contact with your partners, family, friends or pets; undergoing non-pharmacological therapies such as acupuncture; practicing meditation and yoga; keeping quality social relationships and practicing gratitude.^{14,15,16}

The Positive Psychology movement officially emerged in the United States in the late 90s from Martin Seligman's initiative and other researchers, through quantitative research aimed at promoting a shift in the focus of psychology focused only on the treatment of mental disorders and suffering. Widely disseminated among researchers and also in non-academic media, Positive Psychology fosters interventions and proposals to enhance positive emotion, commitment, meaning, positive relationships and personal fulfillment.^{2,8,17}

Positive psychology interventions are simple behaviors in which a person can commit to improve their own well-being and are essential to boost their health, well-being, and happiness. The most famous of these is the “gratitude exercise.” In this exercise, people are instructed to regularly write down “three things” for which they’re grateful for. The list will change from person to person and from time to time. The gratitude exercise proposes to increase individual happiness and protect people from the harmful depression effects.^{2, 8, 10, 16}

The Croatian psychologist Mihaly Csikszentmihalyi, one of the pioneers of Positive Psychology, proposes the Flow Theory, based on the achievement of happiness through the control of the inner life, that is, an optimal state of inner consciousness is achieved with mindfulness invested in realistic goals when skills match the opportunities for action in activities linked to what the individual most appreciates in life. It refers to a common mental state for a variety of people with different levels of education and culture, by performing their skills with extreme concentration and commitment, overcoming challenges proportional to their competencies in such a way that they lose awareness of themselves, they lose track of time, they become hypermotivated and only realize it when the flow passes. But they have been extremely committed and feel extraordinary. Flow is overcoming, it’s a sensation experienced a few times with a highly focused mental state, ending up in a good performance. It’s necessary to be aware of what’s happening while it’s happening, to face the challenges head on in the challenges, since it’s the challenges that keep us motivated, whether at home, in sport or at work.^{1,4}

Understanding the Pillars of Happiness and the possible interventions of Positive Psychology, as people strive to create a meaningful and joyful life, is critical to encouraging the development of certain behaviors essential to well-being, including acceptance, finding purpose, meaning, authenticity, optimism, gratitude, compassion, forgiveness, mindfulness, spirituality, religion, resilience, generosity, self-care, and financial planning. However, there’s no single formula for happiness. Don't make comparisons, making a significant positive impact on one's contentment and well-being is extremely personal. If you're not living up to your values, you won't be happy, no matter how dedicated you are; if some tool doesn't make sense to you, don't use it. Understand that even the smallest positivity discharges can provide substantial

gain and happiness throughout life. ^{7,8,9}

The most important variable for human happiness is the quality of social relationships. For Seligman, there are few positive things you can do on your own, and invariably, happy people are those who have quality relationships, who surround themselves with loved ones, who keep a healthy connection with family, friends, and good relationships at work. It's important to choose relationships that bring out the best in us, because when we experience positive emotions through our relationships, we provide opportunities for our own growth and that of others. ^{2,20}

Experiencing the benefit of happiness requires effort, commitment and practice; we can all develop the pursuit of positive feelings as well as the development of skills for a fulfilling life. Make a conscious effort, learning generates excellence and changes through repetition. According to Friedrich Nietzsche, one who has a reason to live can face almost any "how." Whoever finds meaning/purpose in his/her life is happier. Finding a purpose is belonging to and serving something that you think is bigger than you, it has the ability to change you and the world around you. It's not necessarily an extraordinary meaning of life, but rather seeking meaning in the smallest things, in daily tasks, ending up in greater motivation to accomplish them. The benefit of happiness also lies in the small, momentary glimpses of positivity we get every day of life. ^{18,20,21}

Meditation requires practice, but it's one of the most powerful interventions for achieving happiness. It's possible to change life through mindfulness and meditation. ²¹

Find something to look forward to; anticipating rewards in the future can trigger your brain's pleasure centers as much as the reward itself. Planning a trip is as good as every moment of the trip itself; enjoy the path, the stages, live more the present and your choices. It's important to enjoy the present while it's happening. ^{2,8}

Happiness is a balance, looking to the future and seeing goals and small targets, looking to the past and seeing achievements, overcoming, different experiences, is to look at our life in general and see meaning and purpose. Expand the positivity of your environment, stimulate your positive emotions, your affective memories, use photos, sounds, fragrances, sunlight and decorative items with personal meaning. Exercise one of your strengths, amplify personal strengths and virtues. ¹⁸ Exercise regularly – physical activity

isn't just an incredibly powerful mood enhancer as it also has long-lasting action. Walk, ride, run, play, stretch, jump rope, train at the gym, it doesn't matter, as long as you keep moving. Caring for health and having a purpose are drivers of happiness and longevity.^{10,14.}

Spend money, but not on "things." Contrary to the popular saying, money can indeed buy happiness, but only if it's used to do things and not simply to have things. Spending money on experiences, especially those involving other people, produces positive emotions that are both more meaningful and more lasting. Embrace conscious gestures of kindness, it doesn't have to be anything great, small gestures of kindness dedicated to family, friends, co-workers, acquaintances or strangers, practicing good helps you too. Work on friendship, trust, tenderness, support, loyalty, empathy.

I leave now the reflection and the challenge of seeking the real meaning of happiness for you and of perfecting your strengths in building a happy life.

Happiness is a choice. Choose to be happy. Strive yourself, get over yourself, but allow yourself to fail and start over as many times as needed. Allow yourself to rediscover infinitely, be yourself, but not always be the same, prioritize yourself, evolve and be able to be your best version, according to your values.

Ask yourself which frequent practices you know you could develop and haven't started yet. If by the time you're reading this chapter you don't know where to start, start by exploring the pleasurable effect that strengthening relationships and practicing gratitude will have on your well-being. By integrating these attitudes, which can increase and extend the happiness quota in your daily life, you'll not only begin to feel better, but you'll also find that your enhanced positivity improves your efficiency, motivation, productivity, well-being, and opens up opportunities for greater achievement.

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chapter 8

Self-Awareness

by **Claudio Arantes**

“Who looks outside,
dreams; who looks inside,
awakes.”

—**Carl Gustav Jung**

We all know, in part, what we like and dislike, our interests and what repulses us, as well as some traits of our personality and character. This knowledge takes place at varying levels. The difference between people is the depth and breadth with which each one knows each other, that is, how well we know who we are within ourselves and, hence, who we are in our relationship with the world.

The more we know our positive and negative aspects, strengths, deficiencies and limitations, the greater the chance of developing healthy self-love and greater personal well-being. Personal esteem fluctuates by many factors and its changes are always opportunities for self-assessment. The Rosenberg Self-Esteem Scale (RESS) is well validated and widely used because it's simple and practical. People with high self-esteem cultivate strategies that allow them to rebuild their sense of self-worth to a greater degree than those with low self-esteem¹.

There are two crucial questions: How much self-knowledge do we have? What's the coherence between who I believe I am and who I am, in fact, in my individual and social functioning? It's part of full health to have suitable self-esteem, balanced with a realistic view of the traits that can and should be improved.

Some scholars advocate that a highly positive view of oneself is an adaptive tool for dealing with stressful situations. Festinger², in the Theory of Social Comparison, claims that in the face of internal or external challenges, lacking objective measures of evaluation, we compare ourselves with other people. We set the self-concept by matching, acting and observing results.

Pairs of achievements, skills, and abilities are driven by the desire to improve. They're ascenders, if we can match up to someone who performs better than us. They can have positive results, encouraging the emulation of attitudes that lead to improvement, or negative, leading to discouragement, avoidance and procrastination of the goal. An adverse effect can be extreme competitiveness.

Comparing oneself to people with inferior results, diminishing the other or overreacting personal successes, downward comparisons, create false well-being. Many research lines study the topic and the determining biases of this favorable self-perception. There's special interest in evaluating the individuals behavior and teams in the corporate world³. High self-esteem allows you to cope better with difficulties, but the bias of self-promotion puts the person at risk for wrong perception of the actual capabilities, limits, and how much you

need to improve.⁴

Corcoran and colleagues⁵ report women with breast cancer who, when compared to others with a worse prognosis and/or poorly adjusted to the situation, felt more comfortable and safe. Although it generates less anxiety and depression, this comparison can also lead to a lower level of self-care and the denial of the real individual condition. Perceptions that are in agreement with the one the individual already has lead to self-assertion, and are a kind of validation. Disagreements can lead to reflection, indifference, rejection or intolerance.

What's the fidelity of self-knowledge since it's subject to so many biases? What are the best tools? Studies carried out in the corporate context are useful in trying to answer these and other related questions. In addition to utilitarianism, of the person as a gear that doesn't give problems in the social machine, self-knowledge is imperative if the individual wishes to seek the good for himself and for others. It also allows you to define more clearly the goals, objectives and purpose of life. The greatest knowledge to possess is of oneself.

Our tendencies of thoughts, words, mental routines and attitudes are key elements in defining who we are. We build ourselves through choices. The investigation of oneself allows one to assess what's positive and negative and what contents predominate. This inventory alone allows us to determine what to do with the substrate we possess and what to add to it.

