

SOMALI SWEDISH RESEARCH COOPERATION FOR HEALTH A 1-YEAR HEALTH RESEARCH TRAINING AND IMPLEMENTATION PROGRAMME

**A Report Prepared Following a 2-Week Intensive Start-up Course on
Epidemiology and Health Research Methods in Hargeisa for the Faculty of
Six Somali Universities and Senior Public Health Managers from
The Ministries of Health
16-27 October 2016**

**JOINTLY ORGANISED BY
THE SOMALI AND SWEDISH COLLABORATING UNIVERSITIES
AND SOMALI-SWEDISH RESEARCHERS' ASSOCIATION (SSRA)**

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ACRONYMS

EPI	Expanded Programme on Immunization
EpiGH	Unit of Epidemiology and Global Health
FGDs	Focus Group Discussions
HDSS	Health and Demographic Surveillance System
ICT	Information and Communication Technology
INDEPTH	The International <i>Network</i> for the Demographic Evaluation of Populations and their Health
NAI	Nordic African Institute
RECs	Research Ethical Committees
SAREC	Swedish Agency for Research Cooperation with Developing Countries
Sida	Swedish International Development Cooperation Agency
SNU	Somali National University
SOMAC	Somali Academy of Science and Art
SOPs	Standard Operating Procedures
SSRA	Somali Swedish Researchers Association

PREFACE AND ACKNOWLEDGEMENTS

After years of joint efforts by several Somali and Swedish Universities, and the Somali-Swedish Researchers' Association (SSRA), we are proud that we together have taken a crucial step forward by moving from plans to action in our efforts to rebuild Somali-Swedish training and research collaboration that was interrupted by the civil war in the early 1990's.

We have launched a 1-Year Health Research Training and Implementation Programme by a 2-week intensive start-up in Hargeisa, Somaliland, 16-27 October 2016. This is one important step towards increasing research capacity within the Somali academic institutions and health ministries to stimulate action towards rebuilding the fragile health system, as one step towards improved health of the Somali population.

The successful start-up was attended by 24 well-motivated participants, being faculty members from six Somali Universities, and representatives from the Somali Federal Ministry of Health and ministries of health of Puntland and Somaliland. The learning process was guided by high-level academic staff from the Swedish universities, and one representative from SSRA. The participants will continue the programme over the coming year each one with support from both a Somali and a Swedish supervisor/mentor.

The teachers of the 2-week start up, and the universities they represent, express their immense gratitude and appreciation to the partners for the successful course organization and implementation. Special thanks are reserved for the *University of Hargeisa* for its excellent hosting and multifaceted meaningful support with respect to facilitating communication during the organization phase and meeting logistics, including meals and refreshments during the training. Special thanks go to the President and Vice president of the University as well as the Dean of the Faculty of Medicine and his Associate Dean. The generous logistical support offered by *Amoud University* through their regular daily transportation of course participants, and for organizing a one day study tour visit to Amoud University campus in Borama city is duly acknowledged.

Special gratitude goes to the Swedish facilitators from Umeå University, Uppsala University and Lund University and to SSRA for its active participation. The teachers valued the opportunity of sharing their experience with the Somali course participants and expressed great pleasure, while looking forward to a continuous and enhanced collaboration, firstly, during the completion of the 1-year Programme, and hopefully also thereafter.

SUMMARY

Bilateral research collaboration between Somalia and Sweden was first launched in early 1981/82, by forging an effective partnership, predominantly between several faculties of the Somali National University and numerous Swedish universities and research institutions. This research partnership focused primarily on capacity building, and led to the training of Somali a considerable number of Somali academicians, while generating significant quantity of research outputs that contributed to the production and use of evidence in policy formulation, especially in the Health Sector. This golden era of partnership was abridged by the 1991 extended civil war and conflict in Somalia.

An initiative to revive this cooperation was started in late 2013, when a health conference was held after two decades in Mogadishu, Somalia that was co-organized by the Somali-Swedish Researcher's Association (SSRA) and co-sponsored by Forum Syd of Sweden through Sida support. This effort was followed up by establishing contacts between six Somali universities (two each from the south-central zone, Puntland and Somaliland), and five Swedish universities (Umeå, Uppsala, Karolinska, Lund and Dalarna). A joint conference and a workshop were organized in Umeå in 2014 and 2015 respectively, with the active participation of these 11 academic institutions and SSRA.

Through their interactive research dialogue, the partners came to realize how the extended conflict and state fragility led to health system dilapidation characterized by poor health indicators, weak infrastructures, and the severe shortage of health workforce. The partners acknowledged, however, the inherent opportunity of generating the needed evidence through implementation research that could effectively contribute to capacity building and health system strengthening.

Accordingly, a one year online research training starting with 2-week intensive face-to-face course was organized in October 2016 in Hargeisa, Somaliland, bringing together 24 Somali participants from the six Somali universities and the three engaged ministries of health. The course focused its teaching on the basics of epidemiological and qualitative design, analysis and interpretation. During the course, the trainees were guided on refining methodologies for their study projects to be implemented over a one year period.

During the research training exercise, the commitments of the partner universities were consolidated, exemplified by the promised operational support by Somali universities, building of local research governance capacities and selection of local and Swedish mentors/supervisors for the different planned research projects. The course outcomes were highly promising, leading to enthusiasm amongst the tutors and course participants who envisioned a successful research partnership for the future.

