SEASONAL BIRTH VARIATION OF PATIENTS WITH SCHIZOPHRENIA IN A PORTUGUESE SAMPLE

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Introduction

There is strong evidence that people born in the **Winter** and **early Spring** have an increased risk of schizotypic personality,¹ psychotic-like experiences² and schizophrenia.^{3,4,5}

Several studies have been published exploring different hypothesis.

On one hand, **genetic factors** may play a role, such as the proposed protective effect of cytokine IL4T allele against the development of schizotypal traits (evidence suggests that vitamin D can have immunomodulating effects upregulating IL-4 expression).¹

On the other hand, evidence supports the existence of **environmental risk factors** such as:

- Seasonal variations of temperature,¹
- Maternal sunlight exposure (part of the *Maternal-fetal Chronobiological Hypothesis*),⁶
- Neonatal hypothermia,⁷
- Maternal viral infections during pregnancy,^{7,8,9,10}
- Nutritional deficiencies during pregnancy (e.g. folate, vitamin A, vitamin D).^{7,11,12,13,14}

Methods

- (1) Analysis of the month of birth of **416** hospitalized patients in our Psychiatry Department with a schizophrenia diagnosis.
- (2) Review of the articles published from 2008 to January 2019 was conducted through Pubmed research with relevant keywords.

Results

→ Most of the patients (53%) were born in the Winter and Spring.

→ Winter and Summer were notorious for being the months with the highest and lowest rate of births, respectively (28,5% and 23%).

→ September is the month when most births occur in Portugal, for the general population. In contrast, the highest number of births in the studied sample occurred in **January**, followed by March and December.

Conclusion

Our results support the hypothesis and previous evidence that schizophrenia patients are more frequently born in the winter and early spring seasons. These findings can contribute to the creation of preventive strategies

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