

All countries should strive to make accessible through the primary health care system reproductive health to all individuals of appropriate ages...Reproductive health care in the context of primary health care should, inter alia, include: family planning, information, education, communication and services; education and prenatal care, safe delivery and post natal care especially breast feeding and women's health care; prevention and appropriate treatment of infections as specified in paragraph 8.25, including prevention of abortion and treatment of the consequences of abortion; treatment of reproductive tract infections, transmitted diseases and other reproductive health conditions; and information, education and counseling, as appropriate, on human sexuality, reproductive health and responsible parenthood.
Paragraph 7.6., Chapter VII., Programme of Action, International Conference on Population and Development, Cairo, 1994

Reproductive health care programmes should be designed to serve the needs of all, including adolescents, and must involve women in the leadership, planning, making, management, implementation, organization and evaluation of such programmes.
Paragraph 7.7., Chapter VII., Programme of Action, International Conference on Population and Development, Cairo, 1994

Innovative programmes must be developed to make information, counselling and reproductive health services for reproductive health accessible to adolescents and adult men.
Paragraph 7.8., Chapter VII., Programme of Action, International Conference on Population and Development, Cairo, 1994

Effective information, education, and communication are prerequisites for human development and pave the way for attitudinal and behavioural change. This begins with the recognition that decisions must be made freely, responsibly, in an informal manner, on the number and spacing of children and in all aspects of daily life, including sexual and reproductive behaviour. Greater public knowledge and commitment in a democratic setting create a climate conducive to responsible informed decisions and behaviour.
Paragraph 11.12., Chapter XI., Programme of Action, International Conference on Population and Development, Cairo, 1994

Governments, assisted by the international community and donor agencies, should support, non-governmental organizations and the academic community, support for basic and applied biomedical, technological, clinical, epidemiological and social science research to strengthen reproductive health services.
Paragraph 12.12, Chapter XII., Programme of Action, International Conference on Population and Development, Cairo, 1994

Improved quality of services can be achieved only where quality has been assured by both users and providers of services and where women are actively involved in decision making and service delivery.
Paragraph 12.19., Chapter XII., Programme of Action, International Conference on Population and Development, Cairo, 1994

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List of Acronyms

AIDS.....	Aquired Immuno Deficiency Syndrome
AUB.....	American University of Beirut
AUH.....	American University Hospital
BAU.....	Beirut Arab University
BS.....	Bachelor of Sciences
EOC.....	Emergency Obstetric Care
FGM.....	Female Genital Mutilation
FHS.....	Faculty of Health Sciences
FIGO.....	Federation International of Gynecologists and Obstetricians
GOL.....	Government of Lebanon
HCP.....	Health Care Providers
HIV.....	Human Immunodeficiency Virus
ICPD.....	International Conference on Population and Development
IEC.....	Information, Education, and Communication
IPPF.....	International Planned Parenthood Federation
IMSF.....	International Medical Students Federation
LAU.....	Lebanese American University
LU.....	Lebanese University
MCH.....	Maternal and Child Health
MD.....	Medical Doctor
MLT.....	Medical Laboratory Technology
MOPH.....	Ministry of Public Health
MOSA.....	Ministry of Social Affairs
MS.....	Master of Sciences
PHC.....	Primary Health Care
RH.....	Reproductive Health
RH/FP/SH.....	Reproductive Health including Family Planning/Sexual Health
RHWG.....	Reproductive Health Working Group
RSH.....	Reproductive and Sexual Health
RTI.....	Reproductive Tract Infections
TOT.....	Training of Trainers
STI.....	Sexually Transmitted Infections
UNFPA.....	United Nations Population Fund
UNICEF.....	United Nations Children's Fund
USJ.....	University of Saint Joseph
UOB.....	University of Balamand
WHO.....	World Health Organization

Executive Summary

The national sub-programme on reproductive health aims to assist the Government of Lebanon (GOL) achieve its national reproductive health (RH) goals through improving access to quality reproductive health services and information. It also aims at integrating comprehensive and sustainable quality reproductive health including family planning and sexual health services and information within the framework of the primary health care system at both theoretical and practical levels. To help achieve this, the national sub-programme recommends the following activities:

- ❑ Integration of reproductive health/family planning/sexual health concepts in all existing medical and paramedical academic curricula aiming at standardizing the information in pre-service education.
- ❑ Institutionalize in-service training with the aim of a better assessment of the needs and of designing, conducting and evaluating training events.
- ❑ The curriculum of the National Accreditation Exam should be modified to overcome the problem of diversified health professional graduates and trainees.
- ❑ Dialogue between academic institutions and service delivery institutions should exist, aiming to improve cooperation, linkages and to promote continuous dialogue among different pre-service institutions.
- ❑ Staff-development activities should be supported in the form of conducting continuing medical education seminars and workshops for service providers. In addition, it is important to support efforts to establish and/or expand post-graduate programmes for nursing and midwifery education.

To help achieve these tasks, a dynamic process of open and direct dialogue should be initiated with the concerned institutions in Lebanon. This initiation demands adequate knowledge of the existing curricula and their thematic indicators, and also of all the key steps involved in curricula reform and update. In this endeavor, a review was conducted to document all the academic material that are directly or indirectly related to reproductive health concepts as per the Programme of Action of the International Conference on Population and Development (ICPD). In doing so, the possibility of integrating RH into the existing curricula was investigated.

The universities that were included in the review are: Lebanese University (LU), American University of Beirut (AUB), University Saint Joseph (USJ), Beirut Arab University (BAU) all having Medical, Paramedical and Social Science education. The University of Balamand (UOB) has a Faculty of Health Sciences (FHS), including Nursing programme. The Lebanese American University (LAU) has a course on basic health, and all have Social Sciences Programs.

In the majority of the curricula, the reproductive health as a concept is not present. The perspective and the focus of the available curricula do not include the motif and elocution of reproductive health as defined by ICPD. Nevertheless, most of the subjects and themes are present as separate academic entities dealt with according to major and year of study.

The type of material present in the reviewed curricula includes almost all aspects of reproductive health components (adolescent, safe motherhood, newborn and child care, family planning, infertility, sexually transmitted infections (STIs), menopause, gender, and information, education, and communication (IEC). The material is presented as part of a course, or under a wider subject, or even as an autonomous topic, depending on several academic considerations. The main source of all the material in these curricula is the

scientifically solid textbooks, journals, and articles that are based on research and are evidence-based. Some of these programmes may not have been updated in a way to cope with new concepts in women's health and health services pertaining to reproductive health concept evolution in accordance with ICPD definition.

Regarding the content of reproductive health information, the majority of the reviewed curricula contain medical, paramedical, and social science materials that include topics of certain relevance to reproductive health concepts. These topics encompass material that can contribute to the overall goals of reproductive health. For each course, the time allocated, the expected learnt skills, and the depth and load of its material depends on the area of study and the formation of specialty. Looking into the various components of reproductive health as per ICPD and as appearing in different curricula, it is clearly noticed that the content of these reproductive health-related topics vary.

Remarkable effort is exerted in the programs of mid-wifery and nursing in both the LU and USG to update and to standardize reproductive health material, and to a little extent in the BAU. At the level of AUB, the Reproductive Health Working Group (RHWG) housed in the Faculty of Health Sciences provides continuous updates and original research that partly infiltrate the curricula in terms of seminars, elective courses, or as part of assignment for students.

At the University of Balamand, the Faculty of Health Sciences, although keen on exposing the students to all topics that are under reproductive health concept, is ready to integrate it in the context of developing the curricula and benefiting the students and the community

The revised curricula lack the comprehensive and holistic approach towards reproductive health issues. Integrating reproductive health concept into the existing curricula means in the first place working within the capacity of the current curricula and of the other resources like faculty, funds, training programs, and research projects. It also requires a variety of resources such as staff time, money, and logistical support. There is also a need to integrate comprehensive reproductive health education with other components of a coordinated health program. In addition, effective communication and dialogue between all the stakeholders (national sub-programme, universities, and the UN agencies) is essential for effective integration and maintenance of reproductive health in the curricula.

