

INFLUENCE OF ENVIRONMENTAL FACTORS ON MENTAL ILLNESS

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Abstract

Psychiatric illnesses are a series of disorders that cause disturbance in the normal functioning of the person in family, professional and social life. The cause of these disorders is mostly unknown causes, a combination of factors appear to be implications, some internal organs (genetic, squeals, autoimmune disease, etc.) and others of extreme origin, such as traumatic events, infectious, toxic, narcotics , environmental, etc. The influence of environmental factors on mental illness has long been taken into account, but the mode of action is still unclear.

Key words: Psychiatric illnesses, traumatic event, environmental factors

Introduction

Psychiatric illnesses are a complex of affections of human thought that lead to improper functioning of the person in a familiar or professional social environment. (Robins, 1970) Most often, the cause of mental illness can not be identified as a cause-effect relationship but just as a risk factor. Classification of mental illness is done by international convention, with two unused manuals, namely DSM V and ICD 10. DSM V is used by US psychiatrists and ICD 10 is published by WHO and is mainly used in Europe. Since man is permanent in relation to the environment in which he or she lives, we must consider that he or she is in one way or another affected by it, and consequently some elements would play a role in the development of mental illness. (Sheehan, 1998) In nature, there are many substances that have tropic effect on the central nervous system. The most

well-known are the drugs, these being substances extracted from plants mainly or synthesized from them. The use of substances is the cause of the group of psychiatric disorders called addiction. (Carter, 1999) That is the excessive use of certain substances due to the phenomena of addiction and withdrawal. Commensally flora is formed from several species of bacteria that inhabit the surface of the body and much of the digestive tract, producing some substances that reach the systemic circulation, and on the other hand consumes different substrates from the systemic circulation that diffuses the digestive tract and thus can influence the state psychic of the individual. (Foster, 2013) Another category of factors that can precipitate the onset of a mental illness is what comes from the social environment, including stressed events for the individual's psychic life such as loss, trauma, stress at work, etc. (Liem, 1978) The main factors are implications in the onset of depression, but there are reports of traumatic events that have led to the onset of psychotic episodes that have evolved towards schizophrenia. Phobias also appear to be more directly related to traumatic events. (Seligman, 1971) It is also believed that personality disorders are also precipitated by childhood traumatic events. (Clark, 1994) The geographical area is also considered as a precipitating factor for psychic illnesses in the absence of sunlight in the sub polar regions, so people are forced to spend more time in the dark disturbed thus a cycle considered normal by alternating nighttime.

Material and method

We take into account various environmental factors as a precipitating or causative factor of mental illness as a possible explanation for the etiology of mental illness. Suicides are more common in northern populations than in southern areas in Europe. Lack of light and higher temperatures seem to be rallied with depression, which is the most common disease that leads to suicide. A wide range of substances with effects on the central nervous system are responsible for the onset of drug addiction. Sometimes drug addiction can mimic forms of acute psychosis. It is known that the use of psychoactive substances in persons under psychiatric treatment can lead to an aggravation of the psychotic episode. Microelements appear to play a role in the psychic state, knowing that the most effective treatment for manic-depressive manic phase psychosis is its lithium which acts to stabilize the affective state by an unknown mechanism. Isolation also seems

to have a very strong impact on the human psyche as the reports of some people have been lost in the caves and experienced hallucinations and delusional ideas. Another factor that is possible to act in a certain way but it is not proven to date are electromagnetic waves that are likely to influence the psychic state in a way that is now hardly predictable. In recent times, it has been criminalized that there are negative psychic effects of blue light from electronic devices. Maybe correlated with sleep disorders, depression, chronic fatigue, etc. The frequencies of certain frequencies can also influence the psychic state of some frequent individuals having a stimulating role other inhibitor. Microelements in food and water seem to influence the mental development of the endemic goiter that leads to retardation associated with the low level of iodine in the water. Some bacteria in the digestive tract have been found to be able to consume serotonin that could lead to a hypothesis over the relationship between depression and microbial flora specific to each individual. It has been observed in some years that toxoplasmosis can alter the behavior of individuals, causing them to become more vulnerable to predators so that the parasite will resume its reproductive cycle.

Results and discussions

Some mental illnesses are in clear relationship with environmental factors such as the group of drug addictions that are caused by the excessive consumption of some tropism-related substances on the central nervous system, causing changes in the mental state. Microelements such as iodine and lithium influence the central nervous system first being involved in the normal development of the central nervous system and the second as a stabilizer of the affective state in the manic episode. Electromagnetic and acoustic waves are likely to influence the mental state of individuals who are close to these sources. Light also seems to be involved in the psychic state through the hormonal regulation it determines. The intestinal microbial flora appears to have a role in the metabolism of central nervous system mediators and consequently to influence the mental state. Some parasites such as *Toxoplasma gondii* seem to influence the behavior of lower life by secreting substances that interfere with normal brain function.

Conclusions

The elements found in the environment have an influence on the development and progression of mental illness.

Toxic mania is caused by the use of substances with tropical effects on central nervous system.

Some microelements in the environment have a direct role in the development and functioning of the brain such as iodine and others play a role in stabilizing the manic state such as lithium.

Electromagnetic waves, sound waves and light are likely to influence in a complex way so far the incomplete elucidated the psychic state.

Microbial flora and parasites seem to have the ability to influence the mental state of individuals by interfering with the metabolism of substances that act as central nervous system mediators.

The cause of mental illness is largely unknown to complex research being necessary for the prevention and treatment of these conditions.

References

- Carter, B. L. (1999). Meta-analysis of cue-reactivity in addiction research. *Addiction*, 94(3), , 327-340.
- Clark, L. A. (1994). Temperament, personality, and the mood and anxiety disorders. *Journal of abnormal psychology*, 103(1) , 103.
- Foster, J. A. (2013). Gut–brain axis: how the microbiome influences anxiety and depression. *Trends in neurosciences*, 36(5) , 305-312.
- Liem, R. &. (1978). Social class and mental illness reconsidered: The role of economic stress and social support. *Journal of Health and Social Behavior*, , 139-156.
- Robins, E. &. (1970). Establishment of diagnostic validity in psychiatric illness: its application to schizophrenia. *American Journal of Psychiatry*, 126(7) , , 983-987.
- Seligman, M. E. (1971). Phobias and preparedness. *Behavior therapy*, 2(3) , 307-320.
- Sheehan, D. L. (1998). Diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatr*, 59 , 22-33.
- Tuttolomondo, A. D. ((2012)). Atherosclerosis as an inflammatory disease. Current pharmaceutical design. *Current pharmaceutical design* , 18(28), 4266-4288.