



Workshop Report
Kabarak University
May 7-18, 2019

Building capacity for community focussed health research



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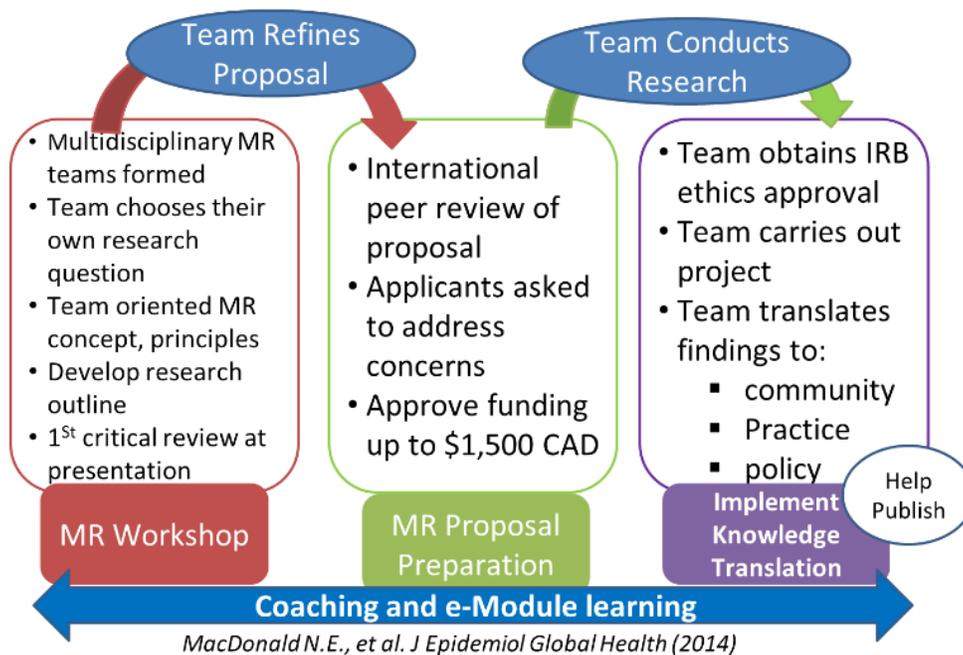


Introduction and Background

Kabarak University (KABU) is a not-for-profit Christian university established in 2001 by the former President of the Republic of Kenya and the Chancellor of the University, Daniel T. arap Moi. It is located about 200 km from Nairobi. The University has an accredited, four-year Master of Medicine in Family Medicine residency and a three-year Master of Science in Human Nutrition and Dietetics training programs. Both require a research thesis as a requirement for completion. The MicroResearch workshop was chosen to enhance research in community research and to promote a culture of research. Family medicine residents were first introduced to MicroResearch in 2016.

MicroResearch tries to build on the success of the *Millennium Development Goals* (MDG) and the *Sustainable Development Goals* (SDG) to develop local research capacity to improve health outcomes. Health researchers in resource-limited developing countries are challenged since they bear 25% of the globe's disease burden with less than 1% of its healthcare professional.

The MicroResearch program is traditionally divided into three segments:



MicroResearch at Kabarak University:

MicroResearch seeks to enhance capacity for local community-focused research, to fit local needs while ensuring quality and integrity of the program.

- During the workshop, participants formed groups of 3 students. Each student selected a research question and worked within their group to assist one another.
- Each student presented their plans for a project, on the final day, and received feedback from other students, faculty and judges.

- The students will revise their project based on feedback and later develop it into a thesis, with the supervisor assigned to them.

Workshop Preparations

This was the 6th workshop held at Kabarak. Impetus for this workshop came as a result of the previous experience and interest in establishing a state-of-the-art training program in Africa with a strong emphasis on community research and experiential learning. Dr. Bruce Dahlman, Head of Family Medicine, signed an MOU between Kabarak University and MicroResearch in 2016. The University and the Department of Family Medicine provided logistical and infrastructure support for the workshop and will supervise the projects that arise from the workshop participants.

Participants

Ten participants started this MicroResearch training workshop; 3 family medicine residents, 6 students in the department of Human Nutrition, and one faculty member. All of the students were planning to develop a research thesis as required for accreditation as a Family Medicine practitioner or for Dietician certification in Kenya. However, 3 Dieticians who had missed the first day, withdrew after 3 more days. Thus, by Day 5 there were only 6 participants and one faculty member. The three family medicine residents had participated in the 2017 MicroResearch workshop. They had been heavily involved in clinical activity over the ensuing two years and took part in this workshop to prepare themselves for developing a thesis, no fee was charged by KABU for workshop participants.