Luft and Ingham⁶, in their Window of Johari, indicate that we have four selves, the open, the secret, the blind and the unknown. What's worth mentioning is that knowing these selves also depends on another human being. I can know my secret self and my open self. The other knows my open self and a self that's impossible for me to see because it's in a blind spot for me. It's his vision of who I am. The unknown self is ignored to the other and will only become knowable to me if I decide to exploit it. It brings, in itself, the idea that a person will live a lifetime evaluating themselves and may not come to know themselves fully.

Part of the difficulty is due to not being alert to what motivates us, failure to remember and benefit from past events, distortion of what happened and acting inconstantly. Another obstacle is to focus on the traits of others, more than on ourselves. Márquez⁷ states: "Human beings are not born once and for all on the day their mothers give birth to them, but ... life obliges them over and over again to give birth to themselves."

One of the initial triggers for self-knowledge is unsuitableness. The individual develops by performing a mental coming and going in which he weighs what it's proposed to be, what it's desirable to be and how it's indeed. When feeling unsuited towards others, the individual should re-evaluate their way of being in that context. You can reassert your self by trying to change external factors or walk away. The alternative is resigning yourself, changing your identity or using a new mask. unsuitableness can happen at any age and situation. The determining factors are diversified. It's important for the individual to evaluate and understand the causes of such feelings.

Self-knowledge can come from necessity. In relationships where hierarchy, economic power and adherence to rules predominate, compliance may be incomplete, but imperative depending on the goals and results to be achieved. At work, wage or experience may imply high-cost adaptation in other fields. The more interactions, the greater adaptability is expected and the greater the arsenal of skills when facing new situations.

The need allows exploiting strengths and weaknesses, fields of excellence and those that demand improvements, self-limiting and sabotaging beliefs and the values and principles that rule the way of thinking. The other's view, like a mirror, helps a lot to clarify about us. The image created of oneself, resulting from these interactions, the one that one tries to sell to the people with whom one interacts, will be more realistic and coherent the deeper and more honest the degree of search. The Self-Assessment Maintenance Model (SEMM)⁸, starts from two premises: a) the individual wishes to keep a positive evaluation of himself and b) this evaluation depends, to a greater or lesser extent, on measuring oneself through the performance of others. Three variables: the psychological other's closeness, the relative other's performance and the importance of this performance, for those who self-assess, set the response generated. The model proposes two processes: comparison, when the other's performance is seen as threatening and thus leads to negative changes in identity and interpersonal relationship such as envy, jealousy, depreciation and detachment. Reflection occurs when the other's performance brings positive consequences for oneself and for the relationship itself, such as admiration.

What sets if self-assessment will be driven by comparison or reflection is relevance. The higher and more significant the relative other's performance and the greater the psychological closeness, the greater the relevance in the comparison or reflection.

Although psychological closeness leads us to seek to be like those surrounding us, there's understanding that the differential is what makes us stand out regarding them. In this search, we move between many circles and increase the comparison processes or reflection. The range of lives and experiences obtained sets, as the person perceives himself, evaluates himself and is more aware of himself, his self-image.

Over time, the more distorted this image is, the more painful the internal dip will become. The greater the inconsistency between the projected personal image and the true self, the greater the social anxiety. The interactions become more difficult, complicated and traumatic because the mask to be used must be much more elaborate such the distance between the self and the persona. The greater the authenticity there's greater self-acceptance and less social anxiety. These tools can become vicious cycles leading to alienation or greater awareness of oneself.

We interact a lot to guide and educate. Looking at it from this perspective, self-knowledge can be understood as an objective and as a means. An aphorism as harsh as it is true is: "No one gives what he doesn't have." People who are afraid to delve into themselves will hardly point out such an experience to others, for we measure the world with our rules. If we're ashamed, insecure, or afraid of what we'll encounter, the journeys of self-awareness are likely to be guided more by necessity and unsuitableness. Those who practice a more usual inner look find undesirable affections, emotions and feelings, but learn to accept, coexist and work on their changes.

Self-care, integrating the mindfulness culture implies seeking to know oneself deeply. For full development, it's important to have practices aimed at integral health. It's necessary to cultivate proper physical health, mental, financial, emotional and spiritual health. It implies knowing and taking care consciously and fully of rest, food, work, physical activities, finances and the dedication of quality time for playful, spiritual and self-assessment activities.

Each person must know himself to the point of understanding his worldview, his reaction to life's events and his responsibility as a human being inserted in a social context. Some people may be highly fitted to themselves, but fail by extreme social misfit. Perceiving oneself must culminate in accepting oneself in what cannot and/or shouldn't be modified and changing oneself where it becomes necessary and/or desirable. More important than the utility to work well in the social environment is the ability to develop, as a human being, to levels of greater excellence. Superior to external validation,

from other people, is self-validation, satisfied to be who you are.

We can learn to seek in the arts, psychology, reading, reflective writing, meditation and therapy insights that lead us to the questions: Why did this person react like this? What if I was living it? What's good for me? What's bad for me? What's desirable to me? What values guide me? Why am I so sensitive in this field? What topics/subjects do I not like to address? In what fields of my life do I dislike people expressing opinions? For what reason does a certain person disgust me? What are my fears?

Self-knowledge is also a strategy. Changing shouldn't just happen out of necessity. It can be part of a plan to achieve a planned goal. I change to become who I want to be. The main aspects to be addressed in true and deep investigation are: the interest fields; self-concept; self-perception; the experiences and life history; the biases I have when interpreting facts, circumstances and people, and memory.

People with negative self-perception tend to look at themselves less because they depreciate seeing themselves. Regarding it, positive self-perception helps because the person tends to like what's seen. Problem arises from the self-love overkill, when the person enjoy himself so much that he doesn't understand that changes are needed.

We don't usually identify our limiting beliefs and our self-sabotaging attitudes. This is a field where the help of a good professional is needed. And it's not just identifying it. We need help to implement new beliefs and attitudes that are more suitable and therefore more functional and more consistent with our individuality⁹.

Mastery, domination, and the pleasure of conquest lead the human being to further explore the external universe, whether through a craft, a capacity or an art. The inner universe is less explored, both by fear of what can be found in the shadow, and by the realization of the Homeric difficulty of mastering some vices, personality traits, and character flaws.

Who we are isn't just about the family name. It's not expressed by the monetary amount we claim to have, nor by the commitment and effort to obtain it. It's not featured by body shape, the results we deliver or the titles, diplomas, positions and achievements. We're not our past, we're not just our successes, much less our failures. These elements influence our identity within its limits and functions. We all know this, but we persist in trying to define ourselves through these references, incomplete in themselves. They say much more about where our focus is than exactly who we are.

Self-knowledge implies effort and dedication, as does every skill to be developed. And requires time. In some cases a considerable amount of time, which competes with everyday life demands. You need breaks to evaluate and get to know yourself. Momentary, when insight is directly related to a situation. Daily, weekly, periodic, cyclical, depending on the stages of life we go through and occasional, when a greater event happens to us.

By assessing personality traits and character, we can identify personal functioning or how we deal with ourselves. Balance in this system allows you to achieve inner peace. Understanding our social capacities and potentialities and our weaknesses in this field allows us to know about our social system, or how we work in relationships with other human beings. In this respect I come to know myself in terms of collectivity, my civism and my civility.

Finally, one of the most important aspects of self-knowledge, as an element of mindfulness and self-care, concerns transpersonal capacities, when the individual seeks to understand their functioning in the face of suffering, pain, death, transcendental issues and spirituality. It's when the person understands himself before the intangible and the broader existential context. In them lie the possibilities of homeostasis, of achieving emotional balance and the healing capacity. In this sphere the person finds what regenerates him and reframes the not-so-good experiences, but that we all go through.

By carefully and honestly evaluating motives, reasons, biases, hopes, and longings we can set what story we want to tell and the degree of coherence with the story we tell. Knowing ourselves will set the way we'll be

"Knowing ourselves will set the way we'll be remembered, especially by those we love."

remembered, especially by those we love. Self-knowledge allows us to understand that we cannot change what was and our past reactions, but we can choose to be different people, both by acceptance and change.

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chapter 9

Self-compassion

by **Edilma Maria Lima Dórea**

“You yourself, as much as anybody in the entire universe deserve your love and affection.”

- **Buddha**

"If you want others to be happy, practice compassion. If you want to be happy, practice compassion."

Tenzin Gyatso, XIV Dalai Lama, in *"Meditations for Living In Balance: Daily Solutions for People Who Do Too Much"* (2000)

Research in prosocial psychology, which includes altruism exploitations, morality and ethics, empathy and compassion, has seen a major breakthrough over the past 30 years¹.

The study of the evolutionary origins of care and cognitive skills explains the emergence of human compassion, whose dominant basis evolved from the care of mammals with their offspring^{1,2}.

Evolution ensured that mammals could protect their offspring from the threats of nature, we realize this when we assess that the emotion of caring (giving and receiving) is innate, and without it our species wouldn't survive. Compassionate care received during early life affects epigenetic development, a number of physiological and neurophysiological systems, such as the immune system, brain development, and many psychological processes, including emotional regulation and self-confidence^{1,2}.

