ASSESSMENT OF WOMEN'S SATISFACTION WITH REPRODUCTIVE HEALTH SERVICES IN HEALTH FACILITIES OF THE LEBANESE ARMY

Implemented by
Lebanese Health Society - LHS

In collaboration with
Lebanon Family Planning Association - LFPA

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FOREWORD

UNFPA Country Office in Lebanon and the Lebanon Family Planning Association (LFPA) collaborated since 2006 in support of strengthening Reproductive Health (RH) including family planning (FP) information and services to the national military forces. The interventions that were conceptualized, implemented and evaluated between 2006 and 2009 aimed at bringing about awareness on safe motherhood, family planning and prevention of reproductive tract cancers and HIV/STIs among the Lebanese Army troops as well as their dependents.

Furthermore, the interventions were intended to support the integration of basic RH concepts and information within the medical, social and educational curricula of the military.

One essential component consisted of developing capacities for ensuring quality RH services in the health clinics affiliated to the Army Medical Directorate as well as awareness raising among Lebanese soldiers, officers and their respective families on RH/HIV/STI/FP and gender issues.

Many opportunities presented themselves for this successful collaboration; mainly the military culture of command and hierarchy on the one hand as well as its willingness and readiness on the other that resulted in the successful implementation of the various interventions.

After 3 years of continuous collaboration, it was agreed to undertake a thorough assessment of the impact of the interventions on the soldiers, mainly in terms of their knowledge, attitudes, beliefs and practices (KABP) regarding RH. Evidence was needed for better tailoring of interventions related to awareness creation. This publication presents the results of a study implemented in 2009 by the Lebanese Health Society for assessing KABP of Lebanese Army soldiers regarding reproductive health, sexually transmitted infections and HIV/AIDS and which articulates relevant, realistic and focused recommendations.

We are confident that all actors will benefit from the findings of this assessment and related recommendations towards the institutionalization of RH/FP/HIV/AIDS information and services within its health, education and social services.

UNFPA Lebanon
Lebanon Family Planning Association

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LHS would like also to highlight the active involvement and full cooperation of the Lebanese Family Planning Association (LFPA) during the multiple phases of research and data collection. Their invaluable contribution was instrumental in bringing about this study.

Profound thanks go to the LHS team: Dr. Rania Tohme, Dr. Inaya Abdallah, Ms. Sawsan Sharrouf and Ms. Lynn Itani. Their valuable assistance throughout the various stages of the study was highly appreciated.

Dr. Abdo JURJUS
President, LHS

LIST OF ACRONYMS AND ABBREVIATIONS

AIDS	acquired immunodeficiency syndrome
FP	family planning
HIV	human immunodeficiency virus
IUD	intrauterine device
LFPA	Lebanon Family Planning Association
LHS	Lebanese Health Society
RH	reproductive health
RHS	reproductive health services
RTI	reproductive tract infection
SRH	sexual and reproductive health
STI	sexually transmitted infection
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

This study was implemented by the Lebanese Health Society and conducted at selected Lebanese Army health centres which, through cooperation with the Lebanon Family Planning Association (LFPA), offer reproductive health services to army personnel and their families.

The aim of this study was to assess the quality of the services provided, using the method of client satisfaction exit interviews based on a questionnaire. The interview questions were divided into eight sections, each relating to a specific topic or area; namely, demographic data, contraception and birth-control methods, reproductive tract infections, pregnancy and abortion, pre- and post-natal care, health awareness sessions, sexually transmitted infections and HIV/AIDS, and the status of the health facility and its services.

Multiple indicators and variables were taken into consideration during the evaluation process. The sample population covered 307 women out of 311 selected among female patients at six health centres. Four centres were located in different geographic regions of Lebanon; the North, the South, Mount Lebanon and Bekaa. Two facilities were in the capital city, Beirut; the Central Military Hospital and the Beirut Centre. The sample, selected proportionately to the load of services, proved highly representative of the women using the health facilities, with a coefficient of 95 per cent.

Married women accounted for 89.9 per cent of the total sample population, and 82.4 per cent had children. Of the 307 women interviewed at the selected health centres, 82.3 per cent had been availing themselves of the reproductive health services provided, while 17.7 per cent had sought other medical advice and/or treatment. Those figures underscore the assumption that most female patients visit the health facilities for reproductive-health related concerns, in particular treatment of reproductive tract infections. In other words, the sample aptly served the aim of the study.

Concerning awareness of contraception, most respondents were familiar with the various birth-control methods, particularly contraceptive pill and intrauterine device (IUD), as illustrated by the high awareness rates of 85.3 and 77.5 per cent, respectively; while just 8.1 per cent had no knowledge of contraceptive methods. On the other hand, awareness of male condom was not satisfactory, with just over half of the respondents indicating familiarity with the device. In exit interviews, i.e., respondents being questioned after their consultation with the doctor or other medical staff, it would have been encouraging if data had indicated near-universal awareness of the various methods. Furthermore, utilization rates were relatively low. For the three most common birth-control methods mentioned above, only between one third and half of the respondents who had indicated awareness actually deployed them. It is worth noting that rates for awareness and utilization were particularly low at health centres which were relatively well served by health awareness sessions; namely, the North, the South and Bekaa.

Of the 45.6 per cent of respondents not using contraceptives, when asked the reason why not, many said they were afraid of possible side effects. This is an issue that would merit further attention. In addition, 53.6 per cent, or more than half of the respondents who had received contraceptives at their last visit to the health centre, had not been given the opportunity to select the birth-control method, although 85.5 per cent said they had received what they had came for, and 75 per cent had been given instructions on how to use the method. On the other hand, 42.9 per cent said they had not received information on other methods, and 28.6 per cent had felt unable to ask further questions. This occurred more frequently at the two health facilities in Beirut.

The rates of reproductive tract infections were high throughout all regions, but especially so in Beirut. This is of serious concern and a critical health issue which requires appropriate and prompt action, especially when considering that close to one third of the respondents, or 31.4 per cent, were pregnant at the time of the survey.

A vast majority of the respondents, namely 82.4 per cent, had children. Most women had large families; 85 per cent had up to four children, while the rest had five children or more. In addition, many reported having had one or more unwanted pregnancy; actually, the percentage was a high of 47.7, with half reported at the Central Military Hospital in Beirut. This is an important issue to be addressed through family planning programmes. Another indicator that warrants further attention is the rate of abortions; 60.8 per cent of unwanted pregnancies end in abortion, with 11.7 per cent of the respondents having had multiple terminations. This is a procedure that exposes lives to unnecessary danger, and more should be invested in reducing the rates of abortion and in prevention.

The standard of the prenatal care offered at the six health centres was high. Nearly all the respondents who were pregnant at the time of the study were making multiple visits to their doctor. Most came during the first and second month to ensure a safe pregnancy and check the well-being of the foetus. In addition, about 85 per cent took iron and vitamin supplements; however, in this respect, the health centre in the Bekaa needs attention, as rates there were significantly lower.

On the other hand, post-natal care was clearly regarded as less important by the respondents. As many as one quarter, or 25.1 per cent of the women had not had a post-natal check-up, with the figure for the North being as high as 50 per cent. Moreover, 32.7 per cent had not returned to the health centre for post-partum consultation or treatment. This seems to indicate poor appreciation and understanding of the importance of post-natal care and follow-up; the probable reason being lack of information since the services are available and accessible.

As for the health awareness sessions on sexual and reproductive health held at the centres, the vast majority of the respondents had never attended such sessions; 99.1 per cent at the Central Military Hospital, 85.7 per cent at the Beirut Centre, and 90 per cent at the Mount Lebanon Centre. The sessions were almost solely recognized in the peripheral centres of the North, the South and Bekaa. The fact that a very small number of respondents had ever turned up warrants serious reconsideration of the activities implemented and the monitoring process adopted. It is also worth noting that the low attendance among the sample population affected negatively several other parameters in the study.

The few respondents who had attended the health awareness sessions perceived them as being 'good' or 'very good'; the same went for the health educators conducting them. However, concerning frequency and scope, some wanted the sessions to be conducted on a regular basis, and to cover a wider range of reproductive health and other health-related topics; for example, sessions on infections and sexually transmitted infections, and on HIV/AIDS, as well as family planning. Though most respondents had been given booklets and brochures on these issues, few had actually read them. Nonetheless, many had an acceptable knowledge of modes of transmission and prevention of the most prevalent infections. However, there is certainly scope for improvement, especially as there is an increased vulnerability and susceptibility of women to sexually transmitted infections, coupled with the low rates registered for the use of male condom.

As regards the accessibility of the health facilities, all of the six centres were deemed easy to get to, with the possible exception of the Central Military Hospital in Beirut. Most respondents could reach their respective health centre within half an hour or less. The number and calibre of the staff at the various facilities were deemed satisfactory, though 80 per cent of the women at the Bekaa Centre would prefer to consult a female doctor. Such other concerns as long waiting time, inadequate consultation time with the doctor, unfriendly environment and, in particular, poor organization were raised and could be improved. Concerning the continuity of care, follow-up appointments were not always given by the medical staff, even when warranted and appropriate; thus, this is an area to be addressed, particularly at the Bekaa Centre. Nevertheless, the services provided were regarded as satisfactory at all the six health centres.

In conclusion, this study provides good background information on the status of the reproductive health services at the six Lebanese Army health centres surveyed. A number of relevant and important issues have been raised, which merit further discussion among the stakeholders concerned to reach a consensus on priorities requiring attention.

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I. BACKGROUND

A. LITERATURE REVIEW

1. Specificities of military population

Recent comparative studies of sexual behaviour in France, Britain and the United States of America have shown that military personnel, both career and conscripted soldiers, have a much higher risk of HIV infection than groups of equivalent age and sex in the civilian population. Armed forces in other parts of the world reflect the same phenomenon. A 1995 estimate of HIV in Zimbabwe, for instance, places the infection rate for army personnel at three to four times higher than that for the civilian population (1, 2). Actually, the professional ethos of the military tends to excuse, or even encourage risk taking, and most military personnel are in the age group at greatest risk of HIV infection; namely, the sexually active 15-24-year-olds.

It is believed that improving women's health is the surest road to health for all. However, multiple challenges face the health authorities and communities as they strive towards promoting and ensuring better health of women everywhere, including the army, especially in reproductive health services (RHS) and in maternal health and safe pregnancy. Women's health is not only a health-care issue, but also one of social justice and a matter of human rights. Along this line, armies strive to reach a stage of cutting maternal mortality, improving access to basic medical care during pregnancy, and providing quality post-partum care and follow-up; i.e., offering comprehensive RHS, including counselling and ensuring the right of women to make informed decisions and choices relating to their health (2).

2. Women and their health

Women and their health are central to the primary health-care agenda, not only as the focus of family planning (FP) and maternal and child health programmes, but also as conduits for improving the health of their children. In their biological and reproductive roles, women are obviously and directly tied to the health of their foetus and newborn baby. Thus, one of the most important health-care services for women is RHS.

Reproductive health (RH) is an important component of public health, and is a prerequisite for social, economic and human development (3). Following the 1994 International Conference on Population and Development (ICPD) in Cairo, the terms 'reproductive health' and 'sexual health' have become widely disseminated among all community sectors. The definition of RH includes many components, among which are (FP), maternal and child health, prevention of harmful practices, reduction of the spread of reproductive tract infections (RTIs) and other sexually transmitted infections (STIs) including HIV/AIDS, and provision of treatment for STIs and their complications (4).

Attempts to understand women's RH needs have shown that the interaction between

clients and the service is a critical, but often neglected dimension of programme efforts. Concern for clients' rights in the provision of RH in developing countries has prompted intense efforts by international experts to promote client-centred models of communication as a replacement for more provider-centred approaches. Moreover, communication between health service providers and clients is an essential component in the delivery of FP services and the vehicle for information exchange, reporting and informed choice of birth control methods (5, 6).

Clients want quality services, and providers strive to offer this; however, definitions of quality can differ. Higher satisfaction levels result in more involvement of the client and, consequently, increase the effectiveness of the health-care services (7, 8). Evaluation of client satisfaction plays a significant role in the improvement of health-care quality. In general, a client's satisfaction is a complicated phenomenon that is influenced by different factors, and client feedback is the foundation for improvement of quality programmes (9, 10).

3. Reproductive health service quality

Improved quality of care is an increasingly important goal of international FP programmes for a variety of compelling reasons. From a human welfare perspective, all clients, no matter how poor, deserve courteous treatment, correct information, safe medical conditions and reliable products. It also has been argued that providing such quality services will lead to increased service utilization by more committed users, eventually resulting in higher contraceptive prevalence and lower fertility. Finally, there is growing recognition that quality makes sense from an economic perspective. If improved quality leads to increased demand for services, then it should have a positive net effect on service providers' income. Some quality improvements are costly and, therefore, may not seem feasible in a period of declining donor resources; however, many others, for example more courteous attention, can be implemented at little or no cost. Conversely, failing to address quality may be more costly than most service improvements would be, as has been argued in the literature related to total quality management and customer satisfaction in private-sector companies. This is equally true for non-profit FP settings (4, 9).

