THE STUDY AND EVALUATION OF IN-SERVICE TRAINING FOR EGYPTIAN PHYSICIANS IN THE FIELD OF FAMILY HEALTH AND FAMILY PLANNING, UNDER THE AUSPICES OF THE HIGH INSTITUTE OF PUBLIC HEALTH, ALEXANDRIA, EGYPT

A Report Prepared by:

Mohammad Mitwalli Ahmad, M.D., PH.D.
Associate Professor, University of Texas Health Science Center

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C O N T E N T S

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EXECUTIVE SUMMARY

The scope of work for this assignment was to assist the faculty of the High Institute of Public Health (HIPH), Alexandria, Egypt, in carrying out and evaluating a pre-service training program, family health and family planning, for Egyptian physicians.

A two-week demonstration workshop in family health and family planning, including maternal and child health, was organized by the Department of Family Health at the HIPH in Alexandria in April 1983. Selected physicians who worked for the Ministry of Health (MOH) in district hospitals and/or health centers in different governorates along the Nile were invited to attend. The objectives of the workshop were to train physicians in specific teaching-learning principles in family health and to explore their attitudes towards family planning and the effect of these attitudes on the teaching-learning process. Also, the training was to improve skills in planning, constructing, and utilizing instruments for measuring their own achievements as trainers for future workshops or seminars in their respective communities.

A series of training sessions were planned by the Department of Family Health, HIPH, to be conducted in selected

governorates from the Delta up to southern Egypt, with the collaboration of their respective departments of health. Three to four physicians who received training at the HIPH in the two-week workshop were selected to be apprentice trainers for another workshop held in their respective governorate under the supervision of HIPH staff and a resource person (AID/APHA consultant).

I, as the consultant, attended two of these workshops: one in New Valley Governorate and the other in Kalubia Governorate. Each lasted four to five days. I attended the New Valley workshop for four and the Kalukia workshop for two days. The trainees were indigenous physicians working in MOH hospitals or satellite health centers in the particular governorate. The numbers varied between 20 to 22 physicians of different age groups--from the new medical school graduate to the old practicing physician; approximately 30 percent were women.

A pretest, monitored by the HIPH staff and apprentice trainers, was given before the session started. The test, which consisted of short essay questions, covered family planning, birth control, maternal health, risks of multi-parity, population problems in Egypt, communications, and

counseling. At the conclusion of the sessions the trainees completed a posttest.

The lectures and /or seminars were informative and interesting, especially those given by the directors of health of the respective governorates and by the dean of the HIPH, during the inauguration of the sessions. The apprentice trainers' presentations were adequate, but sometimes misleading, particularly to those in the audience who had difficulty with English. Besides the seminars, the workshop included group discussions, role play, and religious argumentative confrontations between some participants and staff. At times lack of incentive to learn and disruption by some religious fanatics among the participants caused problems. The language barrier was always solved by translating any unclear statements into Arabic.

The Wilcoxon test, used to evaluate the pre-and posttests results for the New Valley workshop, showed a statistically significant increase in the percentage of participants responding correctly to questions after the seminar as compared to the pre-session examination. However, data from Kalubia Governorate showed no significant difference using the chi-square computation. There were no plans to use the trainee rating or other data sources

for evaluating the workshop and trainers. It is unclear whether it is the trainers or trainees who need more attention and education. The Kalubia workshop lacked the sophisticated direction and administration which was obvious and clear in New Valley. Also, some young trainees with whom I talked were frustrated and worried about their future and the lack of opportunities for progress in their settings. I think there should be continuous medical education with incentives for promotion of physicians and para-professionals, including nurses. Also, health professionals are in dire need of new books and literature to enhance their knowledge and promote their acceptance of new methods and materials.

ABBREVIATIONS

HIPH	- High Institute of Public Health
MOH	- Ministry of Health
AID/APHA	- Agency for International Development/ American Public Health Association
UTHSC	- University of Texas Health Science Center
IUD	- Intrauterine Device

INTRODUCTION

Scope of Work and Schedule

The purpose of this assignment and scope of work was "to assist Egyptian High Institute of Public Health (HIPH) in training and evaluation of pre-service training programs in family health family planning for doctors."

