

45th Biennial Convention (16-20 November 2019)

Building Global Nursing Research Capacity From Efficacy to Implementation in Malawi: Sustaining a 20-Year Collaboration

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PURPOSE: To describe an ongoing nursing research collaboration between Kamuzu College of Nursing, University of Malawi (KCN) and the College of Nursing at University of Illinois at Chicago (UIC). Through the development and testing of a peer group intervention for HIV prevention, our research partnership contributes to the global health priority of HIV prevention, an especially urgent concern throughout sub-Saharan Africa, including Malawi.

RESEARCH ACCOMPLISHMENTS: In 1999, a UIC faculty member came to Malawi with Fulbright funding to form a KCN-UIC research group to adapt an evidence-based peer group intervention originally developed for urban women in Botswana (Authors, 2004). The intervention integrated complementary models including WHO's primary health care model of health worker-community collaboration for intervention delivery (Bhutta, Atun, Ladher, & Abbasi, 2018), Bandura's (1989) social-cognitive learning theory for content that builds self-efficacy, and cultural tailoring to ensure cultural appropriateness (Authors, 2006). We successfully piloted the program for teachers-in-training and the short-term results were promising (Authors, 2007)

We then obtained NIH funding to test intervention efficacy in rural Malawi. We trained health workers to offer the intervention to adults and youth. For both the adults and the youth, the intervention improved safer sex outcomes, including condom use and HIV testing (Authors, 2011; 2014, 2016). With Global AIDS Foundation funding, we extended the project to urban health workers, and the intervention was associated with

an increased use of universal precautions and patient education and reduced their own risky sexual behaviors (Authors, 2008, 2009; 2010; 2011). Our next grant expanded the intervention to include young women in rural Malawi, who were contracting HIV at younger ages than males. Consistent condom use, condom use at last sex, birth control use, and unintended pregnancies improved at 6 months post-intervention but not 12 months. One possible reason for lack of long-term outcomes was the failure to include the whole community. Our current NIH-funded study addresses this gap and the need to scale-up evidence-based interventions by turning over implementation to the community, a strategy that meets local health needs with minimal burden to the health system (Authors, 2018). We are testing a simple implementation model using a hybrid design emphasizing both the implementation process and effectiveness in rural Malawi (Curran, Bauer, Mittman, Pyne, Stetler, 2012)

CAPACITY-BUILDING THROUGH COLLABORATION: After the Fulbright award, we obtained three 5-year NIH grants and one foundation grant. We published 17 peer-reviewed data-based papers. Career development for each co-investigator includes mentoring, building specific research skills and capacities, and publication as a lead author and co-authors, which leads to promotions and independent research funding. We systematically incorporate and mentor junior faculty and graduate students. One junior UIC faculty was awarded a supplement to add Youth Photovoice to our current implementation study, and two master's students completed small projects.

Our collaboration and ongoing NIH funding also was important in obtaining other funding for UIC-KCN capacity-building programs. In part because we had an active research program, Malawi was included in UIC's four-country AIDS International Training and Research Program (AITRP KCN faculty obtained four PhD and two MS degrees from this program. KCN then received an NIH Fogarty capacity-building grant to establish a nursing research center. This collaboration strengthened KCN's capacities for administering externally-funded research and program grants.

Building strong collaborative relationships is a key element of success and links the educational and research missions of both universities. We include multiple voices of university faculty and leaders of the communities and health systems. Many relationships expand on research advisor-student relationships. At both universities, our presentations and workshops expose additional faculty and students to global health research opportunities. Our publications and international presentations enhance the reputations of both universities as global nursing research centers of excellence.

IMPLICATIONS: Our 20-year collaboration provides strong evidence that sustained multidisciplinary research and capacity-building can make substantial contributions to the urgent global priority of HIV prevention, thus contributing to the UN Sustainable Development Goals and UN global health priorities. Our track record of continuous funding and publication is made possible through a strong and resilient interprofessional network of researchers within nursing and across disciplines, who persist in collaboration despite failures and resubmissions. A consistent conceptual model and health priority allows earlier work to build a track record that supports new funding. Our systematic progression from formative intervention development research through efficacy studies to implementation helps bridge the gap between discovery and scale-up and advances the science of health promotion intervention and evidence-based practice.