1. INTRODUCTION

1.1 Research Cooperation: the Successful Past Performance

The bilateral research cooperation between Somalia and Sweden was founded in 1981/82 through the landmark agreement between the Somali Academy of Science and Art (SOMAC), of the Ministry of Higher Education of the Somali government, and the Swedish Agency for Research Cooperation with Developing Countries (SAREC) of the Swedish International Development Cooperation Agency (Sida). This research cooperation attracted several faculties from the then Somali National University (SNU) that have forged research collaborative partnership with over 10 Swedish universities and research institutions. The active implementation of this partnership endured for a little more than 10 years, until it was involuntarily disrupted by the civil war of 1991.

Over this first decade – before the civil war – this collaboration resulted in the creation of several research training programmes, and production of a large number of research outputs. This successfully contributed to the understanding of many of the Somali public health challenges of that time, and benefited local policy and programmatic development in the health sector. This collaboration primarily targeted capacity building, and contributed to the successful training of a considerable number of Somali researchers through masters and doctoral degrees. Many of these trained researchers became engaged substantively during the years of civil conflict in the revival of medical education and allied health sciences institutions in the country.

These efforts were further consolidated during the recovery and rehabilitation that are currently being pursued. To sustain the spirit of this partnership, a Somali Swedish Researchers Association (SSRA) was established and formally registered in Sweden in 1993, with the long-term aim of contributing to the reconstruction of Somali academic institutions & promoting research and training cooperation with Sweden. SSRA was also expected to collaborate with other organizations and groups engaged in humanitarian aid and development in Somalia. Over the years SSRA supported several health interventions working with local Somali civil society organizations and university academic institutions aiming to sustain the successful legacy of the Somali Swedish collaborative partnership.

1.2 Rebuilding the Partnership

1.2.1 The 2013 Mogadishu Health Conference

To substantiate the strong link between research and health system strengthening, SSRA together with Benadir University and the Federal Ministry of Health organized the first national health conference in over two decades, in Mogadishu, November 2013. The declaration proclaimed by this conference endorsed the principles and values of equity in health, universal coverage and the right of everyone to the enjoyment of the highest attainable standards of health; affirming the partnerships between the Ministry of Health, the academicians, the Diaspora, CSOs and development partners.

The conference emphasized a closer coordination between external and internal assistance to the health sector founded on the principles of aid effectiveness; strengthening health system regulatory and legislative functions, as well as the development of a National Health Policy targeting good governance and health sector reconstruction. The declaration affirmed the

effective decentralization of the health care delivery; regulation of the private health sector; improving public-private partnership and deliberated on the three main thematic thrusts of the conference, namely health system governance and leadership; health services delivery, medicines and technologies, and human resources development & regulation.

The outcomes of the conference included the promotion of health research in the country, as an effort to resolve the key challenges facing the health sector; defining actionable health research priorities and using evidence based strategic health actions in planning and implementation¹.

1.2.2 The 2014 Umeå Seminar

The 2013 Mogadishu conference deliberations reflected the necessity to organize a follow up seminar in which the participants would explore the opportunity of reviving the Somali Swedish research partnership in support of Somali health system strengthening.

A Somali-Swedish Planning Group was accordingly formed to set the strategic framework of a seminar designed to address this important subject. In March 2014, a conference financing proposal was approved by Sida and its execution delegated to the Nordic African Institute (NAI) in Uppsala. The seminar was held on 2-3 December 2014 and hosted by the Unit of Epidemiology and Global Health (EPIGH) of Umeå University.

The conference was attended by 53 participants including 25 Somalis, of which 11 came from six different Somali universities covering all the zones, while the rest were Somali Diaspora health professionals. Five Swedish universities and SSRA took part in the seminar. The deliberations of the seminar reflected the commitment of the participants to a collaborative partnership between the Somali and Swedish academic institutions and organizations. The collaborating partners expressed their support to the development of the Somali health services system; promotion of community participation, and ownership and enhancement of research capacity of academic health institutions enabling them to play their crucial role in health system strengthening. The statement of the seminar was published in the Global Health Action².

1.2.3 The 2015 Umeå Planning Workshop

The November 2015 workshop aimed at translating the earlier aspirations set by the 2014 seminar into action, creating a platform for research capacity building, founded on a partnership that would generate valuable learning lessons and experience for all the consortium partners.

The workshop deliberated on the need for research capacity building aimed at improving the performance of the health system; establishing university level ethics research committees, health research councils and research departments; enhancing research planning analytical capacity; strengthening libraries' information and communications technology (ICT); creating university budget lines to fund research; building research partnerships and collaborative networks; and establishing linkages with ministries of health both at federal and state level. The workshop also identified the research priorities that will guide health research in the coming years. It has emphasized the building of basic laboratory capacities and the creation of

¹ The Somali National Health Conference Report. Mogadishu 7th-9th November 2013.

² Healing the health system after civil unrest: Somali-Swedish Action Group*† for Health Research and Development. Glob Health Action 2015, **8**: 27381 - <http://dx.doi.org/10.3402/gha.v8.27381>

a Monitoring and Evaluation system to assess how the knowledge and skills acquired through research have been translated into action. Finally, the need to establish an indexed Somali Health Research Journal addressing the challenge of research dissemination for evidence based decision making was strongly emphasized.