The increased interest in service quality has been accompanied by a similar increase in efforts to monitor and evaluate this quality. Judith Bruce's well-known quality-of-care framework provides an excellent starting point for the development of evaluation tools and indicators. The framework is built around six central elements of quality; namely, choice of contraceptive methods, information given to clients, technical competence, interpersonal relations, mechanisms to encourage continuity, and appropriate constellation of services. Based on this framework, a number of useful methodologies have been developed to evaluate some, or all of the six elements, with situation analysis among the best known (4). A new methodology developed by MEASURE-Evaluation and the Monitoring and Evaluation Subcommittee of the USAID Maximizing Access and Quality (MAQ) initiative, known as the Quick Investigation of Quality (QIQ) approach, also promises to contribute richly to the field of quality monitoring. Another approach is Continuous Quality Improvement, which includes data collection and quality improvement components. While all of these methodologies have proven useful in different settings, they may be too complex, time-consuming or expensive for small service providers to carry out on their own. To begin the process of quality evaluation in such settings, a simpler, more practical

methodology may be called for.

To address this need at selected FP associations in Latin America and the Caribbean, the International Planned Parenthood Federation (IPPF), Western Hemisphere Region, developed in 1993 a simple exit interview focused on client satisfaction. This focus was meant to help FP associations tailor their services to client needs, and to prepare them for a future in which a greater portion of their operating costs would need to be covered by client fees. In general, the client satisfaction is viewed as a key outcome of quality of care, as well as a key component of sustainability. Thus, measuring client satisfaction can be a useful way of evaluating certain aspects of quality. Moreover, increases in satisfaction may indicate improved quality, from the clients' perspective, and better prospects for sustainability. Tools which empower organizations to improve quality, as well as to measure it, can be especially useful to achieving these desirable outcomes (8).

Any conceptualization of quality encompasses both objective and subjective components. Objectively, products or services should meet or surpass standards of safety, proper function, cleanliness and otherwise general excellence. This is often referred to as 'quality control', 'quality assurance' or 'medical quality', and it depends mainly on providers' perspectives. Most efforts to improve quality focused on these medical issues; however, the subjective side of quality has also been recognized as vital, and clients' opinions – particularly their degree of satisfaction – are seen as essential to the understanding of the quality factor. A similar trend in evaluation has increased efforts to measure the subjective side of quality. Given the importance of client satisfaction, both as an outcome and as an indicator, simple methodologies to measure satisfaction can play an important role in broadening efforts to evaluate quality of care (9, 10).

Private-sector companies in developed countries, whether health-related or not, have long recognized that a focus on customer satisfaction makes good business sense. Satisfied clients make repeat purchases, spend more per purchase, produce positive word of mouth and become loyal to a particular brand. Conversely, dissatisfied clients may tell twice as many contacts about their negative experiences as satisfied clients tell about theirs, and are far less likely to return to buy the product or service in the future. Furthermore, fewer than 30 per cent of clients who experience quality-related problems complain directly to the product or service provider, and only between 1 and 5 per cent of complaints reach the headquarters level. Other studies have supported the hypothesis that clients in health settings are reluctant to express dissatisfaction with their service when questioned using exit interviews.

These findings show not only the importance of client satisfaction, but also how difficult it is to assess accurately. Thus, it was decided that a focus on client satisfaction would be a practical way to assess certain aspects of quality and to use the results to serve client needs more effectively. It would have to be done, however, in a way that avoided traditional measurement difficulties. It was hypothesized that such client focus would lead service providers to improve services, produce higher client satisfaction and, eventually, enhance institutional sustainability.

Exit interviews were chosen as the optimal evaluation methodology because they are simpler than such other possible choices as household interviews and focus groups.

Furthermore, they are more practical and less expensive to carry out, in addition to providing the most rapid feedback. In particular, if feedback is provided in a meaningful and timely way, client satisfaction exit interviews can serve not only as a way to monitor certain aspects of quality, but also as a management tool to improve programme performance and sustainability.

The main challenge with using exit interviews in this way is to overcome the well-known problem of 'courtesy bias'; in other words, clients may be reluctant to express negative opinions of services, especially while they are still at the service site. This difficulty has frustrated researchers in the past, as clients often claim to be satisfied even when they are not. It was sought to diminish this problem by focusing on areas for improvement, as opposed to absolute levels of satisfaction, and by recognizing the importance of even very small levels of dissatisfaction.

Quality, access, client satisfaction and sustainability relate to each other. Access must be included in the discussion because, along with quality, it strongly affects client satisfaction. For example, clinic hours, location, fees and, to an extent, waiting time are probably more related to access than quality, but all certainly influence satisfaction. 'Access' determines whether a client reaches the door of the service provider, while 'quality' is normally thought of as the set of conditions that the client confronts once he/she is 'inside the door'. Yet, client satisfaction and, eventually, sustainability depend on both quality and access. These are normally evaluated as 'service outputs' of programmes, while client satisfaction and sustainability are evaluated as 'outcomes'.

Client satisfaction is the key to clients' decisions to use and to continue using services, and is essential to long-term sustainability. Ultimately, client-focused services that meet clients' needs and provide them with satisfying experiences should help them achieve their reproductive intentions. Very simply, the relationship between these concepts is that client satisfaction has the central role in translating access and quality into such positive outcomes as programme sustainability and achievement of reproductive intentions. In this model, clients' perception of such programme characteristics as access and quality determine the extent to which they are satisfied with the services. This, in turn, influences their decision whether to return, and whether to recommend the service to other potential clients. If the number of new and continuing clients increases as a result of favourable perceptions, programme sustainability is enhanced. Likewise, satisfied clients who use methods more effectively have a higher likelihood of achieving their reproductive intentions (11-13).

B. STUDY

1. Rationale

Based on earlier research, it was evident there was a dire need for the provision of RHS in Lebanon, a country where most health-care services were inadequate, especially in rural areas; and client education, particularly in the field of RH, was non-existent after a long period of civil strife (14-17). Thus, in January 1998, the Reproductive Health Programme for Lebanon was initiated through collaboration between UNFPA, the United Nations Population Fund and the Government of Lebanon, and subsequently adopted by the Government. The objective of introducing the RH Programme was to maximize access to quality services throughout all regions of the country, and to integrate comprehensive and sustainable RHS, including FP and sexual health care, in the primary health-care system (17). In addition, goals for the RH sub-programme include reducing maternal mortality ratio to 64 per 100,000 live births, to lower infant mortality rate to less than 24 per 1,000 births, and to lower the mortality rate for children under five to below 30 per 1,000 live births. The RH sub-programme also aims to reduce the total fertility rate from 2.5 to 2.2 children per woman; and to increase the use of modern contraceptive methods to 47 per cent, while increasing birth control choices to both men and women (14-17).

To date, the RH Programme has provided services to 427 health-care centres throughout the country, including rural regions, and has developed training and education to more than 400 health providers (17). The RH Programme has procured contraceptives, medical equipment and supplies, audio-visual material, data-processing equipment and teaching material.

The Programme was formulated jointly by the Ministry of Public Health and UNFPA, with immediate approval of and implementation by the Ministry of Public Health and the Ministry of Social Affairs). The initiative and awakened interest in RH stemmed from discussions at the 1994 International Conference on Population and Development (ICPD) and the Arab Population Conference a year earlier, which also resulted in the reactivation of the UNFPA office in Lebanon.

Moreover, it is imperative to emphasize the important role and impact of the Lebanon Family Planning Association (LFPA), established already in 1969. For three decades preceding the adoption of the Programme, LFPA had been advocating improved sexual and reproductive health (SRH) and family planning. It was through the endeavours of LFPA that two articles in the Lebanese penal code prohibiting the advocacy of and discussion on contraceptives were abolished. LFPA is still very active in this domain, especially in rural areas and within Lebanese Army institutions. This study aims to evaluate the work of LFPA within the Lebanese Army in order to promote and improve such efforts.

A review of the literature has confirmed that few studies have actually evaluated the effectiveness of RH education on recipients, especially in developing countries, including the Middle East (18, 19). Most of what is available in the literature are studies describing the need to assess RH behaviour, or to assess risk factors in the reproductive period (20, 21). The few studies that were conducted have, at best, provided information on

contraceptive use.
One study found that post-partum education on contraceptive use in the countries of Lebanon, Nepal and Peru resulted in increased use of contraception among women (22). However, measurements of patient satisfaction had not been assessed, and the authors concluded that more research was needed to assess the effectiveness of contraceptive education (18). Another study found that women who had received education on contraception were three times more likely to use contraceptive methods than those who had had no information; however, that study also indicated that other measures of RH had not been influenced by such education (23). A comprehensive study has been conducted in Tunisia on the implementation of a quality improvement programme in FP (24). In addition, at least two studies undertaken in Egypt assessed the quality of RH services via exit interviews in three primary health-care units (25), while two studies in Iran on FP focussed on the perception and level of satisfaction among women (26, 27). They are very similar to this study.

A review of studies relating to RH in Lebanon by F. el-Kak in 2000 revealed that most were descriptive in nature and, thus, recommended that "research should also focus on measuring programme impact by selecting priority areas for study to assess efficiency, examine utilization pattern of current services, as well as to determine satisfaction levels of service users" (17). A study by L. Badr in 2001 reported limited information on the ability of a service to provide quality care to clients or on the accessibility and availability of programmes (14). Thus, it is the intention of this study to assess the satisfaction of clients with the services provided, and to document whether the RH programme has had any impact on its users.

2. Proposal

Since 1997, LFPA has been extensively involved in collaborating with the Lebanese Army in promoting RH, including FP services and information, with the prime emphasis being on HIV/AIDS awareness. This is in line with the UNFPA mandate for promoting RH, including HIV/AIDS prevention, and targeting populations at risk. Hence, since 2006, UNFPA has supported LFPA in further promoting the RH component, as well as gender mainstreaming, in its work with Army institution. This support has translated into activities targeting Army troops in various regional barracks, including those deployed in the South following the July 2006 war.

Based on the above, and in the context of the Reproductive and Sexual Health Awareness Education and Family Planning Service Delivery for the Lebanese Army project, implemented by LFPA with partial execution by UNFPA and in line with recommendations for the need to assess the satisfaction of clients visiting Army health centres supported by LFPA in terms of SRH and HIV/AIDS services (of Beirut, the North, the South, Bekaa and Mount Lebanon), a client satisfactory study was carried. This study addressed specifically the services provided by LFPA to six health centres in the context of prenatal care, FP services and contraception. Moreover, the study evaluated the capacity and knowledge of the service providers to cater for the needs of the clients. The study also assessed the need for further strengthening the access and utilization of quality SRH services, including counselling and information provision.

II. OBJECTIVE

The main objective of this study was to assess women's satisfaction with the services provided by LFPA at the selected Lebanese Army health facilities. More specifically, the study aimed at assessing the level of satisfaction with those services which had been strengthened by LFPA from 2006 to 2009 in terms of quality, health personnel competence, availability and attitude of health personnel, counselling, time allocation, educational activities, and availability and use of contraceptives.

III. METHODOLOGY

The research design is descriptive and cross-sectional. The study is based on reports by LFPA on its activities.

A. SAMPLE STUDY

The study covered six Lebanese Army health facilities, selected to include all geographic regions of Lebanon. Two centres were located in the capital city, Beirut; namely, the Central Military Hospital and the Beirut Centre. The remaining four centres were in the North, the South, Mount Lebanon and Bekaa.

The sample population was all female, consisting of women who visited and used the services offered at their respective health facility. The estimated total sample size was 311, with a coefficient of 95 per cent. The target numbers were selected based on the average number of female beneficiaries at each centre per month, as illustrated in table 1. The women were selected by random sampling. After giving their consent to participate in the study, the selected women were questioned by trained interviewers as they were leaving the health centre. Only four women refused to participate, bringing the sample to 307.

TABLE 1

Distribution by centre of beneficiaries and of sample population

Centre	Average number of beneficiaries/month		Sample population	
	(number)	(per cent)	(number)	(per cent)
Central Military Hospital	1,400	37.8	115	37.5
Beirut	431	11.6	37	12.1
Mount Lebanon	500	13.4	40	13.0
North	481	13.0	40	13.0
South	500	13.4	40	13.0
Bekaa	400	10.8	35	11.4
Total	**3,712**	**100**	**307**	**100**

B. QUESTIONNAIRE DESIGN

The instrument used for data collection was a questionnaire, designed according to a thorough literature review, taking into consideration the situation in Lebanon and, in particular, the nature and specificities of the sample population.

The questionnaire included a brief introduction, explaining the nature and objectives of the study and the partners undertaking the survey, as well as underscoring the anonymous and confidential nature of all information given. In addition, the location, facility and name of the interviewer were noted.

In the questionnaire, the 70 interview questions were grouped into eight sections, each part targeting a specific area or topic, as follows:

- **Part One** consisted of five questions in total, with an aim to elicit the age, family status and education level of the respondent, as well as obtaining the main reason for the visit and whether it was the first time to the health centre.

- **Part Two** listed a total of 16 questions on contraception, including familiarity, knowledge and use of contraceptive methods. The questions addressed factors regarding previous and/or present use of such methods and duration of utilization; main reasons for using/not using birth-control methods; participation of respondent in the decision-making process of choice of method; and information given by health workers on type and use of various methods. The issue of communication between the health worker and the respondent was also investigated, as well as the role of the husband of the respondent in making and sharing in such decisions.

- **Part Three** focussed on infections of the reproductive system. The Army Medical Corps rejected all but one question on this topic, with the remaining considered too sensitive to be accepted and included.