Title:

Building Global Nursing Research Capacity From Efficacy to Implementation in Malawi: Sustaining a 20-Year Collaboration

Keywords:

Capacity Building, Collaboration and Enhancing health outcomes

References:

- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*, 1175–84.
- Bhutta, Z.A., Atun, R., Ladher, N. & Abbasi, K. (2018). Alma Ata and primary healthcare: back to the future (Editorial). *BMJ (British Medical Journal)* 363:k4433. doi: <https://doi.org/10.1136/bmj.k4433>
- Chimango, J.L., Kaponda, C.P.N., Jere, D.L., Chimwaza, A., Chimango, J.L., Crittenden, K.S.,... Norr, K.F. (2009). Impacts of a Peer Group Intervention on Occupation-Related Behaviors for Urban Hospital Workers in Malawi. *Journal of the Association of Nurses in AIDS Care*, 20(4):293-307. doi: 10.1016/j.jana.2009.03.005
- Crittenden, K. S., Kaponda, C. P., Jere, D. L., McCreary, L. L., & Norr, K. F. (2015). Participation and diffusion effects of a peer-intervention for HIV prevention among adults in rural Malawi. *Social Science & Medicine*, 133, 136-144. doi: 10.1016/j.socscimed.2015.03.055
- Curran, G. M. G. M., Bauer, M., Mittman, B., Pyne, J. M. J. M. & Stetler, C. (2012). Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Medical Care* *50*, 217–26. doi: [10.1097/MLR.0b013e3182408812](https://doi.org/10.1097/MLR.0b013e3182408812)
- Dancy, B. L., Jere, D. L., Kachingwe, S. I., Kaponda, C. P., Norr, J. L., & Norr, K. F. (2014). HIV risk reduction intervention for rural adolescents in Malawi. *Journal of HIV/AIDS & Social Services*, 13(3), 271-291. doi:[10.1080/15381501.2013.864173](https://doi.org/10.1080/15381501.2013.864173)
- Jere, D.L., Kaponda, C.P., Chimwaza, A., Crittenden, K.S., Kachingwe, S.I.,... Norr, K. (2010). Improving Universal Precautions and Client Teaching for Rural Health Workers: a Peer-Group Intervention. *AIDS Care*, 1-9. doi: 10.1080/09540120903311458
- Jere, D. L N., Banda, C. K., Kumbani, L. C., Liu, L., McCreary, L. L., Park. C. G. ,... Norr, K. F. (2018). A hybrid design testing a 3-step implementation model for community scale-up of an HIV prevention intervention in rural Malawi: study protocol. *BMC Public Health* 18:950 <https://doi.org/10.1186/s12889-018-5800-3>
- Kaponda, C.P.N., Jere, D.L., Chimango, J.L., Chimwaza, A., Crittenden, K.S., Kachingwe, S.I., ... Norr, K.F. (2009) Impacts of a Peer Group Intervention on HIV-related Knowledge, Attitudes and Personal Behaviors for Urban Hospital Workers in Malawi. *Journal of the Association of Nurses in AIDS Care*, 20 (3) 230-242. doi: 10.1016/j.jana.2008.12.005
- Kaponda, C. P., Norr, K. F., Crittenden, K. S., Norr, J. L., McCreary, L. L., Kachingwe, S. I., ... Dancy, B. L. (2011). Outcomes of an HIV Prevention Peer Group Intervention for Rural Adults in Malawi. *Health Education & Behavior*, 38(2), 159-170. doi: 10.1177/1090198110378588

Mbeba, M., Kaponda, C. P. N, Jere, D. L. Kachingwe, S. Crittenden, K. S., McCreary, L. L.... Norr, K. L. (2011). Peer Group Intervention Reduces Personal HIV Risk for Malawian Health Workers. *Journal of Nursing Scholarship*. doi: 10.1111/j.1547-5069.2011.01384.x