Several shared values were also deliberated by the workshop, such as research ownership considerations, the adoption of a research culture founded on mutual benefits and shared respect; advancing the institutional learning principle with the participation of young academicians; linking research to benefit the health system; acknowledging the influence of non-health considerations in health research and sharing and disseminating the research results. The workshop outlined the short-term goals, focusing on university teachers' training in research methodology, ethics, health management and leadership. The presently launched 1-year Health Research Training and Implementation Programme is a concrete first step, developed through a continued dialogue between the Somali and Swedish university representatives.

The longer-term perspective of this collaboration around training and research capacity building through implementation is to enrol several BSc and potential Ph.D. students in academic research training in collaboration with Swedish universities, leading to the development of Somali-hosted Master's and PhD programmes. Likewise the establishment of a Somali Health Research Journal; the development of the right infrastructure and budget for research; and the launching of a health and demographic surveillance system (HDSS) with membership in the INDEPTH Network, leading to establishing a Somali HDSS that can inform health system policy and programmes.³

2 THE 1-YEAR HEALTH RESEARCH TRAINING AND IMPLEMENTATION PROGRAMME

The 1-year Health Research Training and Implementation Programme was started with a 2-week intensive face-to face course in Hargeisa from the 16th to the 27th of October 2016. It was attended by a total of 18 representatives from six Somali universities, three candidates from each and one representative from each of the Federal Ministry of Health and from Puntland and Somaliland ministries of health. Two additional candidates from Hargeisa University and the former Federal Minister for Health Dr Mariam Qasim also joined the course.

The overall aim of this 2-week course was to teach the basics of epidemiological and qualitative design, analysis and interpretation, as well as the role of combining quantitative and qualitative approaches in public health research. The course was designed to follow the research process from problem identification, planning and data collection through analysis, interpretation and documentation.

The course offered trainees the opportunity to define their research questions and focus on issues that are of relevance for their specific situations. During the course, the trainees were guided to refine their draft research projects and advised to submit a final proposal by the end of November 2016. Based on the agreed upon research topics, supervisors/mentors will be

³ Action for Somali-Swedish Collaboration in Research For Health. Umeå, Sweden, 23-24 November 2015.

assigned to each trainee (one each from their respective Somali universities, and one from the Swedish universities). The interaction between the trainees and their local mentors on the one hand and their Swedish mentors on the other, will be carried out on distance by Skype communication. It is expected that this coordinated effort of supervision will ensure the relevance and feasibility of the co-designed research interventions.

Following the initial 2-week training, the trainees will have 11 months to implement their research projects. During this period, researchers will receive continuing support from their assigned Swedish and Somali mentors through online or face-to-face contacts, respectively. During the research implementation phase our ambition is to organise two events of face-to-face contacts between the trainees and representatives from the Somali and Swedish faculties; one at the end of the first six months, where progress achieved and problems encountered will be discussed. Another face-to-face meeting will be held at the end of the 1-year programme, during which the trainees will present the findings of their research projects. During the research period, each group of university trainees and their local mentors will have periodic meetings to assess performance and identify solutions for any operational challenges encountered. Inter-university contacts for consultation and experience exchange will also be encouraged.

2.1 Main Objectives of the 1-year Programme

The key objectives of the full 1-year Training and Research Programme are outlined below:

- i. Develop a research capacity within the Somali academic institutions and health ministries to stimulate action towards rebuilding the fragile health system;
- ii. Introduce both the qualitative and quantitative research methodologies to enable the participants to carry out research interventions in their respective institutions;
- iii. Review the research projects presented by the different course participants, offer guidance on their relevance, in terms of priority and feasibility, and pursue the design of these selected research projects;
- iv. Set an operational base for the 11 months of research implementation that will follow the course and establish linkages between universities and the national and zonal health systems to promote complementarity and collaboration
- v. Establish a research friendly governance modality for this collaborative partnership fully engaging all the participating Somali universities in terms of support and accountability;
- vi. Pave the way for a medium and long-term partnership enabling many Somali researchers to be enrolled in masters and Ph.D. academic research training programmes in collaboration with Swedish academic partner institutions; and,
- vii. Supplement online monitoring and support for the duration of the one year of research implementation with two face-to-face meetings, the first to review progress at midterm and a final face-to-face meeting to be held at the end of the year.

2.2 Specific learning objectives of the 2-week introductory course

At the completion of the course, the research students are expected to gain the following specific learning objectives and outcomes:

- i. Understand the role of combining quantitative and qualitative studies in public health research;
- ii. Understand the role of ethical standards;

- iii. Get familiar with basic epidemiological concepts and discuss epidemiological study design;
- iv. Learn the analysis and interpretation of epidemiological studies;
- v. Know the basic requirements of a qualitative study design;
- vi. Learn the analysis and interpretation of quantitative studies;
- vii. Know the use of data processing facilities and software for analysis; and
- viii. Familiarize the participants with basic health economic concepts

2.3 Preparations before the 2-week Course: Accessing the Cambro Platform

Prior to the course launching, the participants were advised to use the Cambro website. This is a special site established for the Umeå University learning and collaboration platform. A part of the platform was assigned to the Somali-Swedish research collaborative programme. A guide on how to use the Cambro was also displayed on the site menu and the research students were provided with passwords to regularly access the site and its contents.