- **Part Four** contained four questions dealing with pregnancy and childbearing, noting whether the respondent had children and, if so, their number; as well as queries on unplanned or unwanted pregnancies and abortion.

- **Part Five** consisted of a total of 12 questions covering various aspects of pre- and post-natal care. Nine questions dealt with pregnancy status, check-ups and reasons for visiting the prenatal clinic, as well as whether iron and vitamin supplements had been prescribed. The remaining 3 questions dealt with post-natal care.

- **Part Six** covered the awareness sessions targeting RH. A total of 17 questions were asked on the evaluation of the sessions, including time and duration; appraisal of the providers, including their subject knowledge and communication skills; and relevance of the topics and methodologies used, including identifying subjects which had not been well understood or which should have been included, as well as suggestions for improvement. The respondents were also asked whether they had received and/or read any of the booklets available at the health clinics, their opinion on quality and relevance of the subjects covered, and whether they would recommend them to family and friends.

- **Part Seven** listed two questions on STIs, including HIV/AIDS. They covered knowledge of STIs and their symptoms, as well as of HIV/AIDS awareness, modes of transmission, methods of prevention and treatment; with one question on the vulnerability of women to HIV/AIDS and possible reasons.

- **Part Eight** addressed the status of the health centre and the services provided there. Questions were asked on the accessibility of the facility, including time required by respondents to reach the centre and the mode of transport used. In addition, respondents were asked to evaluate the services, giving feedback and suggestions. They were also asked their preference of male or female doctor, and if follow-up and aftercare had been satisfactorily addressed.

The questionnaire was pre-tested and modifications were introduced.

C. SELECTION AND TRAINING OF INTERVIEWERS

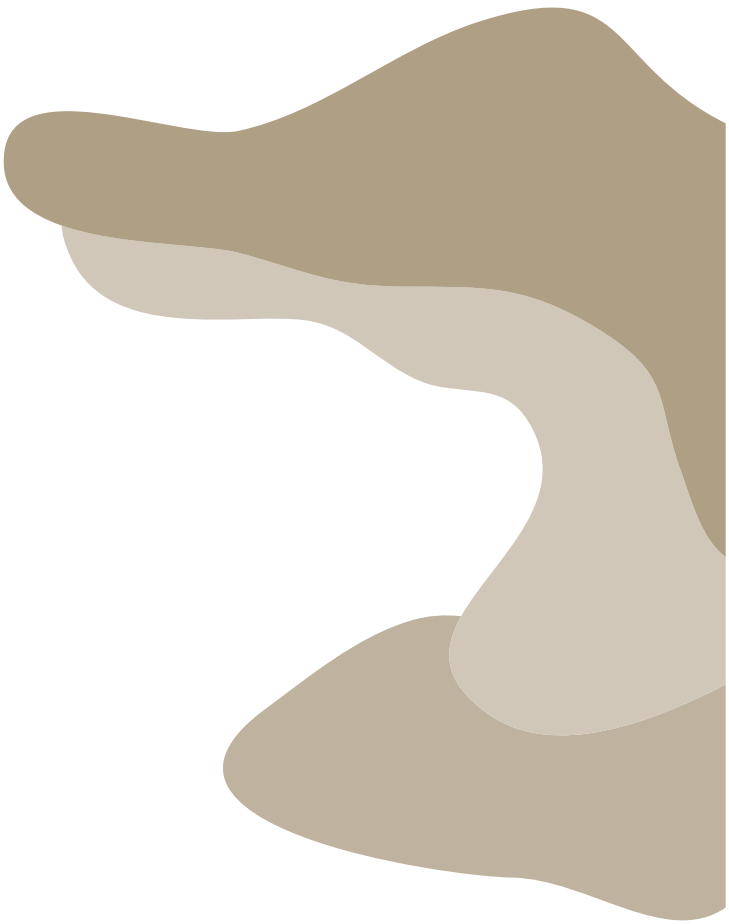
A group of 10 female staff from LFPA were chosen and trained by the researchers to interview the selected sample population. The interviewers attended a one-day workshop, which was given in two parts. The first session covered background material about the subject, stressing the importance of the study and the right way to approach the sample population when addressing such sensitive subjects. The second part was a practical session whereby copies of the questionnaire were distributed and filled. Explanations, analysis and discussion followed.

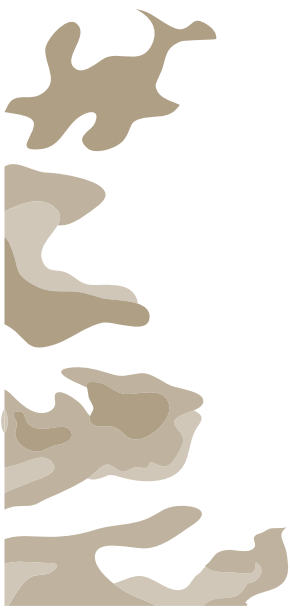
D. DATA ENTRY AND STATISTICAL ANALYSIS

SPSS (XV1) software was used for data entry and analysis. The data on each factor at all health centres were calculated. Descriptive analysis, for example frequency, was used to study the range of variables.

E. LIMITATIONS OF THE STUDY

The securing of approval from the Lebanese Army to conduct the study proved to be a complex and lengthy procedure. As for the questionnaire, certain questions were rejected by the Army and, therefore, eliminated. This resulted in the data for some areas of evaluation being less comprehensive than had been anticipated. On another note, all data were collected by trained staff from the Lebanon Family Planning Association (LFPA), the reason being their having prior authorization to enter Army health facilities owing to ongoing cooperation between LFPA and the Army. Thus, as LFPA staff, they had easy access to all of the six health centres surveyed; however, their affiliation could be perceived as a possible source of bias.





IV. RESULTS

As shown in table 1, the percentage of completed interviews per health centre was closely proportionate to that of female patients visiting the respective facility during a time period of one month. The collection of data required four weeks, and was conducted during the months of July and August, 2009. The interviews were based on a questionnaire consisting of eight groups of questions, each part relating to a specific topic or area.

A. PART ONE: Demographic profile of sample population

Part One of the questionnaire dealt with demographic details of the target population and the reason for visiting the health facilities.

While the age range of the sample population was 15 to 70 years, most respondents in the study were under the age of 45, accounting for 82.4 per cent. The under-50s represented 91.2 per cent of the total sample population; with 17.6 per cent of the respondents under 25 and 4 per cent over 55 years old. These figures show that most respondents were in the reproductive age group, with the average age for the total sample population being 36.25. As illustrated in table 2, the youngest populations were in the South and the North, with averages of 31.82+9.55 and 33.32+9.74, respectively; followed by the Beirut Centre, which recorded an average age of 35.62+9.23; the Bekaa, registering an average age of 37.45+9.74; and the Central Military Hospital, where the average age of the respondents was 37.64+10.57. The oldest population was recorded at the Mount Lebanon Centre, with an average age of 39.15+11.7 years.

TABLE 2
Average age of sample population by centre

Centre	Age
Central Military Hospital	37.64 ±10.57
Beirut	35.62 ± 9.23
Mount Lebanon	39.15 ± 11.7
North	33.32 ± 9.74
South	31.82 ± 9.55
Bekaa	37.45 ± 9.74
Average	**36.25 ± 9.6**

With respect to marital status, the collected data showed that most respondents were married, representing 89.9 per cent, or 276 of the 307 women in the sample population, as is shown in table 3. In addition, 18 respondents were single, accounting for 5.9 per cent of the total sample; while 11 women were widowed, representing 3.6 per cent; and 2 divorced, or the equivalent of 0.6 per cent of the total sample population.

TABLE 3
Marital status

Status	Number of respondents	Percentage of total sample population
Married	276	89.9
Single	18	5.9
Divorced	2	0.6
Widowed	11	3.6
Total	307	100

The majority had children; namely, 85.9 per cent or 253 respondents. Forty-two women indicated they had no children, accounting for 14.2 per cent of the total sample population, a percentage which could cover all single women; leaving an estimated 8.3 per cent married without children. As for the number of children, 105 women, or 41.5 per cent had up to two children; with a break-down of the data indicating 15.4 per cent with one child, and 26.1 per cent with two children. For the remaining sample, 71 women, or 28.1 per cent had three children; and 39 respondents, or 15.4 per cent had four children. In other words, of the respondents with children, 85.9 per cent had up to four children. The remaining 38 respondents, accounting for about 15 per cent of the total sample population, had between 5 and 19 children.

The educational profile showed that less than half of the respondents, or 44.6 per cent, had reached baccalaureate level or above, numbering 137 of the total 307 in the sample population. More than one third had passed the Brevet exam or equivalent, representing 33.9 per cent or 104 respondents, as illustrated in table 4. Of the remaining respondents, 56 had attained elementary-level education, accounting for 18.2 per cent; while 10 respondents were illiterate or read with difficulty, representing 3.3 per cent of the sample population. By interpreting rudimentary elementary education and illiteracy as being unable to read and write with ease and fluency, the combined data would indicate that 21.5 per cent of the sample population would require a more target-oriented approach. On the other hand, 20.2 per cent of the respondents had reached university level.

TABLE 4

Highest level of education attained

Level of education	Number of respondents	Percentage of total sample population
Do not read	10	3.3
Elementary	56	18.2
Brevet	104	33.9
Baccalaureate	52	16.9
Technical Baccalaureate	21	6.8
University (no degree)	19	6.2
University degree	43	14.0
Not specified	2	0.7
Total	**307**	**100**

Of those respondents unable to read or write, 50 per cent were recorded at the Bekaa Centre; while the North accounted for the highest proportion of women with elementary education, with 17 out of the total of 56, or 42.5 per cent. On the other hand, most of the respondents with elementary education were recorded at the South Centre and at the Central Military Hospital, accounting for 47.5 and 45.2 per cent, respectively.

For the majority of the respondents, it was not their first visit to the health centre, as is seen in table 5. As many as 251 women had already come to the centre for consultation or treatment, accounting for 81.8 per cent of the total sample population; while 54 respondents had never been to centre before, or the equivalent of 17.5 per cent.

TABLE 5

First or repeat visit to centre

	Number of respondents	Percentage of total sample population
First visit	54	17.5
Repeat visit	251	81.75
Not specified	2	0.75
Total	307	100

Concerning the main reason for visiting the health centre, the great majority had came for a general check-up; namely, 41 per cent, or 126 of the 307 women in the total sample population. Almost one quarter of the respondents came for prenatal care, accounting for 25.1 per cent or 77 women; followed by RTI at 11 per cent, or 34 respondents. Mammography, Pap smear and pregnancy test had comparable frequencies; 4.6 per cent or 14 respondents came for breast exam, while Pap smear and pregnancy test each accounted for 4.3 per cent or the equivalent of 13 respondents. Visiting the centre for a contraceptive consultation was mentioned by a low 1.6 per cent, or 5 respondents out of the 307; and post-natal care and follow-up was indicated by 9 respondents, or 2.9 per cent, as illustrated in table 6. Other reasons stated by the respondents were problems relating to the menstrual cycle, cited by eight women, or 2.6 per cent; and echography, indicated by four respondents, or 1.3 per cent. Furthermore, visiting the fertility clinic, attending a health awareness session and having a check-up for a job applications were mentioned, each accounted for 0.3 per cent of the total, respectively.

TABLE 6

Reason for visit to centre

Reason	Number of respondents	Percentage of total sample population
Contraception	5	1.6
Prenatal	77	25.1
Post-natal	9	2.9
Pregnancy	13	4.3
Reproductive tract infection	34	11.0
Pap smear	13	4.3
Mammography	14	4.6
General check-up	126	41.0
Other *	16	5.2
Total	307	100

** Included: regulating menstrual cycle (8) 2.6%; echography (4) 1.3%; fertility clinic (1) 0.3%; education session (1) 0.3%; and check-up for job application (1) 0.3%.*

B. PART TWO: Contraception methods

Part Two of the questionnaire focussed on contraception and birth control. To ascertain the awareness level and knowledge among the sample population of various contraceptive methods, as well as their utilization rates, 16 questions were posed to the 307 women taking part in the study.

The contraceptive pill, intrauterine device (IUD), male condom, uterine tube litigation and ejaculation outside the vagina were the methods and birth-control devices most often mentioned by the respondents, as is illustrated in table 7. The highest levels of awareness were recorded for the contraceptive pill and IUD, with rates of 85.3 per cent and 77.5 per cent, respectively. Just over half, or 165 respondents out of 307, were familiar with the male condom, accounting for 53.7 per cent of the total sample. Uterine tube litigation was known to 16 per cent, or 49 respondents; while 125 women mentioned ejaculation outside the vagina, representing 40.7 per cent of the sample population. Other methods recorded lower awareness rates, including rhythm method at 14.4 per cent, female condom at 3.3 per cent, injection at 3.9 per cent, vaginal creams 2.3 per cent and vaginal diaphragm at 1.6 per cent.

However, it is of importance to note the 8.1 per cent, or 24 respondents professing no awareness of any contraceptive method. It is very likely they were among the first-time visitors to their respective centre but, even so, it is of significance that as large a number of respondents as that would be totally unfamiliar with contraception after having seen a doctor or other medical staff.

