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Wealth, health, HIV and the economics of hope

Tony Barnett[a] and **Mark Weston**[b]

[a]LSE Health and LSEAIDS, London School of Economics, and London School of Hygiene and Tropical Medicine, London, UK

[b]61a West Borough, Wimborne, Dorset, UK

Abstract

HIV/AIDS primarily affects people of working age. Population susceptibility is poorly understood. This paper speculates that an operationally defined concept of hope may offer new ways of understanding its social epidemiology. Hope is directly linked to the future in as much as it determines the value people place on that future. Individual and communal levels of hope may vary, with consequent impacts on HIV transmission. HIV/AIDS in turn may reduce hope and thereby reduce societies' future wellbeing. The paper concludes by offering recommendations for research, programming and policy.

Keywords

economics; happiness; HIV acquisition; hope; social epidemiology

Introduction

This paper explores possible links between HIV transmission and the degree to which people are able to adopt realistic plans to achieve future projects, in other words, hope. It is not a research paper but a contribution to the discussion of behaviour change in relation to HIV acquisition in the context of the effects of AIDS on economic performance.

The links between health and economics have gained increasing recognition in recent years. Public health crises such as sudden acute respiratory syndrome, an easily transmissible respiratory infection, and bovine spongiform encephalopathy, a disease associated with systemic failures in the food industry [1], have raised awareness that pestilence can hurt pockets. At the same time, continued and increasing ill health in the poorest parts of the world has heightened interest in the poverty–disease nexus among international donors, policymakers, business and civil society.

People living in countries with higher incomes tend to be healthier and have longer life expectancy than those living in poorer regions. In a widely cited study of the wealth to health link, Pritchett and Summers [2] found that income growth accounted for 40% of differential mortality improvements between countries. There is no simple relationship between poverty and AIDS. The complexities of this relationship are examined in greater detail in Barnett and Topouzis [3]. The poor may be more susceptible to HIV infection as a result of lack of education, general poor health and weak access to health services. On the

Correspondence to Tony Barnett, LSE Health and LSEAIDS, London School of Economics, Houghton Street, London WC2 2AE, UK., a.s.barnett@lse.ac.uk.

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other hand, the wealthy may face risks because of their greater mobility and ability to pay for sex. HIV/AIDS casts a new light on the importance of the reverse relationship, from health to economies. Unlike most infectious diseases, HIV/AIDS primarily affects people of working age. This paper takes a practical look at the association between HIV/AIDS and economies. There is some evidence that AIDS can affect economies. With regard to the socioeconomic distribution of infection, the correlation between economic status and HIV infection is not linear and varies between and within countries.

Here we look at the potential of hope to explain infection rates. Unlike standard contemporary economic analysis, the study of hope incorporates non-monetary values, and may therefore help fill some of the gaps in our understanding of HIV transmission.

Hope is directly linked to the future in as much as it determines the value people place on that future. Those with high hopes in life and who place a high value on the future are likely to make different decisions and adopt different behaviours to those without long-term goals. In an adverse risk environment where life is unpredictable, the future is discounted [4]. Individual and communal levels of hope may vary, with consequent impacts on HIV transmission. HIV/AIDS in turn may reduce hope and thereby reduce societies' future wellbeing.

The role of hope

The limits of traditional economic analysis

Traditional economic analysis of HIV/AIDS focuses largely on the direct links between income and HIV infection. It does not generally address the wider set of circumstances in which decisions are made that put people at risk of HIV infection. Standard economic analysis of the impacts of the disease is also too limited. By looking only at the narrow economic effects in the short term, it omits several factors that may ultimately have a much greater effect on societies and, indeed, economies.

The first of these is non-market labour inputs. The value of women's work, for example, is rarely taken into account, even when it can be measured economically by comparing it with similar work performed as a standard market transaction. Domestic work may be severely affected by HIV/AIDS but is not usually measured by economists [5,6].

The effect of the virus on communities is also difficult for economists to measure. Cost-effectiveness and cost-benefit analyses, the most common tools for assessing the cost of HIV/AIDS in relation to the value of interventions to curtail it, look at the impact on individuals or households. They do not normally consider how entire communities may be damaged by the disease. The stigma surrounding the virus can leave certain sections of society ostracized, with negative impacts on social cohesion. The deaths of working-age people can leave communities without their leaders and problem-solvers, and without the social capital that helps communities confront threats as a group is weakened.