As the Bible says, "Man shall not live by bread alone." While some see compassion linked to an emotional or affective state, others ground compassion in an evolved social motivation and mindset^{1,2}.

Reasons are different from emotions, because they're in the mind, active or not, and can guide conscious and unconscious processes. Without a reason, emotions couldn't be triggered. What triggers the reason for compassion are the encouragement associated with distress and suffering, but the emotions associated with care and compassion are complex and context-dependent¹.

Compassion can also lead us to seek ways to act compassionately in the world connected to our identity. What unites all these examples is the involvement with anguish and suffering and the desire to relieve and prevent them¹.

Human compassion is not only an automatic response to suffering, a desire to be useful, but it involves a discernment, a process of reasoning about what is best to do. Human compassion, therefore, involves motivation¹.

Health professionals are a population at risk for high levels of burnout and compassion fatigue, and are aware not only of the potential for this risk, but also of the need to seek help to cope with a demanding environment³.

Heavy workloads, lack of recognition for achievements and social disconnection of the team are possible factors responsible for burnout and, through this logic, we can lead to a question: what's science anyway? Who takes care of the humans who do the science?

It was suggested the need to decrease the hours for formal care to the patient, as well as informal caregivers. However, these professionals weren't tired of being compassionate (compassion fatigue), but rather tired of having to overcome organizational barriers to be compassionate; that is, of not being able to take care of as they'd like. In this sense, MBSR (Mindfulness-Based Stress Reduction), mindfulness-related interventions and compassion can prevent exhaustion of health professionals and promote their lasting compassion and care³.

"Heavy workloads, lack of recognition for achievements and social disconnection of the team are possible factors responsible for burnout and, through this logic, we can lead to a question: what's science anyway? Who takes care of the humans who do science?"

WHAT'S SELF-COMPASSION?

Self-compassion is defined as "being open and moved by your own suffering, experiencing feelings of kindness and

goodness to yourself, having a sympathetic and non-judgmental attitude toward your unsuitableness and failures, and recognizing that his experience is part of the ordinary human experience."³

It's a practice in which we learn to be a good friend to ourselves when we need it most – we become an internal ally rather than an internal enemy, but we usually don't treat ourselves as well as we treat our friends⁴.

Although this understanding is a simple way of thinking about self-compassion, the fullest definition involves three essential elements we mobilize when we're suffering: self-kindness, shared humanity, and mindfulness⁴.

SELF-KINDNESS

It's when we allow ourselves to be as loving to ourselves as we're to others. Instead of being harshly critical when we notice personal flaws, we're

supportive and encouraging and aim to protect ourselves from harm. Instead of attacking and berating ourselves for being inappropriate, we offer ourselves cordiality and unconditional acceptance. Similarly, when external circumstances in life are challenging and seem too hard to endure, we actively calm down and comfort ourselves⁴.

SHARED HUMANITY

A sense of interconnectedness is essential for self-compassion. It's recognizing that all humans are a work in progress with failures; that all fail, make mistakes and experience difficulties in life. Self-compassion highlights the inevitable fact that life involves suffering for all without exception. However, not only do we suffer, but we also feel isolated, alone in our suffering. But when we remember that pain is part of the shared human experience, each moment of suffering is transformed into a moment of connection with others. The pain I feel in difficult times is the same as the pain you feel in difficult times. The circumstances are different, the degree of pain is different, but the basic experience of human suffering is the same⁴.

MINDFULNESS

Why is mindfulness an important component of self-compassion? Because we need to recognize and experience our pain for the time needed to answer with love and kindness. At the same time, it prevents us from being imprisoned and destroyed by our aversive reactions. Rumination narrows our focus, overstates our experience. "Not only have I failed, I'm a failure. Not only am I disappointed, my life is disappointing."⁴

Many researches show that mindfulness-based interventions (MBIs) set meaningful benefits in both clinical and non-clinical samples. On the one hand, MBIs appear to increase levels of consciousness, strategies for coping with stressful situations, and managing emotions; on the other hand, they appear to reduce levels of perceived stress, anxiety, and depressive symptoms. Usually, MBIs have shown a significant correlation with positive improvements in the following fields: attention, cognition, behavior, and physiological processes, which are likely to influence an individual's functioning and quality of life³.

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chapter 10

Self-Care and the other

by **Claudio Arantes**

“If you want to go fast, go alone, if you want to go far, go together.”

- **African Proverb**

Building yourself is paradoxical. Although we're dependent on all those who preceded us, our parents, our family, and our social circle in a narrower and broader sense, we must focus our efforts and actions on behalf of ourselves. However much the parents care, at some point the child becomes an individual himself, and many protective ties will be severed like the cutting of a second umbilical cord. Every human being, to some extent, must live from himself and for himself. No one can be totally independent, and if they're totally dependent, there will surely be some disorder leading to this imbalance.

The point is that often, in an increasingly corporatized world, the pursuit of excellence leads us to focus excessively on ourselves. We're led early to overvalue our space, our resources, our talents and skills, our achievements, our time, our agenda and our personal ideals. Every person goes through this circumstantially. It's hard to pass a test if we don't focus on that event and what's needed for good performance. The flip side of this coin is that we'll consequently say no to many other things. An imbalance that modern life causes us is that what's to be circumstantial often becomes usual. Over time, the only things that interest me, and on which I concentrate my focus and energy, are those that concern me.

There are many needs in the world. There are physical or material needs, arising from hunger, poverty, diseases, addictions, unemployment, violence and natural events that severely affect the lives of many people. And there are those immaterial ones like ignorance, corruption, loneliness, lack of perspective, relationship conflicts, disappointments, existential emptiness, character flaws, and all sorts of emotional problems. Each human being has a wide spectrum of potentialities and also a range of needs. And those people are ourselves, and everyone else around us.

The current social tools, which lead to hyperconsumptionism, proclaiming an idea of success hyperfocused on material achievements, academic and own space, demand that each person focus on himself in an individualistic way and try to conquer as much as he can or go as far as possible in his ventures. With globalization and social media, every person has the world in their hands and potentially the whole world at their feet. And every human being can dream of it. Getting to the top isn't easy. A lot of things have to be left along the way. And unfortunately, due to individualism and competitiveness, one of the features we left is the love for the other. The slogan "You must love yourself first, then love others", becomes distorted into exclusive self-love.

Helping others is part of self-care and mindfulness as intensely and as needed as any of the other care suggested in this book. By taking care of others, you're taking care of yourself. For example, in the field of non-technical skills that a professional must have we find the needs to know how to communicate well, knowing how to work in team and to keep control in stressful situations, among others. Good communication not only depends on me, in the sense that I know the subject and how to speak, but it depends on me understanding who I'm talking to, in what situation the person who listening to me finds himself and what he understands from what I say. To communicate well and be heard correctly, in the way I want, I must come out of myself and listen to myself from a point of view as the other may be listening to me. It requires full attention to the environment and the individual to whom I speak. And this results in communication improvements, not the exclusive focus on my speech, but much of the attention on the other, the one who listens.

"Helping people is therapeutic and healing. By helping others, I help myself."

Knowing how to work as a team doesn't rely on just me knowing what to do and performing it well, nor on me knowing how to assume many other positions in the team, such as my expertise and knowledge. To a large extent, perhaps for the most part, teamwork relies on a human interaction where people connect beyond the professional. No chain is stronger than its weakest link. Looking beyond yourself allows you to identify when a person isn't comfortable with a task or for personal problems or even for personal and family issues. And there opens up for us an opportunity to be human in the essence of being, offering support and help.

It's not unknown to us that in stressful situations the biggest communication problems and disruptive attitudes occur. We all try to seek solutions and improvements to manage these moments, mainly focusing on the greater result that is not harming the patient client. Dealing with critical events is often related to some failure, which's usually human. Dealing with mistakes teaches us a lot about ourselves and the other. If we make proper use of these occasions, we'll come to understand our humanity better and to question this model of perfectionist success surrounding our society. Dealing with failures reveals some of our greatest fears and insecurities and perhaps is

an element that puts everyone on the team clearly on the same level.

We don't work alone. Successful high performance professionals depend on a whole team to support them. From a nurse or technical professional to those who clean and make coffee. Unfortunately, due to individualism, class division, and differentiated education and payment, many of us have developed a sense of superiority over the people who collaborate with us. Mechanically we come to see them more as equipments than as people. Often hunger, poverty, disease, ignorance, violence, addictions are right beside us, or are part of the life of the human being who lives with us daily, many times longer than our own relatives. But if we don't open our eyes, we won't be able to see it.

Helping people is therapeutic and healing. By helping others, I help myself. As we enter another life, without the pretense that we'll correct everything, but with the intention of "healing at times, relieving when possible, and comforting always,"¹ we won't be acting so much in the aided person's life as mainly in our own life. As we embark on our personal journey in search of the longed-for place in the sun, one of the consequences of individualism is that we focus almost exclusively on ourselves and consequently on our own problems. By entering other people's lives our healing can take place in two ways. On the one hand, I come to see myself as a human being like everyone else, who although have different difficulties, qualitatively and quantitatively speaking, I live surrounded by people who have their daily battles, the same way I do. Seeing that we all have struggles, weaknesses, difficulties and are prone to mistakes frees us from the perfectionism syndrome and allows us to reflect and accept ourselves more as we are in the moment and to seek the best ways to correct and deal with our limitations. I learn to be tolerant and patient with others and myself.

