

Full Length Research Paper

Community-based health sciences learning: a curriculum assessment and the development of family and community health program

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Abstract

Goals: University of Lúrio Pedagogic Directorate's goal is to adopt a health sciences community-based learning methodology and improve teaching practice. With this aim, the Community Health Discipline (common to the 6 Health Sciences Faculty Courses and present in all semesters of pre-graduate curriculum) assessment was made, consequently producing a curricular development proposal regarding Family and Community Health. **Methodology:** Qualitative participatory research methodologies using bibliographic review, surveys, interviews and focal group discussions. The population studied included the Community Health Discipline lecturers, students in all Health Sciences Faculty Courses, families participating in One Student One Family Program and local community leaders. **Results:** Community Health Discipline assessment revealed successes and challenges which led to curriculum development suggestions for the Family and Community Health program. This proposal was approved by Health Sciences Faculty Council as a quality improvement methodology. Nevertheless, the Faculty did not implement curriculum revision.

Keywords: community health, community based learning, health sciences, family health, Lúrio University, Nampula, Mozambique.

INTRODUCTION

Abbreviations

CBE – Community Based Education; CH - Community Health Discipline; CHD - Community Health Department; HPE – Health Professionals Education; HSF - Health Sciences Faculty; HSFC - Health Sciences Faculty Council; MC - Medicine Course; NGO - Non Governmental Organization; NHS - National Health Service; One-SF Program - One Student, One Family Program; SADC - Southern Africa Development Community; UniLúrio - Lúrio University.

One of Lúrio University fundamental objectives is local community development. From its inception in 2007, the university has employed a community based learning strategy (Ferrão and Plano E 2010 – 2014).

HSF prepared curricula in six courses, namely, Medicine, Dental Medicine, Pharmacy, Nutrition, Optometry, and Nursing. The HSF has included the teaching of Community Health in all semesters of all Degrees. This teaching based in One-SF Program, a vehicle for practical

interaction with families living in the neighborhoods surrounding the University.

This community based teaching - learning methodology, has students function in multidisciplinary groups as the preparation for community home visits, provide family education, evaluate activities, diagnose health problems and refer family members to the national health system as necessary.

After 5 years of activity, the Division faces a high workload, insufficient number of partially trained specialized lecturers. Considering One-SF Program is one of UniLúrio grounding philosophies and is the university's methodological priority, it is important to evaluate the impact of these activities in local communities.

Secondly, Family and Community Medicine is a major priority of the Mozambican Ministry of Health as defined in the SADC Health Pact. There is an urgent need to train HSF Teachers in Family and Community Medicine or Family and Community Health (according to the respective formation branch and career) and to include the contents of the discipline of Family and Community Medicine or Family and Community Health (according to the branch) in all HSF courses.

This curriculum revision proposal should be presented later to the TREC and the University for approval.

Identification of Knowledge Problem

Community based teaching - learning methodology demonstrates to be effective in the acquisition of practical intelligence for higher education students (Chastonay et al., 2013). Classified as transformative learning this methodology has contributed to the development of local communities and to the retention of health professionals in low resource settings (Judith, 2009). The CHD and One-SF Program must improve students' preparation for, and interaction with local communities and their health issues. It also provides the Professors an opportunity to adapt health interventions to the community.

The CHD's high workload has not yet shown significant results in student acquisition of abilities in health intervention. It has not translated into quantifiable improvements in the improvement of the local population's health, nor has it motivated our future health professionals toward a career in community practice.

The efficient health team by necessity is interdisciplinary. This team results from an effective inter-professional education. Using an inter-professional interaction approach in specific, practical classes and class organization doesn't seem to result in expected team benefits.

Research ability of Knowledge Problem

UniLúrio Rector and HSF Director are determined to improve the quality of the health sciences teaching - learning process. CH Students and Teachers were available to contribute to the Chair curriculum development. Chair and One-SF Program documents, digital and physical format, were available in CHD.

Several studies show evidence that using the community based teaching - learning methodology in medical education, is an important tool to improve clinical practice (Scott et al., 2008) and it demonstrated that using interdisciplinary education model in health sciences teaching significantly improves patient's outcomes (Somaya et al., 2013).

All HSF Courses are graduating the first groups of trainees. It is an ideal time to gather the necessary information for a curriculum assessment and development.

Goals

UniLúrio Pedagogic Directorate has as an ongoing goal to improve the quality of the teaching - learning process using community based health sciences teaching methodology. With this aim, CHD assessment was made, across all six HSF Courses and in each semester of each Course. This information develop the Family and Community Health curriculum proposal.