Linked to this is the effect on social reproduction. The latter refers to the way societies reproduce patterns – be they ideas, customs, social structures, or ways of interacting generally or working with others over generations. The morbidity and mortality resulting from HIV/AIDS can adversely affect these processes. The death of a mother or father, or both, means many of life's lessons may not be passed on to children. If that mother or father is also an active member of a community (or a country) and its key institutions [7], the impacts will spread widely throughout society as a whole [8]. Very little is known about the effects of AIDS on the non-formal, non-monetized economy of social reproduction. Limited

research, however, suggests that some of the greatest and longer-term effects of the epidemic may be found here (N. N. Mujuru-Mvere, 2004, unpublished dissertation) [9].

Long-term costs such as these are rarely included in traditional analysis of the impacts of HIV/AIDS. Economics cannot fully explain HIV prevalence, and it cannot cover the entirety of the pathogen's effects. One way to engage with these questions is via consideration of the role of hope in the social epidemiology of some HIV epidemics.

Hope and HIV infection

In times of rapid or extended social, cultural and economic disruption, social distinctions, roles, relationships and responsibilities are confused and fluid: people do not have a clear view of the future. Their ability to hope is severely compromised as they are unable to plan in relation to an extended time horizon. Richard Layard, who has had a major impact in raising the profile of the study of happiness, has also acknowledged the importance to wellbeing of hope. 'We could not be happy without setting ourselves goals', he asserts. 'Prod any happy person and you will find a project' [10].

To have such goals, of course, you need hope. Hope is not just about optimism for the future, but also about making and enacting realistic plans to attain future objectives. Snyder [11] has defined hope as 'goal-directed thinking in which the person appraises his or her perceived capability to produce workable routes to goals… as well as the potential to initiate and sustain movement along the pathways.'

Hope for the future can therefore have strong impacts on behaviour in the present. As Snyder *et al*. [12] explain 'The person who is hopeful or envisions the possibility of a positive future is more apt to engage in activities directed towards that future … . In contrast, those persons who have no hope and view the future negatively are less apt to engage in positive behaviour.'

The effects of hope on behaviour can have long-lasting repercussions for well-being [13]. A study comparing children's answers to a series of questions about their hopes for the future with their subsequent scores in a basic skills test found a significant positive correlation between high hopes for the future and high test scores [14]. Hope also appears to affect health. The unemployed experience higher levels of mental distress than the employed, regardless of wealth, possibly because of an absence of hope [15]. Laboratory evidence suggests that goal-directed thinking increases self-esteem and reduces emotions related to depression [16]. A well-known study of British civil servants by Marmot *et al*. [17] found that those male civil servants who had remained in the lower grades of the service had a mortality rate several times higher than those in senior positions. The civil servants were not poor, but were in a position of relatively low income and low esteem where they had lost hope of advancement to higher levels. It was this position, with advancement in sight but always impossible, which negatively affected their health [17]. Transferring this insight to a very different environment, in poor countries, those who are desperately poor cope and sometimes die of poverty. In contrast, those who are just above the poverty line, particularly poor women, may aspire, usually fail and therefore experience hopelessness. It is this structural position that exposes them to individual risk.

The hope environment can influence HIV/AIDS prevalence. People with hope for the future and plans for achieving future goals are less likely to engage in activities in the present that put them at risk of illness or death in the future. In the case of HIV, such behaviours include injecting drug use or risky sexual practices. Behaviour change messages are likely to be more effective if those receiving them have hope for the future. Those without hope, by contrast, place a low value on the future. Without future goals, there is little reason to avoid

actions that may cause harm in the future but do not do so in the present. People may therefore forfeit future gains in favour of present benefits. Despite the risks involved, for example, women facing a daily survival struggle may be forced to exchange sexual favours (possibly without protection) for the economic assistance they and their families need to make it through the week. Men who lack hope for the future may be unwilling to surrender immediate pleasure in return for a far-off future benefit by wearing a condom. People already sick with AIDS may be less likely to adhere to antiretroviral therapy (ART) if they have little to live for, thus risking passing on the virus to others [18]. The hope engendered by the availability of ART is likely to encourage people to present for HIV counselling and testing who would previously have seen no benefit in doing so. Testing has been shown to reduce risky behaviour in those who test positive, and this may reduce HIV transmission.

