### 1

### CHAPTER 3.

### MENTAL HEALTH AND LOCKDOWN

Juan Moisés de la Serna

The implementation of lockdown has proved to be one of the most high-profile and unpopular measures ever, and never more so when, for the first time in history, the Chinese government closed down one of its provinces, preventing the free movement of its inhabitants, and dictating that they remain locked in their homes, only to be allowed out to get food for themselves.

These were unprecedented measures to date, but they were justified by the health authorities as a way to combat the spread of COVID-19, thereby reducing the possibility of infecting other people. Furthermore, in this way the rest of the country was 'protected' from the spread of the disease. A method which was also adopted by Italy when the number of infected rose uncontrollably, and later in many other countries, to a lesser or greater degree.

Putting ourselves, for a moment, in the position of somebody in that particular locality, we realise that, overnight, measures have been put in place limiting our movements and confining us to our own home for days and days, without knowing for how long the situation will last, and even if the measures will prove effective. Furthermore, only those with financial resources or who work online will avoid the dilemma which others face, when their money runs out and they are unable to work because everything is closed. But this is the situation which millions of inhabitants have confronted for months, with the added uncertainty of not knowing how the virus is transmitted or whether they themselves are infected or not. An ongoing stressful situation which, dependent upon each individual's psychological makeup, will affect each one differently, and which, in some cases, will have medium to long term consequences which will continue after lockdown is over.

It is therefore predicted that a greater number of cases of depression or post -traumatic stress disorder will occur in this population, compared to those who did not have to undergo home confinement. Similar was observed in 2003,

amongst those who isolated in cases of Severe Acute Respiratory Syndrome, which is from the same family as the coronavirus, and which causes severe pneumonia (Luna, 2020). Recommendations are therefore being made by international agencies and professional associations of psychologists, for the preservation of the mental health of those who have to be confined to their homes for months.

Attempts have been made to keep people occupied with leisure activities, along with the recommendation of age-appropriate advice for the leading of an orderly life in terms of food, personal care and sport. Everyone has surely heard of the well-known phrase 'healthy mind in a healthy body', which means that in order to have adequate mental health the physical body must also be taken care of, an aspect which is often not taken into account. But when the time comes when we do want to exercise, a number of questions arise. Should we exercise daily? What type of exercise would be the most convenient? How much time should be devoted to exercise? These are typical questions which need addressing.

Although prior to the appearance of COVID-19, when someone was asked on the street by interviewers collecting information on health habits, lack of time was the main reason attributed to the fact of not carrying out any daily physical exercise, in the current circumstances of lockdown, time is no longer an excuse, as reflected in the official recommendations (@ConsejoCOLEF, 2020) (See Illustration 33).

If one thing is clear, it is the many benefits of daily exercise at a moderate level, either in oxygenating the body, or helping tone and maintain adequate flexibility. But does exercise really help the brain? This question has been addressed by research undertaken in a study by Shanghai Punan Hospital; the Shanghai University of Sport and the Tianjin University of Sport (China) (Pi et al., 2019).

The study involved 46 boys, aged between 19 and 22 years, 21 of whom were basketball professionals who trained for six hours a day on average five days a week, and the rest (the control group) were university students who did not habitually practice any sport. They all underwent a diffusion tensor analysis to examine density of the white matter, which allows interconnectivity between

areas, regions and hemispheres of the brain.



<u>Illustration 33. Tweet – Sport in Lockdown</u>

[@deporte.gob y @ConsejoCOLEF recommends continuing the maintenance of healthy lifestyles during lockdown. If you have doubts about training at home, contact qualified sport professionals.]

The results of the comparison between athletes and non-athletes demonstrated that the experts had shorter routes between regions, making it

easier for them to be more efficient in their performance. It was also observed that the circuits involved in tasks associated with sports practice were especially optimised for attention and visual processing, fundamental aspects in this particular sport which, not only consists of shooting a ball into a basket, for which good vision is essential, but within the game, the ball is continually passed to teammates or removed from opponents, therefore attention must be paid to one's teammates' signals, the coach's instructions, and the trajectory of the ball in opponents' hands in order to intercept them. Furthermore, the aforementioned results were significantly related to the number of years of training, hence the more years of training the higher the brain performance.

It may therefore be concluded that one does not need to be a professional athlete for daily practice, even moderate, to help the brain in the optimisation of its various processes. It is therefore advisable to carry out some form of activity with which to improve and tone the body, in addition to maintaining a 'healthy' and optimised brain, thus reducing the hours spent in sedentary activity, which is associated with specific health problems, and which exercise can prevent.

### **Emotions in Lockdown**

If anything has characterised Western society, particularly in the last decade, it has been the pursuit of happiness. To this end, hundreds of self-help manuals have been written in the teaching of how to discover personal happiness.

Although every author defines it differently and establishes a different 'path' to achieve it, they all agree that the achievement of happiness is a social necessity, a social norm to which everyone should subscribe. But who wouldn't want to be happy?

There are many social demands surrounding the establishment of a 'good life' whereby an individual may consider it is not enough to just have a job, a house or a car. But when circumstances change, such as the current implementation of lockdown measures, prior wishes and desires may seem 'unrealistic', and the uncertainty surrounding the disease and what will happen next takes its toll, leading us to wonder, could the achievement of happiness we have been pursuing for so long lead to depression? An answer to this question has been sought by a study undertaken by the School of Psychology, University of New South Wales (Australia) and the Department of Psychology, KU Leuven University (Belgium) (Bastian et al, 2015).

