Childhood morbidity and health in early adulthood: Life course linkage in a high morbidity context

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Comments of the reviser:

This study is a Guatemala cohort that offers a lot of strengths due to different data obtained during the life span of a group of individuals, from childhood to early adulthood. It is important to mention that the associations found don’t imply causality, since there are a lot of other factors that were not assessed and that could influence the health status of a person. The results of this study showed a positive association between the frequency of infections on early childhood and several cardiovascular risk factors on adulthood, which matches with the results of previous studies at developing countries where the child morbidity is associated with morbidity and mortality on older ages. However, this study makes valuable contributions to the medical literature since it evaluates the association at a developing country with high prevalence of communicable diseases, as many in Latin America, besides they found that the development of diarrheal diseases during late childhood is associated with a stronger immune system.

Aim of the study: evaluate the different types of childhood morbidity (diarrhea, anorexia, fever, serious diseases and communicable diseases) are associated with health on early adulthood, specifically cardiovascular risk factors.

Countries on which the study took place: Guatemala, on four villages of the east region of the country.

Design and methodology:

Cohort study on which detailed information about the childhood morbidity was gathered from 558 children between 1970 and 1977 as part of the longitudinal study of INCAP, with a subsequent re-evaluation between 2002 and 2004. The data related to childhood morbidity were collected through interviews to the mother each two weeks, between 1970 and 1977 which were compared with medical records of such subjects. Out of the 558 children, only 339 the tests related to serum lipids and plasma glucose was made on adulthood and 364 of them with the measurement of blood pressure and anthropometric data. A series of regression models of maximum probability were used to evaluate the association between childhood morbidity and...
the development of cardiovascular risk factors on adulthood, controlling by family background, socio demographic variables and behavior risk factors such as alcohol and tobacco consumption.

Results.

Almost all of the types of childhood morbidity evaluated (diarrhea on early childhood, fever, serious diseases and anorexia) are associated with high morbidity on adulthood, independently from the family background, socioeconomic status and behavior risk factors on adulthood. A higher frequency of infections on childhood was associated with less serum concentration of HDL (good cholesterol) and higher concentrations of serum triglycerides, plasma glucose, waist circumference and obesity. There was no association with hypertension. However, the diarrheal diseases on late childhood (2 to 7 years) were associated with a lower risk of dislipidemia and with a better control of fasting glucose, suggesting that the exposure to bacteria after childhood could be beneficial for certain cardiovascular risk markers on early adulthood.

Additional References: