

## Comparison Serum Vitamin D by Geographic between the Highland and Lowland Schizophrenic Patient in the Sumatera Utara

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**Abstract :** Background: The most common of psychotic disorders is schizophrenia. Vitamin D is made from sunlight, and in the skin from UVB radiation from sunlight. If people with Vitamin D deficiency is common severe mental illness such as schizophrenia. Schizophrenia is a chronic mental illness characterised by positive symptoms and negatives symptoms, such as hallucinations and delusions, flat affect and lack of motivation we can found. In patients with Schizophrenia maybe have several environmental risk factors for schizophrenia, such as season of birth, latitude, and climate has been linked to vitamin D deficiency. There is also relationship between the risk of schizophrenia and latitude, and with an increased incidence rate of schizophrenia seen at a higher latitude. Methods: This study was an analytical study, conducted in BLUD RS Jiwa Propinsi Sumatera Utara and RSUD Deli Serdang, the period in May 2016 and ended in June 2016 with a sample of the study 60 sample (20 patients live in the Highland and Lowland, 20 healthy controls). Inclusion criteria were schizophrenic patients both men and women, aged between 18 to 60 years old, acute phase no agitation or abstinence antipsychotic drugs for two weeks, live in the Highland and Lowland, and willing to participate this study. Exclusion criteria were history of other psychotic disorders, comorbidities with other common medical condition, a history of substance abuse. Sample inspection for serum vitamin D using ELFA method. Statistical analysis using numeric comparative T-independent test. Results: The results showed that average levels of vitamin D for a group of subjects living in areas of high land was 227.6 ng / mL with a standard deviation of 86.78 ng / mL, the lowest levels of vitamin D is 138 ng / mL and the highest 482 ng / mL. In the group of subjects who settled in the low lands seem mean vitamin D levels higher than the mountainous area with an average 237.8 ng / mL with a standard deviation of 100.16 ng / mL. Vitamin D levels are lowest and the highest 138-585 ng / mL. Conclusion and Suggestion: The results of the analysis using the Mann Whitney test showed that there were no significant differences between the mean for the levels of vitamin D based on residence subject with a value of  $p = 0.652$ .

**Keywords :** latitude, schizophrenia, Vitamin D, Sumatera Utara

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