

EVIDENCE FOR THE "NEW VARIANT FAMINE" HYPOTHESIS IN AFRICA

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Overview

The 'new variant famine' hypothesis (NVF) provides an analytical framework and a set of predictions regarding future food crises in poor countries stricken by generalized epidemics of HIV/AIDS. This paper summarises the principal claims made by NVF and evaluates recent evidence for and against the hypothesis. It concludes that two of the major components of NVF (concerning patterns of vulnerability and trajectories of livelihoods) are thus far, supported by empirical data and that a third component (concerning mortality) is as yet untested. The positive evidence is, however, still sparse.

Theory

What is the NVF? At root, it is a claim that the nature of food crises in Africa is changing on account of the co-occurrence of a generalised epidemic of HIV/AIDS and other concurrent shocks such as drought. This leads to the following impacts:

1. A new profile of vulnerability to destitution and hunger. This has two components, namely a 'Swiss cheese' pattern of vulnerability (spread out across affected communities rather than geographically defined), and the emergence of new categories of vulnerable individuals and households (e.g. those in formerly food-secure areas such as in small towns).
2. A new trajectory of destitution during crisis. This has the following components. First, general wellbeing is declining already in advance of any external shock such as drought. Second, AIDS-affected households are less well-able to cope during a crisis, leading to more rapid descent into destitution and slower recovery (if any).
3. A vicious interaction between HIV infection, malnutrition and susceptibility to infectious disease. Not only are individuals (adults and children) living with HIV more vulnerable, but there may be a change in the wider ecology of disease and nutrition, leading to greater risk of child death.

It is worth emphasising that the NVF not a claim that HIV/AIDS is the sole, or even the prime, cause of the 2002 food crisis in southern Africa. Nor does it claim that HIV/AIDS is causing a decline in aggregate food production (though that may occur in some places). While the NVF claims that HIV/AIDS significantly changes the pattern of vulnerability to famine, this does not mean that economic, climatic and (most importantly) political factors are unimportant. To the contrary, the NVF hypothesis derives from the view that the HIV/AIDS epidemic exacerbates existing social and economic problems, including governance challenges.

NVF also makes the long-term claim that a protracted generalised HIV/AIDS epidemic could lead to a crisis of social reproduction, on account of widespread and intractable destitution and consistent heightened female adult mortality. This aspect of the hypothesis cannot be tested empirically.

Evidence for New Patterns of Vulnerability Associated with HIV/AIDS

Evidence for this takes the form of studies of the livelihoods of households impacted by HIV/AIDS, not during periods of additional stress (e.g. in food secure areas or during non-drought periods), and nutritional surveillance data from southern Africa during the drought of 2002-03.

An array of small-scale studies indicates that HIV/AIDS causes serious losses at household level, including lower incomes, decreased food cultivation and depletion of assets. This literature is well-reviewed

elsewhere. However, there is a notable disjuncture between this micro evidence and the way in which macro-economic indicators remain robust despite HIV/AIDS. The solution to this paradox is to be found, in part, in evidence concerning household coping strategies, which can maintain production despite adversity.

There is evidence that many households impacted by an adult death respond by drafting in new adults, thus maintaining the household workforce. The strategy (and hence the impact) differs according to the gender of the deceased. In Mozambique, the death of a father led to a marked adverse shift in the dependency ratio and great difficulties in adjusting, while households suffering the death of an adult female were more able to cope, both by shedding children and by acquiring another adult woman. Evidence from tea pluckers in Kenya and cotton growers in Zambia shows that declines in production can be offset by households drafting in the labour of relatives or children to sustain production. This is also reflected in a study of households in Kagera Region of Tanzania suffering an adult death. This Tanzanian study also contains the interesting finding that about one third of those who died had joined the household recently they had relocated because they were terminally ill.

However, this 'coping' response does not solve the fundamental problem, but rather shifts the burden elsewhere and postpones the day of reckoning. These studies concern households in 'normal' times, suggesting that they enter a period of drought or other external stress, less able to respond effectively, and thus more vulnerable to destitution.

Another source of evidence is nutritional surveillance data. An overview of nutritional surveys conducted by UNICEF in collaboration with John Mason found some evidence that indicates an adverse impact of HIV/AIDS. This included clear signs that double orphans have much higher prevalence of malnutrition compared with children with one or both parents living. However, locational correlation between HIV prevalence and undernutrition was complicated by the fact that urban areas tend to have higher HIV-prevalence areas than rural, and therefore have better access to food markets and relief supplies.

The data available did not allow analysis according to HIV/AIDS proxy indicators at the household level. However, these studies pointed to an important conclusion, that although malnutrition rates were higher in rural areas, which tended to have lower HIV prevalence, the decline in nutritional status was most marked in locations closer to towns, which traditionally enjoyed higher food security but were now hit by higher prevalence of HIV/AIDS. If this is correct and generalisable, this points to the emergence of a new category of the vulnerable, namely children in high-prevalence urban and peri-urban communities.