There has been little research on the link from hope to HIV/AIDS, but there is one outstanding example suggesting the concept's relevance. The chaos and terror of Idi Amin's rule in Uganda in the 1970s sharply increased social and economic inequality, particularly between men and women, forced many to discount the future and instead focus on day-to-day survival. Disruption of hope may well have contributed to the spread of HIV in the region. A thriving black market grew up to replace the economic system Amin had destroyed, and cross-border smuggling organized by men was rife [4]. Transport routes are notoriously fertile ground for HIV infection, as traders and truckers spend long periods away from home, sometimes frequenting the bars and brothels that spring up to service them. Gender relations were upended as the men involved in smuggling became wealthier compared with women, and women's dependency on men grew, possibly most among those 'not so poor' women with some education whose aspirations were most acutely frustrated [19]. This imbalance 'inevitably took on a sexual complexion' [20]. The risk environment was made still more precarious when in 1979 the Tanzanian army crossed the border and overthrew Amin, passing along the same transport routes. Rakai district near the Tanzanian border, where both soldiers and traders spent extended periods, was the site of Africa's first reported cases of HIV/AIDS in 1982. Infection thereafter spread rapidly through Rakai and neighbouring areas [21,22].

Clearly, more research is needed to determine the strength of the links from hope to HIV infection. Hope will not explain infection in all population groups – the early infections among men who have sex with men in the United States, for example, often occurred amid thriving, energetic communities. It does, however, offer a possible explanation for the links between environment and risk behaviour [23], with important implications for policy. Hope is quite straightforward to measure by questionnaires, and it is a concept that individuals, communities and policymakers can understand and researchers investigate.

Snyder and co-authors [12,14] developed separate 'hope scales' to assess levels of hope in children and adults. Both include questions measuring what Snyder calls 'pathways thinking' (that is, the ability to devise paths towards future goals) and 'agency' (the ability to initiate practical actions that help one embark on these paths). Snyder has validated these scales in a United States setting that does not relate to HIV/AIDS. He found that the agency and pathways measures were closely correlated and remained quite stable when re-tested. It will be important to validate similar scales in a developing-world setting. Measures on the children's hope scale, with multiple choice answers ranging from 'none of the time' to 'all of the time', were as follows:

1. I think I am doing pretty well.
2. I can think of many ways to get the things in life that are most important to me.
3. I am doing just as well as other kids my age.

4. When I have a problem, I can come up with lots of ways to solve it.
5. I think the things I have done in the past will help me in the future.
6. Even when I want others to quit, I know that I can find ways to solve the problem.

Measures 1, 3 and 5 relate to agency, and measures 2, 4 and 6 to pathways thinking. Once levels of hope have been identified, it may then be possible to find out why some people lack hope. Establishing the obstacles to future-directed thinking and actions will help policy-makers clear a path to the future, with potentially beneficial impacts on many aspects of quality of life.

In an HIV/AIDS context, surveys of hope may help pinpoint the groups most vulnerable to infection, which can then be targeted with prevention and treatment efforts. The association with hope also implies that a broader approach to HIV prevention is needed; one that addresses the wide range of structural/contextual factors that promote or reduce hope. At present, most interventions aimed at preventing HIV infection attempt to alter individual behaviour, such as the promotion of condom use and abstinence. Such interventions operate on the clinical dose–response model. They rarely take account of the broader, structural factors that determine such behaviours. As we have discussed, hope is likely to play a key role in influencing risk decisions, and whether or not one has hope depends on a range of factors, including but not limited to those listed by Layard [10] above. Importantly, individuals and communities themselves can easily identify impediments to hope and thereby engage in the improvement of their health and their societies.

Clearly, many governments in poor countries where AIDS is a problem are already working to improve structural conditions: poverty reduction, transport and communication improvements, water and sanitation and education, for example, are worthwhile goals with or without HIV/AIDS. This raises the question of how those working to tackle HIV/AIDS can add value in influencing the broader environment, particularly given that their resources are limited and that some of those resources will continue to be directed at individual behaviour change efforts.