General Goal

To improve the quality of the community based health sciences teaching - learning process.

Specific Goals

- 1) CHD assessment.
- 2) One-SF Program assessment, consolidation and development plan.
- 3) Curriculum development in Family and Community health by CHD.
- 4) Training, monitoring and evaluation of Lectures in Family and Community Health division for purposes of quality improvement.

METHODOLOGY

Qualitative participatory action research study (Strauss

and Corbin J, 2008), from October 2011 – November 2013, using mixed retrospective and prospective information.

The study population constituted of CHD Teachers and Students in all HSF Courses, HSF directorate members, Families participating in the One-SF Program and respective community leaders.

We reviewed documents, gave out surveys, and organized interviews and focus group discussions.

Teachers were consulted using surveys, individual interviews and during CHD Regents and Lecturers Meetings (2011, 2012, 2013).

We heard Students from all Courses and all CH Semesters (individual informal discussion and group discussions in classroom). We gave surveys, doing pre and post testing in CH classes. We also carried out focal group discussions.

Muatala and Naticiri neighborhood community leaders and participants in the One-SF Program were surveyed individually and through focal group discussions, trying to identify the main challenges and successes.

Family Heads and One-SF health professional participants (who precept CHD practical classes) were surveyed individually by answering a questionnaire, (31/08/2012). This survey was trying to identify the extent of change in families' knowledge, attitude and behaviors regarding health.

We reviewed all available Documents, whether in physical or digital form. These included number of students enrolled in the CHD, mail and correspondence files, CH Practical Classes support documents, CHD Thematic and Analytical Plans of all different Courses.

We should note here UniLúrio HSF's CHD, created at first semester 2011 academic year, to coordinate CH discipline activities, common to all of the courses and semesters.

Medicine course CHC was taught in the 9th (2nd semester 2012; (Pires, 2012), 8th (1st semester 2013; (Pires, 2013) and 4th (2nd semester 2013; (Ferreira and Pires, 2013) academic semesters, including development of Analytical Plans and Manuals, Class planning, theoretical, specific and practical class preparation, families visit guides, test and exam development, application and evaluation.

Activities

During the last quarter of 2011 and the first semester of 2012 the CHD assessment was done, to evaluate teaching results of first cycle of courses offered by HSF (2007 - 2011) (Pires, 2011).

A first curriculum development proposal, written in accordance with present international movement toward a Family and Community Health perspective, was presented and approved by HSF Council on November

30th, 2011.

During the same period, we finished the One-SF Program assessment and the respective development plan (Chaquise et al., 2012).

A Task force team appointed during 2012 first semester, and CHD assessment and curriculum development activities concluded during CH Seminar (06/21/2012), presented a definitive proposal to HSFC on 07/23/2012 (Bila et al., 2012). The Council approved the CHD designated alteration to Family and Community Health and the detailed alterations to introduce in Semester curricula, for all Courses, during the year of 2012, and to begin the full implementation with the Students entering HSF in 2013.

We then began the development of an IT database to record One-SF Program families' demographic, social and health information, aiming to accomplish research and to evaluate program activities on families' health improvement. This database benefited from financing by the University of Saskatchewan, Canada to acquire a server.

Later HSF built a Web page to gather digital resources for learning and teaching (Chairs content, class plans, digital bibliography, and interactive learning modules).

On 08/06/2012 HSFC required Course Coordinators to incorporate the referred proposals in Courses' curriculum revisions, following the conclusion of the first training cycle (first groups to graduate).

On 08/20/2012 the proposal presented to TREC, reinforced the requirement of Course Coordinators to incorporate this proposal into the Courses curricula revisions.

In 08/29/2012, the HCFC meeting debated the proposed alterations and practical implementation measures.

RESULTS

CHD assessment revealed advantages of, deficiencies of, and curriculum changes to, the Family and Community health, program approved by HSFC as a quality assurance methodology.

This study evaluated CHD theoretical and practical teaching situations. It pointed out needs and proposed CH Chair curriculum development changes to the Family and Community Health program as part of the ongoing HSF curriculum revision after the initial course cycle, which began in 2007.

The Division's inclusion of Family and Community Health in all UniLúrio HSF Courses would be implemented beginning 2013 and for the incoming new students. Ministry of Education's Higher Education Board should approve this alteration.

We prepared then a proposal to reorganize the thematic and analytical plans of the division to include a

department of Family and Community Health and a new methodology to match students with families. We proposed a Family and Community Health Information Centre.