My work began on May 7, 1983, and was to be carried out in three weeks. I arrived in Alexandria on May 7, 1983, and called Dr. A.F. El Sherbini, dean of the HIPH, to inform him of my arrival and to set an appointment at the HIPH. The following morning I met the dean and the chairman of the Department of Family Health, Dr. Sawson Fahmy. I was shocked to learn that the workshops had been cancelled for the month of May and were rescheduled to start on June 1 because final examinations were in progress at the HIPH, and all the faculty members were occupied in classes and/or evaluation of master degree theses.

Dean El Sherbini asked me to help develop educational material for the Department of Family Health for the staff and the post-graduate students and to help evaluate some of the students theses for the Master of Public Health degree. Thus, my first assignment was to write short monographs on the subjects they requested. The secretarial

help was fair, but patience and sympathy were called for because of the language difficulty.

On May 12, I went to Cairo to meet Mr. Douglas Palmer, the project officer, and the USAID/C-population officer at the USAID office (Cairo Center). I informed them of the changes incurred by the postponement of the training session and sent a telegram to the American Public Health Association (APHA) and to the University of Texas Health Science Center (UTHSC) to obtain an extension of the assignemnt, as requested by Dean El Sherbini.

My second assignment was in the New Valley Governorate in southern Egypt. On May 31st, Dean El Sherbini, Dr. Ibrahim Kharboush, a staff member, and I left Alexandria and flew to New Valley. The training session began June 1. On June 5, we left New Valley for Cairo, where the dean and his staff remained for business meetings and I flew to Alexandria.

On June 6, at the HIPH, I prepared my slides for the second training session in Kalubia Governorate. Two staff members of the Department of Family Health and I drove to the training center at Sendion, Kalubia, where the sessions were held. Each day, the conclusion of the seminars, we drove back to Alexandria. On June 9, I left Alexandria in a private car and passed by the training center at Sendion, closing session was in progress. In order not to miss my appointment with Mr. Palmer

at USAID in Cairo, I asked the staff present at the session to excuse me for leaving early and to send me the results of the pre-and post-tests. I drove straight to Cairo where I met Mr. Palmer and another officer at the USAID offices. We discussed the core curriculum of the training sessions in both sites, especially with regard to the intrauterine device (IUD) practice and training. Lastly, I submitted my preliminary handwritten report to Mr. Palmer. On June 11, I left Cairo for the United States.

Egypt Profile Data

A reading of the population census since 1897 indicates that Egypt's population has doubled in the first half of the twentieth century. By 1950 it had reached 20 million and by 1978, it had doubled once again to 40 million. It took 50 years for the population to double first, then only 20 years to double again.

The annual rate of population growth during the census period from 1897 to 1947 ranged between 1 and 2 percent. Since the 1947 census, after World War II, the rate has risen to between 2 and 3 percent annually. The mortality rate in Egypt continued to be about 26 per thousand until the end of World War II, after which the rate began to decrease steadily. It now stands at 11 per thousand. The birth rate continued to range between 40 and 44 per thousand (or an average of

42 until 1966. From 1967 to 1973 the birth rates decreased perceptibly--possibly due to the state of war--and then began to rise after 1973, until it reached 40 per thousand. The rapid population growth results from the declining death rate in combination with a consistently high birth rate.

Egypt is now in the middle of the transitory demographic stage and is progressing at an extremely slow pace toward the stage of maturity, i.e., the birth rate drops and the death rate reaches its usual minimum. At present economic development in Egypt cannot keep up with the high rate of population growth and the growing ambition of the people who are facing economic and social problems. Demographers indicate that, even according to the lowest projections of population growth, the population of Egypt will not be less than 60 million by the year 2000. The Nile Valley is already overcrowded. Redistribution of the population in Egypt is an important as limiting population growth.

It is historical fact that the Egyptians used certain birth control methods thousands of years ago, and some of the rudiments of modern methods come from the Egyptian desert. Distribution of modern methods began in the Cairo environs in the mid-1940s, but traditional (and not very safe) methods are still being used--with high failure and morbidity rates--by a large proportion of Egyptians.

The use of modern birth control devices in Egypt is entirely dependent on the voluntary decision of the couple. There is no coercion. The results of numerous studies, especially Bogue, et al, (see references) indicates that the knowledge of birth control methods among Egyptians in rural and urban areas is relatively high, while the application and adoption of these methods is relatively low. There are several motives, reasons, and arguments that account for this phenomenon. Most important is the desire to have more children, which is culturally inherent in males and females. There is also a belief that contraceptives are harmful to health, a belief held even by some in the medical profession, as I observed. In rural areas it is common for the husband as the head of the household, to reject family planning. This is less common in urban areas. Other reasons are a desire to beget males, religious considerations, and the inconvenience of contraceptive use, which may cause disruption in the expression of sexuality or may sully the sacredness of intimacy.