I. Introduction

The main goal of the national sub-programme on reproductive health (RH) is to assist the Government of Lebanon (GOL) achieve its national RH goals through improving access to quality RH services and information, especially to the displaced, and to those living in the underserved areas. It also aims at integrating comprehensive and sustainable quality reproductive health including family planning and sexual health services and information within the framework of the primary health care system at both theoretical and practical levels. In order to achieve those tasks, the overall stated outputs emphasized the necessity of addressing national capacity and capability building, and the management component of the PHC system that has to be strengthened, and similarly the development of Human Resources behooves to be upheld in order to respond to RH/FP programme needs. To help achieve this, the national sub-programme recommends the following activities:

□ Integration of reproductive health including family planning and sexual health (RH/FP/SH) concepts in all existing medical and paramedical academic curricula aiming at standardizing the information in pre-service education. In this regard, the sub-programme calls for the formation of a National Committee on Curricula to be lead by Ministry of Public Health

(MOPH) and the World Health Organization (WHO) to revise the existing curricula and to come up with recommendations. As a matter of fact, and for multitude of apparent reasons, this Committee does not officially exist.

□ Institutionalize in-service training with the aim of a better assessment of the needs and of designing, conducting and evaluating training events. Efforts should be spent towards creating a cadre of Master Trainers at the central level to strengthen training at the *qadaa'* levels. Consistency should be ensured between pre-service curricula and in-service training.

□ The curriculum of the National Accreditation Exam should be modified to overcome the problem of diversified health professional graduates and trainees.

□ Dialogue between academic institutions and service delivery institutions should exist, aiming to improve cooperation, linkages and to promote continuous dialogue among different pre-service institutions.

□ Staff-development activities should be supported in the form of conducting continuing medical education seminars and workshops for service providers. In addition, it is important to support efforts to establish and/or expand post-graduate programmes for nursing and midwifery education.

The above-mentioned activities clearly manifests the importance given by the sub-programme to the academic contribution to RH issues at several levels (1). This anticipated contribution could immensely impact the pre-clinical or pre-training, the training, and the practice stages, in addition to the sustainability of the quality RH services. This task can be best approached through open and direct dialogue with the concerned institutions in Lebanon.

II. Objectives

The study aim to assess and evaluate the status of RH in the existing university curricula. This is expected to assist in the process of initiating a dialogue between various academic and concerned parties to integrate RH concept in the curricula. This demands adequate knowledge of the existing curricula and their thematic indicator, and also of all the key steps involved in curricula reform and update. Several successful patterns of this dialogue/cooperation like the Nursing and Midwifery training programmes can represent cases for initiating and strengthening modules in other disciplines. This review will attempt to document all the academic material that are directly or indirectly related to RH concepts as per ICPD. In doing so, the possibility of integrating RH into the existing curricula will be investigated, taking into account all the interests of the players (teachers, students, administration...).

III. Methodology

Throughout this endeavor, only universities with medical schools, nursing and midwifery programs, social sciences, public health, and related fields were considered eligible for the review of the RH content of their programs. The RH components that will be identified are those stated by the Chapter VII of the ICPD programme of Action, in Paragraph 7.6 which says.... Reproductive Health Care in the context of Primary Health Care should, inter alia, include:

- Family planning counseling, information, education, communication and services;
- Education and services for prenatal care, safe delivery and postnatal care, especially breastfeeding and infant and women's health care;
- Prevention and appropriate treatment of infertility.
- Abortion as specified in paragraph 8.25, including prevention of abortion and the management of the consequences of abortion;
- Treatment of reproductive tract infections;
- Prevention of STIs, including HIV/AIDS and other reproductive health conditions;
- Information, education and counseling, as appropriate, on human sexuality, reproductive health and responsible parenthood;
- Treatment for complications of pregnancy, delivery and abortion; and
- Discouragement of harmful practices including FGM.

IV. Results

In this aspect Lebanon can be a tough case, as higher education in this country is diverse and entertains a vast degree of liberty and privacy concerning type, content, and language. In Lebanon, there are one public university, the Lebanese university, around 10 private ones, and many other colleges and institutes. Their curricula is set by their own private boards within the context or spirit of the system of education of their affiliate or charter, and in agreement with the needs and demands of the country.

The 5 major universities, the Lebanese University (LU), the American University of Beirut (AUB), the University of Saint Joseph (USJ), the University of Balamand (UOB), and the Beirut Arab University (BAU) have both medical and paramedical education. The LAU has a course on Basic Health. All universities have social sciences departments.

IV.1. Historical Background of Universities

IV.1.1. The Lebanese University

The formation of the Lebanese University came a result of a long journey of political and national strife. In 1951, the nucleus for the university was created with the Higher Institute for Teachers, and an Institute for Statistics. In 1953, the Center for Financial and Administrative Studies was found. The major achievement came in 1959, with the decree # 2883 stating, "The Lebanese University is an official institute of higher education in various fields and levels...". Following that, the university expanded gradually- over 20 years- to house by now a total of 14 schools and departments, including the faculty of medical sciences, and the faculty of public health that contains the divisions of midwifery, Medical Laboratory Technology (MLT), medico-social assistance, and nursing among others.

IV.1.1.a. Faculty of Medical Sciences In 1983, the decree for the initiation of a Faculty of Medical Sciences was issued. Currently, this faculty offers degrees in Doctor of Medicine (MD), most medical specialties, and in Dentistry specialties. The faculty cadre is constituted of about 460 instructors, where around 290 faculty members belong to the faculty of medical sciences. Courses are taught in English and French, and students are trained in selected

medical centers contracted by the university. The curriculum of the faculty of medical sciences does not specify any course material that directly addresses reproductive health concepts as a comprehensive, well-defined topic. Nevertheless, there are several chapters and sections containing material that are consistent with the core definitions and descriptions of RH. These are included within a number of courses.

IV.1.1.b. Faculty of Health Sciences It was started in 1981, and includes the following disciplines: Nursing Sciences, Medical Laboratory, Medico-social Assistance, Physiotherapy, Midwifery, Orthophony, and Handicapped Rehabilitation. There are around 400 faculty members, teaching in both English and French. The Nursing Department houses a 4-year program, and it is available in all the branches of the Faculty. The Midwifery is also a 4-year program.

IV.1.1.c. Institute of Social Sciences Founded in 1959, it has 5 branches in the 5 Muhafaza of Lebanon. The Institute offers degrees in Sociology, Social Sciences, and Demography.

IV.1.2. Saint Joseph University

This University was found in 1875. It is a Lebanese private University for higher education. It houses 10 Faculties (Medicine, Pharmacy, Dentistry, Nursing Sciences, Engineering, Law and Political Sciences, Economics, Business and Management, Arts and Human Sciences, and Sciences), and a Midwifery School. The University has branches in North Lebanon, the South, and the Bekaa. The School of Midwifery was found in 1922 and had transformed over years until 1984, when its program is made up of 14 month of study above the Nursing program formation. There is also a program of graduate study in Midwifery.

IV.1.3. American University of Beirut

The American University of Beirut (AUB) is a private, non-sectarian institution of higher learning, founded in 1866, which functions under a charter from New York. It is administered by a private, autonomous Board of Trustees. The mission of AUB is to share in the education of the youth of the Middle East, in the services of its peoples, and in the advancement of knowledge. The University has five Faculties: Arts and Sciences; Medicine (which includes School of Nursing); Engineering and Architecture; Agricultural and Food Sciences, and Health Sciences. In addition, there is a Division of Educational Programs.

IV.1.3.a. Faculty of Medicine The Faculty of Medicine was started in 1867. The Hospital was opened in 1905. The Faculty of Medicine endeavors to provide opportunities for its undergraduate students to develop individual initiative, creative abilities, and professional leadership through participation in extracurricular seminars, discussion groups, research projects, and student organizations. It offers a degree of Medical Doctor (M.D.), and postdoctoral programs including a Master Degree (MS) Basic Sciences, internship, residency, and fellowship training programs. The residency program was inaugurated in 1946, including training in the main medical specialties. Clinical teaching is carried out in the Outpatient Department, in the University Hospital, which has the capacity of 421 beds, in the Family Medicine Practice Center and in the affiliated hospitals.

The curriculum lacks any definite course or cluster of material that directly addresses RH issues in a comprehensive manner. However, RH issues might be present as crosscutting topics in several courses, or part of courses, but with no conceived focus on RH themes.

IV.1.3.b. School of Nursing Founded in 1905, the school of nursing was the first school in the Middle East. The five-year Bachelor of Science in Nursing program, established in 1936, was replaced in 1964 by a four-year program leading to the Bachelor of Sciences in Nursing degree. The core faculty includes 15 members. The main objective of the School is to provide learning opportunities, which will enable the student to develop into a highly qualified professional as well as a civic-minded and concerned citizen. It also emphasizes building personal skills and nurse-patient relationship in the best way possible. Many of the core concepts of RH are present in the curricula of this school.

