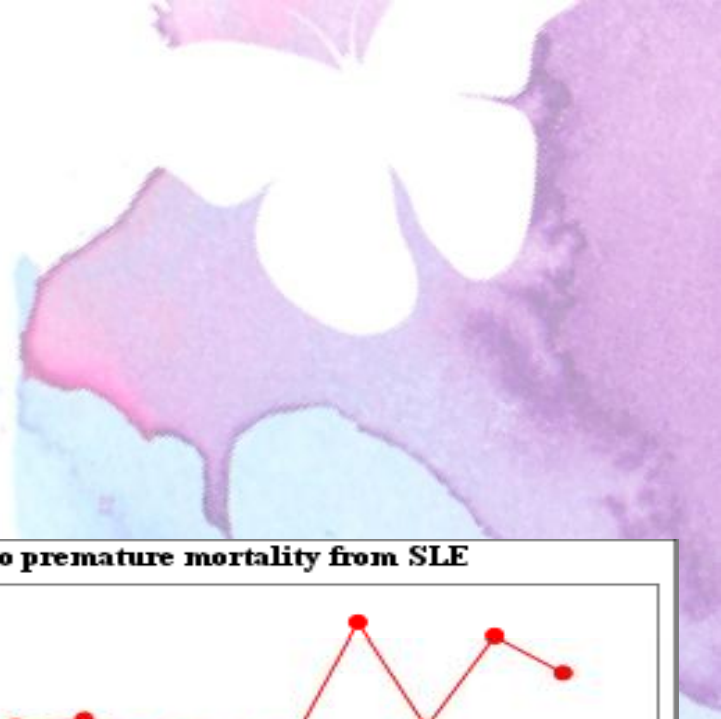


# Economic burden of premature mortality from systemic lupus erythematosus in Cuba

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## 1. Background/Aim

Mortality statistics are traditionally used to quantify the burden of disease and to determine the relative importance of the various causes of death. One of the most frequently used indicators to quantify the economic burden of disease is the years of potential productive life lost (YPPLL).<sup>1</sup>

Although it has been demonstrated that mortality due to systemic lupus erythematosus (SLE) is increasing in Latin America,<sup>2</sup> there is limited research assessing its socioeconomic burden in Cuba.

Our aim was to estimate the years of potential productive life lost (YPPLL) due to premature mortality from SLE in Cuba, between 2001-2018.