We planned a series of seminars to train Family and Community Division teachers, regarding thematic contents and pedagogical resources.

The HSF Activities Plan 2013 presents in chapter 3, Research and Post Graduate Area, aim 3.3, to strengthen the basis for CH Division operation and to develop content to reinforce the dimensions of Family Health.

We developed a guiding budget, simultaneously contemplating investment expenses (one time cost at the beginning of the program implementation) and operational costs (incurred on a yearly basis).

Considering HSF annual budgetary limitations, the activities budget covered by HSF Budget for 2013, was also supported by the cooperation project with the University of Saskatchewan (Canada), under the Family and Community Health Research budget line.

We should also approach other potential local partners (private companies, NGOs) with the view of obtaining financial support for the implementation and development of specific activities. UniLúrio is a partner in a large national and international net of higher education and research institutions, which should facilitate partners and funding opportunities to develop activities, research and extension in Family and Community Health.

On 2013 curriculum revision implementation did not take place. TREC 03/15/2013 does not refer to the theme and HSFC 04/16/2013 refuses to include the subject in the Agenda. HSFC meeting, 07/19/2013 produces a decision that contradicts all previous deliberations. They plan to maintain Community Health Division without any alteration to the model implemented since the beginning of the university.

On 2013, Pharmacy, Nutrition and Optometry Courses made several curricula revisions. Those Courses have already produced several graduating classes and are at an ideal moment to assess and develop, but the CHD was not altered.

We developed a One-SF Program assessment and development plan. It is not yet edited for circulation to Teachers, Students and Partners. We published a summary in English globally accessible on the Internet. (<http://www.hrresourcecenter.org/node/5318>).

CHD in 2013 did not apply the consolidation proposals and activities continue to occur with previously detected problems.

We produced the first three CHD handbooks for Medicine Course, regarding the 4th, 8th and 9th semesters. HSFC, after 12 months, did not allow us to photocopy them, at a low price (5 to 7\$USA) for students.

The HSF web site (moodle) had a limited development and a short duration. It was quickly hijacked "pirated" and

remains inaccessible.

Medicine Course students (3rd, 4th, 7th and 8th semesters) and Optometry students (7th and 8th semesters) and Optometry, Medicine, Nutrition, Pharmacy Course Teachers were trained in community based participatory action research on CH, as result of a University of Saskatchewan, Canada, partnership. We have now eight research projects in process and they will be publish in 2014.

RISKS

Teachers' participation bias.

The Teachers had limited participation in the process, due to disinterest caused by uncertain determinants. There was some "figurative" participation, i.e. the professor attended physical presence but did not really contribute to the division development work.

Deficient communication

An email address was created in 2011 (saudecomunidadefcs@gmail.com, password: salamanca) to coordinate all Teachers, Students, Community Leaders, Family Heads and other partners. However, this initiative did not have any application or result.

Rotation of Teachers and Directorate

Frequent changes in duties for teachers, whether on full or part time contracts, impede the continuity of the application of corrective measures. The changes in the Directive Board along with a precarious institutional memory prevent the due implementation and monitoring of proposed measures.

Political orientation priorities

The Family selection procedure organized according to the local political administration system, introduces variables harming the quality of the selection process.

EVALUATION

Teachers

CHD monitoring and evaluation was done through participation in all the Divisions' Course and Semester Regents and Teachers and CHD meetings during 2013.

Identified difficulties:

- The physical condition of the room: (Great Room, HSF, Muatala) is not appropriate for Teaching of specific classes with 150 Students (5 Courses).
- Verification of attendance in classes with 5 Courses can occupy up to 25% of class time period.
- Institutional visits during the 1st semester (market places, Water Distribution Company, garbage places) are not prepared ahead of time, limiting student learning.
- Requirements prior to visits: (Student responsibility form, Family head's Informed Consent form) not done.
- Families were absent on student visit days (25 to 30% of the time).
- Students use a technical language for Health Education that is hardly understandable for families.
- Analytical Plans of several different Semesters and Courses are lacking.
- Several Practical Activities Plans are lacking.
- Lists of content themes defined for every semester do not correspond to the practical activities done.
- Activities involving 5 different courses make interaction difficult and harm over all, multidisciplinary activities. Group size of 8 students is difficult to operate and manage.
- The specific class before the family visits of the 5th and 7th semesters MC has no learning objectives.
- MC 10th Semester had one Teacher for 50% of the Division content (Hospital management), not having been supplied the clinical part; they did not accomplish any visit to the families.
- High number of specific and practical classes harms the Teaching of the theoretical contents.
- Some Teachers miss the specific and practical classes and Chair meetings and are not subjected to a penalty.
- Due to the great geographical dispersion of families, practical classes should have an increased duration.
- Semesters with short periods of classes (late beginning of classes) do not allow students to finish program execution.
- Specific classes for feedback on practical activities not done.
- Group Report guide does not correspond to Report development guide.
- Group Reports are repetitive and present manipulated data.
- CHD does not incorporate student's recommendations.