There is a gap between awareness/knowledge and adoption/practice. Factors such as education, urbanization, employment, number of living children, and income might have contributed to this gap. The target population is mainly the peasants with little or no education who dwell in villages scattered along the Nile. There is a need to seek new strategies for penetration of local rural and low-income communities.

It is the time to select a suitable mass medium and to use scientific persuasion in the mass-communication message. Community leaders must also be involved in this effort.

II

OBSERVATIONS AND FINDINGS

A demonstration workshop in family health was held by the HIPH in Alexandria in April 1983 to train selected physicians from different governorates in collaboration with the Egyptian MOH and the local health departments. These physicians, who would eventually serve as trainers for their respective governorates, were advised to get ready to participate as apprentice trainers in in-service training workshops in family health in their areas. The workshops were intended to continue medical education across the country in the problem area of family health in general and family planning in particular and to create independent educational units, which are supported by the HIPH. I participated in two of these workshops as a resource person, one for New Valley Governorate, which was held in El Kharga City, southwest of Assiut, and another for Kalubia Governorate, which was held in the Sendion training center near Benha.

Change of Assignment

The workshops were postponed for a month because of the exam schedule at the HIPH. Therefore, prior to my participation in the workshops, I was asked by the Dean of the HIPH to develop monographs on several subjects: needs assessment for medical services in family planning, intrauterine device (IUD) in-

sertion and diaphragm fitting procedures, patient post-conference and instructions for all contraceptive methods, evaluation of performance for medical services, contraception and handicapped women, benefits of oral contraceptives, breast feeding and fertility control, maternal health and multi-parity, and population problems in Egypt. In addition to the above monographs, I left two of my articles "Contraception, Sterilization and Pregnancy Termination" and "Epidemiology of Induced Abortion in the Middle East" (Both of them appear as chapters in books. The first is Reproductive Biology (1980), Huff and Pauerstein, eds. and the second will be in Reproductive Health Care (forthcoming) H.A. Hafez, ed. This material will be used as references for continuing medical education and workshops. The library of the Department of Family Health at the HIPH needs updating and new reference books and journals to catch up on the new technology and to upgrade the HIPH students' theses or dissertations, which lack sophistication in research methods.

The Workshops

A detailed description of the New Valley training workshop is found in the preliminary report. The trainers with their slides and illustrations did a good job in their presentations. I, as a resource person, answered questions during and at the end of the lectures. The participants were divided into three

groups and given a number of subjects to discuss: (1) birth control and family planning, (2) religion, education, and political factors and the concept of family planning, (3) unplanned pregnancy and child health risks in Egyptian society. One-third of the 20 trainees was confused about the first item; however, all agreed that religion and education, not political factors, affect adoption of family planning. All gave unsatisfactory comments on the third item. The Dean of the HIPH, an authority in family health and pediatrics, explained the risks pertaining to unplanned pregnancy in Egyptian society.

The high point of the second day was a seminar given by a religious leader who presented "Islam and Family Health" in Arabic. He was very eloquent and convincing. Almost all the participants were satisfied with the lecturer's explanations, except two who were contentious and seemed to be religious fanatics. Again, the trainees were divided into three groups and given three questions to discuss. Over 80 percent of the participants had difficulty understanding first lecture on population problems in Egypt by the New Valley General Director of Health. Only one-third of the participants did well with the three questions.

The third and fourth days were marred by mistakes or misunderstandings, i.e., the pill "causes cancer," "increases

pelvic inflammatory disease," or "causes infertility" and the controversy over IUDs and nulliparous women. I conducted a short seminar-like presentation to correct the misunderstandings and summarized the risks and effects of multiparity on maternal and child health, proper use of contraceptive methods, contraindications, complications and their management. All deficiencies in the training sessions were made up for, either by group discussion or on one-to-one discussion of specific points. There was a pretest before the workshop began and a posttest at the conclusion of the sessions on the subject matter presented.