The other aspect of healing stems from the fact that by helping I can feel fragile and dependent on help. The more human I see the other, the more human I perceive myself. If the other needs help, I must need it too. And the lesson that comes from that learning is humility. Recognizing where I'm flawed, where I'm limited, and where I can't selfishly deal with my ills. And I learn that it's essential to ask for help, or to accept and value the help that's being offered. Submitting is not easy, it requires a lot of strength and courage. We all like to share successes. We're reluctant to talk about our failures, both professionally and, even more so, personally. Unfortunately, our realities, both

professional and personal, are not only made of successes and glories. There are valleys and shadows.

We have problems with the training of professionals due to a disruptive culture. We have several stressors throughout our training and career. And we have physical illnesses, emotional and relationship problems as every human being has. The fact that we're "professionals prepared for the moment" doesn't make us superhuman, but it can make us inhuman or make us suffer in the process beyond our personal sufferings. Difficulties and suffering aren't, indeed, the real problem. That's just life. Real problems arise when we become egocentric and selfish, when we come to see ourselves as immune to these situations because we're in a prosperous and balanced phase of our lives or when we see ourselves as better than other human beings. It also becomes a problem when a person lacks confidence and hope that they can get help, when they don't see themselves as someone in need of help, and when they enter the deadly cycle of going it alone.

Changes are taking place. SBA, more than two years ago, started the Núcleo do EU, with a broad proposal for the development of mindfulness and self-care. SAESP started the We Care program, focusing on chemical dependence among anesthesiologists. Medical Residency programs are being reassessed and modified with the purpose of implementing self-care and a more humane look at doctors in specialization. As anesthesiologists we pride ourselves that our greatest skill is caring for people. Unfortunately, maybe we've focused so much on caring for people in critical health that we forget to take care of ourselves and the people around us on a daily basis. There's a way to undo it. The time is now. Together we'll go further.

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chapter 11

Intellectual self-care

by **Emiliana Gomes de Mello**

“Hurry up and live well
and think that each day
is a life in itself.”

- **Seneca**

It's not new that the care of the mind is recognized as something essential for the proper functioning of the whole body. The Roman poet Juvenal, said in the first century: "*mens sana in corpore sano*", in the prayer made in the form of a poem that exalted the need to keep the mind healthy so that the body could express its proper power.

Even before that, five centuries BC, Plato, already stated in one of his great works: "always seeking to regulate the harmony of the body to maintain the perfect accord of the soul" and stressed the importance of music for the mind: "musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul."

Thus, he believed that a well-crafted body without a mind that could properly conduct it would bring harm and even risk serious imbalances in character formation, in the notion of right and wrong, in short, of what's ethical.

He drew an analogy between harmony, the musical rhythm that sets balance, and the mind development. "Education in music is most sovereign, because more than anything else rhythm and harmony find their way to the inmost soul and take strongest hold upon it, bringing with them and imparting grace, if one is rightly trained."

Plato compared the precision of a musical instrument with the character righteousness and how it could be deflected as far as a string could tune out because it wasn't in keeping with its nature: "The soul then looks like music strings which it hears, since the relation between the acute and the severe is then proportional to the degree of string tension. In other words, it's the essence of tension that can weaken and then relax."

However, although its importance has been recognized for centuries, it was only since 1970 that self-care emerged as a concept, by American nurse Dorothea Orem. Her theory included, in addition to self-care itself, the performance of self-care and its therapeutic requirement. The definition, therefore, of self-care for Orem, was the practice of activities performed by individuals for their own benefit for the life maintenance and their well-being and consisted of the ability to adhere and commit to their self-care. Its purpose was actions, which assisted in integrity, functions and human development.

A few decades later, starting in 1997, Positive Psychology, created by Martin Seligman, revealed that well-being could be measured in five ways:

positive emotion, commitment, meaning, positive relationships, and fulfillment.

According to the WHO, in order to be healthy, it's not enough to be free of diseases, it's necessary to have physical, mental and social well-being. Recently self-care has also been subdivided into 5 subtypes: physical, emotional, spiritual, social and intellectual.

Intellectual self-care is nothing more than cultivating the mind, expanding knowledge by performing critical thinking and creativity. For this there are countless ways that can be practiced: reading books on topics that give pleasure and arouse interest, studying subjects whose topic runs away from the simple professional field, in addition to taking courses in fields that have affinity. Developing activities that require concentration or require mental effort when performing a skill, such as manual work, drawing or playing a musical instrument contributing to a constant brain expansion.

A few decades ago it was believed that only in childhood there was brain plasticity, however, nowadays it's known that the brain has a remarkable ability to change its structural and functional organization throughout life, in response to changes in environmental incentives.

Its role in learning a musical instrument, which's an intense, multisensory and motor experience, which usually acts in the maintenance of a series of skills over the years, is to strengthen the connections between the auditory and motor areas of the arcuate fasciculus, while activating multimodal integration areas around the intraparietal sulcus. A wide cortical and subcortical brain area is involved in the activities of not only playing but also listening to music. The cerebellum is another important part of the brain that plays a critical role in musical experience, it's activated in rhythm processing, in synchrony, as an external pacemaker.

Another recent discovery in science proves the association of music as a changing agent in the treatment of disease and even in the regression of normal aging, when practiced regularly. Just like we exercise the muscles, we can exercise the brain.

Music has the ability to evoke and regulate emotions, provide pleasure and comfort, relieve stress, regulate mood, besides physiological effects on the human body, including changes in heart rate, breathing, blood pressure, conductivity and skin temperature, muscle tension, and neuroendocrine responses.

There are two main hormones involved in the process of learning a new skill, serotonin and dopamine. Serotonin is an important neurotransmitter for

brain plasticity, it's commonly associated with feelings of satisfaction when reaching a goal, while dopamine is associated with the feeling of pleasure by novelty and the reward cycle.

In a study of neurochemical responses to music, where 2 types were evaluated, the pleasant and the unpleasant, serotonin levels were significantly higher when individuals were exposed to pleasant music. The results indicate that intense pleasure in response to music can also leads to dopamine release.

In addition to music, research has shown increased gray matter volume of the medial temporal lobe in 20-year-olds who learned to juggle with daily practices for 3 months.

"People who practice self-care tend to be much more productive and efficient."

One way to practice intellectual self-care is not to pollute the mind with things that don't add up, such as movies that harm rest after watching it, songs that depress mood, content or dialogues of morbid, harmful subjects that harm well-being.

The cultivation of healthy intellect enlarges intelligence, expanding knowledge and potentialities. People who practice self-care tend to be much more productive and efficient.

Self-care is not only important, it's crucial. Philosophy and science ensure enough reasons to include it in everyday life. The important thing is to find the way to motivate and nurture thoughts with content that really adds to human development.

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chapter 12

Physical self-care

by **Ana Nice Zanutto de Lima**

“And I said to my body.
softly. ‘I want to be your
friend.’ it took a long
breath. and replied ‘I have
been waiting my whole life
for this.”

- **Nayyirah Waheed**

Physical self-care is related to the body. And it involves the care of sleep, eating and physical activity.

SLEEP

Sleep is essential in our daily lives and, on average, we spend a third of our life time with it¹. Sleep deprivation negatively affects our mental abilities and our emotional state, compromising decision-making processes and our creativity².

Fatigue makes us more impatient and prone to moodswings. Getting enough sleep, at the right times and with quality, is as essential to survival as food and water.

At the individual level, damages can affect health in a variety of ways. Insomnia has been linked to aneurysms disruption³, increased levels of B-amyloid proteins (A β) and tau, associated with neuronal damage in Alzheimer⁴. In

teenagers, chronic sleep restriction has led to increased consumption of food with a high glycemic index, especially desserts and candies⁵. There are also relationships between sleep loss and the pathophysiology of diabetes mellitus and obesity⁶.

In the medical world, there's evidence that long working hours would disrupt sleep and have a major impact on the quality of work⁷. Regular sleep changes in these professionals are associated with increased burnout, decreased professional achievement, and increased clinically significant medical mistake⁸. One study exposed a 36% increase in serious medical mistakes and twice as many attentional failures among shift residents who hadn't slept through the night.⁷ Fatigue was also responsible for 300% more medical mistakes regarding patients' death⁷. In medical students, sleep disorders were related to the presence of current or future psychiatric problems⁹.

Nowadays, there's the conviction that sleep deprivation impairs cognitive performance at work¹⁰. Sleep deprivation, physical and mental exhaustion, and health impairments are intrinsically tangled¹¹. Sleeping less than necessary can seriously affect our daytime energy, productivity, emotional balance, and even our weight. Sleeping is essential for brain recovery, and it's not replaceable by occasional resting periods. The state of the brain during sleep is unique¹².

"Sleeping is essential for brain recovery, and it's not replaceable by occasional resting periods."