All the course materials were uploaded in the folder "Resources" in the Somali Swedish part of the Cambro website. The accepted candidates were advised to come to the course with a preliminary reading of important articles that were uploaded on the same website. They were also advised to list any questions arising from the reading. In the case when there were issues in the articles that participants didn't comprehend, they were required to be prepared for discussion on the content of the articles in a seminar during the first day of the course.

2.4 Teaching Epidemiological Research Methods

The training course introduced the methods used in epidemiological research, illustrating the potential of their practical application to health system issues that have direct relevance to population health. At the outset of the course, the participants were acquainted with the relevance of epidemiological research and that *epidemiology is concerned with the distribution and determinants of health and disease, in defined populations with the ultimate aim of controlling and preventing disease occurrence*. Epidemiology was also outlined to include both routine surveillance and research strategies to test hypothesis of the causes of diseases; to measure risks to health; and to evaluate preventive, diagnostic and therapeutic programs and technologies. Epidemiology gathers its methodology from a number of fields both within and outside the traditional medical field. A social dimension is needed in public health work, and supplementing quantitative epidemiology with qualitative methods may increase understanding of how to effectively prevent disease".

2.5 Course Participants and Tutors

The research training workshop was attended by 24 participants from the six Somali universities and the three ministries of health. The participating universities included: Benadir and Galkayo universities from SCS; East Africa and Puntland University of Health Science and Technology from Puntland, and Hargeisa and Amoud Universities from Somaliland. The Federal Ministry of Health and Puntland and Somaliland ministries of health sent one participant each.

The course tutors and facilitators included Klas-Göran Sahlen (PhD, Lecturer, Course Coordinator) from Umeå University, Maria Emmelin (Professor) from Lund University, Carina Källestål (PhD, Associate Professor) and Mats Målvist (MD, PhD) from Uppsala University

and Khalif Bile (MD, PhD, Expert Advisor) from SSRA. The team was also joined by Mohamed Hassan, a research student from Umeå University.

2.6 The Course Organization

The course was successfully hosted by Hargeisa University and conducted within the campus in a well-organized and secure environment, making use of both audio and internet facilities. Hargeisa University offered working breakfast and lunches as well as tea during the breaks throughout the course. The participants evinced great interest for the course and were all actively engaged in an interactive learning process. The established harmony among the participants from the different universities was also remarkable. The tutors described the learning process as highly promising. During the course, the participants were able to critically review their preliminary research proposals with the guidance of the tutors, leading many to refine their proposals, and/or select an alternative research subject for implementation.

2.7 Course Implementation

The educational format of the course was based on a problem-oriented curriculum. In this regard, the participants were presented with authentic data sources on which the teaching was based. The presentational form was a mixture of plenary lectures, group work sessions, training in data analysis and discussions directed toward an interdisciplinary audience.

Upon the submission of their applications, the students were guided to submit their research projects with a structured format i.e. a title that reflects a well-defined research question, a set of objectives, and scope of the research project, methodology and implementation process. The research projects' relevance to the health system and its dissemination plan upon project completion were to be outlined. The participants were offered the opportunity to change their research subjects and revise their project plans accordingly to ensure the relevance of these research interventions to the critical public health challenges facing the Somali health system and consider the feasibility of project implementation.

The participants were exposed to the four social theories of global health. i.e.

i) “the unintended consequences of purposive/social action” holding that all social interventions have unintended consequences that can be foreseen and prevented, whereas others cannot be predicted; ii) “the social construction of reality”; iii) “the social suffering” with four implications to global health, i.e. that socioeconomic and socio-political forces can at times cause disease: deep poverty creating the conditions for tuberculosis to spread; that social institutions can make suffering worse (hospital-based medical errors); that pain and suffering of a disorder is not limited to the individual sufferer as, it may extend to the family and social network, and iv) “the theory of social suffering collapses the historical distinction between what is a health problem and what is a social problem”, by framing conditions that are both and that require both health and social policies⁴.

2.7.1 Teaching Qualitative Research Methods

The first week of the course was dedicated to the teaching of qualitative methods in public health research covering the basic requirements of a qualitative study design and its analysis

⁴ The art of medicine: four social theories for global health

and interpretation. The participants were introduced to the application of inductive reasoning, where this research method focuses on specific observations and then moved on to themes with the identification of patterns in the findings to generate a tentative explanatory theory about a phenomenon.

The concept of multiple realities that apply to different individuals and contexts depend on the researcher's point of view, where the latter becomes an instrument for data collection was introduced to the course participants. This research method being responsive to local conditions and situations considers the changes that occur during the conduct of a study. The qualitative method was described as Interpretive, subjective and value-bound. The research methods used includes: in-depth interviews, observations, focus group discussion, case-studies and narratives. The research questions aim to understand the people's own perceptions and experiences about a particular phenomenon.

2.7.2 Teaching Quantitative Research Methods

During the second week of training, the focus was on quantitative research methods. This training phase was started off with a general overview of the purposes and possibilities of quantitative research, and the participants were encouraged to reflect on the necessity of performing health research.

Quantitative research methods emphasized on objective measurements, using numerical analysis of data collected through questionnaires and surveys or in relation to existing data sets that necessitate more analyses. The tutors reflected how this research method tests hypotheses constructed before data collection, using the deductive nature of quantitative research. The objectivity of this research method and its value-free perspective were outlined.