In Kalubia Governorate, the core curriculum of the training sessions was the same. My two-day sessions were a mirror-image of the New Valley training program. There was the same resistance and misunderstanding. Also, pre-and post-tests were completed as in New Valley, but a different grading technique was used. In the New Valley workshop the number and percent of participants who answered each question correctly in the pretest was compared with the post-test results. In other words, in the pre-test, 11 participants out of 20 answered question number 12, correctly, while in the post-test 18 out of 21 answered correctly, indicating a difference of +30.7%. In the Kalubia workshop, tests were scored by taking the correct answers for each of the 20 participants and then dividing them

into score categories such as: percent correct answers $\leq$ 25, 25-49, 50-74, $\geq$ 75. The New Valley evaluation was computerized by nonparametric test while the Kalubia evaluation was processed by chi-square.

Statistical Evaluation

New Valley Governorate - City of Kharga Training Sessions: Twenty participants took the pre-test before the training sessions and 21 sat for the posttest the last day of the seminar. There were 20 questions, each of which related to a certain subject covered in the workshop. The number of participants who gave the right answers were counted for each question separately in the pre-and posttests. Table I gives the results and the impact of the workshop sessions upon the latter by a plus or minus.

Kalubia Governorate - Sendion Training Center: Twenty participants took a pretest before the training workshop, and a posttest was given the last day. Table II compares the result.

The data from New Valley Governorate was analyzed using the Wilcoxon matched-pairs, signed-ranks test. The percentage of participants who correctly responded to each question was the measure used. Percentages obtained for the pre-workshop examination were compared with those obtained for the post-workshop examination. If these percentages were normally distributed then a paired t-test would be appropriate for the comparision. However, the percentages are not randomly distributed clearly, so the Wilcoxon test, which is a non-parametric version of the paired t-test, is used instead.

TABLE I

Test Results from New Valley Governorate

QUESTION NUMBER	PRE-TEST PARTICIPANT W/CORRECT ANSWERS (N)	(%)	POST-TEST PARTICIPANT W/CORRECT ANSWERS (N)	(%)	DIFFERENCE (D)
1	20	100%	21	100%	0
2	19	95%	21	100%	+5%
3	19	95%	21	100%	+5%
4	19	95%	21	100%	+5%
5	2	10%	7	33.3%	+22.3%
6	7	35%	11	52.4%	+17.4%
7	17	85%	20	95.2%	+10.2%
8	17	85%	20	95.2%	+10.2%
9	12	60%	16	76.2%	+16.2%
10	8	40%	7	33.3%	-7.3%
11	17	85%	15	71.4%	-13.6%
12	11	55%	18	85.7%	+30.7%
13	18	90%	21	100%	+10.0%
14	11	55%	13	61.9%	+6.9%
15	15	75%	20	95.2%	+20.2%
16	13	65%	13	61.9%	-3.1%
17	20	100%	21	100%	0
18	18	90%	21	100%	0
19	17	85%	20	95.2%	+10.2%
20	20	100%	21	100%	0
Total number of participants (20)			Total number of Participants (21)		

Total number of questions (20)

TABLE II

Test Results from Kalubia Governorate

Pre-test			Post-test	
Percent correct	Participants		Participants	
	(N)	(%)	(N)	(%)
< 25%	2	10%	0	0
25 - 49%	5	25%	4	20%
50 - 74%	8	40%	8	40%
> 75%	5	25%	8	40%
Total	20	100%	20	100%

The Wilcoxon test utilizes a rank transformation, ranking each observation from the lowest to highest, and obtains differences between the ranks observed for each question. The p-value obtained for the test was 0.006, indicating a significant increase of the percentage of participants correctly responding to a question after the workshop as compared to the pre-workshop examination. The actual mean percentages were pre-seminar = 75 percent and post workshop = 82.857 percent. The mean ranks computed by the Wilcoxon test were pre-workshop = 6.0 and post workshop = 9.64.

The data from Kalubia Governorate was analyzed using the chi-square statistic. The resulting p-value was not significant, so the pre-and post-seminar results were not significantly different.

III

CONCLUSIONS

The High Institute of Public Health in Alexandria, Egypt, is the only school of health sciences in the Middle East, to the best of my knowledge, and it stands for quality post-graduate education. The facility is old but well built and spacious, but it is shared by many other disciplines. Dean El Sherbini is a hyper-dynamic person and an international figure in the field of family health. Faculty members in the Department of Family Health are highly qualified in teaching and are striving to compete in research. Their local Egyptian Public Health Journal is evidence of their activities. Nevertheless, they need updating and upgrading of their methods and materials. There is a dire need for a new library to help enhance knowledge and promote research.