IV.1.3.c. Faculty of Health Sciences It was started in 1954. It serves to educate and train professionals to help meet the needs of the developing world for competent leaders in the field of health. It emphasizes currently environmental health, epidemiology and biostatistics, population studies, health services administration, health education and promotion, and medical laboratory technology. The department of Social and Behavioral Sciences covers disciplines of sociology, anthropology, and psychology. The Faculty of Health Sciences (FHS) also serves as a department of preventive medicine for the faculty of medicine. There are around 45 faculty members.

IV.1.3.d. Radiological Technology Training Program this is a 2-year theoretical and clinical training in all diagnostic modalities. It offers courses in anatomy and physiology and principles of diseases that expose generally students to the notion of reproductive organs, reproductive physiology, and some cases of reproductive diseases.

IV.1.4. University of Balamand

Licensed by the Lebanese government in 1988, the University of Balamand is a private, independent, non-profit educational institution. It is dedicated to the study of the arts, the sciences, and the professional fields that serve the interests of the community of Lebanon and the Arab East. It has five Faculties, Arts and Social Sciences, Business and Management, Sciences, Engineering, and Health Sciences, in addition to the Saint John of Damascus Institute of Theology and Academie Libanaise des Beaux-Arts.

IV.1.4.a. Faculty of Health Sciences in this university offers B.S. degrees in Nursing, Health Promotion, Medical Laboratory Technology, and Public Health and Development Sciences. Reproductive health topics are not addressed in the curricula as a discipline on their own, but are present as crosscutting material through relevant courses. In addition, Information, Education and Communication (IEC) and Gender issues are also present as part of specific courses.

IV.1.5. Beirut Arab University

This University is a Lebanese private institution of higher education, which was established by the Lebanese Society "Al Birr Wal Ihsan" in 1960, supported by Alexandria University in Egypt, with which it is academically affiliated. The University has 9 Faculties: Arts, Law, Commerce, Architectural Engineering, Engineering, Science, Pharmacy, Medicine, and Dentistry. Beirut Arab University is concerned with all facets of higher education and scientific research. Its aim is to contribute to the progress of knowledge, development of human values and advancement of civilization in Lebanese society.

IV.2. Reproductive Health in University Curricula and Course Distribution

In this section, various RH related topics will be reviewed as they appear in the courses of different faculties in different universities (Table I)

Table I. RH-related Topics in Curricula

RH as in ICPD	AUB	USJ	UL	UOB	BAU	LAU
Safe motherhood	X	X	X	X	X	X
STIs/HIV	X	X	X	X	X	X
Family Planning	X	X	X	X	X	X
Infertility	X	X	X		X	
Repro. Morbidity	X	X	X	X	X	
Sexual health	X	X	X		X	
Gender	X	X	X	X	X	
IEC	X	X	X	X	X	

X implies material exist in different load

Anatomy

This course is given in the faculties of medicine, medical sciences, nursing and medical laboratory technology (MLT) in the following universities: American University of Beirut (AUB), Beirut Arab University (BAU), University of Balamand (UOB) and the Lebanese University.

At AUB, this course is about a regional dissection of the entire human body supplemented by embryology and clinical lectures. Students are introduced to reproductive organ anatomy, their relation to each other and the clinical implications of cases of wellness and disease. In this course students have the chance to get exposed to the anatomical structure of both, the female and the male reproductive systems, and the physiological and clinical correlation's that ensure proper reproductive functions. In the School of Nursing, anatomy exposes students to reproductive anatomy and its clinical correlates.

At LU, medical students learn about general human anatomy including both the female and male reproductive systems, and the significant correlation between their different organs in contributing to reproductive health wellness and ailment conditions. Consequences of disease processes are stressed like (STI, tubo-ovarian problems, tubal damage, congenital anomalies etc). Students also learn how various organs are supposed to function to maintain reproductive health and achieve reproduction.

At the UOB, nursing and MLT students are exposed to RH through the anatomical characteristics of the reproductive organs, the role of each specific organ, and the derangements that affect the function and the well being of the reproductive system.

Human Growth and Development. A survey of principal cognitive, social and behavioral processes that operate across the life span.

Physiology

This course is given in the faculties of medicine, medical sciences, nursing and medical laboratory technology (MLT) in the following universities: American University of Beirut (AUB), Beirut Arab University (BAU) and the Lebanese University.

At AUB, this course covers in part the physiology of reproduction, and its importance in maintaining reproductive health. Physiological processes that govern puberty, menstruation, ovulation and reproduction are discussed. Nursing students are exposed to physiological processes governing reproductive health by learning about hormonal function.

At LU, the hormonal milieu of the human body is addressed in-depth in this course. In part, hypothalamic-ovarian function, menstrual cycle, and ovulation are extensively studied in terms of their contribution to women's reproductive functions and well being as well as in terms of disease situations (menstrual irregularities and infertility...).

At UOB, nursing physiology of reproduction represents a good section of this course. This section introduces students to basic material on all the components of reproduction and the factors affecting it. Hypothalamic, pituitary, and ovarian functions are discussed as processes leading to fertility (menstruation, menopause).

Anatomy and Physiology

This course is given in the faculties of medical sciences, Midwifery and Medico-social Assistance in the Lebanese University.

Students are exposed in this course to the anatomy of the various organs of the reproductive systems, as well as to certain physiological phenomena that governs reproductive system. They study the genital systems including their anatomy, physiology, embryology, and pathology of both the female and male's.

Embryology

At LU, faculty of medical sciences, the basics of the reproductive cycle and the ovarian functions during fetal life are covered. In addition, essential anatomical setup for adequate reproductive functions is described with the possible occurrence of congenital malformation that might have ill effects on future fertility and childbearing.

Microbiology

This course is given at various faculties of various universities: LU school of Nursing, American University of Beirut School of Nursing and Medical Laboratory Technology program, University of Balamand, Public Health and Development Sciences, and Beirut Arab University Faculty of Medicine.

In part, this course focuses on the infectious diseases, including STI (cause, clinical behavior, and ill effects). It also includes study on morphology and physiology of HIV.

Bacteriology and Microbiology

At LU the Faculty of Medical Sciences, this course includes epidemiology of infectious diseases, and bacterial infections affecting the genital tract (STI).

At UOB, the MLT program covers the characteristics of bacteria of medical importance. It focuses on the clinical implication of these microorganisms in infectious disease including their causation of STI and the means available to diagnose them. The students are also exposed to the ill-health consequences of STI.

Virology

Given at LU the Faculty of Medical Sciences and Beirut Arab University Faculty of Medicine, it covers viral infections, including STD's and AIDS.

Obstetrics and Gynecology

This course is given at the Lebanese university faculty of Medical Sciences, Nursing and Midwifery, at Saint Joseph University Midwifery and Beirut Arab University Faculty of Medicine.

At LU, this course includes the bulk of the material that makes up reproductive health issues and concepts. Topics of the components of safe motherhood, ovulation, infertility, family planning, reproductive morbidity, menopause, and STI's are covered. Adolescent gynecological and reproductive health topics are also dealt with in chapters on puberty, STI, contraception, and menstrual irregularities. In addition, this course includes topics on infertility work up, therapeutic abortion, and sterilization. It also covers all the medical processes affecting the reproductive system. There seems to be insufficient teaching in topics of antenatal care, high-risk pregnancy, and urogynecology. In the Midwifery, this course also addresses psychology of pregnancy Introduction to obstetrical maneuvers and surgical interventions Study of gynecological diseases and cancers Students are enabled with skills on the use of actual methods and techniques in pregnancy, childbirth, and gynecology. In the clinical and para-clinical study of pregnancy, normal vaginal delivery, presentations, induction of labor, and complications of labor and delivery are covered.

At Saint Joseph University, these courses cover the phenomenon of reproduction, physiology of pregnancy, delivery and postpartum period. Pathophysiology of infectious diseases, surgical and obstetrical conditions during pregnancy, labor, delivery, and postpartum are all discussed, with clinical applications. In addition, surveillance of mother care through different stages and different gynecological morbidity are studied. In these courses, means and methods to prepare (psycho-prophylactic) and educate the mother about pregnancy and postpartum are taught. Students are also introduced to anesthesia and analgesia in obstetrics.

Clinical Clerkship in Ob/Gyn

A 2-month clerkship offered to third year medical students at AUB Faculty of Medicine consisting of daily seminars in normal and abnormal Obstetrics and Gynecology. It covers clinically and in seminars, topics in safe motherhood, reproductive medicine, family planning, appropriate management and treatment of infertility, STI's treatment and prevention, and reproductive morbidity. Students are to lesser degree exposed to IEC issues, and skills of patient-doctor communication.

