REVISITING SOMATIZATION: ON THE WINGS OF PHYSICS, QUANTUM PHYSICS AND ALLOSTASIS

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Amidst the rapidly expanding sea of knowledge about mental illnesses lies a disorder that is dreaded by physicians, is highly distressing for patients and cumbersome for their families. Somatisation-related disorders are notoriously difficult to treat. They use up to 35% more health-care resources than used to treat all other mental health disorders[1]. There is an over utilization of healthcare facilities by patients of somatization[2]. These patients of somatization disorders carry with them the 'scarlet letter' in the form of endless files full of every imaginable laboratory test and imaging under the sun. The catch: most of their test results are 'within normal limits'.

The DSM-5 has replaced the word somatoform disorder with somatic symptom disorder. It defines somatic symptom disorder as 'somatic symptoms that are either very distressing or result in significant disruption of functioning, as well as excessive and disproportionate thoughts, feelings and behaviors regarding those symptoms, persisting for at least 06 months'. Other disorders of somatization include Dissociative or Conversion Disorder, now known as Functional Neurological Disorder by the DSM-5 and Hypochondriasis, now called the Illness Anxiety Disorder.

Most of these patients have undergone multiple medical and surgical procedures to try and treat these symptoms. Fink (1992) revealed that the outcome of surgical treatment in patients with persistent somatic complaints has been unsatisfactory in at least three quarter of the cases, while two thirds of the medical treatments given to patients with somatization have been judged to be unsuccessful[3]. Medical and mental health professionals, so far, it seems are merely 'tolerating' these patients. Without fully understanding why, our current approach is to throw some pills at the problem and pray it ends up in someone else's OPD. Current knowledge of somatization suggests the cause may be internal conflicts and the excessive use of defense mechanisms as the causative factors. Given these realities, perhaps a newer, more novel, approach is needed to understand the problem.

Let us take a look at a seemingly unrelated and unbelievable story. A study in the United States of America recently compared the number of passengers in trains that crashed with trains that safely reached their destination. While controlling for other factors, it was found that almost all the trains that had accidents had been carrying a fewer number of passengers to begin with. Some of the passengers had cancelled at the last minute, some had remained seated at the platform or the coffee shop. For varied reasons, something had made them decide not to board that particular train. Is it possible that they somehow already knew that something bad was going to happen before it had even happened?

To explain this, we might need to take a quantum leap towards another world. Perhaps the strangest phenomenon to exist in all of physics is something known as quantum entanglement. According to this theory, a photon can be split into two photons that enter a quantum state called entanglement with the help of a beam of laser. The entangled photons have been seen to influence each other across great distances, and they seem to do it instantaneously. So if the spin of one photon is changed, the spin of the other photon is changed at exactly the same time. An experiment was conducted where two entangled photons were taken as far apart as 1200km[5]. It was seen that there was no delay in the relay of information when the spin of one of the photons was changed. Theoretically, it is possible to place the entangled photons billions of light years away but the spin of one photon would still change instantaneously when the other photon's spin is changed. This suggests that the information about changing the spin of one photon seems to travel faster than the speed of light. But according to the theory of relativity, nothing can travel that quickly. Scientists are now theorizing that this might not be a relay of information across space only, but a relay of information across time as well. In other words, changing the spin of one entangled photon causes information to travel back in time to the point when the two particles were close together and interacting. This is when the information from the future is exchanged, each particle alters the behavior of the other, and the effects are carried into the future. This theory that suggests that the future affects the past is known as the 'theory of reverse causality'.

If this theory is applied to the macroscopic world, can it not be possible that some information about those train crashes travelled across time and the people who were supposed to board those trains received an unconscious message about the impending accident, which made them decide not to board those trains? Every human being is made up of atoms, thus the rules of physics apply as much to us as to inanimate objects. Now let us apply the same theory to somatization. What if the unexplained somatic symptoms experienced by a distressed individual are in fact a warning message from the patient's future about developing a medical or mental illness? Because the conscious mind is unable to understand the message, it manifests instead in various symptoms that warn an individual about developing a more serious mental disorder in advance. In other words, their future illness is affecting their health in the past.

There may be another way to look at the causative factors for somatization. The second law of thermodynamics states that the total entropy in a closed system never decreases over time. The energy in a closed system remains constant. So if particles in a system are heated, they will try to escape to bring the total amount of energy back to equilibrium again. The process in the body that leads to this state of equilibrium is known as homeostasis. When homeostasis is centrally controlled, it is called Allostasis. Can this law of thermodynamics and phenomena of allostasis be applied to our understanding of somatization?

Evidence shows that people experience somatic symptoms when they have been through adverse childhood experiences, post traumatic stress disorder, and a number of social risk factors including an abusive husband, a difficult mother in law, isolation, persistent fear, overwhelming love, despair, abandonment, unexpressed anger, social rejection or harassment[6]. If we apply the second law of thermodynamics, for the people who are experiencing these somatic smyptoms, their bodies are actually trying to maintain an equilibrium in their chaotic lives. When they are faced with an adverse external stimulus, it is like heating up molecules in a closed system. In response, something has to happen inside the body to maintain the state of allostasis. The adverse experiences faced all those years ago or the ongoing adversities increase a person's allostatic load, thereby demanding physical changes in the body in order to reach the natural state of equilibrium. Just like we start to sweat when the temperature of our bodies go up, we start to experience various symptoms in response to anticipated stress or challenges particularly when our body has undergone severe adversities, in the past. As the allostasis works through peripheral systems, people with somatization experience symptoms in a number of peripheral systems.

If the allostatic load keeps on increasing, it could potentially be fatal. But since the body is entropic in nature, it will avoid mortality by producing various symptoms to alleviate the stress of the allostatic load. These symptoms may be highly distressing in the short term but are life saving in the long term. To maintain this state of allostasis, the body then adjusts the threat threshold at a far lower level, which will lead to an increased sensitivity to stress that is seen in people who have somatic disorders[7]. The allostatic mechanisms thus make dynamic changes in advance so as to make the appropriate adjustments in the future.

Keeping this in mind, it goes to show that people with somatization may not be exaggerating their symptoms, 'seeking attention' or malingering. Instead they have a meta-physical connection with their symptoms, and possible future maladies that does not show up on MRI scans or laboratory tests. This connection may be impossible for the patient to explain and may seem beyond logic to the doctors who are trained to pick up symptoms in the physical world, while being completely oblivious of the metaphysical. A renewed understanding of metaphysical, physics-related and allostatic aspects of the patient's symptoms can lead to a paradigm shift in the research and management of these disorders.

After having a deeper understanding of the metaphysical causes of the symptoms in a patient with somatization, it becomes clear that psychotropics would play only a marginal or a secondary role in its treatment. Reattribution would be the mainstay treatment for these patients. To help these patients form that metaphysical link between their adverse experiences and their symptoms would be a relief both to them and to their families. A patient may need reattribution sessions regularly, and this still may not make their symptoms disappear. An understanding of their illness, however, will lead to better coping strategies. This may improve the quality of life for patients who have been misunderstood and marginalized by the society and the medical community for far too long.

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