TABLE 7
Knowledge of contraceptive methods

Method	Number of respondents	Percentage of total sample population
Contraceptive pill	262	85.3
Intrauterine device (IUD)	238	77.5
Male condom	165	53.7
Female condom	10	3.3
Injection	12	3.9
Vaginal diaphragm	5	1.6
Vaginal creams	7	2.3
Uterine tube litigation	49	16.0
Ejaculation outside vagina	125	40.7
Rhythm method	44	14.4
Other *	3	0.9
No knowledge	24	8.1

** Included: vaginal rinse, 1 respondent or 0.3 per cent; sperm-reducing medication, 1 respondent or 0.3 per cent; and vaginal suppositories, 1 respondent or 0.3 per cent*

As is illustrated in table 8, about two thirds of the total sample population, or 192 respondents had previously used contraceptive methods, representing 64.4 per cent; and 21.5 per cent had done so during the preceding 12 months. Some had used more than one method; however, the most common were the contraceptive pill, used by about one third or 97 respondents, accounting for 31.6 per cent; IUD, used by 21.5 per cent; and uterine tube ligation, accounting for 20.8 per cent. Just over one fifth of the respondents, or 21.5 per cent reported utilization of male condom. Various other birth-control methods were used, but to a much lesser degree; for example, ejaculation outside the vagina at 6.8 per cent, and the use of vaginal creams at 2.3 per cent.

TABLE 8

Use of contraceptive methods

Method	Number of respondents	Percentage of total sample population
Contraceptive pill	97	31.6
Intrauterine device (IUD)	66	21.5
Male condom	66	21.5
Female condom	1	0.3
Injection	-	-
Vaginal diaphragm	-	-
Vaginal creams	7	2.3
Uterine tube litigation	64	20.8
Ejaculation outside vagina	21	6.8
Rhythm method	-	-
Other *	3	0.9
Have used contraception	192	64.4
Have used contraception during preceding twelve months	66	21.5

** Included: vaginal suppositories, 2 respondents or 0.6 per cent; and unmarried/single status, 1 respondent or 0.3 per cent*

When asked about current use of contraception, 66 respondents had received or used a contraceptive method prescribed at their respective health centre during the preceding 12 months, representing 30.7 per cent of the women in the sample using birth control. As is evident from the data in table 9, of the 66 women using contraception during the preceding 12 months, 44.4 per cent had used the contraceptive pill and 41 per cent IUD. Other methods were less popular; the proportion reported for the male condom was 16.6 per cent, ejaculation outside the vagina was 18.2 per cent, and rhythm method was 4.5 per cent. It is noteworthy that the use of male condom seemed to have decreased during the period. Furthermore, the total number of responses for this variable changed from 66 to 81; the probable explanation being that some respondents reported the use of more than one method, most likely the case among those indicating the use of male condom, ejaculation outside the vagina and rhythm method.

TABLE 9

Use of contraception during preceding twelve months

Method	Number of respondents *	Percentage of population using contraception during preceding 12 months
Contraceptive pill	28	44.4
Intrauterine device (IUD)	27	41.0
Male condom	11	16.6
Female condom	-	-
Injection	-	-
Vaginal diaphragm	-	-
Vaginal creams	-	-
Uterine tube litigation	-	-
Ejaculation outside vagina	12	18.2
Rhythm method	3	4.5

** Some respondents indicated more than one method.*

As shown in table 10, the higher percentages recorded were for the South and the North, at 51.9 and 50 per cent, respectively; followed by Bekaa at 42.3 per cent and Beirut at 35.5 per cent. Lower percentage rates were recorded for the Central Military Hospital and Mount Lebanon, at 16.0 and 11.5 per cent, respectively.

TABLE 10

Distribution by centre of population who received contraception during preceding twelve months

Centre	Percentage of total population per center
Central Military Hospital	16.0
Beirut	35.5
Mount Lebanon	11.5
North	50.0
South	51.9
Bekaa	42.3

As for duration of use, the period of utilization for each of the mentioned birth-

control methods varied, ranging from months to years, as is shown in table 11. For the contraceptive pill, the period ranged from 1 month to 15 years. Actually, 26 respondents had used the pill between one and six months, 12 respondents between 6 and 12 months, 15 respondents between one and two years, 18 respondents between two and five years, 5 respondents between 5 and 10 years, and 4 respondents between 10 and 15 years. On the other hand, IUD and male condom recorded a fairly steady use. This was also the case for ejaculation outside the vagina and, to a lesser extent, the rhythm method.

TABLE 11

Duration of use of contraceptive methods

Method	Duration						
	0-6 (months)	6-12 (years)	1-2	2-5	5-10	>10	Interrupted
Contraceptive pill	26	12	15	18	5	4	-
Intruterine device (IUD)	5	8	14	19	10	8	-
Male condom	5	7	3	10	2	-	5
Injection	-	-	-	1	-	-	-
Vaginal diaphragm	1	1	-	-	1	-	-
Ulterine tube ligation	-	-	-	-	4	1	-
Ejaculation outside vagina	6	6	2	-	1	2	5
Rhythm method	2	2	1	1	2	3	1

Among the respondents not using any birth-control method, close to half indicated that they saw no need to, representing 42.1 percent; fear of possible side effects was mentioned by 27.1 per cent, while 11.4 per cent wanted to get pregnant. Other less common reasons included opposition from husband and religious objections, accounting for 4.3 and 2.9 per cent, respectively, as shown in table 12. Overall, each of the six health centres surveyed recorded similar results, indicating there was no apparent dominance of a particular reason at any one centre.

TABLE 12

Reasons for not using contraception

Reason	Number of respondents	Percentage
No need/necessity	59	42.1
Objection of husband	6	4.3
Health reasons/fear of sides effects	38	27.1
Desire to have children	16	11.4
Lack of knowledge	5	3.6
Religion concerns	4	2.9
Opposition to family planning	12	8.6
Cost	-	-
Total	140	100

Those respondents who had received a contraceptive device during their last visit numbered 14, or the equivalent of 6.4 percent of the total sample of 219 who responded to this question. As many as 88 respondents, or 28.7 per cent, gave no answer. Similarly, when all 307 respondents were asked the main reason they used contraceptive methods, 224 or 73 per cent did not answer. The remaining 83 respondents, or 27 per cent, were mostly split between wanting to avoid unwanted pregnancy and space the planned births. Forty respondents wanted to avoid pregnancy and 32 wanted to plan the birth of a child, representing 48.2 and 38.5 per cent, respectively. Other reasons included not wanting more children, treatment and/or regulating their menstrual cycle, mentioned by 11 respondents representing 13.3 per cent.

Out of the 27 respondents who had received contraception at their last visit, 12 women, or 44.4 per cent, freely participated in the choice of method; while 15, or 55.6 per cent, said they had not. In other words, more than half of the respondents had not been given the opportunity to select the birth-control method. On the other hand, 88.5 per cent, representing 23 out of the 26 respondents who to this question, said they had received what they had came for; while 3 respondents, or 11.5 per cent, said they had not.

When these same respondents were asked if instructions on the use of the contraceptive method had been provided, 18 said they had received information, representing 75 per cent of the 24 respondents who had answered that question. This indicates that a quarter of the respondents had received no information on the contraceptive method they had been prescribed at their last visit. The least informed were respondents at the Beirut Centre, followed by those at the South Centre.

Moreover, just over half of the respondents who had received contraception during their last visit also had been informed about other contraceptive methods, representing 57.1 per cent of the respondents. On the other hand, 42.9 per cent of the women claimed

they had not; with figures varying for each of the six health centres surveyed. Of the respondents having been given information on other methods, the largest proportion was at the Bekaa, with 87.5 per cent of the respondents there having been told of alternative methods; while the Central Military Hospital recoded a low of just 33.3 per cent, indicating that only one third had received information on other methods. As shown in table 13, the figure for the Beirut Centre was 42.9 per cent and for the South 57.1 per cent, while data from the health centres in the North and Mount Lebanon were unavailable.

TABLE 13

Information received at health centre and attitude of spouse to contraception

Centre	Received information on contraception	Felt comfortable to ask questions	Acted in agreement with husband
	(percentage)	(percentage)	(percentage)
Central Military Hospital	33.3	50.0	80.0
Beirut	42.9	66.7	71.4
Mount Lebanon	-	-	-
North	-	-	-
South	57.1	71.4	85.7
Bekaa	87.5	88.9	100.0
Average	57.1	71.4	85.2

Most of the respondents who had received contraceptives during their last visit said they had felt free to ask further questions; namely, 71.4 per cent; while 28.6 per cent felt they could not ask for additional information. As illustrated in table 13, at the Bekaa Centre, 88.9 per cent of the respondents had felt free to ask questions; at the South Centre, 71.4 per cent; and at the Beirut Centre, 66.7 per cent. In addition, half of the respondents at the Central Military Hospital felt they could ask for further information, while no data were recorded at the health centres in the North and Mount Lebanon.

The majority, or 85.2 per cent, of the respondents who had received contraceptives during their last visit had discussed with their husbands the need for birth control prior to seeing the doctor or other medical staff; while 14.8 per cent had not breached the subject with their spouses. Mutual agreement was recorded for all respondents at the Bekaa Centre, followed by the South at 85.7 per cent, the Central Military Hospital at 80 per cent, and Beirut at 71.4 per cent with no data recorded for Mount Lebanon and the North.

C. PART THREE: Reproductive tract infections

Part Three of the questionnaire dealt with RTIs. Of the 297 respondents in this section, 125 had been diagnosed and/or treated for these types of infections during their last visit. This translates into 42.1 per cent having reported suffering from RTI at the time of the interview, as shown in table 14. This is an alarmingly high percentage, warranting a vigilant approach to this issue.

TABLE 14
RTI diagnosis and treatment received on day of survey

Intervention	Number of respondents	Percentage
RTI diagnosis/treatment	125	42.1
Other	172	57.9
Total	**297**	**100**

The highest rates of RTI among respondents were at the Beirut Centre and the South, with percentages of 63.9 and 50, respectively. At the North Centre, 42.5 per cent of the respondents reported having been diagnosed and/or treated during their last visit; with 41.4 per cent recorded at the Central Military Hospital. RTI prevalence was lower at the centres in Bekaa and Mount Lebanon, with 26.5 and 28.9 per cent of the respondents there reporting RTI diagnosis and/or treatment, as shown in table 15.

TABLE 15
Distribution by centre of RTI

Centre	Number of respondents	Percentage of population per centre
Central Military Hospital	46	41.4
Beirut	23	63.9
Mount Lebanon	11	28.9
North	17	42.5
South	19	50.0
Bekaa	9	26.5

D. PART FOUR: Pregnancy and abortion

A large majority, namely 253 of the 307 women questioned, had children, representing 82.4 per cent of the total sample population. Moreover, as previously noted, most of the respondents were in the reproductive age group, with the possible exception of single women who numbered 18 or 5.9 per cent of the total sample; with the remaining 11.7 per cent being married without children. The distribution of women who had children per centre is shown in table 16.

TABLE 16
Distribution by centre of respondents with children

Centre	Number of respondents	Percentage of population per centre
Central Military Hospital	102	90.3
Beirut	32	88.9
Mount Lebanon	35	87.5
North	27	77.1
South	30	76.9
Bekaa	27	84.4
Total / Average	**253**	**82.4**

As evident from table 17, the great majority of the respondents, or the equivalent of 85 per cent, have four children or less. This could be a possible indicator of good FP.

TABLE 17
Number of children

Number of children	Number of respondents	Percentage
One	39	15.4
Two	66	26.1
Three	71	28.1
Four	39	15.4
Five	19	7.5
Six	11	4.3
Seven	4	1.6
Eight	2	0.8
Eleven	1	0.4
Nineteen	1	0.4
Total	**253**	**100**

With respect to unwanted pregnancy, 121 women, or 43.1 per cent of the 281 respondents reported having had one or more unwanted pregnancy. The highest rate of 58.8 per cent was recorded at the Beirut Centre, and the lowest of 20 percent at the Bekaa Centre, as seen in table 18. The other health centres registered rates of between 40.0 and 45.9 per cent.

TABLE 18

Distribution by centre of unwanted pregnancies

Centre	Number of respondents	Percentage of population per center	Percentage of total sample population
Central Military Hospital	47	43.5	38.9
Beirut	20	58.8	16.5
Mount Lebanon	17	45.9	14.0
North	14	40.0	11.6
South	17	45.9	14.0
Bekaa	6	20.0	5.0
Total	**121**	**43.1**	**100**

As for the number of unwanted pregnancies per woman, 118 women out of 121 responded to this question. As presented in table 19, 70.3 per cent had had one unwanted pregnancy; 22 per cent had had two; 5.9 per cent had had three; and 1.7 per cent four or more unwanted pregnancies. These figures are alarming, as unwanted pregnancy exposes the woman to unnecessary and avoidable risk, and reflects a lack of awareness and knowledge of contraception and birth-control methods and FP.

