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INTEGRATION AND FAMILY PLANNING PROGRAMME PERFORMANCE: AN INTERPRETIVE SUMMARY

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INTEGRATION AND FAMILY PLANNING PROGRAMME PERFORMANCE:

An Interpretive Summary

of

Research Projects in Malaysia and the Republic of Korea on the determinants and impact of integration in family planning programmes.

prepared by

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The two research projects summarized here developed a large number of variables, of which only a small portion are shown in this report. Fully documented computer tapes with all items are available from the University of Michigan Population Planning Center and will be sent (at cost) to research groups that wish to use the data for further analyses. For preparation of the computer tapes and for analyses of the Korean data, acknowledgement of assistance is due to Stan Berstein, Kirsten Alcser and Jae-Kyung Lee of the University of Michigan.

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Note: The views expressed in signed articles are those of the authors and do not necessarily reflect those of the United Nations.

I. BACKGROUND

The Population Division of ESCAP has, since its inception, recognized that the administration of national family planning programmes is critical to their success in the region. Thus, giving attention to administrative issues would enable ESCAP to provide assistance to the member governments in their population programmes. Accordingly, ESCAP convened an expert group on the Administration of Family Planning Programmes in 1966. In the ensuing years it undertook various projects in such areas as target setting, service statistics, field worker training and education to assist in building a base of information and experience on the administration of national family planning programmes.

In 1973, ESCAP began a series of research projects directly concerned with the organization and administration of family planning programmes. The aim of these projects was to develop measures of programme performance that could be obtained readily by programme managers, and then to search for the determinants of performance, especially in those administrative conditions over which managers had some control. The first series of studies in 1973-1975 included Indonesia, Singapore, Malaysia, The Republic of Korea, and The Republic of the Philippines. The results were presented in a publication on the comparative analysis of family planning programme performance, (5).

Among the administrative issues that emerged from various discussions and studies was that of *integration* of family planning with other welfare and development programmes. It has long been recognized that narrow clinic-based family planning programmes will not be sufficient to meet the challenge of rapid population growth in the developing world. To the extent that family planning is a specialized clinic-based programme to distribute contraceptives to individual men and women at risk, it is doubtful that it can have much independent impact on levels of fertility. Recognition of this condition is reflected in the great interst given to "beyond family planning" activities, in the common use of post-partum strategies, and in the attempt to provide wider coverage and greater popular acceptance through the integration of family planning with other public programmes.

Findings of the first series of administration research projects lent support to the interest in integration. In these studies there was considerable variance at the clinic level in the extent to which family planning was in contact with, and was perceived to be supported by, other agencies in the government. Further, this variance was directly

CONTENTS

I. Background 1
II. Overview of Country Programes 4
A. Republic of Korea 4
B. Malaysia 5
III. Research Methods and Procedures 6
A. Sampling 6
B. Performance Measures 8
C. Interaction Measures 8
D. Organizational Determinants 8
IV. Findings 10
A. Inputs and Programme Performance 10
B. Organizational Conditions, Interactive Linkages and Programme Performance 13
(1) Malaysia 13
(2) Republic of Korea . . . 19
V. Summary of outcome and programme implications 23

References . . . .inside back cover

related to measures of clinic-level performance. This permitted the tentative conclusion that integration, at least as it worked at the actual point of service delivery, could help to improve the performance of the programme. It also raised questions about the determinants of integration, especially in those organizational areas over which programme managers might have some control.

As a result of these findings, ESCAP began to examine in greater detail both the character and determinants of integration in family planning. In 1975 a working paper, (7), reviewed the literature on integration and raised questions about how it might be evaluated and made a part of rational programme management. This in turn led to an expert group meeting on the organizational aspects of integrating family planning with other development programmes, (6) which further developed the conceptual framework and suggested strategies for evaluating integration in family planning programmes. The studies reported here follow directly from the recommendations of this expert committee report.

Rationale for integration

Over this extended period there has been a growing literature supporting the recommendation for integrating family planning with other development services. India lauched a number of experimental programmes, one of which (3) suggested that linking family planning health and nutrition would be highly beneficial for all activities. More recently Johnston and Meyers (2), presented a cogent argument supporting the Narangwal proposals.

The basic thrust of this set of arguments is that reproduction is not an activity that can be isolated from other facets of life. At the level of the individual family, reproduction is related to the socio-economic condition, to aspirations and opportunities for education, and to changes in such things as residential location, agricultural production, and patterns of occupation, which are all the province of specialized development agencies. Thus, it was argued that linking family planning to these other activities could only help to promote its performance. It was also recognized that public intrusion into reproductive behavior presents a delicate and difficult problem for any development oriented government. Thus, linking family planning to other highly legitimate health and welfare activities, such as maternal and child health, would make it more acceptable in the eyes of the masses of the population. Finally, since the aim of family planning is not simply fertility limitation, but increased welfare for all persons, linking the service to such things as health and nutrition would advance the larger aims of promoting human welfare in general.

