AIDS Behav (2009) 13:470–473
DOI 10.1007/s10461-009-9561-y

COMMENTARY

Broadening Research on Microfinance and Related Strategies for HIV Prevention: Commentary on Dworkin and Blankenship (2009)

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Published online: 11 April 2009

In their article, *Microfinance and HIV/AIDS prevention: Assessing its promise and limitations*, Dworkin and Blankenship (2009) provide a valuable introduction to microfinance as a structural HIV prevention approach and highlight its significance and limitations for women's economic empowerment. Their overview of the components and types of microfinance programs is excellent. Their emphasis on the challenge to gender norms posed by woman-only projects is well taken. Gender power issues should clearly be integrated into future microfinance studies. Most importantly, their analysis contributes to a growing literature calling for HIV prevention efforts targeted to distal determinants of risk.

In this commentary, we respond to Dworkin and Blankenship (2009) about the limitations of microfinance used as a stand-alone strategy for HIV prevention, and advocate expanding the literature consulted in planning research on interventions, such as microfinance, targeting structural and contextual factors. We expand on their point about the methods most appropriate for studying microfinance and other structural interventions, suggesting that study designs beyond the randomized controlled trial (RCT) can provide compelling evidence of the success of these types of interventions and in many cases are more appropriate than the RCT. We conclude by providing an applied example, describing our ongoing investigation of a large mutli-level intervention involving microfinance and food security elements, being conducted in collaboration with an international poverty relief organization.

For decades, the vast majority of HIV/AIDS prevention studies have focused on individual behavioral intervention effects on HIV-related outcomes and, to a much smaller extent, on the impact of structural and multi-level interventions. Sexual risk has often been the exclusive target of change. The efficacy of interventions tested in RCT has not consistently translated well to large-scale public health programs, often producing only marginal risk reduction that is difficult to sustain (Coates et al. 2008). It can be reasonably argued that problems in translation are due to imperfect implementation in the field, adaptation that departs from core intervention elements, or insufficient public health spending to allow widespread implementation of successful interventions. It is also likely that empirically supported individually-oriented intervention approaches would have larger and longer lasting effects in practice if recipients were not faced with myriad complicating factors due to their social and environmental context. Interventions tackling structural determinants of HIV vulnerability, including poverty, food insecurity, and gender power inequities, may provide the improvement in context that allows more proximally-focused intervention

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strategies already developed to reach their fullest potential and produce lasting effects, while at the same time having many other important benefits to recipients. Investigations of these types of multi-level approaches are urgently needed. Without such interventions and broader social science methods to measure their impact, substantial progress in stopping new HIV infections on a global scale may be difficult to achieve (Gupta et al. 2008; Merson et al. 2008). While most researchers are aware of the relevance of contextual and structural factors, such as poverty, to health, the range of intervention approaches suggested has generally been quite limited.

Microfinance is attractive as a potential HIV intervention because it provides a manageable, discrete approach to improving the economic situation of participants, which may in turn have a positive impact on HIV vulnerability. In current practice, however, microfinance is rarely implemented as a stand-alone development initiative. Non-governmental organizations (NGOs), many of them expert in planning and delivery of large-scale social, economic, and public health programming, are well aware that no intervention component can singlehandedly resolve such fundamental problems as poverty, gender-based violence, or the HIV pandemic. Approaches that combine microfinance with, for instance, sustainable agriculture training and support, nutrition outreach, lay health workers, or strategies to diversify livelihoods, depending on the needs of the local community, are more typically the reality for NGOs working on the ground.

Given that microfinance is now often used as a part of a coordinated mix of programs adapted and prioritized to specific contexts and based on the needs of local communities, attempting to determine whether microfinance alone is effective, either at poverty reduction or HIV risk reduction, may not give the approach a particularly valid test. Microfinance may be a highly valuable element in a synergistic, multi-level intervention, even if it does not appear particularly effective in isolation. We argue for greatly expanding the range of structural interventions that are investigated for their HIV prevention potential, particularly integrated approaches that seek to improve the economic stability of a people by not only creating access to currency, but also by helping people become more resilient and self reliant in terms of basic necessities they would otherwise use money for, such as food and energy.

