

We will use bivariate comparisons and multilevel analysis to take into account the interactions between the subject of analysis and its environment. Also, it takes into account the entanglement of statistical units; the lower level units are nested in higher levels. In fact, the multilevel analysis ensures the integration of not only individual (social, economic, demographic and health characteristics) but also captures the part of the HIV which depend in each of the levels or contexts. It addresses human behavior, taking into account not only individual characteristics, but also the fact that these persons are part of larger geographic units such as municipalities or regions.

This study's main objective is to highlight the level of disparities of the HIV positive among all the population. It will also highlight the role of context (individual and socioeconomic characteristics, demographic and regional characteristics) on HIV infection.

It was often used traditional models based on the estimation of ordinary least squares (OLS) to estimate and predict human behavior. For this, two approaches have usually been the object of studies and despite the hierarchical structure of social science data. The first approach attributes group characteristics to individual's member of that group. The second is to aggregate individual variables at the group level. Each of both approaches has a limit. Insofar, it is unclear that individuals belong to the group and their behavior is dependent. Socio- economic and cultural aspects of organizational geographic, influence attitudes and reactions of individuals faced with certain situations (DURKHEIM, 1897 MERTON, 1968 WEBER, 1964). Ignoring integrate interactions between the group and individuals behavior. We are led to errors of aggregation and disaggregation (ROBINSON, 1950; TOM SNEIJERS, 2002). The first is the ecological fallacy to interpret the differences between the groups as the differences between individuals. The second is the atomistic fallacy, which in turn amounts to considering the differences between individuals as differences between groups.

Beyond consideration in the analysis of the context of individuals, multilevel models allow firstly obtaining unbiased estimates and, secondly, they allow to test of Homoskedasticity and independence of residuals.

Overall, we will highlight the impact of the social context on HIV infection among Cameroonians. Then it will identify possible relationships that can emerge. Here, we focus on the analysis of the links between life context of the target population and their individual behaviors. For a variety of information such as the living standard, health infrastructure, labor market indicators, political conflicts, increasing urbanization, socio-cultural context, may well enable us to understand and reconstruct the explanatory elements of the said phenomenon. Contextual or multilevel dimension takes into account the time, the person and his family, the social, the territorial and the cultural, the economic and the health environments.