Workshop Program

Ample space was available for lectures (~2-3 h daily) in the Kabarak Health Sciences Building. Participants also made use of the Kabarak IT Centre for search of literature. Audiovisual equipment, WiFi-internet access and administrative assistance were all provided by Kabarak University Family Medicine Department.

The objectives of a MicroResearch Workshop are: (1) to develop skills needed for community focused research, and (2) to write a great community focused research proposal overview.

Session lectures started at 9:00 AM were followed by interactive small group discussion to assist individual planning. The lectures coincided with the participant's needs as they moved from formulating an idea and to development of the methods for the proposal.

This workshop differed from the traditional MicroResearch workshop format:

- The duration was shortened from 10 to 9 days.
- Each participant developed a research question. This question will eventually become their thesis.
- Participants did not work in teams. Instead they formed "help groups" to work through their research designs and to help each member overcome challenges.
- Reading requirements for the workshop were assigned, including reading Toolkits and Case Studies from the MicroResearch online curriculum. Supplemental reading

was also assigned on sequential methods (explanatory and exploratory models). A formative design assignment required students to develop their topic research question, methods and sampling procedures for four designs: quantitative, qualitative, explanatory (QUAN→QUAL) and exploratory (QUAL→QUAN) models.

- A review of each research question and plan was done on day 3 and 6.

Because of the shortened time available, some of the presentations of a traditional MicroResearch workshop were dropped or modified. Presentations on Career Planning and Report Writing were dropped, while Time Management was shortened and incorporated into Day 1 C.

With one exception, daily attendance was 100%. (The one day exception occurred because one of the participants had an administrative requirement elsewhere)

MicroResearch Proposal Idea Development:

On the first day, each participant identified one research question based on their own past experiences. Many compared and improved their ideas through “brain-storming” with their colleagues each other. They also started looking at background information to see if a question had been asked before and other elements of the topic.

The Family Medicine residents had participated in a MicroResearch workshop in 2017. However, they could not do their research team-project afterward because of clinical demands and logistical challenges to stay together as a team. The Dietician participants had not trained or done research prior to this workshop. All were self-motivated to improve the Kenyan health system through research. Each person assessed their own project idea through the FINER criteria and refined and developed it afterward to a research outline that they will become their thesis. The questions as selected on Day 3, and final question presented on Day 9 (in bold):

- a) **Amy Akim, Day 3:** What are the factors associated with burnout among family medicine residents in Kenya?
Day 9: What is the prevalence and factors associated with burnout among Family Medicine residents in Kenya?
- b) **Belyse Arakaza, Day 3:** What are the knowledge, attitude and practice about cervical cancer screening among health care providers at Kijabe Hospital and Naivasha Health Centre?
Day 9: What is the knowledge, attitudes and self-reported cervical cancer screening practices among female clinicians in Kiambu county?
- c) **Sifora Fanta Chaleabo, Day 3:** Why do laboratory personnel not adhere to SOP's?
Day 9: What are the factors that affect adherence to Standard Operating Procedures among laboratory personnel, in Bomet county Kenya?

-----Intermission-----

- d) **Faith Kintai**, Day 3: What is the double burden of malnutrition among the under 5 school going children in Ainamoi sub-county, Kericho county?
Day 9: What is the double burden of malnutrition among the under 5 school going children in Ainamoi subcounty Kericho county?
- e) **Jane Kiionzi**, Day 3: How does nutrition education affect complementary feeding of infants 6-12months?
Day 9: To assess the nutritional knowledge levels of mothers on recommended child feeding practices in Moi Teaching Referral Hospital.
- f) **Nourine Chepkemoi**, Day 3: What are the micronutrient deficiencies and wasting levels in adults with pulmonary tuberculosis
Day 9: Dietary intake and Nutritional Status of adults with Pulmonary Tuberculosis and HIV co-infection in Kericho County Hospitals

Discussion followed each presentation on Day 3, with emphasis on importance of narrowing and focusing each question. On the final day of the workshop, day 9, each presentation was assessed by the judges in an effort to help the students refine their question and clearly express their proposal ideas.

Final Day Review and Ceremony

Dr. Geoffrey Wechuli opened the final day ceremony (May 17, 2019), with a cordial welcome and outline of the program. The ceremony was divided into three parts. Three students from the department of Family Medicine presented during the first part. After a 10-minute break, students from the department of Human Nutrition presented their proposals. Closing remarks and presentation of the certificates to each student followed. In part 1 and 2, each student presented a 10-minute overview of their proposal to the judges followed by comments and questions from the judges and the other participants. The judges commented on how the proposals could be strengthened while focusing on FINER criteria. Students who were not presenting took detailed notes of remarks from the judges and provided them to help their colleague.