The New Valley Governorate training workshop was well organized due to the efforts of the director general of health of the New Valley. He is a knowledgeable physician in the field of population and a master of the English language. The trainees were indigenous physicians from the south, mostly young and predominantly male (approximately 95 percent). During the first day of training, many of them seemed uninterested and som were indifferent. I arranged a meeting of the trainers and trainees at the hotel where we were staying. They expressed

frustration and discontent, due to economic factors or to the lack of opportunities for promotion. A few wanted to leave the country to better their education and/or to find more interesting work. The latter group was young and ambitious. Two out of the 20 participants were religious fanatics, and their arguments were endless, but they yielded to the majority at the conclusion of the meeting.

As the training went on, the trainees, trainers and I developed good rapport, and they were very enthusiastic about prolonging the training. The three apprentice trainers were in their early forties and were striving to show their command of the material they presented. There were always English language mistakes which changed the meaning. These trainers were line health offices in the Governorate who understood the problems of the young trainees. This empathy helped improve the interpersonal relationship.

The Kalubia Governorate trainees were older and approximately one-third of the group were women. Their training center at Sendion, although a new building, was badly maintained. The bathrooms were very dirty and unusuable. The local director of the program complained that there was insufficient manpower to keep the place clean. Although the sessions in Sendion were comparable to those in New Valley, there was a noticeable difference in the motivation and participation of the trainees.

Pre-and posttests were used to measure the knowledge of the trainees before and after the workshop, but the test results were different to assess. The New Valley evaluation showed a statistically significant increase in the number of trainees who correctly answered each questions in the test. I think it is due to the fact that they were younger, they understood most presentations, and their trainers had better communication with them. On the other hand, the Kalubia evaluation results were not statistically significant, but there was a trend toward higher scores in the posttest: 40 percent in the posttest score category $\geq$ 75 percent, as compared to 25 percent in the pretest. It might be due to the fact that the trainees were older and not motivated to accept new concepts; perhaps the trainers did not accomplish their instructional objectives for the sessions. I attended only two days at Sendion training center and I observed a negative attitude regarding family planning and the problem of population growth in Egypt on the part of the Speakers and misunderstanding and misinterpreting of scientific facts about contraceptive methods.

IV

RECOMMENDATIONS

1. Workshops held at the HIPH to prepare the trainers should have definite instructional and behavioral objectives so that the trainers could be evaluated accordingly. After exploring the benefits and limitations of the objectives, the trainers could practice the mechanics of writing clear and succinct instructional objectives. Once the objectives have been set, then training strategies to promote maximum learning can be developed.

2. The evaluation of the training sessions should be supplemented by input from the trainees to judge the quality of training and pinpoint deficiencies which should be corrected.

3. Acceptance of modern contraceptive technology should be promoted by in-service medical education, by public health awareness campaigns, and by preventive measures. HIPH should continue to exercise leadership by organizing workshops in different parts of the country (especially in the rural communities), by presenting facts, while respecting prevalent values and traditions, and by dealing with communities as groups of individuals who have independent personalities and their own interests.

4. Incentives should be provided for physicians who desire to continue medical education in the field of health and preventive medicine and to become leaders in their communities.

5. The HIPH library should be updated so that it can adequately support training and research.

6. Although the HIPH and the School of Public Health at Azhar University in Cairo have qualified staff for teaching and/or training, a consultant might be of value in updating materials, organizing programs, and upgrading medical and health education. Internal evaluation is important, but external evaluation is mandatory for defining problems and solving them in time.

REFERENCES

1. Bogue, D.J., El Kamel, F. "The Status of Knowledge and Belief about Contraception in Egypt." International Symposium on the Use of Family Planning Methods in Egypt. 3-5 February 1982, Cairo.

2. Fattah, A.A. "Methods of Birth Control: Population Policy and Information Strategy in the Arab Republic of Egypt." International Symposium on the Use of Family Planning Methods in Egypt, 3-5 February 1981, Cairo.

3. Siegel, S. Nonparametric Statistics for Behavioral Sciences, New York: McGraw Hill, 1956, pp 75-79.