Post MD Training (Straight Internship in Ob/Gyn)

Given at AUB Faculty of Medicine, it includes mainly rotations in the Department of Obstetrics and Gynecology covering all aspects of the specialty; safe motherhood (preconception counseling, antenatal care, labor and delivery, postpartum care, and post-abortion care), family planning, reproductive morbidity, gynecological cancers, menopause, treatment of infertility, general and urogynecology. To a certain extent, residents are trained to patient-doctor communication, patient education and provision of information. There are also rotations in the nursery exposing residents to health care of the newborn as a vital part of Maternal and Child Health (MCH). Interns and residents are supposed to prepare resident education conferences on topics pertaining to the rotation.

Post MD Training (Mixed Internship)

Given at AUB Faculty of Medicine, it includes 2 month training in Ob/Gyn where topics are covered at greater depth clinically, as in the clinical clerkship.

Pediatrics

This course is offered at LU medical sciences, Nursing and Midwifery. Topics on neonatology, prematurity, pediatric consequences of a traumatic delivery, and the care of the newborn and child in wellness and disease are covered.

At Saint Joseph University Midwifery, the course covers physical maturation, development of infant to adolescence, and newborn and child care until adolescence, including prenatal period.

Clinical clerkships in Pediatrics

At AUB Faculty of Medicine, this course introduces students to essentials of newborn and child care. It consists of seminars and daily work in the hospital and Outpatient Department.

Gerontology and Geriatrics

Given at LU Nursing, it includes concepts relative to aging, consequent bio-psycho-social changes and an approach and evaluation of aging persons.

Internal Medicine

This is an extensive course, at AUB Faculty of Medicine, where all principles of internal medicine are discussed. Some of the relevant topics to RH concept are included like, STI, HIV, AIDS, besides reproduction and menopause.

Endocrinology

Given at AUB Faculty of Medicine. It covers reproductive cycles, ovulation, menstruation, infertility, and other reproductive health related topics clinically and by seminars.

Fellowship in Endocrinology

Given at AUB Faculty of Medicine. Fellows in this program are trained to approach clinical situations that at times are related to reproductive health matters (infertility, hormonal imbalance, human development, problems of menopause). They are also responsible for expanding their theoretical knowledge in these topics.

Specialty in Family Medicine

In this program, medical residents at AUB Faculty of Medicine are exposed to reproductive health matters including, safe motherhood, general gynecology, ethics, counseling skills, and issues of patient education and information provision.

Community Medicine

At Beirut Arab University Community Medicine Division, there are set of courses offered in different disciplines that take RH concepts into consideration, as it starts from birth to adolescence, reproductive age until old age. These topics are:

- ☐ Health Problems of Children from neonate, infant, preschool, school age, youth, and the factors behind these problems (ecological and biological), and the health care available to prevent these problems.
- ☐ Females in reproductive age, common health problems, and contributing factors. This is a general overview of women's health in the reproductive age. It describes the most common reproductive morbidity (RTI) and the factors leading to their occurrence.
- ☐ Preventive care for females in reproductive period.
- ☐ Special care: pre-marital females, antenatal care, natal care and postnatal care.
- ☐ Primary Health Care.
- ☐ Family Planning: Introduction to contraceptives and birth spacing methods.
- ☐ Demography: Population size, structure and distribution.
- ☐ STI.
- ☐ Pregnancy Problems: Issues contributing to safe motherhood.
- ☐ Health Education (applied course).
- ☐ Communication Skills.
- ☐ Services for occupational health: Working mothers, breast-feeding.
- ☐ Nutrition: Basic, special nutrition for pregnant mothers and vulnerable groups (neonates and infants).
- ☐ Biostatistics and Epidemiolog.
- ☐ Evaluation on Programs.

Post-M.D. Training

Medical residents in the Obstetrics and Gynecology specialty at LU Medical Sciences are trained over 5 years, in various practical disciplines of the specialty in various assigned hospitals. Residents are trained in delivery, clinical and surgical skills.

Three-year residency program

Residents at AUB Faculty of Medicine take increased responsibilities in clinical work and Outpatient services, in addition to serious involvement in ward rounds, chairperson's round, medical chart review, specialty conference, journal club, grand rounds, and other activities. All these activities address directly or indirectly issues in RH, and they empower residents and increase their skills and competence, which reflect on service quality and delivery.

Nursing care

This course is given at AUB School of Nursing, where clinical application of the knowledge are done, focusing on the nursing process to enable students to provide acute care and promotes reproductive health.

Practicum in Nursing

Nursing Students at University of Balamand gain hands-on experience in transferring their skills and know-how to the clients in their own milieu. This is an example of bringing theory into practice. It also provides details about promotion and screening.

Nursing care of children

Given at AUB School of Nursing. Based on the knowledge of normal growth and development, this course focuses on the individual within the family setting from infancy

through adolescence. Coverage includes mainly primary care and could extend to secondary and tertiary care. Hence students will be able to function effectively in the health care delivery system.

Maternal-Child Nursing

Given at AUB School of Nursing, this course focuses on human development from conception to birth, following through infancy to child-hood. It examines the behavior of mothers and their families throughout the childbearing experience with emphasis on preventive health care and its delivery in the community. In this regard, the course stresses education and services for prenatal care, safe delivery and postnatal care, especially breast-feeding. It also tackles infant and women's health care in consistent with the components of reproductive rights and reproductive health stated by ICPD programme of action in paragraph 7.6.

Nursing care of Perinatal Family

Given at UOB Nursing Program, this course deals with the reproductive family and women's health throughout the life span. The student focuses on physical, psychological and emotional needs of mother, infant and family. The process involves health promotion, maintenance and restoration of family health.

Nursing care of the Expectant Family

Given at AUB School of Nursing, this course focuses on the reproductive health of the family, from conception to the neonatal period. In its practical component, the course focuses on women in the childbearing cycle, newborns and families as clients in the hospital and outpatient service setting. Theoretical content stresses the nurse's role in reproductive health and reproductive risk.

Nursing care of Adults I-II

This course is given at AUB School of Nursing. Based on the framework of health status, it then looks into several bodily dysfunctions among which are the metabolic and the endocrine processes, showing how can they disrupt processes related to reproductive health. Students are provided an opportunity to have a clinical application of the knowledge of concepts stated in these courses.

Nursing in the Community

Given at UOB Nursing Program, it provides students with the opportunity to study nursing in different setups, outside the hospital. It gives the opportunity to learn about the health and psychosocial needs of individuals, families and communities on the full health trajectory, including reproductive health.

Community Health Nursing

Given at AUB School of Nursing, this course provides knowledge in the broad area of the field of nursing, public health, and primary health care. The levels of prime concern are the family and its individual members as well as the community, through maintenance and promotion of high levels of health and well being and prevention of illness and disability.

Mental Health and Psychiatric Nursing

This course is given at AUB School of Nursing. The holistic philosophy of clients as bio-psycho-social entities is stressed in both mental health and illness. Opportunities are provided to students to work collaboratively with multi-disciplinary health teams to assess plan and implement relevant nursing interventions.

Contraception- Birth Control

This is a survey of the different methods of contraception, and the role of mid-wife given at LU Midwifery.

Preparations for Pregnancy

At LU Midwifery, this course covers psychological preparation and education of the couple about pregnancy and what to expect Group dynamics and communication. It also teaches about prevention of postpartum problems and means to cope with tragic outcomes.

Maternal and Infant Protection

This course is taught at LU Department of Medico-social Assistance.

Reproduction- Sterility

At LU Midwifery, students are exposed to physiological conditions of reproduction, sterile couple. The course also focuses on ethical aspects of sterility.

Psychology and Intervention of the Midwife in Familial Milieu

Given at USJ Midwifery Program where family dynamics, psychosocial approach to couple: marriage and psychological maturity, integration of new socio-cultural norms, adapting to parental role, and dynamic infant-parent interaction are discussed. Effects on family issues on the individual, and impact of health problems on the family are also covered.

Public Health I and II

At LU Nursing, Midwifery, and Department of Medico-social Assistance, this course covers health education, social dilemmas and their relation to health. School health, epidemiology, and health economics are also discussed.

Clerkship in Preventive Medicine and Public Health

This course is given at AUB Faculty of Medicine.

Epidemiology and Social and Preventive Medicine

At LU medical sciences, students are exposed to the causes and the prevention of infectious diseases including STI. They are also exposed to components of health care and health manpower. At AUB Faculty of Medicine, this course provides an integrated approach stressing psychological and sociological aspects of medicine.

