

TOPIC ARTICLE

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Abstract: In such a detailed view of the personal structure of pain response, they find space some declensions on the therapist's sense of professional responsibility, on his painful afflictions preserved in the memory; afflictions that contaminate the living environment of who takes care of each other in a way that, when that happens, we are able to lead back to a group of factors more involved in reactivity than others less indicative. Unlike Burnout, although it shows equally all-encompassing symptoms, the compassion fatigue manifests itself even after a single episode of exposure to the painful event and is properly attributed only to those who work in a clinical environment and in direct contact with the exposed pain. It's easy to see why our firm has hired such a interest in this suffering of the caregiver and the therapist and the further. The following characterization shows how some symptoms could severely affect the specialist's life.

Abstract text,
(Max. 250 words)

Key Words: (3-5 words) Empathy, burnout, well-being, secondary trauma, insomnia, cancer, compassion fatigue

Introduction:

What is the emotional impact of someone who is exposed to someone else's trauma? What is the cost of the profession therapeutic and healing? Questions like these animate this ESBM*1 Fatigue Study and on the well-being of those who work in the care relationship in general, and in particular in the department of Senology of Santa Chiara Hospital in Pisa. Trauma in its

various forms can cause dissociative consequences to the extent that exposure to pain causes well-defined symptomatological reactions as well as prolonged exposure, personal memories of the therapist and the degree of life disruptions, translated literally with the degree of destruction of life, are the variables unwanted by the therapist, who is tired of other people's pain, being traumatized by other people's trauma.

Main Text:

The reasons for this book are basically born from the desire to give an epigenetic explanation to our new way of life, to the adaptation to a pain that overwhelms the person, who in turn lives longer thanks to a DNA that is getting longer, the same person who however risks succumbing under the weight of an archaic pain such as fear.

What is the emotional impact of someone who is exposed to the traumas of others? What is the cost of the therapeutic and caring profession? Questions such as these animate the ESBM Study* on the fatigue and well-being of those who work in the care relationship in general, and in particular in the Department of Senology at the Santa Chiara Hospital in Pisa. Trauma in its various declinations - family vicarious, family simultaneous, intra-family, secondary - can cause dissociative consequences to the extent that exposure to pain causes well-defined symptomatological reactions and included in the manual of mental disorder starting from in the DSM III, based on the six basic emotions fear, anger, surprise, sadness, disgust and happiness. Those who work in the relationship of care with the other may encounter what is called post-traumatic stress syndrome - i.e. PTSD - and which represents the dimension of a patient's trauma that, in turn, through known neuro-cognitive mechanisms, reaches the health care professional and clinician: the so-called traumatizing trauma (Figley, 2001). So how does a therapist make a recurring painful thought disappear? What is the dimension of the empathic process in this situation? The state of the art in this regard says that in a relatively recent study in 2009 (Adams et al., 2009), the PTSD contamination in the social worker population (therapist, psychologist specializing in childhood trauma, nurses, emergency room doctors, etc.) in New York City after 9/11, was so strong that various profiles of individuals who were involved in a type of tearing pain that needed a lot of "treatment" to be processed and that had uncovered grief and feelings of deep sadness and prostration (Figley, 2001). In such a context the victims needed many hours of medical assistance and psychological intervention. What the researchers of Figley's group were able to notice from the beginning, is that the people indirectly involved in the trauma, soon began to manifest a series of symptoms of psychological stress with related correlations (Nelson-Gardell & Harris, 2003): changes in the

rhythm of sleep, intensity of emotional reactions, inability to modulate the emotions of depressive traits, increased arousal. The highest secondary stress markers were recorded in three specific traumatic categories reported by the victims: sexual and psychological abuse, military combat and collective disasters (Jenkins & Baird, 2002).

Those exposed to the trauma had suffered severe grief and the social professional was suffering the secondary effects. In our work in Pisa the medical and paramedical staff and the psychologists intervened have recorded a significant data related to the trauma syndrome (i.e. ST), in which the "negative life event" correlates in the measure of .18 ($p < .01$) with the experience of their trauma; and again: the age of the professional correlated in the measure of -.14 ($p < .05$), a data significantly interesting for the impact of the average age of the victims relatively low and lastly the other statistically significant data was found with the ST Scale with a data of .27 ($p < .001$). The effects on the person were those typical of PTSD with production of symptoms of dysregulation, hyper-activation of arousal, dissociation traits and momentary disturbances of attention. In summary: age and trauma correlated significantly to the detriment of health care professionals. We can conclude that the acquired contamination of vicarious trauma puts the empathic response which, in Figley's theorization, is the result of a more or less marked exposure to suffering, individual empathic abilities and concern.