TABLE 19

Distribution by centre of number of unwanted pregnancies per respondent

Centre	One		Two		Three		Four or more		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	**(n)**	**(%)**
Central military hospital	32	90.3	10	22.2	2	4.4	1	2.2	**45**	**38.1**
Beirut	13	65.0	4	20.0	2	10.0	1	5.0	**20**	**16.9**
Mount Lebanon	10	65.0	4	28.6	-	-	-	-	**14**	**11.9**
North	10	-	3	21.4	1	7.2	-	-	**14**	**11.9**
South	13	-	4	22.2	1	5.6	-	-	**18**	**15.3**
Bekaa	5	-	1	14.3	1	14.3	-	-	**7**	**5.9**
Total / Average	**83**	**70.3**	**26**	**22**	**7**	**5.9**	**2**	**1.7**	**118**	**100**

Moreover, the data collected for this study show that many unwanted pregnancies were terminated. The Central Military Hospital recorded the greatest proportion of abortions being performed among the six health facilities surveyed, accounting for 42.7 per cent of the total, as seen in table 20. The other centres had comparable rates of between 12 and 13 per cent, with the South registering the lowest at 8.9 per cent and the Bekaa slightly higher at 10.5 per cent.

TABLE 20

Distribution by centre of abortions

Centre	Number of respondents	Percentage of population per center	Percentage of total sample population
Central Military Hospital	53	45.7	42.7
Beirut	15	41.7	12.1
Mount Lebanon	16	40.0	12.9
North	16	40.0	12.9
South	11	27.5	8.9
Bekaa	13	37.1	10.5
Total	**124**	**40.1**	**100**

The rate of abortion among the sample population was high, and a significant number of multiple abortions were recorded among the respondents, as is illustrated in table 21. Different rates of answers from the 120 respondents who had experienced unwanted pregnancy, 73 women had resorted to abortion one time, representing 60.8 per cent. Twenty-seven women had had two abortions, representing 22.5 per cent of the respondents; and nine women had had three abortions, or the equivalent 7.5 per cent. Around nine per cent of the respondents had had four abortions or more. Those respondents who had had four abortions or more were recorded at the Central Military Hospital and the North, as well as one respondent at the Mount Lebanon, as is shown table 21.

TABLE 21

Distribution by centre of abortions by person

Centre	One		Two		Three		Four or more		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	**(n)**	**(%)**
Central military hospital	33	63.5	9	17.3	5	9.6	5	9.6	**52**	**43.3**
Beirut	7	50.0	7	50.0	-	-	-	-	**14**	**11.7**
Mount Lebanon	9	60.0	4	26.7	1	6.7	1	6.7	**15**	**12.5**
North	9	56.2	1	6.2	1	6.2	5	31.2	**16**	**13.3**
South	8	72.7	1	9.1	2	18.2	-	-	**11**	**9.2**
Bekaa	7	58.3	5	41.7	-	-	-	-	**12**	**5.9**
Total / Average	**73**	**60.8**	**27**	**22.5**	**9**	**7.5**	**11**	**9.2**	**120**	**100**

However, a comparison of the history of unwanted pregnancy shows a slight improvement of the rates for abortion among the respondents. Ninety women reported having experienced unwanted pregnancy since visiting the health centre and using the services,

as compared to the 124 respondents who reported unwanted pregnancy before coming to the centre. As is shown in table 22, improvement was noted at a varying degree for the six health centres. Improvement was recorded for the centres in the North and Mount Lebanon, as well as for the Central Military Hospital, though the difference in rates was not significant. On the other hand, at the Beirut Centre a higher proportion of unwanted pregnancy was recorded for respondents after they started using the services at the centre. Other health facilities indicated little change in rates of unwanted pregnancy among the respondents as compared to before they came to their respective centre.

TABLE 22

Distribution by centre of unwanted pregnancies prior to and after becoming beneficiary
Centre Before visiting centre

Centre	Before visiting center		After becoming beneficiary at centre	
	(Number of respondents)	(Per cent)	(Number of respondents)	(Per cent)
Central military hospital	53	42.7	36	40.0
Beirut	15	12.1	16	17.8
Mount Lebanon	16	12.9	11	12.2
North	16	12.9	8	8.9
South	11	8.9	10	11.1
Bekaa	13	10.5	9	10.0
Total / Average	**124**	**100**	**90**	**100**

E. PART FIVE: Prenatal and post-natal care

As this part of the questionnaire relates to pregnancy and child birth, it goes without saying that all the respondents had been pregnant, or were expecting a baby at the time of the interview. A total of 293 women answered the 12 questions in this section, representing 95.4 per cent of the sample population for the study. Only 4.6 per cent of the total number of respondents had never been pregnant, a proportion closely corresponding to that of unmarried women of 5 per cent. Those pregnant at the time of the survey numbered 92, or 31.4 per cent of the sample for this part of the questionnaire.

Of the 92 respondents being pregnant at the time of the interview, 37 were recorded at the Central Military Hospital, representing 40.2 per cent; followed by the North, where 20 were expecting mothers, or the equivalent of 21.8 per cent. The other centres had rates of near or around 10 per cent, as presented in table 23.

TABLE 23

Distribution by centre of pregnancy at time of survey

Centre	Number of respondents who were pregnent at time of survey	Percentage
Central Military Hospital	37	40.2
Beirut	9	9.8
Mount Lebanon	8	8.7
North	20	21.8
South	12	13.0
Bekaa	6	6.5
Total / Average	**92**	**100**

As for the time of their last pregnancy, 15 respondents had been pregnant in 2009 - the year of this study - representing 5 per cent of the sample of 293 women who answered this question. In 2008, 10 women had been pregnant, or the equivalent of 6.2 per cent; with 3.3 per cent in 2007, 2.9 per cent in 2006, 3.3 per cent in 2005, and 3.6 per cent in 2004; with other respondents being pregnant in earlier years. Thus, from 2004 to 2009, around 25 per cent of the respondents had been pregnant; this corresponds to the five-year period during which LFPA was implementing RHS programmes at Lebanese Army health facilities.

During their last pregnancy, almost all the respondents had visited a health professional. Of the 278 who answered the question, 265 had gone to a medical doctor, representing 95.3 per cent. Only nine respondents, or 3.2 per cent, had seen a qualified midwife, and four had visited a private clinic, representing 1.5 per cent.

As is presented in table 24, the Central Military Hospital received by far the largest portion of pregnancies when compared to other health centres, representing 38.22 per cent of the total number who had sought professional care at that facility.

TABLE 24

Distribution by centre of past pregnancies

Centre	Number of respondents who had been pregnant prior to survey	Percentage
Central Military Hospital	99	38.22
Beirut	33	12.74
Mount Lebanon	36	13.90
North	32	12.36
South	32	12.36
Bekaa	27	10.42
Total / Average	**259**	**100**

Of those respondents who had sought professional help, 57 per cent, or 175 women came for a first prenatal visit during the first month of their pregnancy; while the remaining came the second or third month, accounting for 18.2 and 4.9 per cent, respectively; and just 5 respondents during the fourth or fifth month, representing a very small percentage of 1.7, as can be seen in table 25. Most respondents had returned to the same health centre for prenatal visits; namely, 66.8 per cent or 186 women of the 277 who responded, while 92 women did not, accounting for 33 per cent.

TABLE 25

First prenatal check-up

Month of pregnancy	Number of respondents	Percentage
First month	175	57
Second month	56	18.2
Third month	15	4.9
Fourth month	3	1.0
Fifth month	2	0.7
Don't remember	18	5.8
Not specified	38	12.4
Total / Average	**307**	**100**

Concerning the frequency of prenatal visits, about 12 per cent of the respondents saw a trained health professional on a regular basis throughout the pregnancy. The distribution of visits for the remaining respondents is displayed in table 26. By and large, the majority made multiple, frequent and regular visits. Those making eight visits or more accounted

for over two thirds of the sample population.

TABLE 26
Number of prenatal check-ups per pregnancy

Number of check-ups	Number of respondents	Percentage
One	6	2.0
Two	12	4.0
Three	11	3.6
Four	19	6.2
Five	17	5.5
Six	14	4.6
Seven	14	4.6
Eight	28	10.2
Nine	87	28.3
Ten	10	3.3
More then ten	23	7.6
None	2	0.6
Regular	36	12.0

As for the motive and purpose for making the first visit, 30 per cent wanted to confirm the pregnancy and 22.1 per cent aimed at ensuring a healthy pregnancy, while 23.1 per cent wanted to check the health of the baby. Only a small percentage requested a regular prenatal check-up, accounting for 7.1 per cent; with 3.3 per cent wanting to check for the presence of possible pregnancy problems and 0.6 per cent requesting an abortion. In other words, most reasons focused on the presence and safety of pregnancy, as illustrated in table 27.

TABLE 27

Purpose for first prenatal visit

Number of check-ups	Number of respondents	Percentage
Check safety of foetus/baby	71	23.1
confirm pregnancy	92	30
Ensure healthy pregnancy	68	22.1
Regular check-up	22	7.1
check pregnancy problem	10	3.3
Abortion	2	0.6
Not specified	42	13.8
Total	**307**	**100**

The great majority of the women questioned had taken supplements during their pregnancy; 85.3 per cent took iron and 84.7 per cent vitamin supplements, as shown in table 28. As for the remaining percentages, 10.8 per cent did not take iron and 4 per cent did not remember; while 11.6 per cent did not take vitamin supplements and 3.7 per cent could not recall.

TABLE 28

Profile of population receiving supplements during pregnancy

Iron and vitamin supplements	Number of respondents	Percentage
Receive iron supplement	237	85.2
Did not receive iron supplement	30	10.8
Don't recall	11	4.0
Total	**278**	**100**
Receive vitamin supplement	233	85.0
Did not receive vitamin supplement	32	11.3
Don't recall receiving vitamin supplement	10	3.7
Total	**275**	**100**

At most of the six health centres surveyed, the overall distribution of iron and vitamin supplements were high, as illustrated in table 29; the exception being the Bekaa Centre, where only half the respondents had taken iron during pregnancy, with a slightly higher percentage of 67.9 recorded for vitamin supplement.

TABLE 29

Distribution by centre of population receiving supplements during pregnancy

Centre	Iron supplement		Vitamin supplement	
	(Number of respondents)	(Percentage)	(Number of respondents)	(Percentage)
Central military hospital	103	91.2	101	90.2
Beirut	31	93.9	27	81.8
Mount Lebanon	29	78.4	30	81.1
North	30	88.2	28	87.5
South	30	90.9	29	87.9
Bekaa	14	50.0	19	67.9
Total / Average	**237**	**85.3**	**234**	**85.1**

Concerning post-natal care, 184 out of the 251 respondents who had had a check-up after having given birth saw a doctor, accounting for 73.3 per cent. A small fraction of the respondents had gone to a qualified nurse or mid-wife, representing 0.8 per cent each, respectively. The remaining respondents, numbering 63 or the equivalent of 25.1 per cent, did not visit any post-natal care facility or medical professional. It is noteworthy that nearly all the respondents at the Bekaa Centre who had given birth had seen a doctor for a follow-up examination, representing 96.2 per cent. On the other hand, at the North Centre, only half of the respondents had gone for a post-natal check-up. At the remaining four health facilities surveyed, about two thirds of the respondents at the South Centre had attended post-natal care; while three quarters of the respondents at the other centres had had a check-up following delivery.

Of those who had gone for post-natal care, most returned to their respective Army health facility. Out of 208 respondents, 135 had continued their post-natal care at the same health centre, accounting for 64.9 per cent; while the rest had not. At the North Centre, 47.8 per cent had not returned, accounting for almost half the respondents.

When asked about the reason for not attending post-natal care, availability of services or their costs were never mentioned; rather, the main explanation given by 39 of the respondents was absence of problems and fatigue, representing 66.1 per cent; while lack of time was the reason given by 8 respondents, accounting for 13.5 per cent. Ten respondents were unaware of the importance of post-natal care, representing 17 per cent; while two respondents had previous experience with pregnancy and child birth, representing 3.4 per cent, as shown in table 30.

TABLE 30

Reasons for not seeking post-natal care

Reason	Number of respondents	Percentage
Experienced no problem or fatigue	39	66.1
Was busy	8	13.5
Wasn't aware of importance	10	17.0
Has past experience with child birh and delivery	2	3.4
Total	**59**	**100**

F. PART SIX: Health awareness sessions

This section of the questionnaire targeted the health awareness sessions held at the health facilities surveyed, with a question on whether discussions addressing SRH had taken place. The resulting data showed that almost three quarters of the 293 respondents, or the equivalent of 219 respondents or 74.7 per cent, denied being aware of such classes; while 74 respondents reported hearing about and/or attending such sessions, representing 25.3 per cent. The distribution per centre is illustrated in table 31. While health awareness sessions were recognised by more respondents at the health centres in the North, the South and Bekaa, registering percentages of 83.8, 51.4 and 41.2, respectively, they were almost completely denied at the Central Military Hospital.

TABLE 31

Distribution by centre of attendance during preceding 12 months of health awareness sessions

Centre	Attended session		Did not attend session		Total sample population	
	(Number of respondents)	(Percentage)	(Number of respondents)	(Percentage)	(Number of respondents)	(Percentage)
Central military hospital	1	0.9	109	99.1	110	37.5
Beirut	5	14.3	30	85.7	35	11.9
Mount Lebanon	4	10.0	36	90.0	40	13.7
North	31	83.8	6	16.2	37	12.6
South	19	51.4	18	48.6	37	12.6
Bekaa	14	41.2	20	74.7	34	11.6
Total / Average	74	25.3	219	74.7	293	100

Just over 20 per cent evaluated the classes as 'good' or 'very good'; accounting for 7.2 per cent, or 20 respondents, and 14 per cent, or 39 respondents, respectively; while the remaining 1.1 per cent evaluated the discussions as 'average' or 'mediocre'.