HIV prevention researchers have generally found it challenging to conduct rigorous intervention trials addressing structural factors related to HIV (the IMAGE study; Pronyk et al. 2006, is a noteworthy exception). One reason for the relative lack of research on interventions targeting structural and contextual factors related to HIV ('risk regulators' as defined by Glass and McAtee 2006) is that the typical NIH-funded randomized controlled trial (RCT) model does not align well with testing the impact of many structural interventions. For instance, when interventions involve economic benefit in atmospheres of deep poverty and dire need, randomization of that benefit cannot be justified in most scenarios. Likewise, decisions about macro-social policy cannot be determined by randomization. Feasibility of the RCT, too, can become an issue when the unit of organization being studied is very large or when the time frame for full implementation of the intervention is very long (Bonnell et al. 2006). In contrast, smaller-scale individually oriented behavioral interventions are relatively easy to test using the RCT gold standard.

On the other hand, NGOs have been developing and fielding complex, context-driven interventions for decades to alleviate poverty, hunger, disease, and preventable deaths. Few of these NGO interventions, however, have been evaluated in a way that can rule out alternative explanations of success or clearly indicate that the intervention did not work. For example, few NGO program evaluations involve a control group. Evaluations are typically pre-post quantitative designs with qualitative end of program interviews. Results of even the most sophisticated of these efforts typically remain in report form for distribution to other NGOs and in-country governmental bodies. Rarely do they emerge in the peer-reviewed scientific literature. Limited dissemination through academic journals is understandable, given that NGOs implement programs; the funding they secure is for direct service. This state of affairs is unfortunate for the missed opportunities to develop a rich database of evidence for environmental/structural interventions. Future scholarly reviews on microfinance and other structural interventions might do well to expand beyond the peer-reviewed literature to include a more systematic exploration of the rich information to be found in reports, monographs, white papers and other manuscripts from NGOs that are implementing projects in the field.

Responding to the evaluation difficulties noted above, a growing chorus of authors is arguing that existing rules for evidence of efficacy are not necessarily appropriate for evaluating large-scale public health interventions in the field (e.g., Bertozzi et al. 2008; Black 1996; Bonnell et al. 2006; Gupta et al. 2008; Victora et al. 2004). Alternative mixed methods research designs using quasi-experimental, nonrandomized trials, or natural experiments, with more attention to external validity and ethnographic detail, permit strong causal inferences (West et al. 2008), explaining "what works for whom, in what circumstances, in what respects, and how" (Pawson et al. 2005, p. S1:21). Public health intervention studies using non-randomized designs, when reported in transparent ways with sufficient detail about the intervention, comparison condition, methods, and outcomes, make it possible to understand the variables

contributing to success or failure (Des Jarlais et al. 2004). Flexibility as well as novel ideas about how evidence from structural interventions can be acquired and assessed are necessary, especially in circumstances when RCTs are not appropriate. In their paper, Dworkin and Blankenship make several astute recommendations for future research with these issues in mind.

Thus, an important direction for HIV prevention research is the scientific evaluation of "real-world" structural programs implemented by NGOs. Typically, researchers cannot often secure funding to implement interventions of sufficient scope and complexity to comprehensively address structural factors; whereas NGOs are constantly developing and conducting such programs, but do not often have the resources to rigorously examine their effectiveness. Our current research, described below, is in direct response to this conundrum.