After this introductory presentation, different study designs were described. The facilitators also illustrated how the study questions are usually related to time, place, person, risk factors, associations, interactions and effects. The observational studies commonly used in health research were introduced. In this regard the non-analytical descriptive studies such as case reports and the analytical observational studies such as cross sectional studies that describe prevalence of a disease at one point in time, and in association with a risk factor; cohort studies and case control studies were duly explained and practical exercises conducted for better understanding and application. The experimental studies were also briefly stated. The data analysis of observational studies was introduced and practiced in groups. These included the calculation of the relative risk measure, the attributable risk percent/etiological fraction and their interpretation. The visual representations of the data in graphs, plots, charts, and tables and their formulation were elucidated.

In tandem with the theoretical lessons on study designs and the appropriate analyses, the participants had to develop their own research proposals. Those participants who already knew that their project will be utilizing qualitative methods were encouraged to try to pose their research question directed, as a quantitative method nevertheless, for the sake of learning.

The narrowing and development of a research question can sometimes be challenging, difficult and demanding, especially for those who are new to research, as they tend to be too wide and unrealistic in their scope of work. To cut back on the ambition and get a well-defined research question with a feasible design, requires a good understanding of the limitations of each method. This proved to be a very useful exercise and before the end of the course most of the

participants had managed to produce good and interesting research questions. The participants were active and engaged and showed a high level of interest and dedication to the course and to the tasks assigned.

2.7.3 The Mixed Method

The qualitative and quantitative mixed method of investigation was also introduced, where data collection and analysis are conducted within the same study. This approach was elucidated to be applied when a single method is unable to capture the research questions posed. The complexity of this integrated method was also outlined as this will require a diligent integration of the findings and the complementarity of the data of the applied research methods and its labour-intensive nature. It was also noted that the two methods may be applied consequentially where for example a qualitative phase may inform a subsequently conducted quantitative phase of a research programme.

2.7.4 The R Programme

During the teaching of the quantitative method, the R statistical software programme was used. The programme software was freely downloaded and utilized for the course practical exercises. A compendium on how to download and use the program was sent to the participants in advance.

The choice of teaching hands on analysis with the statistical program R and the R commander was taken as this software contains all possible statistical methods. Secondly, using and doing the analysis with this programme will equip the students with the skills to perform their own analysis when they have collected the data.

Solely going through the analytical methods theoretically would not give the students the skills needed, the analytical skills were imparted through an extensive practical application. As a means of translating the training into a practical exercise, the participants downloaded the statistical package of R and performed exercises independently, following the differently presented study designs. By combining theory and practice, a deepened understanding was achieved on how the choice of a specific study design affects the possibility of analysis. However, the choice of R was also a challenge since it constantly experienced problems when loading the program. This depends most often on the different computer settings and configurations, antivirus and versions of programmes that the students have in their computers. During the course, tutors noted that quite a lot of time, had to be allocated to the downloading of the programme. Repeated efforts alone are likely to resolve this challenge.

An important part of the course was the group work exercises that utilized data examples provided by the tutors. The participants were also advised to Increase their knowledge on DHS:s by visiting the homepage of INDEPTH [www.indepth-network.org], which is an organization for DHS:s worldwide and the DHS Program (<http://dhsprogram.com>). For the future, the suggestion is to allocate sufficient time for downloading the R programme, and if possible get prior information about any specific requirements in the students' computers to avoid losing time through the process of downloading and programme use.

In addition to the R programme, the students were informed about the computer software programs of “Open Code” which is a free software computer programme, designed to

facilitate qualitative analyses. The program is developed by Umeå University, Epidemiology and Global Health, and participants could download it from the homepage: [<http://www.phmed.umu.se/enheter/epidemiologi/forskning/open-code/>] or through the GOOGLE search of Open Code Umea.

2.7.5 Plenary lectures and Group Work Sessions

During the course of the plenary lectures, teachers presented an overview of the most central concepts and basic assumptions in quantitative and qualitative research. In the group sessions, the participants were being divided into groups of 4-5 participants in each. These groups constituted an important educational format of the course, where much of the learning process took place through analyses, discussions and reflections upon the research problem. The students have participated actively in these sessions throughout the course. The participants from each university were advised to work closely together throughout the one year of research implementation. In its concluding day, the participants were exposed to basic health economic concepts and principles.

2.7.6 Short Guide on Scientific Literature Search Using HINARI in Somalia

During the course proceedings, a literature search guide was presented to the participants by Mohamed Hassan, where the free access to HINARI Programme has been organized by WHO in partnership with major publishers. HINARI enable institutions operating in low and middle income countries to access large collections of biomedical and health literature. Up to 15,000 journals and 47,000 e-books are now available through HINARI.

The participants were exposed to the Boolean operators AND, OR, NOT and their use in a capitalized form to combine or exclude keywords, resulting in a more focused literature search. Using the Boolean operator OR requires parenthesis around the keywords. For example, the search for articles on “Malaria in Somalia and among children or Infants but not adults”, the PubMed search will take the following format: Malaria AND Somalia AND (Children OR Infants) NOT Adults. The knowledge and skills related to HINARI was useful as this enables the Somali universities to benefit from these resources in pursuing their health research programmes.