The Judges:

- Pamela Kimeto: Lecturer, Department of Nursing, Kabarak University. < pc.kimeto@gmail.com >
- Geoffrey Wechuli: Head, Department of Family Medicine and Community Care, Kabarak University. < Head.FamilyMedicine@kabarak.ac.ke>
- Moses Thiga: Director of Research, Kabarak University. <director_research@kabarak.ac.ke>
- Dr. Wesley Bor, Head, Department of Nutrition, Kabarak University. <wbor@kabarak.ac.ke>
- Purity Langat-Kinyua: Lecturer, Department of Nutrition, Kabarak University. <lpurity@kabarak.ac.ke>

Judges' Summary Comments:

The judges were enthusiastic supporters for every team and the MicroResearch approach to capacity development. Each presenter showed “fire in the belly” and passion for their project and developed a clear rationale for undertaking their plans. Each identified the communities they would be working with and a knowledge translation strategy to shorten the time between discovery and implementation. The judges had many specific suggestions to strengthen each proposal. The Judges used the MicroResearch scoring guideline, Specific comments for each Team were sent to each team after the workshop.

Workshop Evaluation

Participants were asked to evaluate the workshop using a structured evaluation form. Scores and comments are shown in Appendix 6. The 6 participants plus a faculty member, who attended the workshop completed the workshop evaluation form.

Meetings:

I met with leaders of research in Kabarak and attended a thesis defense:

- A thesis defence was made by a student in the department of Human Nutrition. This allowed me and other workshop participants a chance to appreciate the quality of the research expected of students.
- I met with Dr Wesley Too, Dean School of Medicine and Health Sciences on Day 1 and had a chance to review progress of the workshop on Day 8.
- Following the workshop, I discussed the role that MicroResearch could play in future with similar workshops. Since we expect MicroResearch to be busy during 2020, I discussed possibility of Dr. Audrey Steenbeek or Dr. Linda Dodds attending during the next spring workshop for senior Family Medicine residents and Dieticians.
- I discussed the role that Amanda Bradley (Senior Lecturer UBC), on sabbatical from University of British Columbia, might play in assessing the September MicroResearch workshop for junior Family Medicine residents.

Recommendations:

- Consider further refining the schedule for presentations and the format of the workshop to meet the needs for students preparing for their thesis.
- An additional session is needed on conceptual and theoretical frameworks to prepare students for thesis proposals
- Evaluate the workshop as a tool to improve the quality of research thesis by students.
- Continue to incorporate elements found in the MicroResearch curriculum modules into the teaching program and assign reading requirements.
- Recruit participants from other thesis requiring programs to join future workshops.
- Consider incorporating parts of Dr. Kimeto's presentation on statistics and sampling into the workshop lectures, and developing a new toolkit on the topic.
- Encourage collaborative approach among other departments for future workshops to enhance participation and facilitate collaboration.

Acknowledgements:

In closing, I would like to express my gratitude for the help of my hosts at Family Medicine and Community Care, Kabarak University. The guest lecturers were all enthusiastic supporters, not only on the day of presentation, but throughout the workshop. Stephanie Onguka and Geoffrey Wechuli help before and during this workshop to ensure it was a success. Stephanie, in particular, has shown great leadership in developing the Writing Skills Modules that are now available for all MicroResearch workshop participants. I am enormously grateful for everyone's warm welcome and help during the workshop.

Respectfully submitted



Robert Bortolussi MD, FRCPC, FCAHS

**List of Appendices**

1. Teachers and lecture schedule followed during workshop.
2. Judge's scoring system for presentations
3. Workshop and educational material evaluation by participants

**Appendix 1:
Schedule of Workshop Lectures**

Day	Presentation	Faculty*
Day 1 (May 8) Wednesday	Introduction and Objectives Using Internet for thesis projects Defining a research question	GW, RB SO RB, SO
Day 2 Thursday	Principles Clinical Research (Research Tools: Quali Methods) Challenges in Research	PK GW
Day 3 Friday	Project Topic Report by each person (Research Tools: Design, Quantitative methods) Getting Going + Student Update 1	RB, SO JM RB
Day 4 Saturday	Research Ethics Community Engagement	RB, GW GW
Day 5 Monday	Writing and Abstract How to get published	SO PLK
Day 6 Tuesday	Developing a research budget Update on presentations by students	RB RB/SO
Day 7 Wednesday	Knowledge Translation Research to Policy	MT JM
Day 8 Thursday	Research Tools; Sampling and Biostatistics	PK
Day 9 Friday	Career Planning Student Presentations (Part 2) Closing ceremony	RB, GW
Faculty*	G Wechuli, (GW) R Bortolussi (RB), S Onguka (SO), P. Kimeto (PK), J. Mugambi (JM), P. Langat-Kinyua (PLK), M Thiga (MT)	