Regarding the health facility at the Central Military Hospital, 109 out of 110, representing 99.1 per cent of the respondents, had not attended any health awareness sessions at the centre. At the Beirut Centre, 85.7 per cent of the respondents there had not attended any sessions. Of those who had, three reported the sessions as being 'very good', and one as 'good'. The trend was the same at the Mount Lebanon Centre; 36 respondents out of 40, i.e., 90 per cent, had not attended any health awareness sessions; while of the 4 who had, 3 reported them as being 'good', and 1 as 'very good'.

At the North Centre, 31 out of 37 respondents, or 83 per cent, attended the sessions. Twenty-five respondents reported them as 'very good', representing 81 per cent, while 16.2 per cent of the sample at the health centre did not attend. At the South Centre, the coverage was only 51.4 per cent. Those respondents who had attended ranked the sessions equally between 'very good' and 'good'. At the Bekaa Centre, the coverage was 41.2 per cent. Of the 14 respondents who had attended, 1 reported the sessions as 'poor'; 10 respondents as 'good', representing 71.4 per cent; and 3 respondents indicating 'very good', accounting for 21.4 per cent. The coverage of these health awareness sessions was not reaching 74.7 per cent of the total sample population at the six health facilities surveyed in the study.

As regards the time allocated for each session, 76.1 per cent of those respondents who had attended regarded it as 'sufficient', as shown in table 32. However, a small minority thought the duration either 'too long' or 'too short', representing 7.5 and 10.4 per cent, respectively; the remaining respondents either did not know or could not recall, each accounting for 3 per cent.

TABLE 32

Evaluation of length of health awareness sessions

Rating	Number of respondents	Percentage
Sufficient	51	76.1
Too long	5	7.5
Too short	7	10.4
Don't know	2	3.0
Don't recall	2	3.0

With respect to the day of the week and the hour of the sessions, the great majority found them convenient, representing 88.9 per cent of those respondents who had attended. As for the instructors giving the classes, 62.9 per cent thought they were 'very good' and 37.1 per cent 'good', with no other opinion recorded. All the providers were deemed to have treated those attending in an appropriate manner. Moreover, the methodology used, including methods and tools applied, was deemed 'very good' or 'good' by 50.8 and 39.4 per cent of the respondents, respectively; and 'average' by 14.3 per cent

The topics which were raised during the health awareness sessions were ranked by the respondents in order of importance and level of understanding, as listed in table 33.

TABLE 33

Evaluation of topics presented during health awareness sessions

Centre	Preference		Not well understood	
	(frequency)	(Percentage)	(frequency)	(Percentage)
Family planning	17	14.4	1	2.1
Maternal health	22	18.7	1	2.1
Infertility	2	1.7	5	10.7
Menopose	4	3.4	5	10.7
Pap smear	9	7.6	8	17.0
Mammography	10	8.5	3	6.5
Sexually transmitted infections	19	16.1	10	21.0
Reproductive tract infections	26	22.0	9	19.2
Aids	9	7.6	5	10.7
Total / Average	**118**	**100**	**47**	**100**

Of the subjects and topics raised, RTIs was thought to be the most interesting and pertinent by the majority of the respondents. Twenty-two per cent, or 26 of the 118 women in the sample, ranked RTIs the most valuable topic. However, if STIs and AIDS, also being infections, were added, the percentage would rise to 45.7 per cent. In other words, close to half of the respondents ranked infections as the most valuable area for discussion and information. The subjects of maternal health and FP came next in the ranking, indicated by 18.6 and 14.4 percent of the respondents, respectively. Mammography, Pap smear and menopause followed, with percentages of 8.5, 7.6 and 3.4, respectively.

On the other hand, when asked which topics had not been well understood, probably due to the sensitive nature of such issues, only 47 of the total sample population of 307 responded, representing 15.3 per cent. The topics indicated by half of the respondents, or 50.9 per cent, covered infections; namely, RTIs, STIs and AIDS. They were followed by Pap smear, accounting for 17 per cent; and menopause and infertility, each recording 10.7 per cent.

Suggestions for improvement of the health awareness sessions were sought, with only 61 women responding and just 30 actually putting forward proposals and ideas. Suggestions included: continued, regular and more frequent campaigns and sessions; wider scope and coverage, for example extended to schools and community centres in towns and villages; and improved technology, including monitors in waiting rooms screening RH information and educational programmes.

The majority, representing 71 per cent or 218 of the respondents, had received brochures and/or booklets on RH at their respective health centre, while 17.9 per cent said they had not. The subjects covered in these booklets and brochures were reported by 199 respondents, or 91.4 per cent of those who had received such material, as illustrated in table 34:

TABLE 34

Evaluation of topics covered in printed material

Topic	Preference	
	(frequency)	(Percentage)
Family planning	28	14.2
Maternal health	8	4.0
Infertility	53	26.4
Menopose	9	4.5
Pap smear	25	12.5
Mammography	23	11.5
Sexually transmitted infections	26	13.2
Reproductive tract infections	5	2.5
Aids	22	11.2
Total / Average	**199**	**100**

The topics and subjects that were regarded pertinent and of greater value to the respondents, in particular RTIs, had not been as comprehensively covered as they should have been. This is supported by the fact that infections were among the least well understood subjects. On the other hand, infertility had received more coverage, but respondents did not regard it a topic of great interest to them, as is indicated in table 35.

Although 71 per cent of 218 in this sample had received brochures and booklets, only 17.9 per cent, or 55 respondents, had read them, representing a low percentage. Of those who had read the booklets and brochures, almost half thought them 'very good', representing 49.1 per cent or 27 out of the 55 respondents. A similar proportion evaluated them as 'good', namely 47.3 per cent or 26 respondents; while 2 respondents thought them 'average', representing 3.6 per cent. Most respondents, accounting for 87.3 per cent or 48 out of the 55, had recommended such material to others, like family and friends, or would consider doing so.

When asked their preference for subjects to be covered in future publications, respondents listed many of the same topics as had been deemed pertinent and of value for the health awareness sessions. The combined area of RTIs, STIs and AIDS was suggested by 97.8 per cent of the respondents, while other subjects attracted attention in equal proportion, as shown in table 35.

TABLE 35
Proposed topics for health awareness sessions

Topic	Preference	
	(frequency)	(Percentage)
Family planning	87	32.3
Maternal health	122	45.5
Infertility	52	19.5
Menopose	107	39.6
Pap smear	126	46.8
Mammography	119	44.6
Sexually transmitted infections	96	35.7
Reproductive tract infections	106	39.4
Aids	69	22.7

D. PART SEVEN: Sexually transmitted infections and HIV/AIDS

This section of the questionnaire dealt with STIs and AIDS. The vast majority of the respondents had heard of, or were familiar with diseases which were transmitted through sexual relations; 265 respondents of the total sample population of 307 fell into this category, representing 90.4 per cent.

Questions addressing the types of infections were posed, with each being answered by a varying number of respondents. The spectrum of STIs named by the respondents included: candidiasis, mentioned by 60 per cent, or 105 out of 175; syphilis, mentioned by 33.6 per cent, or 38 out of 113; herpes, indicated by 17.6 per cent, or 19 out of 108; gonorrhoea, noted by 14.6 per cent or 15 out of 103; and hepatitis B, mentioned by 4.2 per cent, or 17 out of 307. In addition, 'infections' in general were mentioned by 20.8 per cent, or 64 respondents out of 307. AIDS was the disease mentioned by almost all respondents, representing 92.3 per cent of the respondents, as is indicated in table 36.

TABLE 36
Knowledge of infections and other illnesses

Infection/illness	Frequency	Percentage	Total population per variable
Syphilis	38	33.6	113
Gonorrhoea	15	14.6	103
Candidacies	105	60.0	175
Aids	228	92.3	247
Herpes	19	17.6	108
Other infection	64	20.8	307
Hepatitis B virus	17	4.2	307
Cancer	3	0.1	307

When asked about the symptoms of STIs and AIDS, the following were reported by the respondents, as listed in table 37:

TABLE 37
Knowledge of symptoms of STIs and AIDS

Symptom	Frequency	Percentage	Total population per variable
Vaginal secretion	87	36.2	240
Irritation of the genitalia	121	50.2	241
Burning during urination	75	31.4	239
Pelvic pain	47	19.7	239
Warts/fissures	35	14.8	237
Don't know any symptoms	74	24.1	307

It is important to note that 24.1 per cent, or 74 out of the total sample population of 307 did not know of any symptoms of STIs and AIDS, representing almost one quarter of the respondents. The main symptoms recognized were: irritation of genitalia, mentioned by half of the respondents, or 50.2 per cent; vaginal secretions, mentioned by 36.2 per cent; and burning during urination, mentioned by 31.4 per cent of the respondents. Other such symptoms as pelvic pain, and warts or fissures of the genitalia were less recognized, accounting for 19.7 and 14.8 per cent, respectively.

With regard to awareness of HIV/AIDS, the vast majority, accounting for 92 per cent or 265 of the 228 respondents, had heard about the disease; while 8 per cent, or 23 respondents,

indicated unfamiliarity - a percentage common among all of the six health facilities surveyed.

When indicating modes of transmission of HIV/AIDS, 88.1 per cent mentioned sexual relations, and 5.4 per cent promiscuity, as illustrated in table 38. The second-most mentioned mode of transmission was blood transfusion, brought up by 69.7 per cent; followed by needles, mentioned by 40.1 per cent; sharp objects, indicated by 13.3 per cent; and dental tools, noted by 4.9 per cent. In addition, 9.8 per cent mentioned mother-to-child, as well as saliva at 5.4 per cent. Minor differences in the rates recorded at the six health facilities can be detected; overall, rates were lower at the Bekaa and, to some extent, at the South. It is apparent from the data collected that the sample population is, to varying extent, familiar with the main modes of transmission; namely, sexual relations, blood transfusion and, to a much lesser extent, mother-to-child. If' promiscuity' is added to 'sexual relations', then the total percentage for that variable would be as high as 86.5 per cent.

TABLE 38

Modes of HIV/AIDS transmission mentioned by respondents

Mode of transmition	Frequency	Percentage	Total population per variable
Sexual Relation	237	81.1	269
Blood	166	69.7	238
Needles	91	40.1	227
Sharp object	28	13.3	247
Mother to child	21	9.8	211
Promiscuity	11	5.4	205
Saliva	11	5.4	204
Dental tools	10	4.9	203

Knowledge of the modes of transmission could have been better at all six health centres. The low percentage of 9.8 for mentioning mother-to-child transmission among respondents at reproductive health facilities warrants appropriate follow-up.

Regarding prevention of HIV/AIDS, the use of condoms was mentioned by 35.5 per cent of the respondents; non-contaminated blood 21.8 per cent; loyalty to one partner was noted by 18.6 per cent; abstinence from sexual relation mentioned by 22.2 per cent; avoiding the use of sharp tools, 21 per cent; use of clean needles 18.8 per cent; healthy sex partner by 7.9 per cent; test for HIV 7.8 per cent; and general cleanliness 5.3 per cent; while 1.6 per cent said they did not know, as listed in table 39.

TABLE 39

Methods of STI and HIV/AIDS prevention mentioned by respondents

Mode of prevention	Frequency	Percentage	Total population per variable
Use of condoms	109	35.5	307
Loyalty to one partner	57	18.6	307
Abstinence	49	22.2	221
Relation with safe/healthy sex partner	17	7.9	205
Screened blood for transfusion	67	21.8	307
Use of sterile syringes / sharp tools	46	21.0	219
Testing for HIV	16	7.8	215
Sterile needles / no drugs	41	18.8	218
Desinfecting of wounds	7	2.3	199
Cleanliness / personal hygiene	11	5.3	206
Don't know	5	1.6	307

As shown in table 39, if combined, the most commonly-mentioned method of HIV/AIDS prevention would relate to sexual relations; namely, the use of condoms, loyalty, refraining from sex and abstaining from promiscuous behaviour, accounting for 75.8 per cent of the respondents. However, there is a misconception regarding getting a healthy sex partner. Again, if combined, the second-most mentioned method would be blood, accounting for a total of 61.6 per cent, divided into non-contaminated/screened blood, avoidance of sharp tools and clean needles. Two other methods mentioned were probably based on misconception; namely, HIV test and cleanliness. Of the respondents professing ignorance of HIV/AIDS prevention, three were recorded at the North Centre, with one each registered at the Beirut Centre and at the South Centre. Mother-to-child was not mentioned, although the survey took place at RH facilities.

Over one quarter of the respondents did not know whether HIV/AIDS was a curable disease, accounting for 27.5 per cent of the sample population. A high 56.2 per cent believed there was no cure for HIV/AIDS, while 16.3 per cent said there was - a well-propagated misconception. The remaining 27.5 per cent did not know. Furthermore, and to an equal degree at all centres, 8.8 per cent believed that by looking at a person, one could tell if he/she was infected by HIV/AIDS. On the other hand, three quarters of the respondents believed this was a misconception, representing 75.2 per cent; while 16 per cent did not know.

As to susceptibility to getting HIV/AIDS, 31.6 per cent of the respondents believed that women were more susceptible or vulnerable than men to HIV/AIDS infection and STIs. However, 16.3 per cent did not know and 40.7 per cent did not agree this was the case.