Epidemiology

At USJ Midwifery Program, this is an introduction of the principal methods of epidemiology, with application on health situations in Lebanon and the region.

At AUB Faculty of Health Sciences, this course covers epidemiological principles and methods. Distribution and causation of diseases and their public health importance are illustrated using specific examples of infectious and non-infectious diseases. At AUB Faculty of Medicine, it consists of lectures and practical experience on the descriptive and analytic methods involved in the study of disease behavior and the determinants of that behavior in human population. It illustrates the role of epidemiology in disease prevention and control.

At UOB Program of Public Health and Development Sciences, this course addresses the different concepts and methodologies of the study epidemiology utilized in the field of public health.

Epidemiology of Birth Defects

Given at AUB Faculty of Health Sciences, this course aims at introducing students to epidemiological methods in genetic diseases and birth defects.

Biostatistics

At LU Nursing and Department of Medico-social Assistance, this is an introduction to statistical methods and its use in health settings. While, at AUB Faculty of Health Sciences, the course provides description of all statistical indicators, sources of vital and health statistics, rates, mortality measures, standardization, the life table techniques, fertility measures and health statistics. Further advanced topics are also presented.

Principles of Epidemiology and Biostatistics

At UOB Nursing and Public Health and Development Sciences Programs, this course covers methods of organizing and summarizing data, the normal distribution, methods of inference: estimation, testing hypotheses, analysis of variance, and measures and tests of association. In addition, this course includes basic principles of epidemiology for B.S. students. Important epidemiological principles and methods are covered. Distribution and causation of disease and their public importance are illustrated, including those related to the reproductive system and reproductive health.

Demography

Given at LU Institute of Social Sciences, this is an introduction to essentials of Demography, and its indicators of birth, fertility, mortality, and population trends. It studies population growth and the related indicators: woman and work, obstacles and restrictions and its relation to fertility.

Research in Health Care Sciences

Given at The MLT program of the UOB, the course emphasis is on problem identification, hypothesis development, survey planning and design, methodology of data collection and analysis, and result communication. Issues of funding and implementation of research policies and agendas at institute, national and international levels are addressed. State-of-art research topics are discussed in seminars, tutorials and journal clubs.

Kinesiology and Health

This course is given at UOB Public Health and Development Sciences.

Infectious diseases and AIDS

At LU Nursing, students are exposed to general notions of STI and AIDS occurrence and prevention. At AUB Faculty of Health Sciences, the course focuses on infectious diseases that are common and of importance in developing countries.

Lifestyle Illnesses and Diseases

This course is given at the Public Health and Development Sciences Program of the UOB.

Socio-cultural Factors in Health and Illness

At AUB Faculty of Health Sciences, students are introduced to social and behavioral theories and concepts that apply to the analysis of health-related behaviors. Emphasis is placed on core concepts relating to health and illness, and on the main models relating to the study of health behavior at the personal, familial, institutional and cultural levels.

Theories and Methods of Health Education

At AUB Faculty of Health Sciences, this course introduces students to the major theories of health behavior and health education. Emphasis is placed on the application of health behavior theories to health promotion and education practice. Practical skills are provided for students for planning, implementing, and evaluating health education teaching-learning activities in schools, communities, and patient-care settings. At AUB Division of Education, this course covers principles and practice with applications to school community and patient-care settings including determinants of health behavior, behavioral diagnosis and assessment of health actions, health behavior change, interpersonal and communication skills, and instructional health education materials. It also discusses practical skills for planning, implementing, and evaluating health education teaching-learning activities in schools, communities, and patient-care settings with application into actual field experience.

Determinants of Health Behavior

At AUB Faculty of Health Sciences, this course introduces students to sociological perspectives, which are necessary to understand the influence of the social environment on people's health and health behavior. It discusses sociological interpretations of people's lives

and how these affect their understanding of health and illness. Social aspects, such as culture, gender, class, family and community influences as well as concepts of health and illness are discussed. Through analytical and critical thinking, major concepts and theories guiding public health and health promotion are reconsidered within a sociological framework and dealt with in a Lebanese context. It dwells on means to understand social structure and its link to health and health behavior, stressing the issue of **gender and health, and IEC.**

Practicum in Health Behavior and Education

Given at AUB Faculty of Health Sciences, the students are given the opportunity to practice their skills in program design and implementation in selected settings (schools, community, and health care institution).

Health Promotion

This course is given at the Public Health and Development Sciences Program of the UOB. It dwells on the various methods used in health promotion, which quietly correlates with information, education, and communication skills.

Effective Communication and Group Process in Health Profession

Given at AUB Faculty of Health Sciences, this course introduces students to the fundamentals of health communication. It overviews the functions of communication in health followed by applications.

Interactive Social Support Systems and its Effect on Health and Disease Behavior of the Individual

Given at AUB Faculty of Health Sciences, it reviews and critically analyses theoretical aspects of how family changes affect community health.

Mother and Child Health/Family Planning

Given at AUB Faculty of Health Sciences, it covers data sources and indicators. Several topics in relation to RH issues are discussed: healthy pregnancy and delivery, maternal and child health service, intended and unintended pregnancies, maternal, infant and child morbidity and mortality, adolescent sexuality and fertility, contraceptive methods, adoption and use. It also addresses rationale, scope, design, and evaluation of family planning programs and discusses provision of reproductive health services.

Health Awareness

Given at AUB Faculty of Health Sciences, it aims at increasing understanding of the nature and definition of health and to the factors that relate to healthy living. It tackles common health problems with a main focus on the components of reproductive as they relate to our well being. The course covers issues like prenatal care, safe delivery and postnatal care, approach to and management of infertility, abortion, post abortion care, STI, human sexuality, adolescent sexual and reproductive health, and others in a comprehensive manner within the scope of RH concept according to the ICPD definitions.

Family Health

This course is given at USJ Midwifery Program, about health education, primary health care, sexual education, couple infertility, and different methods for birth spacing.

At the UOB Programs of Public Health and Development Sciences, the course leads to the understanding of how family dynamics affect community health. It also casts light on the developmental stages and needs of the growing child, as well as maternal and child health at various stages, including vaccination and family planning.

Community Health

Given at the UOB Public Health and Development Sciences Program, this course discusses factors affecting health of the rural and urban communities in developing and developed countries.

Community Health Education and Mobilization

Given at the UOB Programs of Nursing and Public Health and Development Sciences, this course introduces the students to principles and practice of health education with emphasis on determinants of health behavior. It addresses the importance of community mobilization as a means of generating resources and ensuring commitment to change.

Health Determinants in Population

Given at AUB Faculty of Health Sciences, this course addresses the wider framework in health of population groups, with special concern for Arab societies. It introduces basic sociological theories of development and discusses elements of the socio-cultural context as they impact health, and gives special focus to issues of child and reproductive health within a family context.

Population and Health

Given at AUB Faculty of Health Sciences, this course covers demographic measures of health levels, health and fecundity in different developmental contexts, determinants of primary and secondary sterility, frequencies of pregnancies and health of mothers and children, health education and family health standards and mother and child health programs.

Population and Development

Given at AUB Faculty of Health Sciences, this course describes trends and prospects, determinants and consequences of fertility, mortality, and population growth. In addition, Linkages with development and health, population and development in Arab countries, social and economic aspects of fertility, Gender, family, and household structures, migration, population distribution and development and aging are discussed.

Seminars on Contemporary Population Issues

The subject of this seminar given at AUB Faculty of Health Sciences varies from year to another to reflect major regional and global population concerns.

Sexual Education

Given at LU Department of Medico-social Assistance, it is an introduction to sexuality, sexual evolution, sexual acts with age, and role of parents in sex education and sex problems.

Sexology

This course is given at LU Midwifery and Department of Medico-social Assistance. It is an introduction to sexuality; the sexual life of the grown ups and forms of help in this regard. Normal sexuality of infant, adolescence, and pregnant women are all addressed in addition to problems of sexual dysfunction.

Introduction to Psychology

Given at LU medical sciences, it is a study of medical psychology, psychoanalysis, and development of personality from birth to adolescence to adulthood. It also studies psychosomatic illnesses and patient-doctor communication.

Psychology

Given at LU Nursing and Midwifery, these courses are introduction to certain psychological principles related to the patient in a health care setting, and the way to understand it and deal with it. They are also introduction to general human psychology with focus on therapeutic aspects and to the psychology of the family, couple, pregnant women, and the postpartum period.

Psychology of the Infant

Given at LU Midwifery, it covers aspects of infant psychology, human communication, and psychology through reproductive age.