Against this chorus of support, a series of questions was being raised about both the meaning and the utility of integration in general and in family planning specifically. An important conceptual distinction was made in the totally different setting of the developed world by studies of the integration of human services carried out in the U.S. by the Department of Health, Education, and Welfare, (9). In human services, *administrative integration* should be distinguished from *service integration*. The former implies giving one administrative unit direct responsibility for a variety of specialized services. The latter implies linking those services at the point of delivery. The two are not only conceptually distinct, they can be found to be quite different in actual practice. For example, in the early stages of the Bohol (Philippines) MCH/FP programme, it was noted that the MCH programme had responsibility for family planning; but in the field, the MCH workers gave very little attention to actual family planning work, (6). On the other hand, the Comparative Administration project (5), found that many clinic level workers were in close contact with field workers from other agencies at the point of service delivery, even though these services were administratively separate agencies.

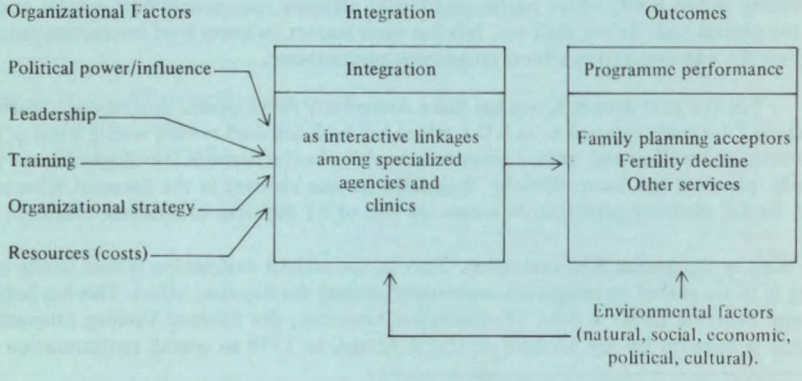
Ironically, the arguments for integration were based largely on the advantages that would flow from service integration, but the proposals were almost universally for administrative integration. Whether in actual fact bringing family planning under the administrative control of another agency would result in increased linkages at the point of service

delivery was not considered, and there was increasing surmise as to whether this would be the result. A UNFPA paper (9) raised these questions in the realm of family planning and rural development. Vernun Ruttan (4), argued in agricultural development for sequential linkages of services from specialized agencies. Etzioni (1) has subsequently pointed out that administrative integration would raise costs and reduce the quality of services and argued for the continuation of specialized services.

One of the gaps in the discussion of integration in family planning concerns the organizational or administrative conditions that affect such integration. From a review of organizational literature the ESCAP expert group developed a model in which specific organizational conditions were posited. (See Figure 1.) Further, that group suggested that research should focus on the actual amount of *service integration* in programmes. It proposed that there should be systematic evaluations of the degree of interaction between family planning personnel and personnel of other local agencies. This would permit the subsequent measurement of the impact of integration on programme performance and of the organizational determinants of integration. Further, it proposed that such research should be carried out in the natural settings of ongoing programmes. This recommendation is based on the recognized deficiencies of using pilot projects as a basis for designing programmes. Pilot projects usually are highly successful, but in large part because they can command greater resources, and especially greater local administrative and human resources, than are usually available in the routine procedures of public programmes that must cover the entire society.

In this research project, then, it was decided to assess the actual degree of service integration at the clinic level, that is, the extent of interaction between family planning and other public programme personnel. This was to be done in the natural setting of the family planning programme as it works on an everyday basis. From the assessment of this interaction, it would be possible to determine the impact such interactions have on the family planning programme, and to identify the organizational conditions that affect integration. The aim is to provide practical guidelines for programme administrators. If the amount of interaction between local staff is positively related to programme performance, and if the organizational conditions that affect interaction can be identified, then programme administrators may be able to increase performance by giving attention to those conditions that will produce greater clinic-level interactions among various staff members.

Figure 1.
GENERAL MODEL OF RELATIONSHIP BETWEEN ORGANIZATIONAL FACTORS, INTERACTION LINKAGES AND PROGRAMME PERFORMANCE



II. OVERVIEW OF COUNTRY PROGRAMMES

Both Malaysia and Korea* have had considerable experience with integrated family planning programming. Both have given much consideration at top policy levels to general administrative structures and to the special issues of integrating family planning with other activities. At the same time, the countries differ considerably in their general administrative character and in the specific history of their family planning programmes. Thus, before moving to a description of the research project and its findings, it is necessary to describe the natural ongoing situation in which integration is being examined.