"Fear and the cerebral sub-cortex."

When a state of fear is triggered, the cortical and subcortical areas of the brain - affected by the activation of emotions - are activated so that the amygdala can send messages, which, in turn, activate modifications that are not always directly recognizable; an example of this activation-deactivation process is typically given by the modular reorganization path of the various memory systems. Without going into the various dimensions related to the storage or recovery of data, related to other locations, here we are interested in exemplifying how some brain areas are pre-constituted to store information in order to be able to reuse it in a sudden emergency situation, as if they were sentinels ready to intervene in case of need. We imagine this synaptic path as a real ramification within the deepest area of the brain, where the amygdala responds and provokes emotional reactions to the stimulus, in advance of the neocortex: in these cases it can happen that the amygdala gives a response and is activated without having completely perceived the message to be conveyed, because the sensory inputs coming from the eye, for example, or from the ear arrive first to the thalamus, with a primary

message and, later, the message is delivered to the neocortex, becoming a secondary signal (LeDoux, 1989).

When the signal reaches the neocortex it refines itself and behaves as thought thought, assuming all those ontological characteristics related to the importance and structure of the cognitive and emotional content; it will be precisely in this phase that thought will really be thought completely, with those processes of elaboration of emotions of the so-called cold processes, where the perspective of the other is functional for the response mediated on emotions; we are far from the sudden reactivity of the emotional resonance and closer to the awareness of the response.

Prolonged exposure, the therapist's personal memories and the degree of life disruptions, translated literally as the degree of destruction of life, are the variables unwanted by the therapist, who is fatigued by the pain of others, being traumatized by the trauma of others. In such a detailed vision of the personal structure of response to pain, there are some declensions on the therapist's sense of professional responsibility, on his painful afflictions preserved in the memory; afflictions that contaminate the vital environment of those who take care of the other in a way that, when this happens, we are able to lead back to a group of factors more involved in reactivity than others less indicative, in the following way (the subdivision is Figley's):

- Prolonged exposure to each other's trauma with traits of lack of empathy, depression, anxiety and sadness;
- Traumatic recollection with reactions associated with anxiety, depression and pain;
- Life disruption with disastrous lifestyle changes and a shift toward prolonged sadness and a sense of withdrawal.

Lifestyle change also manifests itself through the feeling that something important has changed in the daily routine and although this indicator is the most tolerable of all those presented in terms of distress, we can see how the comorbid combination with the other seven factors turns this secondary indicator into a real marker for triggering CF. We remember that we need to talk about this component of the therapist's compassion because it is closely related to empathy and the fact that professions in contact with the pain of others have to deal with these two internally connected dimensions.

Does the therapeutic profession have a cost?

The peripersonal dimension becomes predominant compared to any other representation of the other, deeply affecting the treatment relationship; unlike Burnout, although it shows equally totalizing symptoms, CF manifests itself even after a single episode of exposure and is properly attributed only to those who work in a clinical environment and in direct contact with the exposed pain. It is well understood why our study has taken such an interest in this suffering of the caregiver and the therapist and the further investigation that can be deduced from the characterization that follows, indicates how some symptoms can heavily affect the life of the specialist. In the classification that we recall (Figley, 2002), physical symptoms such as difficulty sleeping at night and psychosomatic disorders, emotional symptoms such as irritability, anxiety and depression, behavioural symptoms such as cynicism, patient avoidance, substance abuse, aggressiveness and pessimism are indicated, interpersonal symptoms such as difficulty concentrating, poor relationship with the patient, dehumanization and lack of sense of humor and work related symptoms such as low work performance, absenteeism, difficulty taking responsibility and poor performance. In a literature review of STS, VT and Burnout risks in 2007 published in the Journal of Loss and Trauma by Sprang and his collaborators, some significant inferences by age and gender are illustrated. The most significant inferences concern the direct incremental proportionality of the risk of STS and VT in cases of increased age - the average age of the sample is 45.22 years, with a range from 22 to 81 years - while age tends to decrease significantly in cases of Burnout (Adams et al, Harrington, 2001; Nelson-Gardell & Harris, 2003; Vredenburg et al., 1999); i.e. younger respondents are - and this is easy to guess - less exposed to professional fatigue and more general psychological discomfort, while older people show symptoms very similar to critical exposure to trauma. The adult participants in this study, 68%, are health professionals. Another significant inference for our observatory is that women seem to be more affected by exposure to vicarious trauma and remain traumatized with a higher incidence than men (Brady et al., 1999; Kassam-Adams, 1999; Meyers & Cornille, 2002), as it leads to wider reflections. The survey draws its conclusions confirming that the percentage of patients with PTSD shows high levels of CF and Burnout in caregivers exposed to the patient's trauma for a long time, and urges us to reach with more and more validity, the particular interest of this study aimed at the ability to be truly empathic even in situations of higher risk.