Social Psychology

This course is given at AUB Social and Behavioral Sciences and LU Institute of Social Sciences. It is psychoanalysis in terms of gender roles and its relation to the social upbringing and focuses on the woman's cause from woman and man perspectives.

Psychology of Development

This course is given at LU Department of Medico-social Assistance, AUB School of Nursing, Division of Education and Social and Behavioral Sciences. At LU it is an introduction to psychology of personality at different stages of life till death.

At AUB School of Nursing, this is a course on human growth and development. It emphasizes the environmental determinants of development from the prenatal period. Content includes discussion of factors that affect development at various age levels, theories of development and relationships between the physical, cognitive, emotional, and growth and behaviors. In the Division of Education, the course covers growth and development of the child and adolescent; and problems of learning and adjustment as they relate to counseling. Finally at Social and Behavioral Sciences, this course focuses on the study of behavior of the individual in relation to social stimulus situations from before birth to adulthood, and how they affect behavior, including health-seeking behavior.

Psychology of Family Life

Given at LU Department of Medico-social Assistance, it addresses the choice of partner, the marital couple, its role and functions, issues of masculinity and femininity and the triangular relationships and fragilities that affect marital life.

Family and Kinship

This course is taught at AUB Social and Behavioral Sciences Department. It is about relationships between kinship systems and family organization; the interplay between marriage and divorce, family and household; comparative analysis of family institutions, roles and statuses; the family and other social institutions; and economy, politics, and religion.

Family Life

This course is given at LU Psychology. It is about family: its evolution, forms, marriage dynamics, childbirth and offspring identity, family relations, and family roles. It also discusses family intervention means.

Emotional Life

Given at LU Psychology, this is an introduction to essentials of emotions dynamics and emotional well being.

Dynamics of Human Relations

This course is given at Saint Joseph University Midwifery.

Mass Media and Society

This course examines the role of mass media in the society as applied in the Middle East area and it is given at AUB Social and Behavioral Sciences.

Communication Theory

Given at AUB Social and Behavioral Sciences, in part this course includes practical exercises and fieldwork on issues of communication.

Intercultural Communication

Given at AUB Social and Behavioral Sciences, this is a study of the cultural dimension of the intercultural processes. It is also an analysis of those aspects of culture, which determines the differences, encountered in intercultural communication: value and value systems, beliefs, modes of behavior, and patterns of thinking.

Seminars in Communication

It is given at AUB Social and Behavioral Sciences Department and it is open for selected topics on the role of communication in society and national development.

Guidance and Counseling

Given at AUB Division of Education, it is an introduction to the field of guidance and counseling. The role of the counselor in school and community settings is emphasized.

Theories and field experience in Guidance and Counseling

This is a study of supervised counseling experience in the schools settings, observing, interviewing, and testing as needed for IEC purposes to meet pupil needs given at AUB Division of Education.

Counseling and Psychotherapy

Given at AUB Social and Behavioral Sciences Department, it is about theories and practices of psychological counseling.

Psychopathology and Psychiatry

Given at LU medical sciences, it includes sections on infant psychology and psychology of the pregnant women, and psychoanalysis.

Sociology

This course is given at LU medical sciences and Nursing, at AUB Faculty of Health Sciences and at Balamand University Nursing and Public Health and Development Sciences.

At LU medical sciences, this course is about development of sociology, socialization, delinquency, social role and status, and social regulation. At LU Nursing, it is an introduction to methods of individual socialization.

At AUB it is an introduction to the study of Society.

At UOB it provides students with the basic concepts in social sciences, and helps them understand the different social manifestations, and their interactive relations, as an entry port to understand the characteristics of the society they are living in. It also trains students on the use of social research methods and on carrying a field survey.

Biology and Sociology of Behavior

This course is given at LU Midwifery.

Social Intervention

Given at LU Department of Medico-social Assistance, it is an introduction to social means of interventions at the level of the individual and the family.

Social Medicine

Given at LU Department of Medico-social Assistance.

Ethnology

This course is given at LU Psychology and tackles the differences based on age and gender, and other cultural and traditional issues.

Anthropology

Given at the UOB Public Health and Development Sciences Program, this course is about studying human being with respect to their nature, origin, physical characteristics, classification, distribution, relationship of races, and social, cultural and environmental relations. Issues of gender within a socio-cultural setting are also discussed.

V. Discussion

The curricula of various programs reviewed in this document are set down according to several criteria. These criteria are related to factors like: University policy, university affiliation, system of education, field of specialty, research, and others. These curricula, except in few situations, are not specifically focused on RH as a concept according as per ICPD, though they cover almost all the topics that are essentially related to issues of Women's Health, Gender, IEC, Primary Health Care, Youth, Family and community concerns. These topics are at the core of RH concepts.

V.1. Type, Source and Content of Reproductive Health Concepts

The type of material present in the above-mentioned curricula includes almost all aspects of Reproductive Health definition and concept. Again, the material might be presented as part of a course, or under a wider subject, or even an autonomous topic, depending on the many academic factors.

Adolescents

This issue is discussed in terms of clinical, socio-cultural and psychological perspectives. In the curricula of medical sciences (medicine, nursing, midwifery), the subject of adolescence is covered through sessions on growth, development, and puberty, and the contributing clinical factors to normal and abnormal conditions, that affect the reproductive system as well. Topics on morbidity related to reproductive behavior, risk-taking behaviors, and components of sexual health and its consequences are all addressed as they relate to adolescent well being.

Safe Motherhood

This is a general term used in this document to include the various topics presented at different academic settings and levels that will ultimately impact Safe Motherhood. In all the medical sciences programs, and at the pre-clinical stage or basic science stage, anatomical and physiological concepts pertaining indirectly to safe motherhood, students learn about reproductive organs and their anatomical correlations, in addition, to the physiological principles that are all vital to pregnancy and childbirth. At the clinical, training, and practical levels, the concept of safe motherhood is studied in an academic continuum in 1-2 courses on Obstetrics or Mother and Child Health Care. Here students are exposed to normal pregnancy and childbirth and the essential components needed to achieve it. This is followed by all the high risk situations that disrupt or endanger this safety, like medical problems of pregnancy, lack of antenatal and delivery care, complications of labor and delivery, abortions, and others. In addition, students are provided with competent skills about safe antenatal care and delivery, operative delivery procedures and their complications. Postpartum care is also emphasized as to its importance in reducing the potential dangers like, bleeding, infections, and depression; problems that disrupt safe motherhood drastically.

Gynecological Morbidity

The bulk of this material is present in the curricula of medical schools, and to a lesser extent in the other medical disciplines (Nursing, Midwifery). It looks into all sorts and types of ailments that affect the reproductive system: general gynecological problems, infectious conditions, cancer, menopause, related psychological disorders, and uro-gynecological situations. At the basic science level, basic physiological principles guiding the proper function and well being of the reproductive system are taught, in addition to extensive course on organ disease (pathology) studying the basis of diseases, including gynecological ones. At the clinical and practical levels, medical students and residents deal with all the gynecological morbidity in specialized clinics within the medical centers (oncology, uro-gynecology, STI, and family planning clinic...).

Newborn and Child Care

This is covered in the curricula of medical and paramedical programs. It is also present in the social science fields.

Family planning

Basic material on reproduction, hormonal functions and anatomical and physiological principles, constitute a solid ground for learning about family planning methods and how they work. Later, students are exposed to various hormonal, barrier and surgical methods in family planning, and how they function. This is mainly restricted to medical and midwifery students, and nursing students to a lesser extent.

Infertility

The degree of exposure to this topic again varies with specialty and year of study. Basically, students in all medical and paramedical specialties are exposed to basic principles governing the physiological and hormonal processes that ensure reproduction on the side of males and females. However, the study of all derangement's leading to infertility problems are mainly reserved to medical students, and at a more sophisticated levels to residents in Ob/Gyn. Specialty clinics are available for medical students and residents at the clinical level to approach and manage couples suffering from infertility, in addition to performing all the needed procedures. In other disciplines, the problem of infertility is addressed from socio-cultural and anthropological perspectives.

Sexually Transmitted Infections

This topic is addressed in several courses and in many ways. In the courses of Microbiology, pathology, and infectious diseases, all students in medical and paramedical domains are exposed to STI material. At higher levels, this material is displayed more in-depth, especially in clinical programs and medical specialties (Internal Medicine, Infectious Diseases, Ob/Gyn, and Dermatology).

Menopause

Presented as one of the major women's health problems, and is addressed in all medical and paramedical specialties, at different levels.

