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The Genetic and Environmental Etiology of Schizophrenia in Palau

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ABSTRACT

Schizophrenia is a chronic, severe, and disabling brain disorder that has been affecting people throughout the world. There is an established worldwide 1% average prevalence of schizophrenia; however there are high degrees of variability between different regions. Palau, an oceanic nation located in Micronesia, has an abnormally high prevalence rate of schizophrenia at 1.99%. When separated by gender, women have abnormal prevalence rate of 1.24%, while the men have a high prevalence rate of 2.77%, which is over twice the average worldwide. There has been a plethora of research conducted over the years to determine the genetic and environmental etiology of schizophrenia in Palau. Palau's somewhat isolated and small population offer the advantage of a valuable insular population for the study of genetic etiology of schizophrenia because there may be fewer susceptibility genes for schizophrenia than in heterogeneous populations throughout the world.

Recent studies have highlighted that schizophrenia in Palau is a complex genetic disease, yet is also greatly influenced by certain environmental factors. As part of the research, blood and tissue samples from 160 schizophrenic Palauan patients were sampled. In addition, 400 relatives of the patients were reviewed and shown as unaffected by the disease; although there were first and second-degree relatives who were affected. The patients were also interviewed frequently about relevant matters, such as their diet and daily activities. By examining these studies, I was able to determine that many environmental factors may be involved with the disease, such as exposure to viruses, heavy marijuana use, malnutrition before birth, and other not yet known psychosocial factors. Because of Palau's intricately, interconnected families and small population and isolation, it has a high prevalence rate of schizophrenia.

Key Words: Palau, Schizophrenia, Prevalence, Micronesia

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