The study involved 200 Belgian university students, ranging in age from 17 to 24 years of age, of whom 110 were women, drawn from a sample of 786 volunteers. For all of them social expectations were evaluated, particularly with regard to negative emotions such as loneliness, depression, sadness or anxiety. The presence of depressive symptoms was measured using the standardised Center for Epidemiological Studies Scale (Radloff, 1977), and the level of perceived loneliness was evaluated by the UCLA Loneliness Scale (Russell, 1996). In addition, all the participants underwent a situation where they were emotionally manipulated, making the student feel either better or worse about themself.

The results showed that those students with higher social expectations of achieving happiness were the ones who were the worst at accepting failure, causing them feelings of loneliness and depression. On the other hand, students with low social expectations of achieving happiness were the most tolerant of the fact of not achieving it, and they did not present such marked feelings of

loneliness and depression.

These results suggest the need for reflection upon social demands and how at times one may, instead of facilitating the path to happiness, hinder it by asking for more than what is personally achievable, resulting in a 'social failure' and leading to negative feelings which may cause depression.

With the current situation of many countries being in lockdown, some people who have lost their jobs experience internalised demands creating negative feelings and thoughts of personal failure, because they are continuing to measure themselves on the same pre-lockdown 'social success' scale. This situation has affected workers with temporary contracts or who, due to the nature of their work, are unable to work remotely. The exacerbation of the difficult conditions in which they live, creates a trigger for mental health problems, which may start with symptoms of depression coupled with a strong feeling of personal unhappiness (@diarodeburgos, 2020) (See Illustration 34).

An important and fundamental variable in relating life experience to emotions is Emotional Intelligence which, if formed adequately during childhood, allows an individual to possess the necessary tools to face any frustration caused if the social expectation of happiness is not achieved.

As noted, happiness is intrinsically related to emotions. But what happens when an individual is subjected to emotional disturbance?

One's state of mind is the way in which one copes with daily activities and how one responds to any difficulties which may arise. The healthiest way is to adapt the state of mind to the specific circumstances, so at one moment a certain level of higher activity may be required, in giving a quick or energetic response, whilst at others they should be calm and slow. Therefore, everyone, throughout the day tends to go through almost every mood, with moments of lesser or greater intensity of personal activation, dependent upon the circumstances surrounding the individual.

However, when these states are altered, the individual responds in an imbalanced way to the requirements of the moment, i.e. in an inappropriate way, either with over-activity or inactivity, and contrary to what the current circumstances require. This will not only jeopardise the effectiveness of any work being carried out, but will also affect social, family and partner relationships.



Illustration 34. Tweet – Unemployment in the face of Lockdown

[Today in DB: In Burgos in 15 days the virus has destroyed jobs created over 2 years. 2 arrested and more than 600 fines issued for breaking of lockdown. 70% decrease in emergencies from coronavirus. Infant and Primary Schools lose another 1000 students of religion. La Liga ACB suspended sine die]

These mood alterations may become 'chronic', causing the individual to maintain a continuous high level of activation, taking a toll on their health and

causing irritability, rudeness and even aggressiveness, as may be observed in anxiety disorders where there is a continuous high level of activation not justified by the circumstances. When low activation responses become chronic, social, family and personal relationships will be impaired, but in this instance by excessive passivity which may result in inaction and absolute dependence upon others to carry out the simplest of tasks. This is what happens in major depressive disorder, where a relaxed and paused state becomes chronic, becoming part of the individual's way of behaving.

These are the most frequent events involved in the emergence of mood disorders, although it is possible for a combination of both states to occur, classified as bipolar disorder, where moods switch from depressive to manic, and these changes of mood, which are out of step with the current circumstances, predominate. The sudden changes in state, without prior warning, and the intensity of some episodes, whether manic or depressive, may disconcert and even confuse those close to the sufferer. Although there are specific treatments in the control of these symptoms, allowing sufferers a longer period of stability, they are often abandoned by the patients. Believing that they are 'cured' or that they 'no longer need them' are the main motivations for stopping the medication. But how do patients with bipolar disorder experience their disorder? This question has been addressed in a study undertaken by the Department of Psychology, Kumaun University (India) (Chandola, 2016).

The study involved 40 patients diagnosed with bipolar disorder and 40 without (control group), and all of them were asked to complete the Dimension Personality Inventory (Bhargawa, 2012).

The results showed significant differences in gender (highest in women); in age (higher incidence amongst adults aged between 40 to 50 years versus young people aged between 20 to 30 years); but no significant differences in personality were found between the assessment of patients with bipolar disorder and the control group.

The authors of the study pointed out that these findings were unexpected because, unlike other disorders where symptoms may be less evident, but the patient is aware of and actually suffers from his illness, in the case of bipolar disorder there are very obvious dual symptoms evident, yet the situation does not appear to impact upon their personality.

Suffering from this disorder in a situation such as lockdown, where the patient is confined for days and days can lead to a series of problems. The patient may abandon their treatment, leading to an increase in symptoms which will, in turn, affect other family members or carers who will also suffer if the patient experiences manic episodes due to lack of medicine (@ma\_purity, 2020) (See Illustration 35).