3 SOCIO-CULTURAL CONSIDERATIONS IN HEALTH RESEARCH

During the 2-week long introductory research training course, the collaborative research advisor Dr. Khalif Bile, used to make short presentations on socio-cultural themes to illustrate their local contextual influences on health research implementation. These themes followed the delivery of each of the planned training sessions, illustrating the perspectives of research performance in the Somali socio-cultural context.

In the Somali post-conflict scenario, researchers need to acknowledge that their technical contributions in their operational viewpoints carry all the three pillars of development, namely maintaining peace; promoting human rights with special attention to health, education and equity; and advancing development. The design and implementation of health research projects, however, would require a careful consideration of the Somali political, economic and

socio-cultural perspectives as well. The main themes presented by the research advisor during the training course are summarized below:

3.1 Recognizing Local Cultural Values

Although the researchers would need to pursue the scientific research methodologies and related study protocols, they are well advised at the same time to remain cognisant of the cultural values prevailing in their local political, social and cultural contexts. The latter include examining the appropriateness of the designed research questions and the consideration of the local setting when addressing human rights aspects that are inherent to the pursued implementation research.

3.2 Ethical Aspects of Research

The imperative compliance with the scientific international ethical guidelines should concomitantly interface with the socio-cultural fabric, where issues such as autonomy may be addressed not only at the individual level, but transcend also to the local communities. Similarly, the culturally sensitive subject areas and the areas considered as social stigma need to be recognized and carefully handled.

The issue of confidentiality of information shared by research subjects has the possible social perspective of impinging on the household and/or community social harmony. Moreover, although feedback on the study results may not be explicitly demanded by the research respondents or community leaders, it is culturally advisable to build communication links with the community and provide feedback about the research implementation process and its outcome results. The provision of collective beneficial activities to the research targeted communities may be considered for these deprived population groups, such as the organization of health camps and facilitating the access to health care services.

3.3 The Consent Process

In the Somali context, where a large proportion of the population is uneducated, particularly women, the community has limited understanding of the rights stated by the research ethical principles. Accordingly, researchers will need to acquire special communication skills to convey the required messages on the research design and implementation. Interestingly, however, the concept of informed consent is culturally widely understood and strongly guarded, where communities perceive the cross-cultural traditional value concept of the “*you cannot do anything to me without my approval*” paradigm. Collective consents can be realized by obtaining documented verbal or written informed approval/consent from the local community leaders. This collective community support to the project will in its turn help to attain consent approvals from individual research subjects.

3.4 Building Partnerships at Community Level

Researchers need to create collaborative partnerships with local community leaders, opinion and religious leaders, women groups and other organizations that are operating at the research targeted community level. These partnerships will cultivate mutual respect, and contribute to the research implementation process, health advocacy and capacity building, that could possibly lead to beneficial health education outcomes and improved care seeking behaviour.

3.5 Building the Research Team

Researchers must regularly share their progress with the ministries of health, faculty colleagues and the university leadership; recognize the local co-workers' research team effort and acknowledge the successes achieved by them. The research teams should illustrate coherence and consistency in their project work, demonstrate humility and get motivated when recognized by their senior management.

3.6 Organizing and managing Interviews and Focus Group Discussions (FGDs)

When conducting an interview or FGD, the pursuit of culturally responsive interactions with research subjects was strongly outlined. The latter was illustrated to encompass the selection of a neutral venue and the creation of a culturally conducive environment, while upholding a serious body language with a relaxed and respectful attitude, with a continued focus on the research questions in hand. The importance of putting own pre-understanding within brackets and posing focused but open-ended questions was emphasized to encourage rich narratives about the informants' own experiences about the studied phenomenon. To allow the respondents to correctly understand the essence of the research questions posed, they need to be clear and specific and supplemented by the necessary explanations as required. Likewise, leading questions need to be avoided, since culturally, the respondents may agree out of respect or sense of regard. Another reminder is to retain focus on the research subjects to gain their active involvement, and avoid diversions, such as entertaining discussions that are not necessarily related to the subject. It is also important during the FGDs that all the participants are engaged, and the dialogue is not dominated by a few individuals. The interactions with the research subjects should help to build rapport with participants, while the interviewers need to combine their technical skills with good listening and absorptive capacities. The latter are assets of great cultural importance, especially when addressing sensitive and personal issues that are relevant to the implementation of the research plan. Moreover, when creating the research governing boards, through the establishment of ERCs, it will be essential to give due consideration to the cultural competencies necessary that are related to the unique characteristics of the local population and express this capacity in the research design and implementation

4 FORMATION OF RESEARCH ETHICAL COMMITTEES (RECs)

The establishment of university level ethics review committees was discussed during the course and the participants were briefed about the necessity of building such research governance structures in each university. The need to preserve the multidisciplinary nature of the RECs was also outlined, by including a wider scientific expertise with due gender and age balance and with the presence of lay persons representing the interests of the community.

The RECs' establishment should be consistent with the university and country regulatory structures. Moreover, the REC standard operating procedures (SOPs) will need to be explicitly outlined making them publicly available by displaying them on the university website. The SOPs should elucidate the roles and responsibilities of the REC, the members and their terms of appointment and the procedures followed for accomplishing its role. The members of the REC should be engaged in a briefing and learning process related to ethics, as they need both

an initial and continued education regarding ethics and biomedical research.

The committee(s) should pay attention to some of the key tasks recommended by WHO which include but are not limited to the following responsibilities^{5,6}.