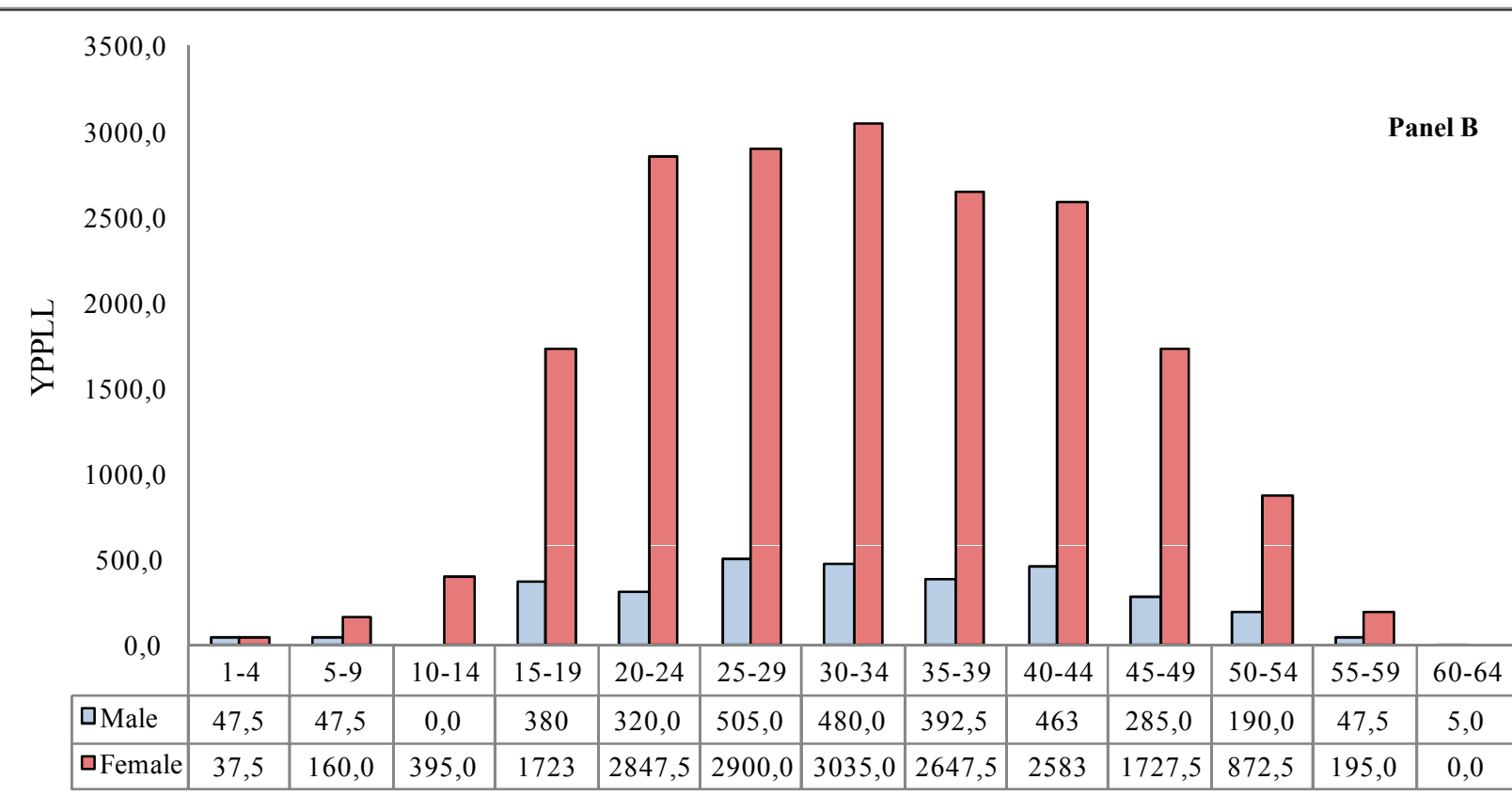
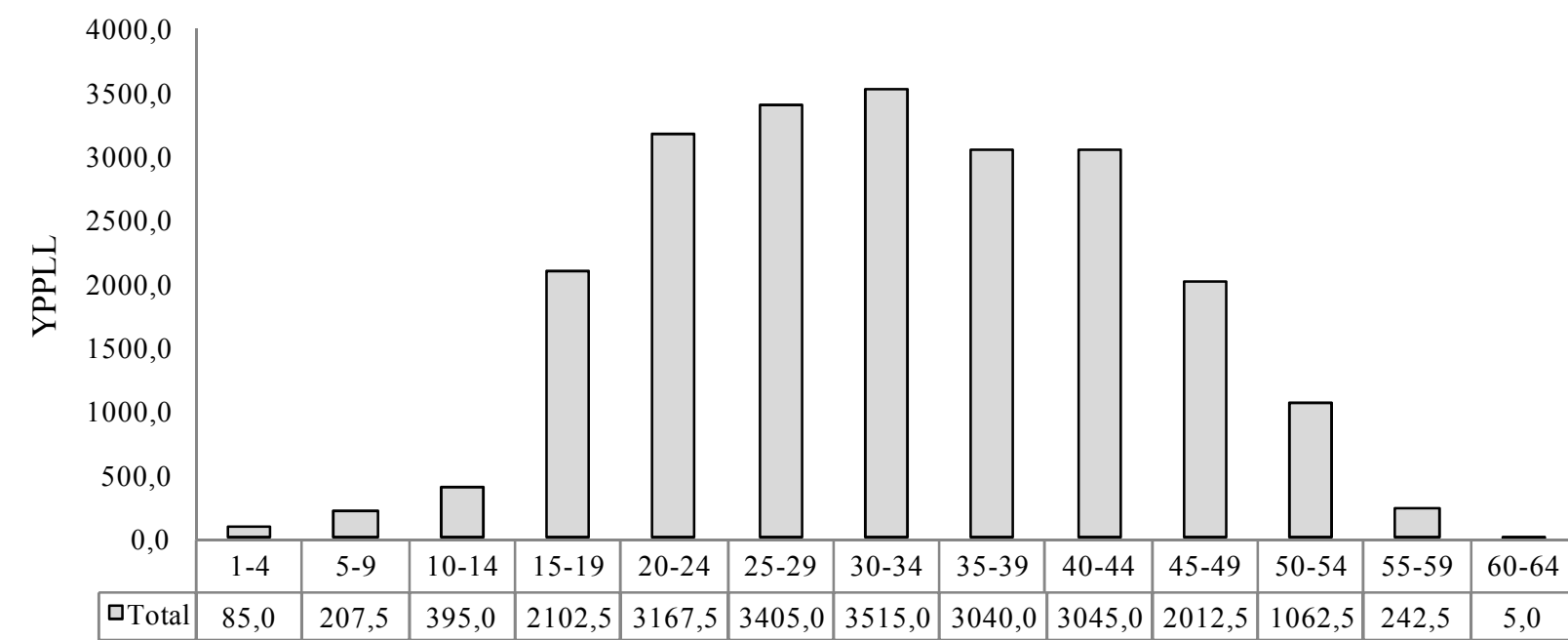
## 2. Methods

Data were retrieved from the Cuban Ministry of Public Health mortality database (International Classification of Diseases-Tenth Revision, code M32). YPPLLs were calculated from the number of deaths during working age period, including those deaths that occurs in an age prior to entering the labor market (<17 years). The retirement age was considered according to the Cuban regulations in each period (2001-2009 and 2010-2018). YPPLLs were estimated by multiplying the number of deaths for a given age group by the expected productive years remaining from the midpoint age in each group. The age-standardized YPPLL rate (ASYR) was adjusted by the direct method according to the average estimated population in Cuba (<65 years) and the WHO's standard population.