Illustration 35. Tweet- Bipolar in lockdown

[Today, on World Bipolar Day, we are raising awareness of this illness. Isolation can be difficult for many, but it is a real challenge for those with a mental illness.

We empathise with those who are suffering]

Before a patient reaches the extremes of chronic emotional stress, much can be done with regards the recovering of an emotional tone which is appropriate for the circumstances. To this end, Emotional Intelligence may be strengthened, whereby activation or inactivation is not experienced continuously, but tense or relaxed states are adapted, pertinent to the circumstances of each moment.

An appropriate therapeutic intervention, sometimes in conjunction with controlled pharmacological treatment can help the person recover their normal life, and, along with it, the social, family and partner relationships which, during their illness have suffered so much. The individual is therefore able to regain a suitable state of mind which allows for feelings of happiness.

However, happiness may be hindered by other feelings such as guilt, an emotion of which we are aware, which arises when we know that something wrong has been done, or that something which should have been done has not been. Therefore, guilt manifests itself as a feeling of blame regarding the undertaking (or not) of certain actions. In order for such feelings to arise the person must have a certain level of morality, or at least awareness of the fact that either what is being done does not meet socially desired expectations, or that a lack of action would be similarly undesirable

Currently it is understood that feelings of guilt, like pain, may be either positive or negative. For example, pain serves as a warning that all is not well in the body, and a 'remedy' must be found to alleviate it, this would be the 'positive' pain, whereas the 'negative' is when the pain continues over a period of time, even when measures have been taken to remedy it. So exactly the same thing happens with guilt, it is activated when something has been done which is known to be morally wrong, or something that should have happened does not. This should lead the individual to reflect upon why it was wrong and to try and remedy it as far as they are able, with the intention of not making the same mistake again once the 'lesson has been learned'. This may thus be seen as something positive, involving how an individual grows by learning from their mistakes. The negative element arises when the feelings of guilt remain for too long, even when a 'remedy' has been actioned in respect of its origins, and thus becomes an 'ordeal', making the individual feel bad within themself for something they cannot 'forget'.

People who suffer these 'stagnant' feelings of guilt, which will already form a part of their general demeanour, will experience various health problems, linked to this period of continuous stress, such as headache, stomach pain, tightness in the chest or tension in the shoulders. These people will also tend to exhibit the somewhat extremist way of 'thinking in black or white' where nuances of a

situation are not appreciated, and they have intrusive thoughts of self-reproach and aggression towards themselves.

With regards negative guilt, three modes may be identified. Firstly, where the individual blames themself for 'all the evil in the world' whether it has anything to do with them or not. This is known as internal locus of control, whereby the individual believes that they are responsible for everything that happens around them, even though, in many instances, circumstances will not depend on the actions of the individual, but they are dependent upon the intervention of a third party. The second position is whereby the blame for everything which happens to an individual is blamed on others, even if they have not participated in the act, and no responsibility is assumed by the individual. This is known as external locus of control, where someone else is blamed for anything that goes wrong, and it is usually adopted by 'immature' people who have remained at an earlier stage of moral development where they identify good with themselves and bad with others.

The third approach is where the individual excuses the responsibilities of both themself and others, by attributing everything to the circumstances of life, behaving as if they have agency to do whatsoever they please. Such is the defence used by people with few or low morals, in the sense that whatever they do they feel no responsibility for the results, and they will carry on doing exactly as they please. An example would be when an individual justifies themself by saying 'life made me this way' and does not bother to improve or change, continuing to do whatever they do with no sense of remorse.

In none of the aforementioned negative guilt positions does the individual attempt to analyse the circumstances which led to mistakes being made, nor is there any assumption of responsibility for the consequences that an action or inaction led to. Hence if the experience has not served as a lesson for the individual to reflect upon, the same mistake will be made the next time a similar situation arises.

Each of the above three situations will do nothing but harm the normal development of an individual, generating conflict wherever they may be, whether in the workplace or with a partner or family, since the feelings of guilt will be accompanied by a corresponding behaviour – in the first case of inactivity and avoiding outside contact so as to 'not do any more harm to the world', and in the

second two cases simply seeking pleasure without looking any further. As in the case of frustration when expected goals are not achieved, this guilt will prevent the individual from enjoying a state of happiness, therefore they will first have to 'fix' their emotions in order to be free to search for happiness.

However, when talking about a population of millions confined to their homes, who thinks about happiness? As strange as it may seem, not only is it possible, but it is also quite fitting not to be focussing exclusively on the negative aspects of the current circumstances. Hence the government has changed their television programming schedule to include humorous slots, even making comic programmes about the current situation in order to make the lockdown situation more bearable for everyone. (@RTVE\_Com, 2020) (See Illustration 36).



Illustration 36. Tweet – Humour in Lockdown

["Diarias de la cuarantena" (Diaries from Lockdown) has arrived. A realistic and revealing sitcom about the funniest side of living together in times of a pandemic]

For years there has been talk of the benefits of being a positive person, particularly in the social sphere, although sometimes this particular term is confused with that of an optimist, since whereas positivity refers to a type of thought, optimism is a characteristic of personality.

Positive thoughts are those which make us appreciate what we have around us, where we feel that everything will go well, and that our efforts will be rewarded. Similarly, positive thinking allows us to believe that others will be fair and consistent in their judgements. Contrasting with these thoughts are the negative ones, where everything is horrible, unfair and inadequate and feelings of envy, self-criticism and lack of self-esteem are prioritised.