Gender

Although present in medical and paramedical curricula, but it is mainly addressed in social sciences domains.

Information, Education, and Communication

All revised curricula contain some sort of material that deals with issues of Information Provision, Patient Education, and Communication at the level of Health Care Provider (HCP).

Those types of topics covered are very relevant to the ICPD programme of action as per chapter VII, paragraph 7.6 addressing RH care in the context of PHC.

The source of RH in the content of any curriculum information, as mentioned previously, follows certain rules and policies that are specific to each university (Table II).

Table II. RH-related Topics in one University Curricula (AUB example)

AUB FAC. COURSES	Medical School	Faculty of Health Sciences	School of Nursing	Faculty of Arts& Sciences
Safe motherhood	XXX	X	X X	
Repro. Morbidity	XX	X	X	
Infertility	XX	X	X	
Family Planning	XX	X	X	
Sexual health	XX	X	X	
IEC		XX	X	X
Gender		XX	X	X
STI	XX	X	X	X

X refers to the load of the material

Some of the curricula are influenced by certain modules present in French, American, and Arabic universities and programs, and all of them are formed initially long before the appearance of RH as a concept. The main source of all the material in these curricula is the scientifically solid textbooks, journals, and articles that are based on research and are evidence-based. With respect to topics related to RH, they also come from the aforementioned sources. Some of these programs may not have been updated in a way to cope with new concepts in women's health and health services pertaining to RH concept evolution as per ICPD definition. This is related to the responsible body being unaware or neutral about that specific RH dictum. This very much true of the case of medical school and social science disciplines, while it is more promising in the case of midwifery and nursing programs in USJ and UL. In those cases, the people in charge are continuously aware of the evolving RH concept, and the RH material that exists are based on the recommendation of International Conference of Midwife, Federation International of Gynecologist and Obstetrician, International Planned Parenthood Federation (IPPF), and others.

The content of RH information in the majority of the reviewed curricula include medical, paramedical, and social science materials that cover topics of certain relevance to RH concepts. These topics might even stretch out to encompass substances that can contribute to the overall goals of RH. For each course, the time allocated, the expected learnt skills, and depth and load of its material depends on the area of study and the formation of specialty.

Looking into the various components of RH as per ICPD and as appearing in different curricula, it is clearly noticed that the content of these RH-related topics vary: In the discipline of Medicine, each and every topic is studied extensively and in-depth in the different courses mentioned in previous sections of this review. Series of lectures, conferences, and rounds are prepared that focus on these topics.

The references are present in world known textbooks, prestigious journals, and in certain cases IPPF recommendations. This is mainly at the level of medical students, while at the level of medical residents, especially those in Obstetrics and Gynecology, Infectious Diseases, Family Medicine, Pediatrics and Dermatology are more concentrating within these fields on the RH-related topics. Topics like STI and AIDS are studied in details with clinical applications and research. Similarly, in Ob/Gyn, all issues of woman's reproductive health from birth to

death are thoroughly worked upon in theory, clinically, periodical seminars, literature review, and research. However, in these fields students are too immersed in the basic and clinical learning and education, and this had affected their exposure to other topics of IEC, counseling, and gender sensitivity. These topics are not properly addressed or given enough attention.

Regarding midwifery students, being the first caregivers to females in pregnancy and childbirth mainly and in cases of birth control, their curriculum is very opulent in number and in content of topics. These topics address the mother during various stages from pre-pregnancy to postpartum and family planning. They also dwell amply on the psychological well being of the woman within her couple and family life. There is plenty of exposure to issues of patient education, information provision, and counseling. None the less, the content of other RH-related topics on reproductive morbidity and cancer, infertility work up, and high risk pregnancy is very minimal, as these topics are not part of the formation of the mid-wife.

In case of Nursing, the content of RH-related material is more focused on the expectant mother, perinatal family, and maternal-child nursing, in addition to basic principles governing reproductive health, all are needed to assure safe motherhood and women and family well being. Also the role of the nurse in IEC is addressed in the content of nursing curriculum.

In other disciplines, certain aspects of RH-related topics are addressed. In Demography and Population programs, content is more focused on certain population trends related to fertility, morbidity, and mortality, with the effect of socio-cultural factors in this regard. Most RH issues are addressed in a context of population indicators, while the other RH issues of IEC, gender, health promotion, high risk behavior are extensively present and in several courses in the area of Health and Social Sciences.

V.2. Place of Reproductive Health in the Curricula

In the majority of the curricula, the RH as a concept is not present. The perspective and the focus of the available curricula do not include the motif and elocution of RH as defined by the ICPD. Nevertheless, most of the subjects and themes are present as separate academic entities dealt with according to major and year of study. In fact, all RH material was always present in all relevant programs, but these programs did not accompany the continuously evolving concept of RH.

In specific, there are cases where a block course on RH is available like the case of the mid-wife and nursing programs in the UL and USJ, where RH is introduced as a concept and developed and defined throughout the course explaining its contents and details. Again, in another university, BAU, a course on RH is being taught that includes all the defined RH components as per ICPD.

At other universities, RH material appears to be spread through several specific courses, and with various intensity depending on the specialty, and at times several RH topics are so interrelated to constitute a block within a course, or a separate course or training module (post M.D. training, and some medical courses). For example in block courses like OB/Gyn, or reproductive medicine, topics are incorporated and interrelated, versus other nursing, population, and Public health programmes that deal with separate topics, making it specific to the curricula and courses of each school or faculty (Table III).

Table III. RH-related Topics in one Faculty Curricula (AUB-Medical School)

AUB FAC. COURSES	Anatomy	Physiology	Microbiology	Pathology	Internal Medicine	Ob/ Gyn	Social preventive medicine	Epidemiology and Biostatistics	Public Health
Safe motherhood						X	X	X	X
STD/HIV			X	X	X	X	X	X	X
FP						X	X	X	X
Infertility					X	X	X	X	X
Repro. Morbid.			X	X	X	X	X	X	X
Sexual health			X			X	X		X
Gender						X			X
IEC									X

V.3. Efforts for Updating and Standardizing Reproductive Health Information in the Curricula

The national sub-programme on RH has emphasized the importance of working towards standardizing RH material in the form of strategy, guidelines and protocols. Remarkable efforts are spent in the 2 programs of midwifery and nursing in both the LU and USJ. The midwifery association in Lebanon, part of the international committee continuously recommends modifications and updates, on a yearly basis, as per International Conference of Midwifery (ICM), Federation International of Gynecologists and Obstetricians (FIGO), IPPF, and other international bodies recommendations. For example, following the ICM in 1999 in Manila, Philippines, research on RH was recommended in all programs. These recommendations and updates are introduced in two ways: at the level of the courses, and at the level of training, which includes teachers and midwives, and follow up training later.

At the level of AUB, the FHS housing the RH national group is providing continuous updated resources that infiltrate the curricula in terms of seminars, elective courses, or part of assignment for under and graduate students. The RH group works in the realm of ICPD recommendations.

At the level of UOB, the FHS although keen on exposing the students to all topics that are under RH concept, is willing to negotiate and get exposed to the evolving RH concept, and be ready to integrate it in the context of developing the curricula and benefiting the students and the community. Later any sort of material assistance can follow the technical one.

The LU, being the national university, is subjected to certain political and administrative policies that make procedures of renewal lengthy and slow. After all, the responsible are open to discuss any potential addition to the curricula, training to teachers, students that will empower them and assist in more exposure and training.

V.4. Reproductive Health-Related Application of Theory

In both clinical and social setting, and depending on the formation of each and every specialty, the RH theoretical topics are applied in several patterns: clinical, post M.D. training,

fieldwork, workshops, and research projects. It emphasizes technical, clinical, communication, and analytical skills. It also adds to the integrational concept of looking at women's health as a whole. These activities are scheduled by assignments and credits.

Family Planning Clinics

In a hospital and a primary health care setting, medical students and residents, student midwives and nurses are trained to approach couple seeking birth-spacing, and to provide those couples with adequate counseling on the various methods available, the choices they have, and the possible health effects. Also, students of public health, medical-social assistance are trained on counseling skills in these clinics. This application lacks proper client-HCP communication where all methods are discussed and enough time is spent with the client to make sure providing all the needs.

Sexually Transmitted Infection Clinic

Exposure to various STI's, causation, diagnosis, and means of treatment are done. Students learn how to approach these cases and how to counsel them in a delicate way. Providers need to be more trained on issues of sexuality and sexual health to be able to counsel their clients or to refer them to more specialized care.

