NEUROLOGY IN FUTURE

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Neuroscience is the field that is devoted to the scientific study of the nervous system. The study of the human brain has been called the last frontier in science. Of all the objects in the universe, the human brain is the most complex: There are as many neurons in the brain as there are stars in the Milky Way galaxy. So it is no surprise that despite the glow from recent advances in the science of the brain and mind, we still find ourselves squinting in the dark somewhat. In fact, our standard treatment approaches have barely changed in decades and still fail as many people suffering from mental distress.

Anything that poses a challenge or a threat to our well-being is a mental stress. Some stresses get us going and they are good for us as without any stress at all, our lives would be boring and we would be probably feel pointless. However, when the stresses undermine both our mental and physical health they are bad. Depression is among the most burdensome disorders worldwide, giving rise to considerable adverse effects on activities of daily living for extended periods of time.

Secondly, our modern lifestyle is changing our brains. There's some evidence it's not all for the better.
1) Our brains are getting smaller. Over the past 10-20,000 years, the size of the average human brain has shrunk by the size of a tennis ball.
2) We are not getting smarter. Since the Victorian era, average IQs have gone down 1.6 points per decade for a total of 13.35 points.
3) Our attention spans are getting shorter. In 2000, the average attention span was 12 seconds. Now it's 8 seconds. That's shorter than the 9-second attention span of the average goldfish.
4) The human brain is usually compared to the most advanced technology of the day. It's been compared to a clock, a switchboard, a computer, and most recently to the internet.

The Human brain cannot differentiate between reality and imagination. According to my knowledge,

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"Imagination has a great role in the creativity of an individual". I am sharing my own experience in favor of the importance of imaginations.

I spend a lot of my time alone (loneliness) which compel me on the imagination of some important issue and imagination compel me to do something creative and by the grace of my great Allah almighty I have created a lot. But the threatening point is that loneliness and my own imagination compel me for not trusting anyone.

On a cellular level, it is a challenge for neurology to prove "how imagination occurs?"

The neurologists should work hard to prove the relationship of imagination with the individual's creativity and if we find that relationship it will be our great achievement as we will be able to prepare our children for the future technological, economic, natural and social problems of the world.

The statement in favor of advanced research in neurology is that "when we learn a new fact, like someone's name, there are physical changes in the structure of our brain. But we don't yet explain exactly what those changes are, how they are orchestrated across the vast seas of synapses and neurons, how they embody knowledge, or how they are read out decades later for retrieval."

We tend to think of sleep as a time when the mind and body shut down. But this is not the case; sleep is an active period in which a lot of important processing, restoration, and strengthening occurs. Exactly how this happens and why our bodies are programmed for such a long period of slumber is still somewhat of mystery. But scientists do understand some of the sleep's critical functions, and the reasons we need it for optimal health and wellbeing. One of the vital roles of sleep is to help us solidify and consolidate memories.

Studies show that a good night's sleep improves learning. Whether you're learning math, how to play the piano, how to perfect your golf swing, or how to drive a car, sleep helps enhance your learning and problem-solving skills. Sleep also helps you pay attention, make decisions, and be creative. Studies also show that sleep deficiency alters activity in some parts of the brain. If you're sleeping deficient, you may have trouble making decisions, solving problems, and controlling your emotions and behavior.

A big hidden challenge for neurology in the above discussion is that the artificial world is stealing the brilliant gift of sleeping from the human life with the help of stress and depression.

I am the student of M.B.B.S at Guilin Medical University China. I am very interested in the undergraduate research in neuroscience and nutritional medicine that's why I always collect data for my future desired researches in Medicine.

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In the process of collecting data from Google, I find that depression is one of the big international challenges to the human life. Then I start thinking and study about this problem as I myself have been suffering from depression since 2013 and at last I find some interesting and simple solutions of defeating the depression up to some extent. These solutions are in the favor of the advanced research in neuroscience that's why I added it in this essay.

The conclusion of my own theoretical research is "The artificial world is the main cause of the mental stress and depression". I would present three arguments to support my statement.

1) Researchers in Finland found that urban dwellers who strolled for as little as 20 minutes through an urban park or woodland reported significantly more stress relief than those who strolled in a city center.

2) Today, we live with ubiquitous technology designed to constantly pull for our attention. But many scientists believe our brains were not made for this kind of information bombardment, and that it can lead to mental fatigue, overwhelm, and burnout, requiring "attention restoration" to get back to a normal, healthy state.

3) In one recent experiment conducted in Japan, participants were assigned to walk either in a forest or in an urban center (taking walks of equal length and difficulty) while having their heart rate variability, heart rate, and blood pressure measured. The participants also filled out questionnaires about their moods, stress levels, and other psychological measures.

Results showed that those who walked in forests had significantly lower heart rates and higher heart rate variability (indicating more relaxation and less stress), and reported better moods and less anxiety, than those who walked in urban settings. The researchers concluded that there's something about being in nature that had a beneficial effect on stress reduction.

In the study of my research, I put the treatment of neurodegenerative diseases (A challenge for neurology) on a first priority.ALS was my great interest which had affected my nearest late relative. His death cause was ALS. In the last six months, he had difficulty in speech and gradually lost his speaking ability completely. Then I started research on Google for the communication with ALS patients. I did not find anything special for him that am why I started observing my affected relative and at last, I created my own ALS communication sheets and wrote a simple article on the Communication with advanced ALS patients.

In this duration, I find some important clues for the manual treatment of ALS but unfortunately, it was too late and my relative with ALS had passed away and secondly, the treatment which was in my mind is a very slow and not tested treatment.

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I want to do applied research on my desired treatment for ALS but there is no opportunity for undergraduate in Pakistan to do applied research.

The summary of my proposal for my desired research on ALS treatment is below:

"We can induce the production of a neuron by our mental activity such as critical thinking quizzes etc. The proof of the above statement is that Einstein's brain was similar in size to other humans except in the region that is responsible for math and spatial perception. In that region, his brain was 35% wider than average.ALS is a motor neuron degenerative disease that's why ALS patients should face a series of quizzes (especially designed for ALS) at a very early stage of the disease. Secondly, recent research on nutritional mechanisms and their effect on the brain show they are involved in almost every facet of neurological functioning including alterations in neurogenesis and neuroplasticity throughout the life cycle. Therefore an advanced applied research should be done on an effective diet modification which is required for neuron regeneration."

The problem which needs a neurological attention is that the scientists agreed that science is too far from understanding the basis of consciousness to consider recreating it.

I myself suggest that if we want to improve the study of neurology, we should study the mammalian brain on embryonic level i.e how the neuron cell born? How the neuron cells differentiate to the resting types of neurons? "I think the origin of a neuron is related to the activity of the human body."

In short, the study of the human brain is the last frontier in science, that's why "neurology" will be the first priority of the brilliant medical research scientists in the future. The most important and threatening challenge for neuroscience is mental stress and depression and the main cause of mental stress and depression is "The artificial world". Similarly, researchers believe that being in nature restores depleted attention circuits, which can then help us be more open to creativity and problem-solving, that's why the present neurologists should find the possible and effective relation between the modern technology and human brain and mind. Another important need of modern neurology is to work in combination with nutritional medicine.

If the above problems are taken on priority by the present medical research scientists then in the future 2050, neurology will rule on a whole "Medicine" like a king.

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