Some structural changes can have negative impacts on HIV/AIDS. Improving transportation links, for example, allows for greater mobility, which can be a risk factor for infection. Poverty reduction also gives people a larger disposable income and may enable them to afford to visit sex workers. These changes may also have positive effects, of course, as increased wealth is generally associated with improved health. It may be that those tackling HIV/AIDS could influence policymakers to consider the potential negative side effects of structural changes on HIV transmission. Structural improvements such as improved gender relations, women's education, reduced discrimination against sexual minorities and health system reform are also likely candidates for those working on HIV to advocate for. More research is needed in order to establish when the latter can have greatest value; determining an optimal balance between individual and structural interventions and determining which structural areas to target are complex questions that have so far received little attention. It may be that a focus on hope as a bridge between structural conditions and individual behaviour will help to address some of these issues, particularly if it is recognized that 'poverty reduction' may indeed remove significant population fractions from 'poverty' (however defined) while accommodating increased inequality which frustrates hope and aspiration. Uganda between 1992 and 2006 is a case in point. Official 'poverty reduction' has doubtless been dramatic. The proportion of the population living below the poverty line declined from 56% in 1992 to 44% in 1997, to 35% in 2000, to 31% in 2007. The government is reportedly on track to reducing poverty to 10% or less by 2017 and to reducing by half the proportion of people in extreme poverty by 2015. At the same time as these achievements, however, there is evidence of increased inequality. Consumption gains

have been inequitably distributed. The richest decile has thus experienced the largest rise in living standards: real consumption increased by 20% since 1997, whereas the consumption of the poorest decile grew by only 8% over the same period.

The impact of HIV/AIDS on hope

Many factors influence hope. Security, economic circumstances, the work environment, and family and community cohesion are some of the most obvious. Health is another. HIV/AIDS can destroy hope, resulting in vicious spirals that damage societies and lead to further HIV infections. We know that poverty and HIV infection are positively correlated in some circumstances, with higher rates of infection borne by socially disadvantaged groups, particularly women [24-27]. In an environment where HIV/AIDS makes long-term prospects precarious, the incentives to save are reduced, leaving families less secure financially and societies with fewer resources for investment in economic activities. Motivation to invest may also decline. Freire [28] has estimated that saving as a proportion of gross domestic product in South Africa will fall by 14% by 2010 as a result of HIV/AIDS.

AIDS mortality and morbidity may also discourage families from investing in human capital [29]. If the disease diminishes parents' hope that their children will reach adulthood, spending scant resources on their education will become less attractive, with long-term negative effects on children's life prospects. Birdsall and Hamoudi [30] have found that lower parental life expectancy is associated with reduced primary school enrolment and fewer years of schooling. Parents may also decide to have more children to compensate for the higher risk of a child dying, meaning resources have to be spread more thinly between children, thereby reducing the education and healthcare received by each child.

Perhaps the greatest impact of AIDS on hope and the prospects of setting and achieving goals is felt by orphans. Bell *et al*. [31] have forecast that by 2010 19% of South African children will have lost both parents. Just 29% will have both parents surviving. Children orphaned by AIDS suffer higher rates of depression than other children and have lower self-esteem [32-34]. As well as the emotional damage that makes people less likely to formulate goals, orphans also lack the means to achieve their objectives. Human capital among orphans is weaker than among non-orphans. A study in Indonesia found orphans less prepared for life [35], whereas a detailed ethnographic study of orphaned children in Botswana demonstrates the multiple disabling traumas experienced by orphans of the epidemic in that country [36].

From a policy point of view, families affected by AIDS may need more persuading than others to continue to save and invest in their children's education. Financial incentives may be required in these circumstances. A strong focus on orphans is also urgently needed. The psychological trauma experienced by AIDS orphans can compromise their hope for the future and imperil their subsequent integration into society. Counselling and treatment could help limit these impacts, and orphans will also need assistance in mapping out and working towards goals.

Economic interventions for HIV/AIDS

Existing interventions to prevent and treat HIV/AIDS emphasize individual behaviour. The ABC approach to prevention (abstain, be faithful, condomize), for example, encourages people to alter their sexual practices [37]. ART requires individuals to follow strict dosage routines. These measures require that people have hope for the future and goals to aim for. They do not by themselves alter the structural environment that strengthens hope, so their

long-term benefits are likely to be limited unless they are complemented by interventions with broader aims.