F. PART EIGHT: Status of health facility and its services

This section of the questionnaire aimed at evaluating the six health centres in the study and the services provided at each.

The majority of the respondents found it easy to reach their respective health centre, accounting for 76 per cent of the total sample population. The Mount Lebanon Centre scored the highest, with 92.5 per cent of the respondents using that centre finding it easily accessible. The South Centre was also deemed accessible, as testified by 82.1 per cent of the respondents there; followed by the Central Military Hospital at 69.6 per cent. Most respondents could reach their respective health facility within 30 minutes, representing 72.5 per cent. For 16.6 per cent, it would take up to one hour to get to the centre, while 10.6 per cent required more than one hour. Based on these figures, the six health facilities can be regarded as easily to fairly accessible, overall.

As for the medical staff at the respective health centre, only one third of the respondents would have preferred to consult a female doctor, accounting for 33.9 per cent. Of the remainder, 41.5 per cent had no preference; and 24.6 per cent would rather see a male doctor. The preference for a female doctor was the highest at the Bekaa Centre, representing 80 per cent of the respondents there.

Concerning the evaluation of services provided on the day of the survey, 70.7 per cent, or 217 respondents considered them as 'good'; 24.1 per cent, or 74 respondents regarding them as 'average'; while 2.6 per cent, or 8 respondents deemed them unsatisfactory. No major differences were noted among the six health facilities, with the exception of the Beirut Centre, with over half of the respondents there considering the services as 'average', accounting for 55.6 per cent of all respondents at the centre; and two fifths, or 38.9 per cent evaluating them as 'good'. The health facility deemed the best as regards quality of services provided was the Mount Lebanon Centre. Of the respondents there, 92.5 per cent thought the services 'good', and 7.5 per cent as 'average'. As illustrated in table 40, the services at the other centres were deemed 'average' to 'good'.

TABLE 40
Evaluation by centre of services provided

Centre	Quality of services									
	Good		Average		Substandard		Not specified		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Central military hospital	89	76.7	23	19.8	2	1.7	2	1.7	**116**	**37.8**
Beirut	14	38.9	20	55.6	2	1.7	-	-	**36**	**11.7**
Mount Lebanon	37	92.5	3	7.5	-	-	-	-	**40**	**13.0**
North	30	75.0	7	17.5	2	5.0	1	2.5	**40**	**13.0**
South	26	65.0	12	30.0	2	5.0	-	-	**40**	**13.0**
Bekaa	21	60.0	9	25.7	-	-	5	14.3	**35**	**11.5**
Total / Average	**217**	**70.7**	**74**	**24.1**	**8**	**2.6**	**8**	**2.6**	**307**	**100**

More than half of the respondents had complaints regarding the service received at the health facility, representing 50.4 per cent or 155 respondents. The one factor most respondents did not like was the long waiting time, mentioned by 38 per cent. This was followed by the quality of treatment, noted by 15.5 per cent; and lack of organization, commented on by 16.1 per cent. Others felt they had not been given sufficient consultation time with their doctor or other medical staff, accounting for 8.4 per cent; and unfriendly environment was also mentioned by some 4.5 per cent. In addition, the appointment date and/or time was perceived as inconvenient by 6.5 per cent, as shown in table 41.

TABLE 41

Evaluation of service received at health centre on day of survey: negative feedback

Complaint	Number of respondents	Percentage of respondents with complaint	Percentage of total sample population
Long waiting time	59	38.0	19.2
Unsatisfactory treatment	24	15.5	7.8
Inconvenient appointment date/time	10	6.5	4.0
Poor organization	25	16.1	8.2
Inadequate consultation time	13	8.4	4.2
Unfriendly atmosphere	7	4.5	2.3
Poor cleanliness	6	3.9	2.0
Poor Attitude of health practitionner/docor	3	1.9	1.0
Lack of privacy	4	2.6	1.3
Poor access due to stairs/multi-level	4	2.6	1.3
Total / Average	**155**	**100**	**51.3**

The majority, namely, 232 respondents or 77.6 per cent, said they had received adequate information from the doctor or health professional about the complaint, illness or reason for their visit. However, 5.7 per cent, numbering 17 respondents, said they had received partial information; while the remaining 48 respondents, accounting for 16.4 per cent, did not know or were unsure. The data varied for the six health facilities, as is illustrated in table 42. At the centres in Bekaa and the North, the vast majority of respondents felt they had received adequate information from their health professional, accounting for 96.4 and 92.5 per cent, respectively; while only just over half the respondents at the Beirut Centre said the same, representing 52.8 per cent.

In addition, the great majority, namely 251 respondents or 84.2 per cent, had been given a follow-up appointment, while 10.4 per cent did not need further consultation or treatment. As is illustrated in table 42, the highest percentage was recorded at the North Centre, where 97.5 per cent of the respondents had been given a follow-up appointment by their health professional. At the Mount Lebanon Centre, the percentage was 92.5 per

cent. A much lower percentage was recorded at the Bekaa Centre, where 63.3 per cent of the respondents had been given a follow-up appointment, while 36.6 per cent had not needed one.

TABLE 42

Evaluation by centre of information and follow-up service received on day of survey

Centre	Received suffisant information		Given follow up appointment	
	(number of respondents)	(percentage)	(number of respondents)	(percentage)
Central Military Hospital	87	75.6	98	87.5
Beirut	19	52.8	30	83.0
Mount Lebanon	31	77.5	37	92.5
North	37	92.5	39	97.5
South	31	77.5	28	70.0
Bekaa	27	96.4	19	63.3
Total	**232**	**77.6**	**251**	**84.2**

V. DISCUSSION AND COMMENTS

Though client satisfaction may be a complex phenomenon influenced by a multitude of factors, as has been well documented in numerous studies and research papers, the evaluation of patient satisfaction is a vital component when assessing the quality of health care, and in the planning and implementation of programmes and instruments to improve health-care services and facilities. Thus, measuring patient satisfaction can be a useful way of evaluating certain aspects of quality and ensuring better prospects for sustainability; while patient feedback is the foundation for improvement of quality programmes.

In line with the above, it was deemed necessary to undertake an evaluation study of the RHS available at Lebanese Army health facilities. These services were implemented by LFPA and have been provided by the Association at Army health centres since 2006. The study was commissioned by UNFPA and subcontracted to the LHS, with the objective to evaluate the quality of services at selected Army health centres using the method of client satisfaction exit interviews. In assessing the quality of services and facilities, the study targeted six basic elements: namely, choice of contraceptive method; information provided to patients; technical competence; interpersonal relations; mechanisms to encourage continuity, i.e., repeat visits and follow-up; and availability and accessibility of services.

To initiate the process of quality evaluation in a military setting, taking into consideration the unique and distinctive environment of the armed forces and the specificities in operation in such a milieu, a simple and practical methodology was thought most appropriate; thus, the method of exit interviews was selected and adopted. With an instrument focusing on client satisfaction, it was thought the study would help LFPA tailor services to current patient needs, as well as assisting in the developing of future quality-enhancing programmes and expansion of appropriate services, as well as being a key component for sustainability.

The sample covered six health facilities in total, located in each of the five administrative regions of Lebanon; namely, the North, the South, Mount Lebanon, Bekaa and Beirut, in addition to the Central Military Hospital in the capital city. The sample size was calculated based on the population fractions utilizing the services at each centre and was proportionate to such rates. The coefficient was 95 per cent, and the total sample population comprised 311 female patients at the six health centres. The actual number of women participating in the study was 307, resulting in a 98.7 per cent success rate. Consequently, the sample collected can be considered as having an optimal and appropriate representativeness, as is illustrated in table 1.

Though the average age of the total sample population was 36.25±9.6, the age of individual respondents in the study ranged from 15 to 70 years. Most women interviewed were 45 or younger; in other words, 85.9 per cent of the sample was in the reproductive age group. Married women accounted for 89.9 per cent of the total sample, with 5.9 per cent being single and the remaining either widowed or divorced. The majority, or the equivalent of 84.7 per cent, had children; and most had visited the health centres on previous occasions and used the services there.
The education profile was encouraging, with a mere 3.3 per cent unable to read or write, or 10 out of the 307 respondents. Based on such high rate of literacy, it was expected that

most women would have picked up and read information leaflets, brochures and other educational material available at the health centres and distributed during the health awareness sessions held there. However, as is evident in the study, this was not the case.

As stated, the vast majority of the women interviewed, or the equivalent of 81.8 per cent of the sample population, had been to their respective health centre on earlier occasions for consultation or to seek treatment, as illustrated in table 5. Thus, the sample should provide a reliable evaluation and increase the validity of the results.

To see the doctor for a general check-up was the most frequent reason for coming to the health centre, accounting for 41 per cent of all visits; while 25.1 per cent of the respondents sought prenatal care, followed by treatment for RTI at 11 per cent, with related illnesses and other reasons making up the remaining percentage, as shown in table 6. Such procedures require extensive utilization of the health services; therefore, the respondents in the study were likely to be in a position to evaluate fairly such services, thus enhancing the validity and reliability of the study.

Concerning familiarity with contraception and knowledge of various contraceptive methods, the two most common methods - namely, the contraceptive pill and IUD - were well-known, as indicated by 85.3 and 77.5 per cent of the respondents, respectively. At the other end of the spectrum, however, 8.1 per cent stated having no knowledge of any contraceptive method.

Furthermore, knowledge of male condoms, at just over 50 per cent of the total sample population, was considered relatively low, though the figure is comparable to that of the Lebanese population as a whole. With about 40.7 per cent of the respondents in the study indicating ejaculation outside the vagina and 14.4 per cent the rhythm method as means of avoiding unwanted pregnancy, many would clearly benefit from increased awareness of such simple contraceptive methods as condoms. It was anticipated that a greater number of the women questioned would have been more familiar with and knowledgeable about contraception. Actually, knowledge with regard to contraceptive methods should have been universal among the respondents at the health facilities, given the information and education offered at the centres; however, this was clearly not the case, as illustrated in table 43.

TABLE 43

Comparison: knowledge of and use of contraceptive methods

Method	Knowledge		Did not attend section		Total sample population	
	(Number of respondents)	(Per cent)	(Number of respondents)	(Per cent)	(Number of respondents)	(Per cent)
Contraceptive pill	262	85.3	97	31.6	28	44.4
Intrauterine device (IUD)	238	77.5	66	21.5	27	41
Male condom	165	53.7	66	21.5	11	16.6
Female condom	10	3.2	1	0.3	-	-
Uterine tube ligation	49	16.0	64	20.8	-	-
Ejaculation outside vagina	125	40.7	21	6.8	12	18.2

The trend among the respondents indicated a preference for using the contraceptive pill and IUD. A comparison of data for 2008 and 2009 shows that they were the two most recognized and widely used contraceptive methods among the sample population, as indicated in table 43. Over 10 per cent more respondents took the pill in 2009 than in 2008 and the use of IUD almost doubled.

On the other hand, the use of male condoms decreased and no respondent in the sample had undergone uterine tube litigation in 2008, though 64 respondents went through the procedure the following year. The use of contraceptive methods proved more prevalent among the respondents at the health centres in the South and the North, where around half the women interviewed had received some form of contraception during 2009, followed by Bekaa at 42.3 per cent, as can be seen in table 10. Such data correlated very well with the quality of the health awareness sessions, which were evaluated as being 'very good' and with greater coverage in these regions.

Of the respondents who did not use any contraceptive method, when asked the reason why, 42.1 per cent said they "didn't feel the need to". This poses the question of possible lack of information, as many of the women in the study were still in the reproductive stage of their life. Furthermore, 27.1 per cent said they were afraid of possible side effects, while 3.6 per cent professed ignorance. These issues could be addressed efficiently by LFPA health workers during the health awareness sessions held at the health centres. It is an aspect which concerns universal coverage of these sessions.

Of the respondents who had received contraception during their previous visit to the health centre, 88.5 per cent had been given the treatment and/or contraceptive method they had requested. This applied to all the health centres surveyed in the study. However, more than half said they had not freely shared in the decision-making process regarding which contraceptive method to choose; over 40 per cent said they had not been informed of other methods; while 42.9 per cent stated they had been given no instructions in the use of the method. In addition, almost more than a quarter stated they had felt unable to ask their doctor further questions regarding contraception, though 77.8 per cent had discussed the issue with their husbands and received their consent. These figures are based on data collected from all six health facilities surveyed; nevertheless, it is worth noting that the situation was particularly dismal at the Beirut Centre and the Central Military Hospital.

Over 40 per cent of the total sample population came to the health centre to seek treatment for RTI, making it the third-most common reason for visiting the centre after general check-up and prenatal care. The highest rate was registered at the Beirut Centre, where 63.9 per cent of the women surveyed requested RTI treatment; while at the health facilities in the Bekaa and Mount Lebanon, the rates were significantly lower, as indicated in tables 14 and 15. These rates are very high indeed, and there is an urgent need to address such significant prevalence of RTI among the women seeking treatment at the six health facilities, particularly as almost one in three was pregnant at the time of the interview – with the situation being even more dire at the Central Military Hospital, where a staggering 90 per cent of the respondents reported expecting a baby. A possible vehicle for raising awareness and disseminating vital information on RTI would be the series of lectures and health awareness sessions presented by LFPA and held at the various centres.