One type of thinking or another will tend to play a fundamental role in how others perceive and react to us, hence positive people are often held in highesteem, whilst negative people are often 'marginalised' and left out. For this reason, it is socially more 'profitable' to be positive. But what is the role of positive thinking in the field of health? The answer to this question has been sought in an investigation carried out by the Department of Special Education, University of Thessaly (Greece) (Karampas, Michael & Stalikas, 2016).

The study involved 395 cadets from the Hellenic Army Academy aged between 18 and 22 years, of whom 123 were women. They all completed a standardised questionnaire in the evaluation of resilience – the Connor Davidson Resilience Scale (Connor & Davidson, 2003); another to evaluate positive thoughts – the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988); and one to assess general health via the General Health Questionnaire-28 (Goldberg & Hiller, 1979).

The results reported a significant correlation between positive thinking and resilience, i.e. the more positive thoughts a person has the more capability they feel in overcoming any obstacles in life. Equally significant correlations were obtained between positive thoughts and overall health, i.e. positive people were healthier than those with negative thoughts.

It should be taken into account that this study was undertaken with a very specific population - army cadets, who tend to be subjected to much higher levels of stress and demand than the rest of the population, so with that proviso in mind, it may be assumed that positive thinking serves to prevent illness amongst people subjected to high levels of pressure and anxiety. In the instances of those

confined to their homes, although such a situation would not, initially be considered stressful, since people are at home, with their own belongings and their loved ones, the uncertainty as to when it will end, along with the health crisis itself, makes it a stressful and burdensome situation for some.

It is not being suggested that positive thinking may serve to combat COVID-19 or mitigate its effects if one is infected, but it does mean it can help in maintaining a better general state of health overall, an aspect which, along with healthy eating is emphasised by the health authorities as key in strengthening one's defences. Therefore, if the body does have to face the disease, it can do so under the best possible conditions.

## Depression in Lockdown

One of the most frequent problems seen in the field of psychological consultation concerns emotions, either due to their over-activation, as in the case of stress and anxiety, or their inhibition, in the cases of sadness and depression. This is not because people are more sensitive to these problems and visit a psychologist more often, but rather that they are the most common mental health problems, experienced more than any other disorder in the field of mental health.

Sadness, along with happiness and fear, is considered to be one of the basic emotions, a state in which an individual no longer feels 'fulfilled' or even 'normal'. There are many reasons which can generate sadness, from the loss of a loved one to not having achieved a desired goal, but perhaps the most serious is the presence of a disease, especially if it is chronic or incurable.

The relationship between physical and mental health has long since ceased to be disputed. When someone suffers a disabling physical health condition this will have a direct effect both on their mood and in other areas, including the manner in which they relate to themselves and others.

When one feels bad, for instance when suffering from a chronic illness, this can significantly alter one's mood, even leading to depression. But when the symptoms of depression appear the situation gets worse, as the effect they have on health is important, reducing the quality of life of the individual by lowering not only the mood but also the immune system, placing the patient in a vicious circle. The worse they are physically the worse they feel psychologically, and the more depressive symptoms they suffer the worse their body will respond, therefore recovery, instead of being facilitated is hindered.

The consequences of such a vicious circle are an aggravation of the symptoms, worsening the patient's quality of life, making them less tolerant of what happens to them, and resulting in a worse prognosis for them than in another individual who has no depressive symptoms. It is therefore important for the first symptoms of depression to be diagnosed so they can be treated as soon as possible and do not progress and damage the health of the patient any further.

The origins of depression may be distinguished between exogenous and endogenous. Exogenous depression is caused by external 'negative' events experienced by the sufferer which affect their mood, e.g. the break-up of a

relationship or the loss of a loved one, when the sadness felt extends beyond the usual mourning period.

Amongst the characteristic effects of depression are feelings of guilt, hopelessness and futility, along with negative thoughts. In addition, there may be increased sensitivity to pain, persistent malaise, digestive problems, fatigue, irritability, indifference to previous interests, difficulty in concentration, and altered sleep patterns (too much or too little).

Although, as commented earlier, the relationship between physical and psychological health is long established, new discoveries are still being made. To date it has been known that when the body is 'mistreated' with too much pressure, wear and tear is caused and the body may 'fail' prematurely. This has been confirmed in studies since the 1960s when the term Type A personality emerged, defining those individuals who are particularly competitive and restless with high levels of stress and anxiety in their daily lives. In these people it was found that they were more likely to suffer from cardiac disease such as a heart attack which, if it occurs, not only increases the possibility of another one, but also significantly weakens this important muscle, and in many cases can shorten a person's life by months or even years.

In contrast, the term Type B personality emerged and was identified as being somewhat more protected from health issues and characterised by a calm individual with peace of mind who is governed by the values of cooperation and creativity, yet equally effective in the tasks they have to carry out. In this personality type the heart, far from being affected by the 'challenges' of the everyday, seems to be protected and there are fewer heart attacks than in those with Type A personality. But what happens with people who suffer with depression? This question has been addressed by a study undertaken by the School of Experimental Psychology, University of Bristol (UK) (Thomson, 2014).

The study involved 1413 participants of whom 785 had suffered depression (480 endogenous and 205 reactive). Their average ages were 44 for those who had suffered reactive (exogenous) depression and 58 for those who had suffered endogenous depression. More than half (67.7%) the participants were women. As a control group, data from the National Health Service Registry (England) was used, where information was obtained regarding the number of heart attacks suffered, and the survival rate of people in the same age groups.

The results found that men tend to suffer a significant shortening of life due to heart problems, but this relationship only occurred in the cases of endogenous depression.

There is depression currently being caused due to lockdown due to the temporary 'loss' for some people of activities which previously 'enriched' their emotional life, although based on previous research this will not pose a threat in terms of a shortening of life. However, attention must still be paid to emotional states, since they may well be influenced by the current lockdown situation, resulting in the appearance of anxiety and depression (@LANACION,2020) (See Illustration 37).



<u>Illustration 37. Tweet – Depression in Lockdown</u>

[Coronavirus: one in three Argentinians feel depressed and anxious due to lockdown]

## Anxiety in Lockdown

There are numerous situations throughout the day which require close attention. If a person is rushed or has too many demands at the same time, this can result in stress, which may manifest itself in the alteration of usual sleep patterns, causing insomnia.

Stress maintained in the medium to long term can be harmful to health, in what is known as distress. However, there also exists 'good' stress, the type which, for a short period of time enhances both capacity and responses to the task in hand. This type of stress is called eustress.

Whether stress is 'good' or 'bad' depends both upon the psychological assessment of stressful events and situations, as well as the length of time for which they persist. For instance, a situation viewed as challenging but appealing in the manner of improving oneself or 'showing off' will motivate the individual to give their best, thus obtaining success which otherwise would not have been achieved. However, if that same situation is maintained over time, a depletion of resources occurs, as explained in General Adaptation Syndrome (Selye, 1946) and the situation ceases to be motivating but instead becomes something 'insufferable' hence the stress takes over and wins. This syndrome divides stressful situations into three stages.

The initial stage is the alarm reaction where the organism prepares to respond to the stimulus or stressful situation.

The second stage of resistance or Adaptation is when the hypothalamic pituitary adrenal (HPA) mechanism is activated in response to the stressful demand. If the demand disappears a 'deactivation' process occurs via the same

HPA pathway, whereby the cortisol of the adrenal glands inhibits the production of the corticotropin-releasing hormone from the pituitary gland, which deactivates the HPA axis and recovers the basal levels prior to the onset of stress. On the other hand, if the stressful situation continues, the organism will continue to the next stage.

The final stage is exhaustion, based on the fact that the body's resources are limited and only available for a short time, and they eventually burn-out. This exhaustion brings a whole series of consequences to the different systems involved which may then cause the individual to become ill.

Medium term stress tends to lead to a series of consequences such as muscle aches, sleep and mood disturbances and immunodeficiency. Chronic stress, on the other hand, has more serious effects and may be responsible for digestive disorders leading to ulcers and diarrhoea; obesity due to increased appetite thus an increased risk of diabetes; weakening of the immune system and higher susceptibility to colds and infections; loss of memory, motivation, sleep, altered moods; increased blood pressure and heart rate; and accumulation of cholesterol and triglycerides in the blood with associated increased risk of heart disease and strokes.

On a psychological level chronic stress may also increase the symptoms of certain disorders, such as schizophrenia, where the higher the stress levels, the greater the expression of psychotic symptoms. In other people, the acute toxicity of high levels of cortisol in the brain affect certain neuronal structures leading to worsened cognitive performance. One such structure is the hippocampus, which is necessary for the establishment of new learning.

## The Immune System in Lockdown

The immune system, which protects the body from internal and external infections, is very sensitive to emotional changes, particularly stress. When stress is generated the body will experience immunosuppression, reducing the use of these functions to a minimum, but if the stress is maintained the system will be damaged.

The first indications that the immune system is not working properly may be observed when symptoms of conditions such as psoriasis or lupus appear. If no remedy is found and the stressful situation continues, there will not only be a slowdown in the healing and recovery process of any existing conditions, but the door is 'left open' to all kinds of other infections, as well as producing a worsening of any autoimmune diseases such as multiple sclerosis.

The HPA axis, when functioning correctly, produces a timely activation in the body in stressful situations, allowing an individual to give the right response at the right moment, whether it be of 'fight or flight'. However, if this activation is maintained over time, because the cause of stress is still present, 'malfunctions' occur in the normal processes, thereby increasing the likelihood for the individual to suffer from various diseases. This is due to the close relationship between the immune and psychological systems, the former being responsible for the correct recovery of any disorder within the organism, and low defences not only slow down this process, but also contribute to the onset of infections and other diseases. As mentioned previously, this relationship is also mediated by personality factors, with Type A and Type B personalities connected with higher and lower levels of heart disease respectively.

It is therefore known that high levels of stress will mainly affect the health of the heart, and that those with Type A personality are more likely to suffer health attacks than those with Type B personality. These two personality types are the most well-known, although a few years ago two other types were discovered, Type C and D.

In Type C personality there is a high level of expression of emotion, particularly positive ones. The individual tends to be very positive, hiding their negative emotions from others. They tend to suffer from rheumatism, infections, skin allergies, skin diseases and cancer.