In collaboration with an international research team, we are engaged in a National Institute of Child Health and Human Development-funded study (Grant *#R01HD 055868 Pathways Linking Poverty, Food Insecurity, and HIV in Rural Malawi*, PI: L. S. Weinhardt, CoIs: L. W. Galvao, P. E. Stevens, W. Masanjala) in which we are examining the effects on HIV vulnerability of an integrated multi-level poverty-relief program in rural Malawi. The *Tiphunzitsane Project* (*Learning Together* in Chichewa, the local language), is a partnership of four institutions: CARE Malawi/USA, the Medical College of Wisconsin's Center for AIDS Intervention Research, the University of Wisconsin-Milwaukee's College of Nursing, and the University of Malawi. CARE Malawi (part of one of the world's largest NGOs focused on poverty eradication) is delivering a large-scale economic development and food security intervention, referred to as SAFE, with funding from the European Commission. With NIH support, we are measuring the success of this NGO effort. The CARE SAFE program is a large-scale, long-term structural intervention combining 'farmer field schools,' which provide education in sustainable agriculture techniques to improve families' food supplies, nutrition, and income; community-based microfinance implemented through guided local savings and loans groups; and local governance capacity-building to support food security, diversification of livelihood strategies, and implementation of local health committees. HIV education and referrals for testing and care are integrated throughout the different levels of contact CARE has with program participants and their communities when implementing SAFE. Through its intended effects on economic stability, food supplies and nutrition, essentially improving the context in which people are living, the CARE intervention is expected to have positive effects on several health-related outcomes including HIV.

Using a quasi-experimental, non-equivalent control group longitudinal design, we are recruiting participants from two types of areas in rural central Malawi: areas selected *a priori* by CARE to receive the SAFE program and separate areas receiving unrelated CARE programming focusing on education. We will assess HIV-related, food security, and economic outcomes through quantitative household surveys at both the individual participant and community levels. We are recruiting CARE program participants upon enrollment in either the SAFE or education programs and interviewing them at baseline, 18 and 36 months to examine changes in individual participants and their households over time. We will examine broader changes at the community level, also hypothesized to result from the CARE intervention, by surveying randomly-selected households in each of the two types of study areas at baseline and at a 48 month follow-up. In addition to examining the effectiveness of the multi-level SAFE intervention, as implemented in the field by CARE, we will analyze the longitudinal data to test pathways between socioeconomic changes, agricultural practices, food security, HIV risk behavior, and HIV-related outcomes, taking gender-power issues into account. Toward the end of the five-year project, we will conduct a qualitative end-of-program evaluation, interviewing 120 CARE SAFE participants to understand the perceived impact of the intervention on their lives and the mechanisms of that impact.

This collaboration allows the opportunity to conduct a detailed controlled study of a coordinated, multi-level intervention, including a community-based microfinance element, being implemented over several years on a scale that would unlikely to be supported entirely by NIH research funding. We are, in effect, combining NIH and NGO program funding to enhance the contributions of both. We hope this commentary will encourage others to collaborate across sectors to test ambitious community-based multi-level structural interventions for their effects on HIV outcomes. We challenge our HIV research colleagues to innovate other ways to evaluate multi-component interventions targeting economic stability, food security, and other structural factors that are at once feasible, scientifically sound, and ethical. The need for this research has never been greater, given the current deteriorating economic conditions worldwide. With increased attention to these issues, we can build an empricial knowledge base that is useful for scientists, public health professionals, and policy makers in understanding the potential of structural interventions for HIV prevention as well as the broader health impacts of different approaches to economic aid and development.

Acknowledgments This work was supported by award number R01HD055868 from the Eunice Kennedy Shriver National Institute

Of Child Health & Human Development and by National Institute of Mental Health center grant P30MH052776 (PI: Jeffrey A. Kelly, PhD). The content is solely the responsibility of the authors and does not necessarily represent the official views of the Eunice Kennedy Shriver National Institute Of Child Health & Human Development or the National Institutes of Health. The authors thank Dziko Chatata, Josephine Ulimwengu, Mahdu Deshmukh, and Kent Glenzer with CARE Malawi and CARE USA for their assistance in developing the NICHD project described.

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