The ESBM Study* is an observational research work, divided into three unequal parts, one appendix with the worksheet and one with the protocol and test projections; it has two basic assumptions in the background:

1. hypothesis a): The health care staff of the Department has a stable level of well-being, far from stress related to the workload;
2. hypothesis b): The Ward health care staff has a high level of perceived stress and an altered state of functional well-being.

The tests used in this work have been gathered in a provisional protocol under review that wants to measure, through self reporting tools, the cognitive abilities to mentalize the effects of exposure to normal life events, the imaginative thoughts about border situations, in terms of response on awareness and self-awareness and support of social cognition, with respect to the adaptive function of learning, and finally, the psychological well-being of exposed individuals. In order to evaluate aspects related to professional empathy and interpersonal reactivity to stress, we used the Mehrabian Balanced Scale, which examines the components of our interest - vicarious experience and interpersonal experience - with items equally distributed and reciprocally oriented positively and negatively, together with Davis' Interpersonal Reactivity Index IRI - version for the Patient. The response to some issues related to imaginative situations and response situations such as "Daydream and fantasy with a certain regularity, about things that might happen to me" (item 1 taken from Interpersonal Reactivity Index IRI - version for the Patient), allowed us to measure, in this specific case, the reactivity in front of certain situations, particularly exposure to internal or external emotions. We needed an index that, together with the balance of the negative effects of acquiescence and social desirability provided by the Balanced Emotional Empathy Scale, with items such as: "I can't feel sorry for people who are directly responsible for their unhappiness" (item 2 from BEES), and the IRI Reactivity Index was able to give a first indication of empathic behaviour. To complete the profile required by the study, it was decided to place two scales on psycho-physical well-being alongside the ISI sleep severity index and the level of awareness of one's own stress with the PSS perceived stress scale.

Overlooking the detailed analyses that will be included in a special appendix, a broader discussion can be made on the Pearson correlation scores that have been calculated by relating the four total scales and the age variable, in order to determine how much age is correlated to one of the four indices. We can therefore conclude that as age increases, so does the Total IRI score. The major concern that emerged in this work, in addition to the great emotional impact, was to overcome - or at least try to do so - the constant risk of methodological error, inherent in the choice of certain survey instruments of ESBM*, which on the one hand give a good

statistical result, but on the other, require some special attention during administration and scoring.