Infertility Clinic

Again, here students encounter all sorts of infertility cases, and face all the psychological settings of the couple. Besides the adequate technical training, students scarcely receive competent counseling techniques to help infertile couple.

Reproductive Morbidity Clinic

including separate oncology clinics, RTI clinics.

Safe Motherhood Clinic

it includes the regular antenatal clinic and the high-risk clinic, professionally supervised deliveries, and post-abortion care.

Specialized Adolescent Clinics

This type of clinics is absent, due to the surrounding sociocultural circumstances in the community. However, the existing PHC centers and private clinics receive few cases in the adolescent age groups for different types of complaints. This situation can be encouraged within certain measures to allow more utilization of these services.

Sexual Health Clinic

This service does not exist as it stands. Mostly, it is part of the gynecology clinic, or infertility services.

VI. Limitations

This task of curricula review represents a major challenge as the various existing curricula belong to different private universities that have their own missions and by-laws. Though all the revised curricula have been described regarding RH content, however in-depth assessment of the content and presentation of every related course was not done. This is because of the limited time and the scope of the review.

The meeting held was very informative, yet further meeting with course instructors and students were not possible to hold. The degree of response and interaction with the academicians met depended to a certain extent on their exposure and understanding of the concept of RH.

VII. Recommendations

Effective curricula share the following characteristics: being research-based and theory-driven, include basic, accurate information that is developmentally appropriate, allows students to model and practice relevant social skills, address social and media influence on behaviors, strengthen individual values and group norms that support health-enhancing behaviors, of sufficient duration to allow students to gain the needed knowledge and skills, include teacher training that enhances effectiveness (1).

Implementation and maintenance of a curriculum require a variety of resources such as staff time, money, and logistical support. There is also a need to integrate comprehensive health education with other components of a coordinated health program. Effective communication with the health services, health promotion sites, physical education services, nutrition services, clubs, families and communities are essential for effective collaboration and implementation. The following are adapted from the Opportunity-To-Learn Standards for Health Education (2). They represent actions for universities to consider:

- ▮ Support and implement policies and plans that include health education as a core academic subject,
- ▮ Provide and advocate for adequate financial support for implementation,
- ▮ Recruit professional health educators,
- ▮ Provide pre-service and in-service professional preparation, boost sessions, and technical assistance to prepare administrators, instructors, and other staff to support and teach health education, specifically RH education,
- ▮ Develop guidelines and materials to assist in implementation and assessment, support the use of Information Technology,
- ▮ Conduct or support continued research in RH,
- ▮ Devote adequate resources to provide technical assistance and material support,
- ▮ Establish and maintain, and utilize communication systems for ensuring that universities have access to current information, technical support, and training opportunities.

As inherent in the discussion, it can be recommended that future work should focus on three aspects: the service setting, the Health Care Provider (HCP), and the quality of care at the clinical, practical and training levels. At the theoretical levels, the issues of FP do exist extensively in the medical and the paramedical, and probably one should stress the concepts of counseling and providing which methods to what cases and under what indications, so you can cater services adequately. In the case of Sexual Health, the subject is not dealt with as a separate entity from the definition of concepts to other discussions. Instead, it crosscuts in several courses dealing for example with infertility, STIs, reproductive morbidity, and menopause. With respect to RH, the review shows its presence across the board, however, each topic needs to be revisited for 2 reasons: to properly situate it in close integration with the guiding principles, and to strengthen the other related components in each topic (counseling, women perception, relation with the HCP..etc).

VII.1. Teachers' Experience

The national sub-programme on RH in its first cycle demands several training activities for different health care provider specialists. This has lead, in the first place, to the formation of a core of trainers, where some of them are academicians or part of the faculty staff of certain universities. It seems that teachers can be put in 3 categories:

- ▮ Those who are actively involved in the functions and outputs of the national sub-programme, and are mainly part of the staff of certain professional (nursing, midwifery, medicine, public health). This core of teachers have good expertise in understanding the

concepts of RH, and in communicating the relevant material as per ICPD, and in preparing training of trainers (TOT) activities...

- ▮ Those that are involved in research and other activities related to RH. Again, those teachers are RH researchers and experts, but they may not be involved in the teaching of RH-related material for certain academic purposes (curricula, work load, no courses).

- ▮ Those who has minimal or no idea of the concept of RH, its evolution, and all about the related topics and issues that constitute RH. Although, they might be indirectly aware of certain RH material that crosses in certain courses, but definitely they do not have the proper perception of the holistic approach and the significance of the RH definition.

This may be related to several factors: no advocacy were done to them, cannot appreciate its significance, not urged to have it as it is not found in the curricula, not focused in their academic attentions. It looks from the review and from other interviews done that teachers have no special experience or training or extra interest in RH topics, except the staff of midwifery and nursing programs who are trained to teach RH topics. The task of having trained teachers for RH topics will be thoroughly addressed in the overall endeavor of implementing RH in the existing curricula. An initiative for adapting to change and for participating in managing change is to be examined (3).

VII.2. Development of Training Material

Development of a training material is closely related to technical assistance on one hand and on the quality of ongoing training on the other hand. In this review, the current training sessions that involve nurses and midwives were claimed to be satisfactory, concerning exposure to the majority of topics and concepts. However, need arises with respect to training modules and demonstration in terms of videos, anatomical forms, posters, tools, gender issue and other illustrative material, while conducting follow up training, training TOT, and other activities.

There is also a need to standardize the educational material, procedures and protocols towards creating a dynamic and typical course putting RH concepts into the exact perspective. In this regard, the United Nations Children's Fund (UNICEF) has developed a booklet about labor and delivery protocols for midwives. There is also ample need for training material on counseling, especially peer counseling, and for periodic RH publications to help students and teachers understand adequately about RH evolving concepts, and the various RH topics, and to help them maintain this understanding.

Regarding the other form of material assistance that should follow the technical one, this depends on the scope of the curricula examined, and on the decisions of the concerned academic committee after discussing the technical assistance.

Although, most likely the majority of the material assistance will be similar. It is of paramount importance to review and assess the existing training packages on the light of the RH evolution and the impact of the training.

VII.3. Gender and Information, Education, and Communication

Gender is a cross-cutting issue that appear to be in all disciplines. It seems that the core /theme of the curricula does not clearly include gender. The teachers also are not yet clear about the exact meaning and use of gender and how to communicate it in the classroom. Many a times teachers are faced with more than one concept of gender and other times they

are not able to convey it.

Gender as a cross-cutting issue is not well integrated into curricula in relation to RH. Nonetheless, many of the surveyed curricula were found to include courses addressing gender issues in one way or another, within topics of anthropology, sociology, family dynamics, and health promotion. In departments like sociology, anthropology, psychology, several courses are available addressing the IEC and gender issues in different settings. Regarding IEC, several courses in various majors contain material on this concept, separately be it in information, in communication, in education or all together, depending on formation of students. Disciplines like health promotion, Nursing, Midwifery do address IEC, but it needs to be more focused to meet RH needs.

VIII. Conclusion

The RH concept has evolved to encompass all the various components pertaining to women' health in a comprehensive manner. The introduction of this concept being relatively new, might take a lot of effort to be integrated into the academic and training arena.

The existing curricula reviewed in most of the programs contain RH topics in different ways and presentations, and not necessarily as a comprehensive course or discipline, or even under the heading of RH. These curricula are deeply rooted in a highly technical grounds bound with rigid scientific rigor. This regime of education stresses the dexterity and skills (which is important), leaving the other surrounding and affluent non-medical or non-clinical contributing factors aside. In that sense, the holistic approach, which is at the heart of RH, remains missing.

In planning to work out a reform and change in the existing curricula, there are at least two broad categories of decisions that guide the actions: the macro and the micro decisions. The macro decisions should worked out with curriculum committees, deans of faculties, department chairpersons, teachers in specific cases and governmental or private agencies. These decisions generate policies, schedules and regulations, and they constitute an important entry point for any curricular changes. Micro decisions, although can be overridden sometimes by the macro decisions, they can be even more important than macro ones. Teachers on a moment-to-moment basis can perform micro decisions during instructional events. So teachers stand out as an excellent opportunity to start RH in curricula waiting for long-term macro decisions to take place (5)

Integrating RH concept into the existing curricula means in the first place working with the capacity of the current curricula in order to introduce RH, hoping to better develop it. A wide range meeting of all stakeholders guided by a steering academic committee, and lead jointly by the Ministry of Public Health and the Ministry of Higher Education, should be undertaken. This is crucial as most of the universities expressed readiness and willingness to contribute and participate in this process of RH integration in the curricula.

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