Individuals with Type D personality, which is perhaps the least well-known type, exhibit a high level of self-demand, with hyperactive behaviour and low self -esteem and disconnection between the emotional and the 'rational' world, making them more likely to suffer form psychosomatic diseases. Ulcerative colitis, peptic ulcers and vascular disorders such as hypertension are also more likely to occur in this personality type.

The same lockdown situation will therefore have different effects on moods, emotions and the immune system for each individual, dependent upon their personality type. Type B personality seems to be the type most associated with a satisfactory state of general health, due to the calm manner in which they approach life's challenges, considering them to be transient circumstances which must be lived through, but which cause no increase in anxiety, thus stress and its effects are avoided.

### Diet in Lockdown

Although in times of lockdown measures have been put in place by governments ensuring that all its citizens have access to food, it should be taken into account that one's state of mind will always influence the choice of what is eaten, in quantity as well as quality.

Suffering depressive symptoms, together with the loss of interest in something which previously gave pleasure (anhedonia) can make the individual, little by little 'abandon' certain elements, such as personal hygiene and nutrition. There is an increase in the consumption of high calorie foods and alcohol, causing weight changes and, if accompanied by binge eating as a way to 'fill' one's life, this can cause weight gain which may eventually lead to obesity.

However, depression may also cause the opposite effect, i.e. the 'bad' diet leads to weight loss. In this instance the diet, coupled with lack of sleep, which means being awake more hours of the day (characteristic of people with depression) means the individual is active, hence burning more calories, but in this particular instance the calories are not being replaced due to the inadequate diet.

For some years there has been evidence of a close relationship between depression and obesity, with a greater number of obese people suffering from depression and, equally, people suffering from depression have a higher percentage of obesity. It is not clear, however, whether it is depression which is the cause of obesity or vice versa.

It must be borne in mind that obese people tend to be more susceptible to teasing from others, especially at an early age. They are particularly sensitive in the pre-adolescent phase, when the opinion and judgement of others is of paramount importance. For a young person, being rejected or ridiculed can act as a trigger, undermining their self-esteem, which may lead to isolation and the avoidance of social relationships. At the same time, they may 'retreat' into food,

using it as a way of 'filling up' on the love they lack.

A study analysing the effects on depression of an intervention on obesity was carried out by the Department of Psychology, Faculty of Humanities, Bond University; The Lakeside Rooms Centre, and the Mullumbimby Psychology Centre (Australia) together with the Foundation for Epigenetic Medicine (USA)

(Stapleton, Church, Sheldon, Porter & Carlopio, 2013).

The study consisted of 96 obese adult participants, half of whom were given an Emotional Freedom Technique (Church, 2017) treatment, while the rest did not carry out any form of treatment. The four-week treatment directly intervened on obesity, whilst with regards the depressive symptoms, an evaluation was carried out before and after treatment to see if they had been affected, and if so, to what extent.

The results showed positive effects, both in terms of reduction in obesity and improvement of depressive symptoms, effects which were maintained over time, as confirmed by results from an assessment twelve months later.

The above results confirm the positive effects of the intervention both on obesity and depression, allowing a general rethink on the way in which major depressive disorder is treated, avoiding the side effects in some patients of a drug- based intervention treatment, whether presented in isolation or in combination with psychotherapy.

## Sleep in Lockdown

It is known that, once childhood is over, in which there are more sleeping than waking hours in a day, that proportion is reversed, and the body requires around eight hours sleep per day for the rest of its life. This schedule may not always be maintained, resulting in some losses and some accumulations of sleep during certain periods which will subsequently be recovered. For instance, the working day is longer in the shifts of some jobs, or young people may stay up late studying or partying, and they will eventually compensate for this 'accumulation' with a long sleep.

Similarly, it is natural in the elderly for sleep time to be split, and instead of sleeping eight hours in a row, they tend to wake up after the first five hours, completing the remaining three hours a few hours later. But even in the elderly there is a tendency to abandon this type of 'fragmented' sleep, and there is often a kind of 'deregulation' where microsleeps are taken, regardless of what time it is, since they do not recognise that proper sleep is essential for the proper functioning of the brain, even when elderly.

Whilst discussing the importance of sleep, it requires mention that in the event of an accumulation of sleepless nights, e.g. in the studying for an exam or working of night shifts, the effects will become increasingly significant and serious, affecting both physical and psychological health and social relationships. Physically, muscle mass will decrease, along with an increased tendency to suffer illnesses, since the immune system reaches peak activity during sleep. Furthermore, injuries caused by lack of attention and increased possibility of accidents will occur. On a psychological level, there is a reduction in attention and concentration and inability to focus. With regards social relationships, others will realise and react accordingly. Furthermore, excess fatigue will either result in sufferers not wishing to spend time with others and, if they do, they may be irritable, ultimately resulting in loss of social contacts.

Classic experiments regarding sleep deprivation demonstrate devastating effects on attention, performance and other cognitive functions such as learning. Sleep deprivation may also put the mental health of an individual at risk who, after days without sleep becomes exhausted, drained and irritable, with moments of euphoria, paranoid thoughts, and subject to psychotic episodes, all due to not

sleeping well.

Similarly, sleep deprivation has an important effect on decision-making, according to the study carried out by the Sleep Research Centre of Loughborough University (UK) (Horne, 2012). This has also been evidenced by experiments concerning decision-making with regard to future profits as, for example, in the Iowa Gambling Task (Buelow & Suhr, 2009) which demonstrates the accuracy of decisions taken, based on variables set by the experimenter, who manipulates the amount of possible gains or losses in each trial.