- Assess scientific design of the proposed research studies, their relevance to the set objectives, the justification of any predictable risks and the modality in which the results will be reported and disseminated
- Evaluate the recruitment of research participants and the characteristics of the sample frame as well as the research participants' inclusion and exclusion criteria
- Appraise the care and protection of research participants, the investigators' qualifications and experience for the proposed study and the description of any financial costs to research participants
- Ensure the protection of research participants' confidentiality and the informed consent process; the obtaining of informed consent; the justification for the inclusion of research individuals who cannot consent, and a full account of the arrangements for obtaining the consent or authorization necessary for conducting the study
- Address the community considerations by indicating the steps to be taken to consult with the communities and address their concerns during the research design, while evaluating the extent to which the research contributes to the enhancement of local healthcare, and responds to public health needs

5 COURSE OUTCOMES

5.1 Commitment from the participating Somali universities

At the outset of the course, the senior leadership of all the participating Somali universities accepted to fulfil their roles and responsibilities in this implementation research partnership. This was by way of: i) fully sponsoring their candidates to the course; ii) supporting the field implementation of their selected research projects that will have the duration of one year and nominating a mentor for each researcher to provide regular guidance and support; iii) advancing research development as an integral part of the roles and responsibilities of these academic institutions; iv) establishing research ethical committees in their respective universities and v) working closely in partnership with the Swedish universities to gain sufficient capacity through this academic research training and implementation.

5.2 Commitment from the Participating Swedish Universities

The five Swedish universities showed their commitment to the launching of the field research cooperation by: i) developing the two-week training course material content and by assigning senior teachers from three different universities for the course (Umeå, Lund and Uppsala); ii) sponsoring the full cost of the trainers' team during the two weeks of the intensive course; iii) committing to assign a Swedish mentor/supervisor for every Somali trainee/researcher who will guide the research work using online network technologies; and iv) being ready to assume

⁵ Research ethics committees. Basic concepts for capacity-building, WHO 2009, ISBN 978 92 4 159800 2

⁶ International Ethical Guidelines for Biomedical Research Involving Human Subjects. the Council for International Organizations of Medical Sciences (CIOMS) in collaboration with WHO.

greater involvement in a longer term collaborative research, and repeat the successful experience of the past by training Somali academicians and health system professionals on masters and/or doctorate programmes, provided the necessary resources are mobilized and made available.

6 THE WAY FORWARD

6.1 Following up the Research Implementation

During the full 1-year training and research collaboration programme, the participants will consider the following activities:

- **Producing Periodic Progress Reports**

The participating institutions will ensure that their trainees/researchers will produce brief quarterly individual progress reports that illustrate the accomplishments made and outputs attained during the quarter. The report will also outline the challenges encountered and how they were resolved, as well as the planned activities for the following quarter. These progress reports need to be shared with the mentors for scrutiny and advice, and the course and research coordinator and Research Project Advisor, who will jointly put these quarterly reports in an electronically shared Newsletter.

- **Consideration of a Mid-term Seminar**

The participating Somali and Swedish universities will consider the holding of a midterm seminar after completing the first six months of the research work to review progress and address any locally encountered technical, logistic and administrative/managerial challenges. This seminar will also create a platform for the researchers to present their attained results and envisage the outstanding field and analytical work yet to be accomplished. This will also be a performance appraisal forum for different participating researchers using an evaluation checklist. In case of resource limitations for holding the mid-term seminar, zonal seminars may be considered.

- **Organizing a research conference**

At the end of the 1-year training and research implementation, our ambition is to organise a conference where the different research outputs of the trainees/researchers can be presented and discussed. This forum will also be open for the other Somali universities or any international entity including the Somali Diaspora. The conference presentations will be submitted three months in advance to the inter-university and SSRA conference organizing committee assigned to this task. The Hargeisa University has offered to sponsor the local conference cost, if selected as a venue for the conference. Other institutions offering similar support may be considered. The final venue will be selected through a shared evaluation of the locally prevailing operational suitability.

These research meetings will be held in the country, hosted by one or more of the participating Somali universities. The research projects to be pursued fall in the domain of maternal, neonatal and child health and nutrition; hygiene promotion; communicable

disease control related research interventions i.e. malaria, tuberculosis and HIV/AIDS and hepatitis viral infections; elimination of female genital mutilation/cutting; barriers to the Expanded Programme on Immunization (EPI); human resources for health and health financing. Several participants are in the elaboration of their research projects, following which the final list of all the research projects will be made available and shared.

6.2 Dissemination of Research Findings

The output results of the different concluded research projects will be presented in the end of the year conference, and their dissemination and translation into practice pursued. During the year of research implementation, the researchers of each zone and their respective public sector health authorities will regularly share the research implementation process and the consideration of its results for practical application. The reliability of integrating the generated evidence into the health system programmes is expected to produce partnerships between the health ministries and the academic institutions, while contributing to the improvement of population health outcomes.

6.3 Creating a Conducive Research Environment in Somali Academic Institutions

The six Somali universities have all committed to integrate research as one of the key pillars of their academic programmes and agreed to allocate budgets for research support activities. The universities are also establishing their committees to deliberate on ethical issues related to research that involve human participants and/or personal data.