An interesting fact in the literature points to optimism as decisive better sleep quality. A study with 3,548 participants evaluated the relationship between optimism and self-reported good sleep quality in two moments. Within a 5-year range, the most optimistic were 78% more likely to self-report very good sleep quality and higher sleep quality index persistently good over the 5 years¹³.

Sleep is a physiological need and should be respected. Getting in sync with your body's natural sleep-wake cycle, or circadian rhythm, is one of the most important strategies for better sleep. If you keep a regular sleep-wake schedule, you'll feel much more invigorated and stimulated than if you sleep the same number of hours at different times. Try to sleep and wake up at the same time everyday¹⁴. This helps set your body's internal clock and optimize the quality of your sleep¹⁴.

Take care of your sleep conditions: its deprivation burden over the years may not pay off for the concessions made for temporary gains.

FOOD

We're aware of only a fraction of the food decisions we make daily¹⁵. Besides, we're either unaware or unwilling to recognize how much the environment is able of influencing our decisions about food¹⁵.

Emotional regulation also plays a role in differences in eating behavior¹⁶. There's strong evidence that poor diet is associated with depression. The reverse has also been shown, namely that a healthy diet rich in fruits, vegetables, fish and lean meat is associated with a low risk of depression¹⁷.

"Once we connect our food choices to our physical and mental well-being, food selection process becomes a matter of listening to our own body."

Nowadays it's not unusual to adopt high-energy and/or ultra-processed foods in the diet. The high-sugar diet has been linked to cognitive impairments, negative neuroplasticity, and emotional disorders such as anxiety and depression¹⁷. Sugar consumption increases food impulsivity, its excessive consumption leads to changes in brain function, altering states and subsequent behavior¹⁸. Addiction,

stress, fear, anxiety and depression entail neural mechanisms parallel to excessive sugar consumption¹⁸.

There's evidence that daily consumption of sugar-sweetened beverages during adolescence can impair performance in learning and memory tasks later in adulthood¹⁹.

In a study of sugar consumption and changes in the reward brain system, 7,000 female pigs were analyzed by imaging techniques (PET-scan)²⁰. They were allowed access to a sucrose solution for 1 hour for 12 consecutive days, and major changes were observed in the brain's dopaminergic reward and opioid systems²⁰. The results demonstrated that sucrose affects reward mechanisms in a similar way to addictive drugs²⁰.

Excessive fructose intake was also evaluated as a contributing factor to several behavioral disorders, including attention deficit hyperactivity disorder (ADHD), manic depression, aggressive behaviors, and others²¹. It may be that an eventual disruption of the brain's reward system is implicated in the genesis of these neuropsychiatric disorders.²¹

Regarding ultra-processed foods, a study conducted at Ohio State University (USA) showed that four weeks of this type of diet led to a strong inflammatory response in elderly rats' brains²². Neuroinflammation was accompanied by cognitive changes, such as behavioral signs of memory loss²². The researchers also found that supplementing the processed diet with omega-3 fatty acid DHA prevented memory problems and decreased inflammatory effects almost entirely in the in the studied guinea pigs.²²

But are there even specific foods capable of stimulating or protecting brain functions? A recent study conducted at Rush University Medical Center found that a special type of diet, MIND, was associated with better memory and thinking skills, regardless of Alzheimer's disease and other brain pathologies commonly related to age.²³

And are we taking the proper amount of water? Dehydration can cause negative effects on vigor, self-esteem, short-term memory, and attention²⁴. Rehydration, however, mitigated these effects²⁴.

Being mindful of the foods we eat can influence wiser choices. Once we connect our food choices to our physical and mental well-being, food selection process becomes a matter of listening to our own body.

PHYSICAL ACTIVITY

People who exercise regularly tend to do so because it gives them a huge

sense of well-being. They feel more energized throughout the day, sleep better, have sharper memories, and feel more relaxed and positive about themselves and their lives.

Many studies have shown that physical activity can reverse at least some of the undesirable effects of sedentary lifestyle and contribute to slowing brain aging and the occurrence of degenerative pathologies such as Alzheimer's disease, diabetes and multiplesclerosis²⁵.

Sedentary behavior, specifically standing still for a long time, is associated with an increased risk of depressive symptoms.²⁶

Until recently, some scientists had doubts about the therapeutic nature of physical exercise in relation to anxiety disorder. However, more and more evidence has been gathered up towards this benefit. Moderate and strenuous exercise were able to relieve anxiety symptoms, even when the disorder was

“Sedentary behavior, specifically standing still for a long time, is associated with an increased risk of depressive symptoms.”

chronic²⁷.

While low-intensity exercise triggers the brain networks associated with cognitive control and attention processing, high-intensity exercise activates primarily networks involved in emotional

processing²⁸.

Regular physical activity for 6 months was effective in improving neurocognition and decreasing the risk of developing dementia with advancing age²⁹. Many studies have shown that regular physical exercise can increase hippocampal volume, and a survey of healthy people aged 55 to 85 showed significantly greater activation in four cortical areas (medial frontal, inferior temporal, medial temporal, and fusiform gyri) after exercise compared to rest. Increased hippocampal activation also occurred in both brain hemispheres³⁰, showing that physical activity contributed to more efficient memory recall³⁰.

Similar observation was made when assessing memory performance after a sports session. Neuroscientists at the University of Geneva demonstrated that an intensive exercise session of just 15 minutes improved memory, including the acquisition of new motor skills.³¹

However, overtraining can also induce cognitive fatigue. After overtraining, a reduction in brain activity in the prefrontal cortex was detected, in addition to greater impulsivity in the decision-making process³².

Perhaps the key to balance is commitment to some moderate, if small,

physical activity on most days. Once the body and mind are closely linked, when your body feels better, your mind will make physical activity a necessary habit.

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chapter 13

Spiritual Self-care

by **Frederich Marcks Abreu de Góes**

“Spiritual intelligence is the intelligence of the soul.

It’s the intelligence with which we heal ourselves and with which we become truly whole beings.”

- **Nayyirah Waheed**

INTRODUCTION

Amid so much day-to-day activity, there's the daily stress faced during anesthesia, especially in the most complicated cases. Within the difficulties of relationship in the workplace and the constant feeling of not valuing his work, the anesthesiologist still feels enchanted by his specialty. But these factors are mistreating little by little and occupational diseases begin to emerge, which consume these doctors.

The causes of illness are many and the problems that come from them too. In the book "Occupational well-being in anesthesiology", launched by the Brazilian Society of Anesthesiology (SBA), together with the Federal Council of Medicine (CFM) and edited by Dr. Gastão Duval Neto¹, the main factors that cause occupational diseases are shown, and among them are: lack of control over working hours, impairment of family life, legal issues, difficulty in communicating, clinical problems, work system, handling of critical patients, experience of emergency crisis situations in anesthesiology, having to make decisions in fractions of a second, sometimes without having someone to share, dealing with death, administrative problems, personal conflicts and professional relationships. There's a high incidence of occupational stress, which reaches up to 96% in Latin America. This excess stress has an impact on the anesthesiologist's health, causing physical diseases, psychological disorders, behavioral disorders and intellectual alterations, besides impacting family life and the employment of many professionals. Societies of anesthesiology have thoroughly discussed this issue and sought solutions to these problems. The correct confrontation of this reality goes through a series of measures that, according to Dr. Gustavo Calabrese Tachiaro, can happen at individual, team and institutional level¹. At the individual level, the importance of self-care stands out, which has been alerted by SBA's Núcleo do EU, throughout the two years of existence of this innovative project by Dr. Marcos Antonio Albuquerque, through monthly webinars and participation in the Journeys and Congresses of Anesthesiology in Brazil. This core highlights several aspects of self-care, which has as its basis mental care, financial care, physical care and the pursuit of spiritual well-being. Among the strategies for promoting well-being and self-care mentioned by Blackwelder et al. are the optimistic view of life, establishment of good relationships and involvement with spirituality/religiosity². These authors state that happier doctors set a better and healthier workplace, with more commitment and more quality in

care, making the patient experience much more positive.

SPIRITUALITY / RELIGIOSITY

A distinction must be made between spirituality and religion. This is necessary so that we can understand the broad meaning of spirituality, not limiting it to a religion or a religious practice. Of course, spirituality can be developed through the individual involvement in a church or religious group, but the concept of spirituality goes further. Although there's no agreement on the subject, it can be said that religiosity is different from spirituality, and a person can be very religious and not have a high degree of spirituality and vice versa. For Koenig, the relationship between spirituality and health is already well set nowadays through thousands of scientific studies on the subject. He states that in recent decades there has been the birth of a new field of knowledge, the field of religion, spirituality and health³. Most of them show that patients who have a belief or who are spiritually developed can face illnesses and even the life ending in a more positive way. And many recover faster and follow medical advises better. Contrary to what many professionals think, having a religious practice actually makes a person more responsible for his health, since he understands that he's a creature loved by God and that he must be well to do His Will through other's love, and has no right to treat badly or take bad care of his body. So, the person takes care of himself, to take good care of those who are next to him This is the attitude of one who's spiritually intelligent. The way medicine, usually, sees spirituality varies from one pole, where some claim that science and religion don't mix, to the other extreme, where there's the defense of the integration of religion and religiosity in healthcare³. In the past medicine has always been associated with the sacred, because man has always sensed that there was something else, a mystery behind human existence. With modernity and the advancement of science, this pre-Christian medical wisdom was banned from books and the medical academy. Medicine has become the science capable of repairing the human machine, and the doctor has gone from being a priest to being a businessman, who has his business only as a means of making money like any liberal professional⁴. However, since 1998, the World Health Organization (WHO) itself has added to the concept of quality of life, which was previously defined as biological, psychological and social well-being, the notion of spiritual well-being, because spirituality is a constitutive part of man⁴. More than 80% of people claim to have a practice of spirituality/religiosity⁵. But to

conceptualize spirituality we'll consider what Koenig, McCulough and Larson say: "It's the personal search to understand issues related to the end of life, its meaning, about relations with the sacred or transcendent that, may or may not lead to the development of religious practices or formations of religious communities."⁵ This definition makes it very clear that a person doesn't need to have a religion to have a high degree of spirituality, and doesn't need, in fact, to believe in the existence of a transcendent being, since spirituality can be the way the individual relates to nature, the environment, art and the world⁶. Indeed, we need to develop what we might call Spiritual Intelligence.

