

Epidemiologic transition and the YLD/YLL ratio

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Background

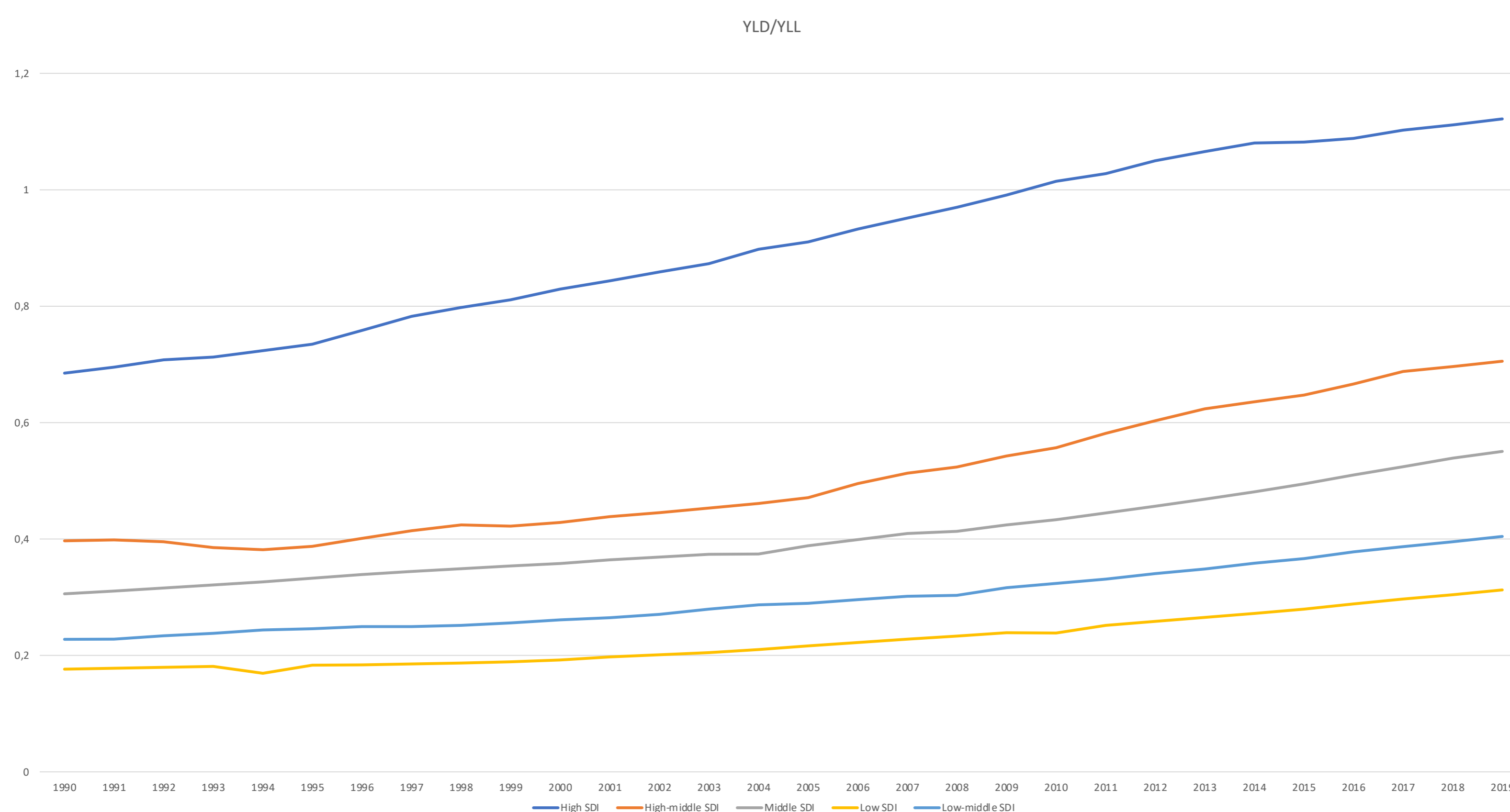
The epidemiological transition is characterized by demographic, societal and health status changes in societies. The shift from acute to chronic diseases is the most visible effect on health of populations. High volume of years of life lost due to premature mortality is related to acute diseases which are of higher importance in early phases of epidemiologic transition. Chronic diseases are responsible for larger burden of years lived with disability and often related to later phases of epidemiologic transition.

Methods

Using the GBD data we propose a simple index based on ratio of two elements of DALY's as YLD/YLL. We used the data of the GBD study available at <https://vizhub.healthdata.org/gbd-compare/> on 12/06/2023 to calculate the index for time of 1990-2019. We categorized countries using the socio-demographic index, SDI presented at same website.

Results

The value of the index has increased ranged from 0.68 to 1.12 in group of high SDI countries and from 0.17-0.31 within low SDU country group. The index shows consistently increasing values by five SDI based country groups with a clear and persistent difference among the groups.



Further work should analyze trends within individual countries and consider cut-points among phases of epidemiological transition. Verification of the index could be done by correlation analysis with generally accepted indexes such as the HDI or health measures such as life expectancy. It can also be used to evaluate impact of orientation of health systems (balance between health care and public health) and contribute to health policy development.

Conclusion

Although the proposed index needs more research and validation studies, despite of all uncertainties, it seems to be robust to show progress in epidemiological transition. It can be used to adjust priorities within national health policies as well as global health actions. It can also help to predict future health system needs to tackle causes leading to YLD or YLL.

Key messages

- A simple index of YLD/YLL can be used to measure and forecast the progress of epidemiologic transition
- The index, after more verification-oriented research, can be used to target future health policies both on global and national level.