The risk I am talking about is that of the attenuation paradox. The amplitude of the construct (for BEES and IRI) extends with many items up to 30 self-report questions and requiring a large population of subjects in order to be able to perform the relative oscillations. The Authors of the two Tests, Mehrabian and Davis, do not exclude, but rather predict that the same amplitude can be traced back to more focused analysis, without incurring in selective reductions of items as often happens to see in many studies, in which one has the illusion of measuring better, because you select items with higher scores without looking at the content or theoretical meaning, often obtaining as a result, outcomes with redundant scales and with very high α values (apparently many significant). Therefore, studies that do not correspond to reality and are not valid from a statistical point of view. One of the merits of this work is having let the sample show its functional significance. We did not manipulate the size and the number of our study (ESBM* N=46), we preferred not to intervene with corrections that would reduce the natural distortion, postponing the issue of higher inferences, to the developments that ESBM* will be in the near future with a larger sample and in balance with the relative factorial analyses. As things stand at present, we were interested in the fact that our sample had good factorial stability and showed some interest in the proposed topic. The data shown in the methodological chapter confirm our intent; from our Study emerges a good internal coherence, especially with respect to certain empathic aspects such as the impermeability to contagion from internal emotional layers and the susceptibility to contagion of the same emotional layers. Our sample showed very low values in these BEES facets, with the predictable differences by categories. Low values in these items means a high level of empathy and vice versa. The physicians participating in the study showed an average of 10.41 with a deviation of parts at $DS = 10.57$ while the nurses in the study had an average for the same facets of 14.04 and a $DS = 12.54$. This means that - as indicated by the Authors of the scale - by crossing these facets with some IRI items that measure personal distress the group registers a certain state of well-being, but strongly conditioned by levels of empathy and exposure. The greater the susceptibility shown, the greater the level of empathy that raises the degree of distress. When we correlate this data to the perceived stress, with the PSS scale, the anamnestic condition also comes into play, which in summary is good. However, in order to be able to conduct the subsequent inferences and correlations, we refer to other sites where the higher analysis will be deepened and treated.

The most interesting discussion is on the emotional part related to the effects that the oncological disease actually has on the people who participated. In the background breast cancer refers to an archaic, continuous pain, which in this ward coexists with therapies. Tiredness and industriousness require an intervention of assessment in order to prevent the onset of malaise and burnout, which at the moment are only slightly declined in some areas such as personal distress mentioned above. For this reason it was decided to propose a Risk Assessment protocol functional to the results of ESBM* that will be built on the basis of the evidence presented. We can certainly conclude the methodological discussion by asserting that the hypothesis that is correct to validate, is the hypothesis b) that the health care staff of the Department of Senology of the Santa Chiara Hospital in Pisa has a high level of perceived stress and an altered state of functional well-being.

Conclusion:

Our DNA stretches to adapt to longevity; we were not programmed to live that long, yet research and progress have made epigenetic changes: we are developing in evolutionary terms, we are increasing the stages. The estimated survival of life runs on the edge of the ideal experience of becoming immortal, but in the situation where this is likely to happen, the first fears appear, second only to stress trauma, of surviving life. The concept intrinsically linked to the fear - of death - of those who take care of cancer patients, hooks the phantasmagorical ritual of the enchantment of living and not living, of memory, of the past that returns in other forms, under more or less present experiences, under more or less archaic experiences, and in making this journey, we consume the moment of the melting point, that unrepeatable moment in which we stopped feeling pain for one event and began to have it for another. We stop seeing one man, and we see another. Then, reflecting on it, I remembered that it is often ironic how it is easier to die than to be born, and - given the result of life - I deduce that, from a merely cognitive point of view, such theorization can easily be validated by the living, while it is much more complicated to question those who are no longer, and modern obstetrics and gynecology in childbirth, are both to disavow the postulate of departure: one is born now in every way. The first big difference between being born and dying lies in awareness. We are born unconscious, while, with the exception of a few deaths, we leave consciously.

Something tells me, however, that, at this point, the reader might be led to think that the scientific dissertation at the basis of this book, and from which we started with all those data, those acronyms, has taken a breather, giving way to the more discursive aspects, and the impression might seem true.

But it's not.

In order to enter into fear without making methodological mistakes, it is necessary to understand what we are willing to let go of and what to base vital arguments on. We are on a deep submerged journey, where words are preferred to numbers, but to achieve this result, many numbers have been needed. Here is science. I have fathomed the stories of the protagonists and, where possible, I have participated in their parts of life told. When I compiled the family histories I wondered if I was forgetting something, if I was omitting details, if I was fantasizing, if I was inventing parts and in doing so I got deeper and deeper into their stories. There is Mario (fictional names) who takes psychotropic drugs to sleep, or Adele who is ashamed to say it, but even she, as a young resident doctor, can no longer sleep and to do so, she takes drugs. There is Antonio who is a nurse and struggles to empathize, who is afraid of needles and dreams of fire at night. There is Marta the anesthesiologist who cries when she accompanies a woman to the operating room. Then there's me, who doesn't cry. I, who until one day before was afraid of everything, from the living to the inanimate, from darkness to winter cold, from closed spaces to squares, from the conscious to the unconscious, from the present to the future, in short I was happily dichotomous. Now I am firm and resolute, I fill files, protected by my ironed but extremely imperfect gown, used as a safe bulwark for the thousand intrusive questions; I stand there with my image of competence and I don't feel any expansive pain and this gives me a lot of other kind. A disguised pain, as subtle as pleasure when it is about to turn towards suffering, that acted part of me in which I stop being executive and relax: it is then that magmatic pain comes out, the one that wakes you up while you sleep and makes you think of an earthquake, while you are shaking, and with you the artifacts of your room.