SPIRITUAL INTELLIGENCE

American philosopher and physicist Danah Zohar and her husband, Ian Marshall, introduced the concept of spiritual intelligence which they called Spiritual Quotient (SQ)⁷. For these researchers, SQ is our third intelligence, responsible for "placing our acts and experiences in a broader context of meaning and value, making them more effective"⁷. In the book "Unlocking the Power of Spiritual Intelligence," researcher Djalma Pinho states that having a high spiritual quotient makes us able to use the spirit to achieve a more meaningful life⁸. The SQ makes us more creative and is linked to the great questions and needs of man to discover the meaning of life, what's the purpose of his existence. And it's precisely this quotient that we must resort to so that we have more developed ethical values. Djalma Pinho argues, following the thinking of Zohar and Marshall⁸, that we have three dimensions of intelligence flowing in our mind: the rational neural arranging, which uses the left side of the brain, responsible for logical and rational thinking and is represented by the Intelligence Quotient (IQ); the associative neural arranging, which uses the right side of the brain, is influenced by habits and is represented by the Emotional Quotient (EQ), which is the ability to perceive emotions in oneself and others, having the discernment between them and the ability to use this information skillfully, managing them while working with others. It involves self-awareness, empathy, self-control, self-motivation⁷. Goleman states that emotional intelligence can establish part of the success or failure of everyday relationships and experiences.⁹ A third type of neural arranging that uses faith, is creative, and generates thoughts that can change other intelligences is the Spiritual Quotient (SQ). Zohar states that SQ is the intelligence that manages to balance the other two intelligences towards what really matters, which's the purpose of existence. The person with high SQ has

the ability to understand the meaning of his life, reflects upon the meaning of things, asks about the ultimate destiny of the physical and psychological world. Opens the mind to the existence of the intangible and the transcendent, but it's not bound by and doesn't accept any form of fanaticism, sectarianism, or dogmatism. What features a spiritually intelligent person is the search for deep relationships and not staying in superficiality. Usually seeks understanding by looking at and highlighting what unites it to other people and not what separates it, strengthening good relationships. Enjoys every moment well, once he lives in the present moment and admires the beauty of a sunrise or a sunset, he's aware that the world doesn't revolve around him, and that he's not alone on the planet. He gives himself entirely as it is, without hypocrisy¹⁰. Discovering the meaning of life, its purpose, is the way out of the existential void of a meaningless life, as Viktor Frankl stated, the Logotherapy creator. Therefore, IQ refers to skills, resources and talents, EQ to desires and wants and, balancing the two, we have QS, which is the meaning and shows the purpose and value of life. This all generates high performance and happiness⁸.

By developing these potentialities, the spiritually developed person begins to answer the basic questions of life, finds a purpose, reconciles with himself, with others and with life, longs for the truth and he calls for true freedom.

IS IT POSSIBLE TO DEVELOP SPIRITUAL INTELLIGENCE?

Faced with so many challenges that arise in our lives, developing spiritual intelligence is the best form of self-care, because you seek your inner peace. I'm not saying it's easy, but I know it's not impossible. It's a long walk that can last a lifetime, but you learn how rewarding it by admire the entire landscape along the way, no matter where you go. Developing spiritual self-care is the great response we can give to managing everyday stress. We'll have the grateful surprise of knowing that we're not super beings with unimaginable powers, but we're fragile people, who take care of other people and we need to offer them the best that is in ourselves. The study of spirituality has become a new field of knowledge and is an interdisciplinary field, which has been growing more and more.

HOW TO DO IT?

Reading the great spiritual teachers nourishes our spirit and strengthens us. Do daily meditation, have occasional moments of solitude where we can get in touch with ourselves and the transcendent. Taking advantage of silence,

taking breaks daily, are individual attitudes that we can have to help us grow spiritually. We can pray, participate in rites in some church, if that's part of my personal requirement. But we cannot be stuck with ourselves, we must get out of our egoism and be supportive people, this is one of the features of those who are spiritually intelligent.

Building positive relationships and launch yourself to help others. Realizing that we can do anything if it's done out of love – as St. Augustine says, “love and do what you want.”¹¹ Having attitudes

spiritually intelligent makes us people who are balanced and able to change the climate of the environments we're in. In the same way it makes us able to understand the other's pain, the colleague's frustration and even the aggression we suffer. After all, there's no more spiritually intelligent attitude than

“Having attitudes spiritually intelligent makes us people who are balanced and able to change the climate of the environments we're in.”

that proposed by Jesus Christ: you shall love your neighbor as yourself¹². Forgive not seven times, but seventy times seven¹³, and lastly, love your enemy.¹⁴ Attitudes like this can prevent any occupational disease, giving us the right guidance on how to move forward. With faith in God, nature or even humanity.

Have a good spiritual self-care journey.

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chapter 14

Financial Management Self-responsibility and Self-care

by **Laura de Jesus Gomes Monteiro Ribeiro**

“The most powerful force in the universe is compound interest. Compounding is mankind’s greatest invention because it allows for the reliable, systematic accumulation of wealth.”

- **Albert Einstein**

In Brazil, there's the Brazilian Financial Health Index (I-SFB)¹, which brings in its concept the needs of being able to comply with current financial obligations, making good financial decisions, having discipline and self-control to meet objectives, feeling safe about financial future and being free to make choices that allow you to enjoy life. Survey-takers point to the need to have more information about finances, given the uncertainties regarding the way they deal with money. In the same sense, the Brazilian Financial Well-Being Index² points out worrying percentages, such as: "61% of Brazilians don't enjoy life as they'd like to by mismanaging money, 57% don't plan actions to guarantee financial future and 68% of Brazilians aren't ready to deal with unforeseen events". Given this, only 40% of Brazilians are investors, whose average monthly family income is R\$7,100.00, being just over 3% of investors with average monthly income above R\$19,961.00³.

On the other hand, research⁴ on the payment and satisfaction of Brazilian doctors points out as average monthly payment the amount of R\$19,833.99 and, when asking the question "what kind of expenses or loans do you currently have", the answers are usual, such as financing houses, cars, credit card debts, in addition to medical expenses and others. Therefore, although the average monthly income is significantly higher, there are higher expenses, proportional to this income, which also results in a budget plastered by financial commitments. A warning sign, since Brazil ended 2021 with 76.3% of indebted families⁵. Besides, problems in personal financial life cause negative effects on mental health, a conclusion reached by an interesting research, which sought to understand the relationship between financial well-being and Burnout Syndrome in anesthesiologists⁶. The results show that the lower the financial well-being, the greater the risk of Burnout and points to the weekly workload with a positive correlation with this risk.

Thus, for financial well-being, it's necessary to look at financial health as one looks at physical and mental health; with diagnosis, monthly and annual checkups, medication and due compliance with the prescription. In order to obtain the desired result, it's important to survey any commitments made, debts and interest incurred. Depending on the situation, it's appropriate to use Law 14.181/21, which provides for the prevention and treatment of over-indebtedness⁷. It aims to increase consumer protection, create tools to make lending more transparent, avoid abusive procedures and enable a way of debt negotiation similar to that of companies under in judicial recovery. The

intention is to renegotiate debts with all creditors at the same time, with “existential minimum” guarantee. The ideal is to seek guidance from the Consumer Lawyer and PROCON, to analyze each case, as secured debts aren’t considered, given the possibility of selling the property for debts payment.

Simple interest is used in real estate financing, since compound interest isn’t allowed by Brazilian law for this type of operation⁸. In amortization, interest is levied only on the outstanding balance and with extraordinary amortizations it’s possible to significantly reduce the debt and interest to be paid. Although it comes from the priorities of the lifestyle, one should avoid its lack of control, which’s extremely harmful to personal finances and incurs the greatest risk, which’s not investing. Otherwise, life can be marked by the negative effects of interest levied on the anticipation of consumption, while the opportunities for construction and growth of equity are postponed. Financial management consolidates the habit of saving, in addition to benefiting from the positive effects of compound interest over time. As long as the interest and/or profits received are reinvested, it’s possible to notice the strength of the TIME variable in the investments. For example, a certain capital invested with a yield of 10% per year doubles its value every 7 years.