There are four tasks with possible established results of high gain, small gain, small loss or high loss. Once a baseline measurement on performance is obtained, the tasks are performed again after some hours of sleep deprivation, usually 24 hours, in order to observe the interference or not of lack of sleep in the decisions taken.

Research suggests that deprivation of 49 hours sleep causes the participants to take risky decisions such as would be taken by individuals with injuries to the ventral prefrontal cortex. These studies were undertaken by the Division of Neuropsychiatry, Walter Reed Armed Forces Research Institute; Maryland Psychiatric Research Center; Department of Psychiatry, University of Maryland; Department of Radiology of the School of Medicine, and the Department of Environmental Health Sciences of the School of Public Health and Hygiene, John Hopkins Institute of Medicine (USA) together with the Rotman Research Institute and University of Toronto (Canada) (Colten & Altevogt, 2006).

It may therefore be concluded that lack of sleep not only reduces cognitive abilities, affects emotionality, and impedes the immune system, but also leads a person to make 'bad' decisions, hence the importance of maintaining a regular sleep pattern of at least eight hours per night.

### Resilience in Lockdown

When speaking about the role of stress in the emotional world and its consequences on the organism, reference must be made to the term of resilience, which has become a key psychological concept in recent years, referring to the manner in which a person copes with life.

The term resilience arose from the testimony of survivors of some of the most extreme situations to which people can be subjected, such as the Nazi concentration camps in World War Two. It was analysed as to why, despite living through the same horrific circumstances of war, some had survived and others not, and why some of the survivors managed to rebuild their lives, yet others were plunged into despair.

This analysis, and testimonies such as that of Victor Frankl, who developed logotherapy as a method of dealing with such situations (Frankl, 2004) led to the emergence of this kind of formula of overcoming any adversity, something which appears to be linked to a person's character, as well as their way of thinking and seeing life. This concept is currently used in therapy, not only in helping those who have survived extreme situations, but in helping people overcome the daily difficulties of life, aiming at reinforcing the resilience which everyone has inside them.

Resilience is therefore a concept which may be learned and developed, and which has a critical role to play in protecting the individual, since everyone is exposed to stress on a daily basis. With development of resilience it is possible to learn how to overcome any difficulties which may arise, and it is therefore important that it is taught to children at an early age.

The boom in the eighties within the field of Emotional Psychology and, more specifically, within its applied branch of Emotional Intelligence, has resulted in a rather specific vocabulary, which may not be familiar to everyone. Included in this vocabulary is the term of resilience, which may be understood as the set of personal capacities and abilities available to the individual allowing them to face the most difficult situations and emerge victorious from them.

Although some have identified resilience as a personal quality with which one is born, rather like charisma, it is largely considered that it can be developed and improved, thus enabling one to have the necessary tools to cope with the

challenges of everyday life, something which is essential in any job or profession. But from what age is it appropriate to learn about resilience? This question has been addressed by a study undertaken by the Faculty of Science and Technology, Technological and Higher Education Institute of Hong Kong (Hong Kong) (Tung, Ning & Kris, 2014).

There were 257 participants in the study, all high school students, 86% of them between 16 and 20 years of age and the rest over 20 years of age, half of whom were girls. Each student was given a questionnaire to ascertain their levels of stress, whether there were physical symptoms associated with any stress, the presence of depression, and their levels of self-confidence, self-esteem and optimism.

The results reported that half of the participants considered they had good levels of resilience, self-esteem and personal self-control. In terms of comparison according to gender, the girls demonstrated higher anxiety levels and lower social perception. Children from single parent families, who constituted 10% of the participants, showed lower levels of resilience and self-esteem as compared to the rest of their peers.

Evaluated overall, it can be concluded that the results are not a particular cause for concern. Whilst half of the students have low resilience which, as the authors suggest, may lead to sleep disorders associated with anxiety as well as other psychosomatic disorders, resilience can be learned and developed, and it is extremely useful in increasing self-esteem and academic performance.

It is therefore important that resilience be detected and developed from childhood, in order that the individual may be prepared for the day to day challenges they will face, whether at work or in their personal life. Resilience is essential when facing a situation such as that of lockdown where, due to the exceptional nature of the situation, high levels of stress may be generated, which can even lead to feelings of worthlessness and depression. As long as one knows how to put the situation in perspective and find a sense of 'meaning' in life, it will be much easier to face and cope with the situation.

# List of Illustrations

```
Illustration 33. Tweet – Sport in Lockdown 77
Illustration 34. Tweet – Unemployment in the face of Lockdown 80
Illustration 35. Tweet – Bipolar in Lockdown 82
Illustration 36. Tweet - Humour in Lockdown 85
Illustration 37. Tweet - Depression in Lockdown 90
```