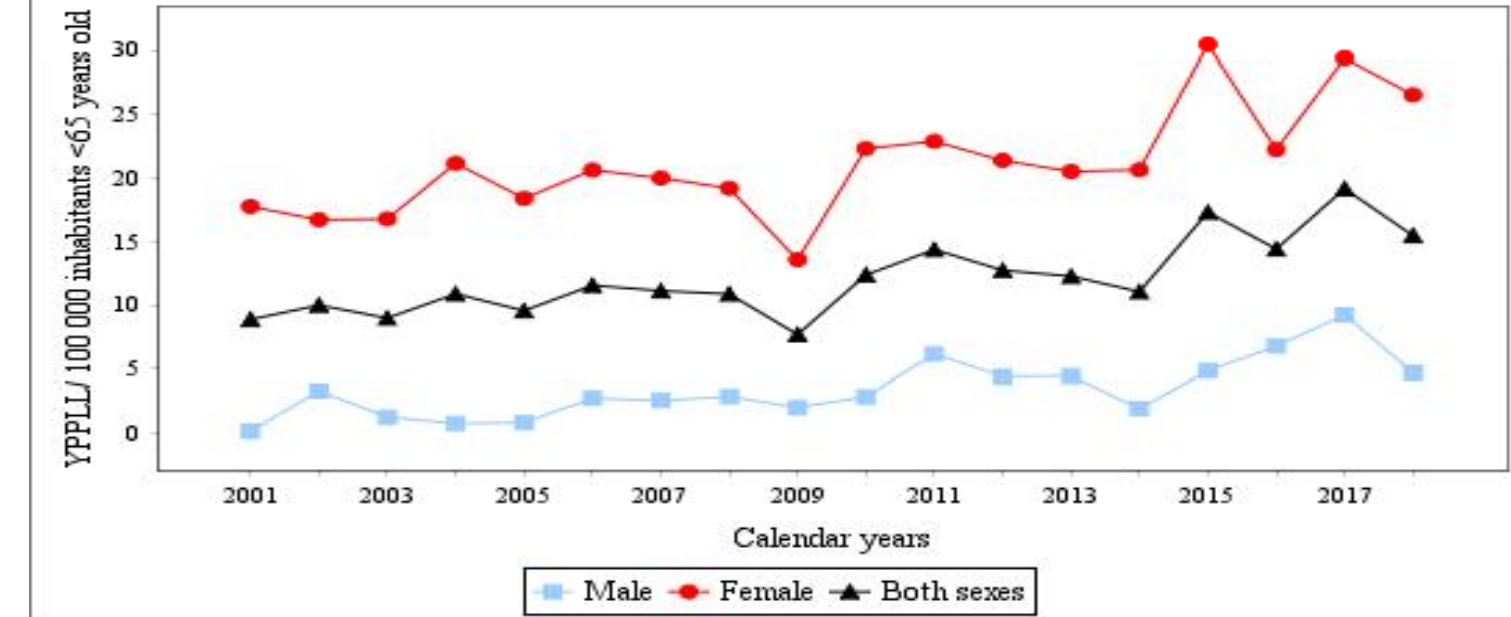
## 3. Result

There were 1 452 deaths from SLE (81.3% in working age), which represents 22 284.5 YPPLL. In women, the YPPLL was 19 122.5, an excess of 15 960.0 YPPLL over men (3 162.5 YPPLL). The age group of 30-35 was the most affected in women (3 515.0 YPPLL) and in men, it was the 25-29 (505.0 YPPLL) (Figure 1). The ASYR in 2018 was higher than in 2001 in both sexes (Figure 2).

**Figure 1. Years of potential productive life lost due to premature mortality from SLE by age and sex**



**Figure 2. Temporal trends in YPPLL due to premature mortality from SLE**



## 4. Conclusion

YPPLL due to premature mortality from SLE has increased in recent years, being higher in women and in the 25-34 age group than in men and in other age groups, respectively. YPPLLs as a measure of the economic burden of premature mortality, provides new information and can contribute to the recognition of SLE as a health problem in Cuba.

## 5. References

1. Rumisha SF, et al. Years of potential life lost and productivity costs due to premature mortality from six priority diseases in Tanzania, 2006-2015. PLoS ONE. 2020; 15(6): e0234300.
2. Scherlinger M, al. Worldwide trends in all-cause mortality of autoimmune systemic diseases between 2001 and 2014. Autoimmun Rev. 2020;19:102531.