If an individual lacks financial organization and pays interest, he’s the loss-making economic agent, the debtor who takes credit within financial system. If he’s an individual who manages to save and, with the surplus resources invested, he’s the surplus economic agent, the lender who lends to financial institutions. With this comes the bank spread, which’s the difference between the interest rate that the bank receives from the deficit and the rate that the bank pays to the surplus. To organize financially, the most used initial method⁹ is 50-30-20. According to it, spending is distributed by allocating 50% of the resources to needs, 30% to wishes and 20% would be allocated to financial priorities. These include the emergency reserve formation, the debts foreclosure and the amounts allocated to the objective of achieving financial independence. Having the reserve decreases the risk of disposing of all financial planning in the face of unforeseen events. In fact, the survey⁴ carried out with Brazilian doctors shows that, in 2020, among survey-takers, 22% started working fewer hours per week, 18% had wages frozen and 12% had to leave for some time. In these cases, having the equivalent of 6 months or up to 1 year of monthly spending on a highly liquid investment, that is, one that can be withdrawn at any time, is essential.

Consistently saved resources generate passive income to be used when

there's no longer active income provided by the labor force. It can be formed by fixed income and variable income, depending on the investor's risk profile. For example, government bonds are purchased through Direct Treasury program when funds are lent to Federal Government and interests are received¹⁰. You become a partner of publicly traded companies, through the purchase of shares on the stock exchange, in the expectation of seeing the growth of the company and obtaining a share of net income, depending on the number of shares held¹¹. Therefore, it's important to set what are the life goals and respective terms, whether short (1 to 2 years), medium (2 to 5 years) or long term (over 5 years), because the term to achieve each goal is what will guide the investment strategy. With this, it's avoided This avoids early selling of bonds in the secondary market, which increases costs with taxes¹² and other charges, avoiding the high turnover of assets, capable of generating losses.

Most Brazilians invest in the savings account and the main factor in choosing it is the search for security and liquidity³, different from the one who invests in the stock market, in search of greater profitability, a risk premium for the expected return. In this market there's also greater liquidity due to the ease in getting rid of those most traded shares, although there's a risk of trying to sell at times of low prices. The conservative investor, who owned shares on the stock exchange in 2020, with the beginning of the pandemic, panicked. Faced with systematic or non-diversifiable risk, with stock prices falling, many sold quickly. However, the subsequent recovery, with the return of quotations to the levels of March of that year, accompanied the foundation of each company. Its value is what keeps the investing partner, aware that it accumulates participation in good companies, but that, eventually, one can be affected by the systemic risk to be managed through diversification, as it involves a problem that affects the specific company or sector.

For the long-term investor, times of falling prices can mean opportunities to buy the stock at good prices. These declines can also happen throughout market cycles, influenced by business cycles, which are influenced by monetary policy. The rise in inflation makes the Monetary Policy Committee of the Central Bank – COPOM try to get it back to its goal. It raises the basic interest rate of the economy (SELIC rate), with this the interest charged on financing, loans and credit card become higher, causing consumption and, consequently, inflation to decrease¹³. While interest rates remain high, fixed income assets become more attractive and variable income loses attractiveness. In another sense, when inflation is under control and interest

rates are lower, credit becomes cheaper and consumption is stimulated. In this scenario, fixed income loses attractiveness and the stock exchange becomes again attractive, investors go in search of higher returns for their capital, assuming higher prices and risks. By starting a new inflationary cycle and raising interest rates, the decision-making process is again affected. However, one should avoid short-term emotions, focus on what is known about investments and observe the real gain obtained.

Actual profitability is that actually received, minus inflation. Otherwise, by consuming the gross value of the income, the capital will lose value over time and the investor will have realized it too late. For example, publicly traded companies tend to have products and services to be readjusted, with the possibility of growth and/or distribution of net income to shareholders. The same happens with the Real Estate Investment Funds, “brick” FIIs, which count on the appreciation of the properties belonging to the funds, depending on the moment they’re within the real estate market cycle, in addition to the lease agreements with monetary correction clauses to be reflected in the distribution of dividends. Otherwise, the Treasury IPCA+ pays the fixed interest plus the variation of the country’s official inflation, with the option of receiving the nominal profitability every six months or in the expiration. On the other hand, the “paper” FII (Real Estate Receivables Certificates - CRI) distributes the nominal profitability monthly, paying attention to the credit risk in the cycles of inflation and interest. In these cases, it’s necessary to emphasize that it’s essential to reinvest the amount corresponding to the inflation of each period, so that the capital purchasing power is kept invested.

In any case, higher yield means greater risk and risk management is done by diversification. Given that there’s no best investment, the choice must be appropriate to the risk profile and depends on the life goals of each investor.

“Accumulating financial assets to maintain some or all consumption during old age requires planned behavior.”

Among them, the important thing is to practice financial self-care, as it’s necessary to save enough to retire, for the benefit of the elderly self. A task not easy, because research indicates that this is due in part to people's tendency to think of the future self more as someone else than as the present self, which makes saving seem like giving money rather than investing in themselves. When designing themselves into apps, individuals who used

realistic age progression photos allocated more resources to this future self. The conclusion they reached is that visualizing themselves as older helps you save for retirement more effectively, because by building the connection with the person you'll be, you become more motivated to take steps to contribute.¹⁴ and 15.

Accumulating financial assets to keep some or all consumption during old age requires planned behavior. Topic addressed by the Life Cycle Theory¹⁶, which arose due to the change in life expectancy at birth¹⁷. While in 1920 the expectation was to live 34 years, in 2020 it was 76 years, with prospects of increasing to a life expectancy at birth of 80 years by 2050. Therefore, one needs to take responsibility for retirement planning, to be the agent in one's own process of building the necessary assets, anticipating longevity risk. Saving, investing and reinvesting the interest and/or profits received, with the clarity of the life goals that may determine the results. In self-care find the balance between saving a lot and spending everything, to live the desired lifestyle without falling into the vicious cycle of work to pay off debts. Thus, the limitations imposed by the end of the workforce will be rewarded by decisions to better use time and money, keeping the quality of life from today, without renouncing better prospects for the future.

DISCLAIMER

Informational/educational content, the examples used and the mention of financial services and/or products do not mean recommendation of any type of investment.

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chapter 15

Integrative Approaches to Anesthesiologist Self-care

by **Andréa Luiz Kraemer**

“Change, but start slowly,
because direction is more
important than speed.”
- **Clarice Lispector**

This chapter aims to discuss integrative approaches, or also called Integrative and Complementary Practices (ICP), in order to sensitize anesthesiologists to self-care practices.

In general, it can be stated that the main objective of integrative approaches, which make up integrative medicine, is the maintenance of health and well-being. However, in the presence of illness, it's necessary to consider the person who falls ill beyond his isolated illness, encompassing physical, mental, spiritual, functional, biochemical, environmental, social, cognitive and emotional issues.^{1,2}

The person's lifestyle is considered one of the essential basis of integrative medicine, regarding care with a healthy diet, constancy of physical exercises, leisure time opportunity, sleep quality and development of the ability to look at oneself, fostering moments of pause and performing mind-body activities. Therefore, the patient is a co-author of his/her health process.

Traditional Chinese Medicine is regarded as an Integrative and Complementary Practice (ICP), encompassing acupuncture, Chinese diet therapy, Tai Chi Chuan, Chinese herbal medicine and Tao Yin. In addition, practices such as yoga, Ayurvedic medicine, music therapy, aromatherapy, art therapy, diet therapy, mindfulness, meditation, French auriculotherapy, supplementation (vitamins, nutraceuticals, herbal medicines, probiotics), homeopathy, music therapy and aromatherapy are also part of the ICPs, presenting evidence of their positive effects in the treatment of anxiety, depression, insomnia and metabolic disorders such as systemic arterial hypertension, diabetes and chronic pain.^{3,4}

Universities around the world have incorporated Integrative Medicine into their curriculum – such as the University of Porto in Portugal, the University of Firenze in Italy, the University of Witten in Germany, and the University of Bern in Switzerland. The American Consortium for Health and Integrative Medicine, founded in 2017, brings together 70 North American academic institutions, including universities such as Harvard and Stanford, with increasing interest in the subject and aimed at generating scientific research that supports this vision in the health model.^{5,6}

When it comes to anesthesiologists, how can these integrative medicine approaches improve their self-care?

To answer this question, we'll cover in more detail some of the key integrative practices: acupuncture, supplementation, mindfulness.

Acupuncture

Acupuncture is part of TCM (Traditional Chinese Medicine) and involves a technique of inserting needles in certain places of our body, called acupuncture points. It was recognized as a medical specialty in 1995 and is a cultural heritage of humanity.