Appendix 2
Scoring and evaluation system for Judges

Judge's Summary Scores		
	Points	
Feasibility: eg. Topic, time, budget	25	
Importance and Relevance: to local community,	25	
Methods –appropriate to question	20	
Addresses SDG	10	
Novelty	10	
Evidence multidisciplinary team participation	10	
Total Points	100	
Presentation: Rate out of 10		
Specific Comments		

Appendix 3: Workshop and educational material evaluation by participants

Responses from the anonymous Workshop Evaluation: 7/7 responses, 100%

Score: 1=low to 5=excellent

Number respondents (n), median score indicated in **bold**

Section I

a) How would you rate this workshop?

1(0), 2(0), 3(0), 4 (0), **5 (7)** **Mean: 5.0**

b) Did it raise research issues you had not considered before?

1 (0), 2 (0), 3 (0), 4 (1), **5 (6)** **Mean: 4.86**

c) Did it stimulate your interest in research?

1 (0), 2 (0), 3 (0), 4 (0), **5 (5)** **Mean: 5.0**

d) Would you recommend it to a colleague?

1 (0), 2 (0), 3 (0), 4 (0), **5 (7)** **Mean: 5.0**

e) This program enhanced my knowledge

1 (0), 2 (0), 3 (0), 4 (1), **5 (6)** **Mean: 4.86**

Section II

1. Why did you come to the workshop?

- Part of my thesis requirement (4)
- Interest on MicroResearch is about.
- To gain knowledge on research (2)

2. What was most helpful in the workshop?

- How to gain access to information on the internet.
- To be reminded about research and come up with a research question for my thesis
- To understand qualitative and quantitative research approaches
- Study tools and lectures
- Basic statistics and sampling
- All the topics

- Knowing the difference to 3 study design and methodologies
- Knowing each site for references from internet

3. What might be changed?

- More time
- Cover full day lectures as opposed to half day so to cover much of the topics
- None or no comment (3)
- A bit more on analysis of qualitative data analysis
- Consider changing the flow, analysis came after KT.

4. What lecture(s) was (were) most helpful?

- All of them (3)
- Navigating the internet and using it for literature search
- Qualitative and quantitative design (2)
- Knowledge translation (3)
- Statistics helped us a lot (3)
- Budget

5. What lecture(s) topic could be shortened or dropped?

- None (or no comment) (6)
- Career planning and documentation (*Note: These were not lecture on this visit*)

6. How will you use what you learned?

- It I will use it to develop and conduct my research
- Write my full proposal and thesis correctly and from a well con (*sp?*) place.
- Help out other young researchers in the field
- I will use it in my coming thesis
- I will complete the research I have started and do more research
- I will do more research and publish
- In my thesis project and in my lifelong research career.
- This is very useful knowledge in doing my own research. It will be more inclusive and I'll ensure I'll persist through to the end - knowledge translation.

Other comments:

- I'll recommend this training to anyone interested in research. It's very useful and can help in making research useful to the community through knowledge translation. The course demystifies research and puts it in a way that's useful to the lowest classes of the community
- I learned a lot
- Africa is a continent where research is needed. I hope to see this workshop in more African countries. The demand is high, please keep on coming.
- This was very useful training

Please use the scales below for questions 7-10 and write in a number (1 to 5) in the blank space provided for each question.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. The MicroResearch online materials increased my understanding of research methods

1 (0)	2 (0)	3 (0)	4 (2)	5 (5)	Mean: 4.71
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

8. The additional readings and Powerpoint slides on blackboard increased my understanding of research methods.

1 (0)	2 (0)	3 (0)	4 (2)	5 (5)	Mean: 4.71
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

9. The design assignment (quan, qual, explanatory and exploratory designs) increased my understanding of research methods

1 (0)	2 (0)	3 (0)	4 (1)	5 (6)	Mean: 4.86
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

10. My facilitators and faculty of MicroResearch course were available to help refine my thesis research question and study design

1 (0)	2 (0)	3 (0)	4 (1)	5 (6)	Mean: 4.86
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

Other comments:

- My mind is opened up and I can “comperenity” (Sp?) and confidently carry out research. Thanks very much.
- Have more
- This was great and timely training.