Students

CHC evaluation through all Courses' students consultation, individual interviews during practical classes and focal group discussions within MC Chair teaching (2013).

Identified difficulties:

- Students without a Family (estimate 25%).
- Great distance traveled on foot from HSF to the houses of the Families (>30 minutes) leads student fatigue and reduces interaction time with the targeted public.
- Large number of students in each group hinders the reception in the family houses, personal contact and privacy, limiting the validity of the answers of family members.
- Large number of families to visit in each practical class reduces the time dedicated to each family, which limits diagnostic activities, health education and referral to the NHS.
- Lack of materials (pamphlets, posters), utensils (scales, measuring tapes, blood pressure cuffs, stethoscopes) for practical classes.
- Many Families are systematically absent on the days marked for student visits, revealing a low motivation for interaction with HSF due to "activities fatigue."
- Multidisciplinary teamwork done by Students based in practical classes in the families, show a juxtaposition of contents (not the wanted interdisciplinary) and they still lack the ethical requirements and necessary legal wording to publish.

Families

CHD monitoring and evaluation was done by listening to the members and heads of families and of community leaders, along with individual interviews during the course of the practical classes in 2013.

Identified difficulties:

1) Participants

- A list of participating families with the name of head of family, house number, leader of the block and associated student does not exist.
- In acute or chronic disease cases, student support to refer to the NHS is not solid (patient transports, connection with health staff in health centre, monitoring of health results).
- In cases of acute disease in families with low economic resources, food support does not exist.

2) Ex-participants

- As proposed in One-SF Program, Families whose student has concluded the Degree should become the new protagonists of "health promotion" in the community. Not accomplished, probably due to breakdown in communication between the family and HSF and absence of orientation and supports (for community intervention) from the Faculty.

3) People unable to participate

- Several Families and Community leaders in neighborhoods adjacent to HSF (Murrapaniua, Natikiri) have been waiting for a long time for the intervention of the One-SF Program.

Medicine Course assessment

In April 2013, the Medicine Course assessment of 2012 (Pires et al., 2013) continued showing deficiencies previously detected in CHD assessment (thematic contents poorly organized and not adapted to present realities, disorganized, poorly supervised practical classes where results were not evaluated). This reinforces the need for the previously proposed solutions (curriculum revision and development of a Family and Community Health program, specific selection of Teachers qualified in Community Health, practical class guides, effective field work monitoring, IT registry of collected data, results evaluation and shorter distance to travel between students and families).

CONCLUSIONS

Community Based Health Sciences teaching methodology is an important tool for transformative learning and for training professionals to be able to intervene in low resource population's health problems in an ongoing manner. However, the methodological and pedagogic complexities and multiple external determinants demand from the University a sophisticated organization and added resources that are not always available in developing countries like Mozambique.

In spite of the undeniable value of HSF CHD and of One-SF Program, internal information, communication, organization and procedural difficulties have limited, until now, the development of a curriculum based on Family and Community Health, seen as the most efficient internationally accepted method to approach population health education.

It is recognized that all HSF Courses should benefit from an evaluation of CHD, structuring community based learning and interdisciplinary.

We think that it will be necessary to have a more directive intervention from the University Rectory and Pedagogic Board, towards a quality improvement in this teaching - learning process to obtain significant health results in target population.

Ideally, this type of teaching/learning experience helps the student understand first hand, the following principles, experience and purpose, thought and action, institutional and personal accomplishment and social responsibility. For HPE programs to be capable of producing community oriented health professionals, who are available to improve access to health care, competent to improve population health outcomes and could avert the current health care challenges of society, it is imperative that the implementation of CBE takes place in its true sense, demanding strategic and sustainable change at large, well balanced HPE elements including institutional

structure, curriculum and faculty, resource allocation and commitment at all levels (Wagdy and Zahra, 2014).

CIRCULATION

UniLúrio Rector and Pedagogic Directorate, HSF Directorate, Teachers, Students and HSF Council. This study shall be available in written form to the two HSF Libraries and in digital support on the UniLúrio web page.

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