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Informing health choices in low-resource settings

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Because of the abundance of health information, available via multiple sources, it is important that individuals be able to critically appraise health claims to make well informed decisions. This is of even greater importance in low-income countries where individuals cannot afford to invest in ineffective treatments. Indeed, public health practitioners have long touted the importance of health education; for example, a variety of well tested and updated curricula to prevent adolescent pregnancy and HIV have shown positive health outcomes across low-income and high-income communities.[1] Yet, these efforts have typically focused on behavioural practices, rather than the skills necessary to make sense of a seemingly limitless amount of health information.

As the digital age is enhancing the speed and frequency with which we are able to access reliable health information, so too does it perpetuate the spread of misinformation. Communication platforms such as television, radio, and increasingly non-traditional platforms, including social media and internet search engines, offer rapid dissemination of both accurate and inaccurate guidance on preventive and curative health interventions. When the sharing of health guidance is done by dependable and verifiable sources, mass dissemination can have a positive effect on health behaviours.[2] Conversely, non-scientific claims can quickly proliferate, negatively affecting health-care use and health outcomes for those who are unable to critically analyse available information and discern fact from fiction.[3] From the spread of antivaccination claims via social and internet media,[4–6] to continued battles against AIDS denialism,[7] health misinformation abounds.

In *The Lancet*, Allen Nsangi and colleagues[8] and Daniel Semakula and colleagues[9] extend such findings by testing an intervention that teaches health literacy in Uganda, including how to assess the reliability of health treatment claims. The two articles evaluate the effectiveness of the Informed Health Choices school-based intervention aimed at primary school children (ages 10–12 years) and a podcast aimed at their parents. Children in early adolescence are a vital age group in which to build critical-thinking techniques. Equally, parents remain an important audience because they are responsible for the health decisions of the household and model health-seeking behaviours for their children.

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In Nsangi and colleagues' cluster randomised trial,[8] 120 eligible schools were randomly assigned to the Informed Health Choices study group in which they received textbooks, exercise books, and a teachers' guide (60 schools, 76 teachers, and 6383 children) or to the control group in which they did not receive the intervention (60 schools, 67 teachers, and 4430 children). During nine 80 min lessons, provided over the course of one school term, teachers trained students on 12 concepts essential to assessing claims about treatment effects and making informed health choices. The primary outcomes included the mean score on an examination, with two multiple-choice questions representing each of the 12 concepts, and the proportion of students with a passing score. In Semakula and colleagues' randomised controlled trial,[9] 675 parents of children taking part in Nsangi and colleagues' trial[8] were assigned to listen to either the Informed Health Choices podcast (n=344) or typical public service announcements about health issues (control group, n=341). The primary outcomes were again the mean score on an examination, with two multiple-choice questions representing key concepts necessary for assessing health claims (18 questions in total), and the proportion of parents with passing scores on the test.

The two trials assessed the ability of students and their parents to successfully analyse claims about the effectiveness of health treatments, providing strong evidence that the Informed Health Choices intervention was able to significantly increase the capacity of both groups to assess claims about treatment effects. Students exposed to the Informed Health Choices intervention were significantly more likely than those in the control group to have a passing score on the test to accurately assess treatment claims (3967 [69%] of 5753 children in the intervention schools had a passing score [≥13 of 24 correct answers], compared with 1186 (27%) of 4430 children in the control schools [adjusted difference 50%, 95% CI 41–55, p<0·00001]). The effect of the intervention was larger for children with better reading skills, but was also effective for children at lower reading levels. Similarly, parents who were exposed to the podcast were more likely to have a passing score on the test than those in the control group (203 [71%] of 288 parents receiving the intervention mastered the concepts [≥11 of 18 correct answers] compared with 103 [38%] of 273 parents in the control group [adjusted difference 34%, 95% CI 26–41; p<0·0001]). These interventions show strong effects in enhancing the ability of young adolescents and their parents to assess health

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claims, suggesting the potential for such curricula to increase informed health choices. Future research should examine replicability and cost-effectiveness in similar settings.

The implications for these papers are relevant to multiple stakeholders—those interested in health promotion, evidence-based health care, and health literacy. First, as Nsangi and colleagues and Semakula and colleagues mention, the ability to assess and refute health claims creates a more informed citizenry that will make better family health decisions while also holding governments accountable for health policy. While additional research would be helpful to understand the type of curricula that is most effective in given settings, these results should motivate a redoubling of efforts by governments, health-care organisations, and health professionals to enhance health literacy among adolescents and adults. These studies suggest that targeting adolescents by as early as 10 years of age might be effective. However, the extent to which these kinds of interventions can be applied outside of a school setting, specifically to out-of-school youth who remain a vulnerable and marginalised group, also needs to be established. Second, findings also show that a podcast and perhaps other innovative forms of technology can be an effective outlet to improve health literacy for adults, where such information platforms are available and accessible. Third, the material for these interventions was created and tested in a low-income setting, yet yield findings that are salient beyond the health-care sector and in low-income, middle-income, and high-income countries. In a world typified by a constant stream of information, the authors recognise the importance of skilful assessment and analysis of claims, and suggest their initial efforts have broader relevance. Finally, to our knowledge, the study by Nsangi and colleagues is the first published trial that shows that primary school children (ages 10–12 years) are able to learn health literacy skills, such as how to discern claims about treatment effectiveness, even in resource-poor settings with large student to teacher ratios. This outcome is critical, showing that sophisticated health ideas can be effectively transmitted at an early age thereby empowering young adolescents to be involved in making decisions about their health care in an informed and productive manner.

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