Acupuncture can improve sleep, physical and mental fatigue, anxiety, depression and musculoskeletal pain such as cervicalgia, back pain, tension headache. It's well known that Eastern philosophy, based on the Yin and Yang theory, has neurophysiological support from the recognition of the release of several neurotransmitters, some with endogenous opioid function, associated with spinal and supraspinatus neuromodulation, at the level of thalamus and periaqueductal gray matter. Acupuncture also has a regulatory effect on our immunity, improving the number and function of CD8 + T and NK cells, and decreasing the release of inflammatory cytokines. More recent studies prove the improvement of neural activation and brain functional connectivity through ERK protein kinase expression, which explains the effect on the limbic system and emotions.^{7,8,9}

During an acupuncture session, the patient often falls asleep, in a deep state of relaxation. Meanwhile, its endorphins are released in order to promote the above-mentioned benefits.

SUPPLEMENTATION

The list of interventions to help sleep, anxiety, depression and many modalities of chronic diseases involves the improvement of sterile chronic inflammation, oxidative stress and glycation, which are illness' biochemical bases. This is where supplements come in, whose main function is to optimize the biological terrain of the cellular matrix and the immune system.¹⁰

Supplements called nutraceuticals are defined by Zeisel¹¹ as food derivatives that contain the concentrated form of a bioactive compound of a food, used to improve health, in optimized doses compared to those that could come from food. Hippocrates (460-370 B.C.) had already warned us: "Let food be thy medicine, and let medicine be thy food." An example of nutraceutical is curcumin, derived from turmeric, whose anti-inflammatory and antioxidant activity is well known and which should be prescribed in the form of 95% curcuminoids, ensuring absorption superior to the dry extract at 0.4% found in the supermarket.¹²

Treatment of affective disorders, both depressive and anxiety-related, should consider which neurotransmitters may be deficient. If the patient has depression due to lack of serotonin, tryptophan or 5-hydroxytryptophan (5-HTP) would be well indicated, associated or not with allopathic medication. Deficiencies of vitamin B12 and folic acid due to polymorphisms or dietary deficiencies should be investigated in emotional disorders. Vitamin D is also required in the synthesis of serotonin, along with omega 3 oils (DHA and EPA), which relate to the release and action on pre and postsynaptic serotonin receptors.¹⁰ Another predisposing factor to behavioral symptoms in mental diseases is dysbiosis, which should be investigated and can be treated with specific probiotics.¹³

Sleep disorders can be optimized with the use of nutraceuticals and herbal medicines such as 5-HTP, dry melissa extract, dry valerian extract, vitamin B3, vitamin B6 and melatonin.¹⁰

The critical sense when indicating supplementation should be kept, taking into account its indications and contraindications, based on the clinical condition of the patient and respecting the interactions with allopathic medications, in an individualized manner.

MINDFULNESS

Mindfulness provides awareness of the present moment, and has been associated with physical, mental and emotional benefits, reduction of anxiety and depression, prevention and reduction of stress and fatigue, better cognitive performance, improvement of sleep, state of consciousness, mood and empathy.¹⁴

Several neuroscience studies prove its benefit in optimizing brain plasticity, with positive repercussions on the state of concentration, self-knowledge, compassion for oneself and others.¹⁵

There are different exercises that lead to mindfulness, such as breathing and directing attention to this breath, listening to quiet music and focusing on the sound provided by it, contemplating the nature around you, as long as you make a firm decision to experience only that moment, trying to avoid intruding thoughts or parallel fields. And every time that there's a scattered attention, calmly and without judgment, one must return again to the present moment.

The practice of mindfulness empowers the individual to perform one task as a time, rather than carrying the weight of multitasking, increasing their

aptitude to enjoy life more consciously, as a unique opportunity for learning, spiritual evolution, and personal fulfillment.

CONCLUSION

The integrative practices described have in common the human being's holistic view, doctor-patient relationship emphasis and concern to seek the diseases' origin to reset the balance, once the focus becomes the individual and not the disease, covering their emotional and lifestyle issues.

Modern medicine will continue to advance with regard to new technologies, however, by incorporating integrative practices into current biomedicine resources, it strengthens self-care initiatives.

Therefore, answering the question posed at the beginning of this article, insofar as the anesthesiologist is able to broaden the careful look to himself, through the knowledge of these described approaches, he meets one of Núcleo do EU's primary objectives, Which are precisely the improvement of his well-being.

"The integrative practices described have in common the human being's holistic view, doctor-patient relationship emphasis and concern to seek the diseases' origin to reset the balance, once the focus becomes the individual and not the disease, covering their emotional and lifestyle issues."

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chapter 16

Anesthesiologist and Time

by **Pamella Braga Morais**

Alice: “How long is forever?”

White Rabbit:

“Sometimes, just one second.”

Lewis Carroll

"Hours of boredom and minutes of terror"; "the first to arrive and the last to leave." If you've never said or heard these phrases, you're probably not an anesthesiologist. And they've become so repeated in our midst because they both demonstrate a great truth: time is our main partner at work, whether as an ally or an enemy. This relationship is as close as it's unconscious, since at all times we

"Reflecting on how we deal with time in our professions and in life can help us make more conscious choices that are more suited to our values, in order to live a life with more quality and fullness."

are molding or being molded by the time passage, but without realizing it. Reflecting on how we deal with time in the profession and in life can help us make more conscious choices and more suited to our values, in order to live a life with more quality and fullness.

The notion of time permeates our routine in anesthesiology at all times. One of the first essential lessons of the residency is the onset of action and the half-life of the drugs most commonly used in the operating room. We take into account the surgery time and the knowledge of surgical times when designing our anesthetic planning. We recorded in the bulletin the start and end times of the surgery, the time of antibiotic administration and the graph of vital data about the time. Often, we wait for a brief – or long – time for the surgeon, for ICU vacancy, for the patient and even by some essential material for surgery. We calculate the room time of the cases to arrange a surgical scale or the shift. In an emergency, we race against time and remember the importance of seconds; in a long elective surgery we act with time, keeping active vigilance over our patient as we watch the hours pass on the clock.

Considering only graduation and medical residency, the minimum time required for the training of an anesthesiologist in Brazil is 9 years, which represents more than 10% of the Brazilian life expectancy, according to IBGE¹ data. In addition to many hours at work, we also invest our life time in continuing education, research and teaching and we can realize the importance of each minute of improvement when we handle a complex case well, relieve a patient's pain, are recognized by our peers and proudly watch the evolution of residents, day after day, working on our services. It's also noticeable the beneficial effect of the passage of time in professional maturation that a good baggage of experiences and memories can provide, making us gradually more able to deal with the several challenging situations that care and teamwork in

the surgical environment present daily. On the other hand, the hours of life excessively dedicated to our specialty, associated with the high level of occupational stress² and individual susceptibilities, can cause many physical and mental diseases to anesthesiologists, with serious consequences for themselves and their surroundings³.

Although we have such a close relationship with time at work, we aren't necessarily experts in managing the time of our own life outside the hospital. The day has 24 hours for everyone and finding a balance between working hours, professional improvement, self-care (sleep, physical activity, food, psychotherapy, hobbies), fulfilling the responsibilities of adulthood and living with family and friends can be, for many, a mere utopian pretension. Those trying to achieve this balance may feel pressured, anxious, or frustrated if they fail to reduce the high expectations of performance and perfection created by themselves and fueled by a materialistic and highly competitive society. As Voltaire said, "the best is the enemy of the good" and when we talk about time management this phrase becomes an even greater truth. Instead of pressuring ourselves to act in a certain way when we already feel at our limit, it's important to be flexible, keeping in mind that life is constantly changing and that this is why balance is dynamic. Knowing yourself and staying true to your values can be a useful guide to understanding what should be prioritized in our life and at what time.

In the book "The Top Five Regrets of the Dying - A Life Transformed by the Dearly Departing"⁴, Australian palliative care nurse Bronnie Ware recounts her experiences during years of working with end-of-life patients. In this book, she lists the 5 most common regrets of most people close to death and 3 of them are closely related to the use we make of our time. They are: "I wish I'd had the courage to live a life true to myself, not the life others expected of me"; "I wish I hadn't worked so hard"; "I wish I had stayed in touch with my friends". The lamentations are followed by honest reflections on the not always so positive influence of the environment on us, the construction of beliefs that stuck us, the need for a purpose to feel satisfied with oneself and with life, the importance of simplicity as a factor of freedom and the relevance of the friends presence in keeping our mental health and sense of happiness. The careful reading of this book, fellow anesthesiologist, added to the reflections that it stimulates, will certainly not be wasted time.

In my family, people either died of cancer before the age of 60, as happened to my mother and her 3 sisters, or they died very old, with an

advanced dementia. In both possibilities, the time of life with presence, memory and affection was shortened by natural causes. Probably because of this, since my childhood, when family losses began, I find myself reflecting on how well we can live the time we still have. Being an anesthesiologist, postgraduate in palliative care and aerospace doctor made me participate in the life story of many people in brief but critical moments, which certainly refined my look at time and care for myself and others. However, by getting pregnant and becoming a first-time mother of twins, during the pandemic, my notion of time management - both chronological and emotional - was expanded. I realized that it's possible to live multiple lives within a single lifetime. It's just allow ourselves to live the needed changes, in our own time, prioritizing the essential, in order to be more consistent with our own truth and thus become increasingly full beings in the world. As Renato Russo said in the song Wasted Time: "Every day when I wake up / I no longer have the time that has passed / but I have a lot of time / we have all the time in the world."

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