One of the factors likely to influence hope is wealth or the possibility of achieving it. There is an extensive literature showing how economic incentives can contribute to improvements in other areas of health, such as drug dependency or alcoholism. In the United States, for example, contingency management approaches to treating stimulant abusers, which provide money to cocaine and methamphetamine users in return for regular clean urine samples, have been found to reduce stimulant use [38,39]. Some drug users have reported that having something to strive for and being successful and receiving a reward for it, an unusual experience for many of them, was a key influence on their decisions about whether to use drugs during the study period. Similar research in the area of HIV/AIDS in poor countries is more limited, but the IMAGE project in South Africa [40] is the most rigorous study of the association between interventions and changes in behaviours associated with HIV transmission. It is a sound example of the way in which interventions alter structural circumstances, lead to increased hope and therefore improved health and wellbeing outcomes.

The IMAGE study, South Africa

The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) study in South Africa [40] assessed how an economic intervention could contribute to reduced HIV transmission by unblocking a path towards future goals. This study adds to what is at present a very thin literature on how microfinance can reduce HIV transmission. A study in Kenya [41], for example, found that female sex workers who enrolled in microfinance programmes reduced their average number of partners and experienced declines in sexually transmitted diseases.

Intimate-partner violence is an important risk factor for HIV, and one in four South African women reports being a victim of such violence [42,43]. The IMAGE study, a randomized controlled trial that ran from June 2001 to March 2005, assessed the impact on the risk environment of a microfinance scheme that also included gender and HIV training. Microfinance has been a boom industry in the developing world in recent years, with millions of poor families given both hope of a better future and a means to achieve their goals. Women in particular have benefited from such schemes [44].

The IMAGE programme was targeted at poor women in South Africa’s rural Limpopo province, an area much affected by male labour migration to South Africa’s industrial heartland. The scheme involved small loans combined with participatory learning activities that women attended every 2 weeks. Loans were used mainly for retail or tailoring businesses [40].

The impacts on hope were substantial. Ninety per cent of women in the intervention group reported that the programme had significantly improved their lives. Women enrolled in the programme were more likely to participate in social groups and collective action and felt a greater sense of community solidarity during crises [40].

The increased hope led to some improvements in health. Although there was no effect on HIV incidence or unprotected sex, intimate-partner violence decreased by 55% in the intervention group compared with the control group over a 2-year period [40]. It may be that changes in the hope environment will eventually have effects on HIV transmission, although this is as yet uncertain as such effects could be expected to become evident over a period longer than that of the research project.

Recommendations

Early work on HIV/AIDS in Uganda [4] suggested that the situation in Rakai in 1989 could best be described through the concept of a 'risk environment', where sexual behaviour was seen not to be risky in itself but only in a particular environment. This gave rise to the notion of an ecology of risk, in which risk was differentially distributed across a social or geographical space, depending on the coming together of specific factors, which made a particular activity 'risky' in a specific environment. This idea was explored further by Rhodes and colleagues [45-47] in relation to injecting drug use in the former Soviet Union, and most recently by Glass and McAtee [23] who describe social and economic structures as 'risk regulators'. The structural nature of risk in relation to HIV has also been reviewed and discussed extensively by Sumartojo [48] and collaborators [49] as well as most importantly by Wallace [50] over a long period in relation to HIV and other health issues [51].

Here we argue that hope is a conceptually distinct and operationalizable variable that provides a possibility for measuring, via individuals and groups of individuals, ways in which ecologies of risk regulate risk to the individual. Hope thus provides a distributional dimension for understanding differing potentials for behaviour change. Although high-risk environments may be described in terms of conventional measures of social and economic conditions, income, wealth, education and social class, the concept of hope may lead us to a better understanding of the pathways between individual perspectives on the world, social and economic conditions and risk-taking behaviours.

Deployed in this way, surveys of relative hope levels in and between communities can help in the identification of high-risk environments. This could enable the identification of communities of hopelessness. Such an approach would be particularly appropriate in poor countries, where more general background socioeconomic data are not always available. It could facilitate the pinpointing of geographical areas and social segments, in which further exploration of the social and economic conditions leading to hopelessness could suggest leads into effective policy and programme responses. By using the concept of hope and hopelessness, members of such communities could be directly involved in dialogue intended to identify ways in which the existing situation could be reversed. Such an approach might be described as a reflexive ethnographic epidemiology of hope and this is a perspective that points the way forward, out of hopelessness, into circumstances of reduced exposure to infection.