6.4 Open Access Somali Health Journal

The health journal project was discussed in several fora during this partnership and considered essential for the effective dissemination of the research output of the Somali universities and other publications relevant to the Somali health development context. An active dialogue will be initiated engaging the Somali and Swedish participating universities and SSRA to bring this mission into fruition.

7 THE SIDA SUPPORT POTENTIAL

The historical SAREC-Sida research collaboration of the 1980s has contributed to the training of 23 members of the Somali National University academic staff who gained their MSc and PhD degrees in Sweden, while another 40 professionals were trained in different research courses and gained valuable field training skills as partners of this collaborative research programme.

Sida officials both from the Headquarter and from the Nairobi Swedish Embassy for Somalia level participated in both the 2014 research seminar and 2015 research planning workshop in Umeå, Sweden. The Sida support to the Somali health system is notably significant, of high relevance and well aligned with the Somali health policy and programmatic interventions.

However, in the post conflict and fragile status of the country, there is a genuine necessity to supplement the available global technical knowledge with the locally generated evidence. The latter will enable the health system to address the contextual socio-cultural attributes that

influence and mostly impede the effective delivery of health services. The Swedish technical support through research training and implementation could also generate improvements in population health outcomes, and scale up the efficiency and cost-effectiveness of the public health system.

8 RECOMMENDATIONS

The successful implementation of the 2-week course needs to be sustained with efforts for the participating institutions, the trained participants, the tutors and mentors alike. To make this research collaboration succeed, maximum attention needs to be given to the management processes of the selected research projects, while lending the necessary technical support for the effective implementation of the planned research projects. To achieve this goal, the following recommendations are put forward:

- i. Ensure that the mentors closely guide the participants on the clarity of their research questions; the relevance of the proposed design; sample size calculation; the methodology facilitating a response to the research question; the definition of possible confounders, data collection, analysis and validation
- ii. Encourage inter-university research collaboration, where the trained researchers and their local mentors reach out to their counterparts in other Somali universities to exchange their field experiences, i.e. implementation processes and operational challenges and address and build collaborative linkages, consequent to this Somali Swedish research collaboration
- iii. Consolidate the course's gained learning experience including the use of the R programme through some additional online training lessons, that are possibly uploaded in the Cambro's website resource section, while at the same time the Somali universities need to explore opportunities, where more experienced participants of the course assume the role of peer facilitators and assist other course participants needing support, by receiving them in their universities or visiting other universities through organized study tours
- iv. Institutionalize the Somali universities' support to research development as an integral part of the roles and responsibilities of these academic institutions, and undertake this health research collaboration as the first step to reach this milestone, through effective planning, close mentoring and support in implementation
- v. Establish REC in each participating university, or a REC that is shared by more than one university; and set out the operational guidelines through shared consultations that will govern these RECs to ensure that the appropriate biomedical research ethical standards are being pursued.
- vi. Select the Sweden mentors/supervisors from the participating universities and SSRA to guide, coach and support the students, who are not apparently homogeneous in their capacity levels and are of a different background, in finalizing the design of their research projects and providing the technical knowledge required through regular online contacts and the offer of constructive and timely feedback throughout the research implementation process
- vii. Select the Somali mentors with the students' involvement in the process, from the same university or ministry of health as for those candidates selected from the health system with the responsibility of overseeing the researcher's work plan, providing knowledge and skills and facilitating all the operational aspects of the project on behalf of the university and helping in setting times for consultation meetings on data collection, analysis, interpretation and reporting.

- viii. Ensure that each trainee/researcher assisted by his or her two mentors produces a brief quarterly progress report, illustrating the accomplishments made during the quarter, as well as the degree to which the set short-term objectives were attained, while concurrently sharing the planned activities for the following quarter
- ix. Plan and organize a 2-day midterm seminar in June/July 2017, and an end of the year 2-day research conference, where the senior leadership of the Somali universities, Swedish counterparts and SSRA will jointly decide on their arrangement, i.e. venues, coordination and management.
- x. Explore the opportunity of establishing an open access Somali Health Journal in which the SSRA and Somali universities will assume more responsibility for its initial development phase and for its subsequent consolidation

9 CONCLUSION

The 1-year Health Research Training and Implementation Programme, with its 2-week start-up face-to face course in Hargeisa, was an exercise that emerged from a two year long contact between six Somali and five Swedish universities that have forged together with SSRA, the vision of building a joint collaborative research partnership. This was an effort to contribute to the development of the fragile and conflict-affected Somali health system.

The participants' ambition and eagerness to learn was highly encouraging and formed a very good starting point for the envisaged 1-year training and research programme. The course addressed both the qualitative and quantitative research methodologies and introduced health financing in a context where financing of the fragile health sector is less predictable and inadequate.

This intervention is aimed at advancing health research as an integral part of the roles and responsibilities of the growing Somali academic institutions. Also important is the introduction of the ethical principles in health research, which positively influence the establishment of internal partnerships between the Somali universities on the one hand and their health systems on the other.

The 24 planned implementation research projects (one for each trainee/researcher), addressing priority public health needs are anticipated to produce a valuable mass of research evidence for practical considerations, which can be used for amending programmes/project protocols or even impact policy. The latter is expected to increase the efficiency and cost-effectiveness of the Somali public health system, improve human rights and equity, whilst and contributing to the post-conflict recovery and peace building process.

10 ANNEXES: COURSE PICTURES