Norr, K. L, Tlou, S.D, Norr, J. L., McElmurry, B. J., & Moeti, M.M. (2004). Impact of Peer Group Education on HIV Prevention Among Women in Botswana. *Health Care for Women International* 25 (3) 210-226. doi: 10.1080/07399330490272723

Norr, K., Kaponda, C., Crittenden, K., Dancy, B., Jere, D., Kachingwe, S., Kafulafula, U., ... Talashek, M. (2006). A Primary Health Care Intervention to Mobilize Health Workers for HIV Prevention in Malawi. *Primary Health Care Research and Development*, 7:318-330. doi: 10.1017/S1463423606000430doi:10.1017/S1463423606000430

Norr, K.F., Norr, J.L., Kaponda, C.P.N., Kachingwe, S.I., & Mbweza, E. (2007). Short-term Effects of Peer Group Intervention for HIV Prevention among Trainee Teachers in Malawi. *African Journal of AIDS Research*, 6 (3), 239-249. doi: 10.2989/16085900709490420

Abstract Summary:

This presentation describes a 20-year collaboration between two colleges of nursing in the USA and Malawi. We have had continuous research funding throughout. Our experiences in building research capacity and promoting collaborators' careers provide important lessons learned that can benefit others.

Content Outline:

1. **Purpose**
1. To describe an ongoing nursing research collaboration between two colleges of nursing in the US and Malawi
2. Through the development and testing of a peer group intervention for HIV prevention, this partnership contributes to the global health priority of HIV prevention, an especially urgent concern throughout sub-Saharan Africa,.
2. **Research Accomplishments**
1. Began with a US faculty member with Fulbright funding, who formed a KCN-UIC research group to adapt an evidence-based peer group intervention originally developed for urban women in Botswana
2. We then obtained NIH funding to test intervention efficacy in rural Malawi. For both the adults and the youth, the intervention improved safer sex related outcomes, including condom use and HIV testing
3. With Global AIDS Foundation funding, we extended the project to urban health workers, and the intervention was associated with reduced risky sexual behaviors and increased use of universal precautions and patient education
4. Our next grant expanded the intervention to include young women in rural Malawi. Consistent condom use, condom use at last sex, birth control use, and unintended pregnancies improved at 6 months post-intervention but not 12 months
5. Our current NIH-funded study addresses the need to scale-up evidence-based interventions by turning over implementation to the community
3. **Capacity-Building through Collaboration**

1. We obtained three 5-year NIH grants and one foundation grant and published 17 peer-reviewed data-based papers.
2. Career development for each co-investigator includes mentoring, building specific research skills and capacities, and publications, which leads to promotions and independent research funding.
3. Junior faculty and graduate students are incorporated
4. Important capacity-building programs are closely linked to our multidisciplinary research collaboration and ongoing NIH funding in Malawi.
5. Building strong collaborative relationships is a key element of success
6. We include multiple voices of university faculty and leaders of the communities and health systems where our research occurs
7. Many relationships expand on research advisor-student relationships.
8. At both universities, our presentations and workshops expose additional faculty and students to global health research opportunities
9. Our publications and international presentations enhance the reputations of both universities as global nursing research centers of excellence.
4. **IMPLICATIONS:**
 1. Our 20-year collaboration provides strong evidence that sustained multidisciplinary research and capacity-building can make substantial contributions to the urgent global priority of HIV prevention, thus contributing to the UN Sustainable Development Goals and UN global health priorities.
 2. Our track record of continuous funding and publication is made possible through a strong and resilient interprofessional network of researchers within nursing and across disciplines
 3. A consistent conceptual model and health priority allows earlier work to build a track record that supports new funding.
 4. Our systematic progression from formative intervention development research through efficacy studies to implementation helps bridge the gap between discovery and scale-up and advances the science of health promotion intervention and evidence-based practice.

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Author Summary: Dr. Jere is an Associate Professor in the Community and Mental Health Department at Kamuzu College of Nursing, University of Malawi. She has been part of this collaboration from its inception and is currently the MPI of an NIH-funded study of community-owned implementation of peer groups for HIV prevention study. She has over 20 years of experience in multi-method evaluation of research as well as expertise in adolescent development and substance use issues.

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