### Referenced Tweets

- @ConsejoCOLEF. (2020). Consejo COLEF en Twitter: ".@deportegob y @ConsejoCOLEF recomiendan seguir manteniendo estilos de vida activos durante el confinamiento. Si tienes dudas sobre cómo entrenar en casa, contacta con profesionales cualificados/as del deporte. #YoMeMuevoEnCasa. Retrieved April 5, 2020, from https://twitter.com/ConsejoCOLEF/status/1245005430096646151
- @diariodeburgos. (2020). Diario de Burgos en Twitter: "Hoy en DB: El virus destruye en Burgos en 15 días el empleo creado en 2 años 2 detenidos y más de 600 multas por saltarse el confinamiento Bajan un 70% las urgencias desde el coronavirus Infantil y Primaria pierden otros mil. Retrieved April 5, 2020, from https://twitter.com/diariodeburgos/status/1245946653867151361
- @LANACION. (2020). LA NACION en Twitter: "Coronavirus: uno de cada tres argentinos siente depresión y ansiedad por la cuarentena https://t.co/CWVlbjUnrb https://t.co/OmPUUrydBh" / Twitter. Retrieved April 7, 2020, from https://twitter.com/LANACION/status/1244726615902269441
- @ma\_pureza. (2020). MaPureza en Twitter: "Hoy, en el Día Mundial del Trastorno Bipolar, hagamos conciencia sobre esta enfermedad. El aislamiento puede ser desafiante para muchos, pero es un reto para aquellos que tienen enfermedades mentales. Tengamos empatía con aquellos qu. Retrieved April 5, 2020, from https://twitter.com/ma\_pureza/status/1244753247107272705
- @RTVE\_Com. (2020). RTVE Comunicación en Twitter: "?¡Llega "Diarios de la cuarentena", una sitcom realista e íntima sobre el lado más divertido de la convivencia en tiempos de pandemia! ? Estreno (y risas aseguradas) el martes a las 22:05 h en @La1\_tve https://t.co/Gk34fN2. Retrieved April 5, 2020, from https://twitter.com/RTVE\_Com/status/1245748325346918401

- Bastian, B., Koval, P., Erbas, Y., Houben, M., Pe, M., & Kuppens, P. (2015). Sad and Alone. *Social Psychological and Personality Science*, *6*(5), 496–503. https://doi.org/10.1177/1948550614568682
- Bhargawa, M. (2012). Dimensional Personality Inventory. *National Psychological Corporation, Agra*.
- Buelow, M. T., & Suhr, J. A. (2009, March 5). Construct validity of the Iowa gambling task. *Neuropsychology Review*, Vol. 19, pp. 102–114. https://doi.org/10.1007/s11065-009-9083-4
- Chandola, D. R. (2016). Is personality of schizophrenics & Samp; bipolar patients are similar? *International Journal of Sciences & Applied Research*, 3(5), 51–59.
- Church, D. (2017). The EFT manual. Hay House, Inc.
- Colten, H. R., & Altevogt, B. M. (2006). Sleep disorders and sleep deprivation: An unmet public health problem. In *Sleep Disorders and Sleep Deprivation:*An Unmet Public Health Problem. https://doi.org/10.17226/11617
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new Resilience scale: The Connor-Davidson Resilience scale (CD-RISC). *Depression and Anxiety*, 18(2), 76–82. https://doi.org/10.1002/da.10113
- Frankl, V. E. (2014). The will to meaning: Foundations and applications of logotherapy. Penguin.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, *9*(1), 139–145. https://doi.org/10.1017/S0033291700021644
- Horne, J. (2012, November 1). Working throughout the night: Beyond "sleepiness" impairments to critical decision making. *Neuroscience and Biobehavioral Reviews*, Vol. 36, pp. 2226–2231. https://doi.org/10.1016/j.neubiorev.2012.08.005
- Karampas, K., Michael, G., & Stalikas, A. (2016). Positive Emotions, Resilience and Psychosomatic Heath: Focus on Hellenic Army NCO Cadets. *Psychology*, 07(13), 1727–1740. https://doi.org/10.4236/psych.2016.713162
- Luna, K. (2020). Speaking of Psychology: Coronavirus Anxiety. Retrieved February 29, 2020, from APA.org website: https://www.apa.org/research/action/speaking-of-psychology/coronavirus-anxiety
- Pi, Y.-L., Wu, X.-H., Wang, F.-J., Liu, K., Wu, Y., Zhu, H., & Zhang, J. (2019). Motor skill learning induces brain network plasticity: A diffusion-tensor imaging study. *PLOS ONE*, *14*(2), e0210015. https://doi.org/10.1371/journal.pone.0210015
- Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, 1(3), 385–401. https://doi.org/10.1177/014662167700100306
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40. https://doi.org/10.1207/s15327752jpa6601\_2
- Selye, H. (1946). The General Adaptation Syndrome and the Diseases of Adaptation. *The Journal of Clinical Endocrinology & Metabolism*, *6*(2), 117–230. https://doi.org/10.1210/jcem-6-2-117

- Stapleton, P., Church, D., Sheldon, T., Porter, B., & Carlopio, C. (2013). Depression symptoms improve after successful weight loss with emotional freedom techniques. *ISRN Psychiatry*, 2013, 573532. https://doi.org/10.1155/2013/573532
- Thomson, W. (2014). The Head Stands Accused by the Heart! —Depression and Premature Death from Ischaemic Heart Disease. *Open Journal of Depression*, 03(02), 33–40. https://doi.org/10.4236/ojd.2014.32008
- Tung, K. S., Ning, W. W., & Kris, L. T. Y. A. (2014). Effect of Resilience on Self-Perceived Stress and Experiences on Stress Symptoms A Surveillance Report. *Universal Journal of Public Health*, 2(2), 64–72. https://doi.org/10.13189/UJPH.2014.020205
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063