Evidence for New Trajectories of Destitution During Crisis

The household studies cited above suggest that AIDS-impacted households may be able to 'cope' (for a while) in the absence of additional stresses. This implies either a secular long-term decline in wellbeing, or a greater vulnerability to downward pressures without the prospect of corresponding increases. What happens when there is a drought, such as in southern Africa during 2002-03?

Some of the best data concerning the household-level impact of the southern African food crisis comes from the surveys by the SADC Food, Agriculture and Natural Resources Vulnerability Assessment Committees. During 2002, these surveys did not look for potential impacts of HIV/AIDS, although they were collecting data on potential proxy indicators such as household demography or the presence of a chronically sick adult. A reanalysis of data in early 2003 found that many of these proxies were strongly correlated with household food insecurity. There is plentiful evidence for households going hungry during food crisis. According to the SADC VAC survey in early 2003, 57% of households with a chronically ill adult (taken as a proxy for AIDS-affected) had gone entire days without eating. However, a study of two districts in Tanzania found no association between socio-economic variables and households' AIDS-impacted status, a finding that may be explicable by the fact that in one location (Monduli), households identified as AIDS-impacted had a markedly better socio-economic profile to begin with.

The analysis of nutritional surveillance data by John Mason and colleagues found an interaction between HIV/AIDS and drought in increasing child malnutrition levels. While drought and the presence of an HIV/AIDS epidemic were each independently associated with a decline in the nutritional status of children in the general population, the decline was multiplied with a co-occurrence of the two. What we need to know is whether this deterioration continued, was slowed or halted, or was reversed, during the non-drought year of 2003. Preliminary findings indicate a modest rebound in the middle of 2003, followed by a subsequent deterioration.

We do not have detailed household-level qualitative studies of coping (or failing to cope) during the drought of 2002-03, which might backup these findings. However, there is suggestive evidence for an increase in young women and girls entering commercial sex work and widespread sale of assets. In parts of Malawi, an old practice known as 'kupimbira' resurfaced in 2002, whereby very poor families 'sold' or 'loaned' pubescent girls as 'wives' to older and wealthier men, in return for gifts of food.

Evidence for New Mortality Risks

There is evidence for changes in the ecology of malnutrition associated with the southern African drought and the HIV/AIDS epidemic. However, we do not know how this translates into risks of mortality. There are no data on mortality for the southern African drought of 2002-03 that can be used to test this aspect of the hypothesis. Modelling these interactions using existing frameworks (e.g. UNICEF's 'underlying causes of malnutrition'), and gathering empirical evidence on malnutrition, infectious disease exposure and child mortality, is an important task if the child survival revolution is to be sustained in countries afflicted by generalised HIV/AIDS epidemics. Any findings will have implications for the framework for child survival developed by the Bellagio Study Group on Child Survival.

Evidence for Aggregate Food Production

Although the 'food availability decline' theory of famine was refuted by Amartya Sen more than twenty years ago, it has a remarkable afterlife and still commands respect among many. The NVF makes no claims about aggregate food production. However, some critics have argued that it should, and therefore it can be tested against aggregate production statistics.

Looking at aggregate crop production, the correlations between HIV prevalence and production seem weak or non-existent. For example, the Zambia VAC survey attributed the geographical distribution of food shortages to climatic conditions, environmental degradation, food marketing and pricing factors, rather than HIV levels. Another analysis by Guy Scott and Charlotte Harland came to a similar conclusion, arguing that rural HIV levels were relatively low (11%) and had no clear correlation with food insecurity, that there were no indications of a rural labour shortage (especially in the cotton sector), and that the food crisis had in any case been somewhat exaggerated. In this regard, it is also worth citing the cotton-pickers study by Larson and colleagues, which found that the marked production declines of some households on the death of a working age adult, 'have little impact on aggregate output,' because their production levels are already so marginal to overall output.

Conclusion

The NVF hypothesis remains a hypothesis. By academic standards, it is still very young—the first peer-reviewed publication on the subject is less than a year old. In this brief period, however, sufficient evidence has become available to refine the hypothesis and to test aspects of it. This allows us to conclude that the two of the three planks of the NVF are supported, in a general way, by the data. The third plank, concerning mortality, thus far has no supporting data. There is also evidence that the HIV/AIDS epidemic has as yet no discernible impact on aggregate food production.

None of the studies cited were specifically designed to test the NVF hypothesis. Rather, they are parts of a jigsaw, with many missing pieces. The two major gaps at present are the absence of a livelihoods study of

households concurrently impacted by HIV/AIDS and drought, and mortality data. In addition, the two main existing data sources, namely livelihoods studies focusing on the impact of adult deaths, and nutritional surveillance, need to be considerably expanded in scope before firm general conclusions can be drawn.

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