A profile of the reproductive life of the sample population was explored through pregnancy status, number of children, rates of unwanted pregnancy before and after frequenting the health centres, and the status of abortions. Overall, 82.4 per cent of the respondents had been pregnant before, with the highest percentage of 90.3 recorded at the Central Military Hospital. The great majority, namely 85 per cent, had up to four children, while the remaining respondents had more than four. Nearly half of the women with children had also had one or more unwanted pregnancy. Such a high rate of unwanted pregnancy among the sample population could be considered as an indicator of poor FP. The situation was true for all the health centres and is an issue which should be addressed, especially as a comparison of the rates of unwanted pregnancy among the respondents before they visited the Army health centres and after becoming patients there indicated little or no change, as illustrated in table 22. Of the respondents who reported having had unwanted pregnancies, 60.8 per cent had had one abortion, 22.5 per cent had had two, others up to seven times, as shown in table 21. This is something that warrants further attention as it exposes lives to the danger of death, and more effort should be invested in preventing unwanted pregnancy in the first place.

Concerning the pre- and post-natal care as related to the last pregnancy, of the 307 women questioned at the six health centres, 92 were pregnant at the time of the survey, representing 31.4 per cent of the total sample population. As is illustrated in table 23, the Central Military Hospital reported the highest rate of pregnancy among its patients, representing over 40 per cent of the women pregnant at the time of the study, followed by the North Centre at 21.8 per cent. Among the six health facilities surveyed in the study, the Central Military Hospital received by far the greatest proportion of pregnant women – a situation which warrants increased efforts to be deployed at this centre, especially as patient feedback indicated the lowest rate of satisfaction.

During their last pregnancy, almost all respondents had sought the help of a health professional, in most cases a doctor, representing 95.3 per cent. This is good practice in prenatal care. The greatest majority came the first or second month of the pregnancy, as illustrated in table 25, then coming for regular monthly check-ups, as shown in table 26. For the first, as well as subsequent visits, the reasons given were centred on safety of the pregnancy and well-being of the foetus/baby, as seen in table 27. These are excellent indicators for commendable practice of prenatal care. During the pregnancy, most respondents took iron and vitamin supplements, representing 85.2 and 85 per cent, respectively, as illustrated in table 28. This practice was further evidence of good and appropriate prenatal care at all the health centres, with the possible exception of the Bekaa Centre where more attention was needed in this respect, as shown in table 29.

On the other hand, the post-natal care was less impressive. In fact, the study showed that as many as one third of the women who had given birth had not come back for a check-up after delivery, with half of the respondents at the North Centre not returning for a post-natal follow-up. Something should be done in this respect, especially as it is compounded by the fact that only two thirds returned to the same health centre. The issue was not the availability, accessibility or cost of the services; the problem lies in the fact that the respondents themselves lacked appreciation and understanding of the importance of follow-up and aftercare, as shown in table 30. Such issues should be addressed by underscoring the importance of post-natal care for the health of both the baby and the mother, as well as, to a certain extent, the whole family.

Concerning the health awareness sessions on SRH held at the health centres, 74.7 per cent of the respondents reported they had never attended such classes. The sessions were mainly recognized by respondents in the peripheral centres in the North, the South and Bekaa, where attendance was as high as 83.8, 51.4 and 41.2 per cent, respectively.

On the other hand, they were denied by 99.1 per cent of the respondents at the Central Military Hospital, by 85.7 per cent at the Beirut Centre and by 90 per cent at the Mount Lebanon Centre, as illustrated in table 31. Thus, there is a major problem of coverage in Beirut and Mount Lebanon, which needs further investigation and warrants serious reconsideration of the activities which are supposedly implemented at these centres. How to measure and evaluate a service which is virtually non-existent is most problematic; furthermore, its existence affects almost all other parameters and variables in the study. With 74.7 per cent of the total sample population not being reached, there is a dire need to act, possibly by introducing more sessions and engaging additional health workers.

Based on data provided by the limited number of respondents who had actually attended the health awareness sessions at their respective health centre, the quality of the sessions was recognized as 'good' or 'very good', overall. The timing of the sessions was also 'appropriate' and 'convenient', according to 88.9 per cent; while 62.9 per cent of the respondents evaluated the providers leading the classes as 'good', and 37 per cent as 'very good', treating the participants appropriately and applying suitable methods of instruction. With evaluation rates as high as these, the issue of lack of coverage remains an enigma.

As for the topics discussed during these sessions, most respondents found RTIs the most valuable and pertinent, especially if the percentages for STIs and HIV/AIDS were included, accounting for a total of 45.7 per cent of the respondents. Information on maternal health/safe pregnancy and FP ranked the second and third most important subjects to be discussed. When asked for suggestions for improvement, respondents indicated such issues as greater number of and more regular sessions; more frequent information campaigns; extended coverage to include other family members, for example husbands and parents, as well as targeting schools and community centres; and improved use of technology, including monitors in waiting rooms screening documentaries and educational programmes.

The majority of the respondents had received booklets and brochures at the health facilities. When discussing the content and relevance, some suggested further coverage on infections, while infertility was viewed as being of less relevance and interest, as shown in tables 34 and 35.

Concerning awareness of about STDs and HIV/AIDS, there is room for improvement, though knowledge of HIV/AIDS was very good. On the other hand, only about one quarter of the total sample population knew about symptoms of STDs and AIDS; thus, more effort should be invested in this area.

The study results also indicated a gap in the knowledge of modes of transmission, especially mother-to-child, which recorded a low average of 4 per cent. However, all centres need to provide more information on modes of transmission of HIV/AIDS and methods of prevention; particularly condom use, which was mentioned by only 35.5 per

cent of the respondents. Misconceptions about transmission also should be addressed.

Another factor which requires further attention and should be dealt with in greater depth is the fact of women's higher vulnerability and susceptibility to HIV/AIDS infection and STIs. Only just under one third of the respondents believed women were more vulnerable as compared to men in this respect, while 40.7 per cent did not think that was the case.

When evaluating the health centre and the services provided, the study indicated that, overall, the respondents reported a high level of satisfaction. The majority, accounting for 76 per cent of the total sample population regarded their health centre as easily accessible, with the possible exception of the Central Military Hospital, which recorded a slightly lower percentage of 69.6 per cent. In other words, most respondents could reach their respective centre in 30 minutes or less, accounting for 72.5 per cent.

Overall, the staff and health personnel at the facilities were thought 'satisfactory' by respondents at almost all of the six centres. However, at the Bekaa Centre, 80 per cent of the respondents there would have preferred a female doctor.

As many as 70 per cent of the respondents deemed the services provided at their respective health facilities as 'satisfactory' to 'good', accounting for 24.1 and 70.7 per cent, respectively. In contrast, respondents evaluating the Beirut Centre gave significantly lower scores, as is shown in table 40. When identifying areas for improvement, 38 per cent indicated waiting time and 15.5 per cent quality of service, including better organization and adequate consultation time allocated to each patient, in addition to creating a friendlier environment, as is illustrated in table 41. When ascertaining the quality of information and follow-up care provided, the Beirut Centre should be given attention in this respect, as well as the Bekaa Centre.

In conclusion, this study has shown that the quality of some RH services can be considered as 'adequate' to 'good', as is the case for prenatal care. However, many other services require urgent attention. Of particular concern is the lack of coverage of LFPA-provided health awareness sessions at three facilities; namely, the Central Military Hospital, the Beirut Centre and the Mount Lebanon Centre. Hence, a revision and amendment of strategies and activities should be undertaken to improve the quality and scope of the services, and to respond to the large number of specific comments and recommendations put forward by the respondents at the health facilities surveyed.

REFERENCES/BIBLIOGRAPHY/ لائحة بالمراجع

1. UNAIDS. AIDS and the Military: Best Practice Collection (May 1998). Accessed 11/5/2007. http://data.unaids.org/Publications/IRC-pub05/militarypv_en.pdf.

2. United Nations. "United Nations Security Council Resolution 1308 on the Responsibility of the Security Council in the Maintenance of International Peace and Security: HIV/AIDS and International Peacekeeping Operations." (2000). Accessed 30/06/2007. http://daccessdds.un.org/doc/UNDOC/GEN/N00/536/02/PDF/N0053602.pdf?OpenElement.

3. Castro, M. "Women's Education and Fertility: Results from 26 Demographic and Health Surveys." Studies in Family Planning 26 vol. 4 (1995): 187-202.

4. Alden, D. L., M. H. Do and D. Bhawuk. "Client Satisfaction with Reproductive Health-Care Quality: Integrating Business Approaches to Modeling and Measurement." Social Science & Medicine 59 vol. 11 (2004): 2219-32.

5. Khlat, M., M. Deeb and Y. Courbage. "Fertility Levels and Differentials in Beirut during Wartime: An Indirect Estimation Based on Maternity Registers." Population Studies 5 vol. 1 (1997): 85-92.

6. Donabedian, A. "The Quality of Care: How Can it be Assessed?" Journal of the American Medical Association 260 (1988): 1743-8.

7. Bertrand, Jane T., Robert J. Magnani and Naomi Rutenberg. Handbook of Indicators for Family Planning Program Evaluation. (New York: USAID, 1994).

8. Schmidt, F., and Teresa Strickland. Client Satisfaction Surveying: A Manager's Guide Citizen-Centered Service Network. Ottawa: Canadian Centre for Management Development, 1998.

9. Williams, T., J. Schutt-Ainé and Y. Cuca. "Measuring Family Planning Service Quality through Client Satisfaction Exit Interviews." International Family Planning Perspectives 26 vol. 2 (2000): 63-71.

10. Brook, R. H., E. A. McGlynn and P. G. Shekelle. "Defining and Measuring Quality of Care: A Perspective from US Researchers." International Journal for Quality in Health Care 12 (2000): 281-95.

11. Langer, A., G. Nigenda and J. Catino. "Health Sector Reform and Reproductive Health in Latin America and the Caribbean: Strengthening the Links." Bulletin of the World Health Organization 78 vol. 5 (2000): 667-676.

12. Avis, M. et al., "Questioning Patient Satisfaction: An Empirical Investigation in Two Outpatient Clinics." Social Science & Medicine 44 vol. 1 (1997): 85-92.

13. England Health Care Commission. Health Care Commission National Targets 2007-2008: Access to Reproductive Health Services. London: England Health Care Commission, 2008.

14. Badr, L. Clients' Perception of Reproductive Health Services Provided in Selected Clinics in Lebanon. Beirut: UNFPA, National Reproductive Health Programme, 2001.

15. El-Kak, F. Review of Reproductive Health Research in Lebanon. Beirut: UNFPA, 2000 (unpublished).

16. Tannouri, G. Unmet Reproductive Health Needs for Rural Women in the Bekaa Area. Beirut: LFPA, 1998.

17. UNFPA and Government of Lebanon. Final Report of the Midterm Review Meeting of the Country Programme 1997-2001. Beirut: UNFPA, Government of Lebanon, 2000.

18. Hiller, J.E., E. Griffith and F. Jenner. "Education for Contraceptive Use by Women after Childbirth." Cochrane Database System Review 3 (2002): CD001863.

19. AbouZahr, C. and J. P. Vaughan. "Assessing the Burden of Sexual and Reproductive Ill-Health: Questions Regarding the Use of Disability-Adjusted Life Years." Bulletin of the World Health Organization 78 vol. 5 (2000): 655-666.

20. West, Christina P. K., S. Khatry, J. Katz, S. LeKclerq, E. Kimbrogh-Pardhan, S. Dali and S. Shrestha. "Vitamin A or Beta-Carotene Supplementation Reduces Symptoms of Illness in Pregnant and Lactating Nepali Women." Journal of Nutrition 130 vol. 11 (2000): 2675-82.

21. Shawky, S. and W. Milaat. "Cumulative Impact of Early Maternal Marital Age during the Childbearing Period." Pediatric & Prenatal Epidemiology 15 vol. 1 (2001): 27-33.

22. Agha S., A. M. Karim, A. Balal and S. Sosler. "The Impact of a Reproductive Health Franchise on Client Satisfaction in Rural Nepal." Health Policy and Planning Heapol (2007): 1-9.

23. Raine, T., C. Harper, K. Leon and P. Darney. "Emergency Contraception: Advance Provision in a Young, High-Risk Clinic Population." Obstetrics Gynecology July 96 vol. 1 (2000): 1-7.

24. Letaief, M., M. Ben Hmida, B. Mouloud, B. Essabbeh, R. Ben Aissa and N. Gueddana. "Implementing a Quality Improvement Programme in a Family Planning Centre in Monastir, Tunisia." Eastern Mediterranean Health Journal vol. 14 (2008): 615-627.

25. Hassan, H., M. Zaky, Hind A. S. Khattab and D. Galal. "Assessing the Quality of Reproductive Health Services in Egypt via Exit Interviews." Maternal and Child Health Journal vol. 11 (2007): 301-306.

26. Nanbakhsh, H., S. Salarilak, F. Islamloo and S. Aglemand. "Assessment of Women's Satisfaction with Reproductive Health Services in Urmia University of Medical Sciences." Eastern Mediterranean Health Journal vol. 14 (2008): 605-614

27. Nakhaee, N. and A. R. Mirahmadizadeh. "Iranian Women's Perceptions of Family Planning Services Quality: A Client-Satisfaction Survey." The European Journal of Contraception and Reproductive Health Care 10 vol. 3 (2005): 192-198.