

Research finds flaws in studies of mass deworming efforts for children in poor countries

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The *International Journal of Epidemiology* finds that three widely cited research studies relating to mass deworming in Africa have substantial problems in their methods and analysis. The original researchers claimed that their results show long-term effectiveness of these mass deworming programmes in developing countries, but this critical analysis concludes that the findings are unlikely to be as positive as previous researchers have reported.

Millions of children in some of the poorest areas of the world are infected with [intestinal worms](#). The infections can impair appetite and cause anaemia in individual children. For many years, parasitologists, economists and development specialists have laid great faith in community control programmes of mass drug administration. The aim is to eliminate the worms and thus improve nutrition, health, education and thus materially contribute to the economic development through higher incomes. Recent independent critical appraisal from the Cochrane and Campbell Collaborations have shown that the short-term benefits appear to have been exaggerated. This new research carefully appraises the few studies examining long-term effects.

The researchers applied current day methods of appraisal to the three follow-up studies carried out nine years after a trial in Kenya and a second in Uganda had been completed. The original authors sought to identify the [long-term effects](#) of short additional exposures to

deworming programmes in settings where the children were then all dewormed multiple times. The researchers examined school attendance, appetite and wage earning nine years later; another study looked at the spin-off effects of deworming the community on very young children. Whilst the original authors found strong positive effects, the appraisal showed that the authors had not used pre-planned protocols and the studies were at high risk of reporting bias and selective reporting of favorable results.

The senior author of this new analysis, Professor Paul Garner, from the Liverpool School of Tropical Medicine's Centre for Evidence Synthesis in Global Health, said: "When we apply international standards for epidemiological methodological rigor in these studies, unfortunately they don't pass muster.. Multiple significance testing and then selection of supportive results seems to be a potential problem. This is an example from the field of development economics where bias needs to be taken into account before the authors make policy recommendations."

More information: Sophie Jullien et al. The impact of mass deworming programmes on schooling and economic development: an appraisal of long-term studies, *International Journal of Epidemiology* (2017). [DOI: 10.1093/ije/dyw283](https://doi.org/10.1093/ije/dyw283)

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