We have seen that the relationship between economic structures and processes and the HIV/AIDS epidemic still remains poorly understood 30 years into the epidemic. These relationships are currently being examined in more detail by Tony Barnett and Daphne Topouzis in association with a team from the University of Kiel in Germany. What is also clear but less frequently stated is that efforts to achieve effective behavioural change have had mixed results and in many countries have largely failed. A major flaw in many of these efforts has been the assumption that necessary changes in sexual behaviours are individual responses to 'doses' of prevention interventions. In fact, increasing evidence suggests that behavioural changes cannot be dissociated from their social, economic and cultural contexts, which may govern whether any such dose is effective [23,52-54].

In recent years, some donors have begun to acknowledge the importance of these contexts and of 'structural interventions' to alter them. This new line of thinking recognizes that although it is not clear that HIV epidemics are directly caused by poverty, they are closely related to the complex and diverse social, economic and cultural inequalities found in human societies. Whereas behaviour change assumes mainly individual responsibility and action as

risk behaviours, structural interventions assume that the environment regulates the risk faced by individuals. It is environments that are risky, not merely individuals' behaviours.

We can briefly summarize the recommendations of this paper as follows.

Policy recommendations

From the perspective of policy strategy, we should move away from simplistic perspectives focused on individual behaviour change and recognize that the environments within which transmission and effects occur must be taken into account. Continuing to act as though these environments are immune to interventions is costly. We have argued that a key component in creating a risk environment is the relative absence of hope for large numbers of people. When people have little hope and little aspiration, they discount the longer-term future and take risks to survive in the present and very near future. That may be a significant variable in the epidemiological processes we are seeing in the case of the rapid and wide spread of HIV in Africa and other poor and disrupted regions of the world.

Structural interventions may be an important way of introducing hope into the lives of those who currently can expect little. Security, stability, expectations of seeing the birth of grandchildren and their coming to adulthood, expectations of seeing a small enterprise grow bigger or a tree crop plantation come to maturity – these are all signs and indicators of hope that can have vital impacts on decisions and behaviours. In the longer term, creating and agitating for conditions such as these for more people is crucial if hope is to be raised as a weapon against HIV/AIDS.

Programmatic recommendations

Considered programmatically, there are two interrelated strategic paths. Programmatic interventions most amenable to immediate funding and returns to investment in the medium term are those that extend the realistic aspirational decision horizons of individuals and communities. In the context of a long wave epidemic such as HIV/AIDS, the medium term is probably in the range of 5–15 years. We do not yet have a great deal of experience in developing programmes for structural interventions. Welfare support systems of various kinds, ranging from cash support (as in the case of pensions and child support schemes) are undoubtedly one type of intervention that may serve to increase hope. Microfinance and assertiveness and gender training targeted in particular at women may also be potentially useful interventions.

In each case, these programmes seek to increase hope, extend personal and communal planning horizons and thus add value to the future in circumstances in which people otherwise have every reason to discount it. It is important, however, to ensure that these and similar economic interventions reach those who need them, and that their effectiveness in strengthening hope and reducing HIV transmission is monitored on a long-term basis. In resource-constrained environments such as are found in many areas affected by AIDS, risks that the uptake of such programmes will be limited to those not at risk of infection, or to those with high education levels and therefore awareness of programmes' existence, must be factored into programme design.

Research recommendations

We need to know much more about the social and economic distributional effects of the HIV/AIDS epidemic in poor countries. A research project on this subject is currently in progress in cooperation with a team from the University of Kiel, Germany. We also need to understand more about the role of differential hope in combination with social and economic inequalities in shaping diverse HIV epidemics around the world. Studies measuring levels of

hope and comparing them with HIV prevalence will provide some indicator of the strength of the link between the two without being able to pinpoint causality. Studies asking individuals about the role of hope in influencing their sexual behaviour may also produce interesting results.

More research is also needed to assess the impact of structural interventions on HIV transmission. If economic programmes are to become a mainstay of HIV prevention, many more such studies will be necessary. Questions also remain as to how far those working on AIDS should go in advocating for broad structural changes, given that many governments are endeavouring to implement these changes anyway and that the resources available for HIV/AIDS activists are limited. Finding areas in which an HIV/AIDS perspective on broad structural change can add value will be vital, and decisions about the proportion of resources and energy that should be devoted to structural interventions versus behavioural change programmes will require a solid evidence base. Improved understanding of these issues can make a significant contribution to linking social justice to interventions via increased hope for those who are structurally disadvantaged.

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