Am I able to move objects with pain? After the first not reassuring feeling about the collapse of my mental functions, I hook myself on the rational part and soon I realize that the artifacts in the room are also stationary and I rejoice in this: they are there, motionless, to reassure me about our mutual immobility.

I am not moving physically and neither are they; it is my mind that is moving. It moves and moves vital energy, I have consumed myself a little bit in that department and in doing so I have also moved evolutionistically my biological age, my genetic construct. A little piece of my DNA is now stretching, it knows that I can see beyond a breast covered by a tattoo that is not at all seductive or a breast reconstructed on the results of a painful surgical cut; on that kind of pain my proto-narrative envelope, as Imberty is tuning with my soul and in doing so,

as on a musical score, the notes are the thoughts and the music is my mind: the mind plays the thoughts. As it comes out, the reader will think, from this improbable essay, perhaps only with the intellect and with the awareness that pain can build paths that do not necessarily lead to fear, while instead - and I consider it an axiom - fear always leads to some modified and alienated form of pain, which in turn imprints in its own genetic code, the image, not always salvific, of resilience and endurance. I do not yet possess the key to this kind of reasoning, but I can imagine that intensifying emotions in this regard may be good practice for a painter or a Hegelian philosopher, both of which I am not. I can try to put an idea above theoretical reasoning, which perhaps becomes necessarily theoretical because of its effects. And while I think I can't do that, I'm already doing it.

I often hear some professional and esteemed colleagues skillfully blandly say "I'm not afraid of you" or "I'm not afraid of you" or, worst of all, "I'm not afraid of dying" or "I'm not afraid of dying", while I, who have all these fears and have even more important ones, know that they are all meta-statements that say something else, like messages after 11:00 p.m. asking how you are. But really at that hour you want to know how I am? As the eminent Francesco Piccolo quoted for the reference to after-hours messages rightly points out, there are reasoning above reasoning that means the exact opposite of what is expressed in clear text. Everyone is afraid to die, because fear is democratic, fortunately for us. Think that fear not having fears, not feeling that heartbeat at the end of a dark staircase, or a narrow alley, or a very high skyscraper when you fear heights and you don't know it before you reach them.

Think about how much you lose if you don't climb a summit without knowing that - while trying to keep your skin - you might not make it to the next Christmas lunch, which in some ways relieves other annoyances, but that's another subject. We are what we do and fear is a real dimension that moves and that can also hook the identity aspects of a person, like a sort of wandering movement of a fluid within a shape: it, fear, keeps the formulation, but it can change density, shape, color depending on the identity aspects of the human background that contains it.

In turn, however, man, as a good container as he is, modifies himself according to the content and also changes shape, size, volumetric spaces, in short, he can - and with a good approximation he does - change the level of tolerance and become something else from himself, while maintaining a high level of threshold on the non-acceptance of the so iridescent, waving, mellifluous state of pain and feeling of fear.

This is the synthesis of my work, which reasoning on an idea of a thought can have and necessarily - I hope - will have, changing forms and contents; I will remain so faithful to the nature of the wise man and will be able to take advantage of the subsequent modifications that this reasoning may have.

Difficulties in sleeping at night, psycho-somatic disorders, emotional symptoms such as irritability, anxiety and depression, behavioural symptoms such as cynicism, avoidance of the patient, substance abuse, aggressiveness and pessimism, interpersonal symptoms like the difficulty of concentration, poor relationship with the patient, dehumanization and the little sense of humor and work related symptoms such as low work performance, absenteeism, difficulty in assuming responsibility and poor performance, are all the evidence of our Firm, which we would like to expand to form a sample of at least 500 participants including physicians, nurses, psychotherapists and psychoncologists in order to build a treatment protocol for professional pain.

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