A. Republic of Korea.

Korea's family planning programme began in 1962 with government recognition of the high social and economic costs of rapid population growth. There had been little or no organized family planning activity in the country prior to that time. Along with the creation of a government programme, a private Family Planning Association was created. The government family planning programme was established within the Ministry of Health and Social Affairs. Health services were organized to be provided through county level clinics and their township substations, which are the lower units in a direct administrative hierarchy that moves upward through the provincial offices to the national level. There is also a parallel administrative hierarchy that leads from the Ministry of Home Affairs down through the provincial governor, country chief, and township chief to all field level technical workers. At each level the civil administrative officers have considerable authority over the specialized professional services, including health and family planning. The lowest levels of family planning usually consist of a county level family planning supervisor and township level field workers who recruit acceptors and provide some services. The programme also uses private medical doctors, officially designated to insert IUD's, provide sterilizations, and some other back-up services as needed. The county medical clinic provides contraceptive services as well. At the township level the worker can be called upon by the township chief to assist in activities other than family planning as they are needed. The worker often travels to villages in the company of other lower level workers, such as the TB visitor, and both are sometimes called upon to assist in agricultural censuses, taxation or other special drives of the government. The physical base of the workers is either in a special office or substation for health and family planning, or, where such substations do not exist, in the township office itself, where health and family planning may simply have a table or desk in the central hall. As we shall see, this has some impact on lower level interaction patterns and on the way interaction affects programme performance.

For the past decade Korea has had a community development programme ("Saemaul Undong," typically referred to as S.U.), which has been oriented toward raising levels of productivity and welfare and toward generating a spirit of self-reliance in the villages. Since 1977, family planning has been officially designated as one element in the Saemaul Movement, and family planning performance scores are one of 47 different programme measures that are used in the overall S.U. evaluation. That is, the official designation is that family planning is to be part of an integrated community or rural development effort. This has brought family planning under a third administrative hierarchy, the Saemaul Undong programme, which is directed by the Ministry of Home Affairs. In 1979 an overall reorganization was

Korea throughout the text refers to the Republic of Korea.

proposed, in which the local family planning worker would also have direct responsibility for TB and MCH. This scheme was not in effect at the time of the research project, but it was still observed that in some townships the family planning worker already has responsibility for MCH and TB, and for a wide variety of other activities as well. The new scheme will provide for official recognition of what the ESCAP 1976 working paper calls "role integration." This condition permits us to ask a number of questions about how lower level interactions among workers affect family planning and community development programme performance. It also permits us to ask whether the inputs of the family planning workers have any impact on the performance of the community development programme.

B. **Malaysia.**

The Malaysian National Family Planning Programme was created by legislation in 1966. Its work was preceded by activities of a private Family Planning Association, which had been growing steadily in a number of the states since about 1953. Unlike Korea's overall administratively integrated programme, the Malaysian programme is directed by a special National Family Planning Board, which reports directly to the Prime Minister. The Board has a Chairman and a Director General, who serves as chief executive officer of the programme, and includes ten members from relevant government ministries and ten members from the non-government sector. The Board has broad authority to advise on overall population policy and to make specific programmatic linkages with any sector or agency it deems relevant. It also runs its own direct and specialized family planning service, which has provided the lead in bringing contraceptive services to most parts of the country.

Since 1970 the Board has generated a series of specifically integrative projects. It cooperates with the private Family Planning Association and has worked closely with the private estate (largely rubber and palm oil) sector to provide services on the estates. It also has a programme with the government's highly successful Federal Land Development Authority for services on its land schemes. Most important for our purposes is a project with the Ministry of Health to provide family planning services as part of the integrated health services to rural areas. This project was lauched in 1970, with training programmes, staffing and logistical arrangements that moved steadily through pre-designed stages to bring services to more than half of the rural population by 1977. (See Table 1 page 6) The integrated programme brought greater service delivery to the rural areas and greatly increased the overall number of acceptors in the programme. The graph in figure 2, (page 7) shows that this increase was not achieved at the expense of other parts of the programme but reflected real additions brought by an extension of the programme services through integration. The existence of this specifically integrated programme will permit us to examine the interaction patterns it has produced and to ask if these are related to programme performance in both family planning and health services. The Malaysian research thus focuses exclusively on the Ministry of Health integrated clinics.

NFPB – National Family Planning Board
FPA – Family Planning Association
MOH – Ministry of Health

III. RESEARCH METHODS AND PROCEDURES

A. Sampling.

The Korean project selected four provinces on the basis of their rank ordering on family planning performance, including the highest, two which ranked fourth and fifth, and the lowest ranked province. In each group of High, Medium and Low performance ranks, 15 clinics were selected for examination. Four clinic areas were excluded due to inaccessibility or because of their highly urban character. (The study concentrated on rural areas where the S.U. programme is also concentrated.) This left 41 clinics from counties that were rather evenly distributed along the rank ordering of family planning performance.

In Malaysia the project selected 18 districts, including nine that were classified as intensive input demonstration areas and nine that were not so designated. In each district the sample included the main health centre and one of its local midwife-cum-quarters

Table 1.
STAGES IN IMPLEMENTATION OF INTEGRATION

Year	Stages	Areas Covered	Rural Health Facilities			Population Covered
			MHC	SHC	MCQ	
1971 1973	*Stage I* (a) Pilot Project and Service Demonstration	8 Health Districts in 7 States				947,000*
1974	*Stage I* (b) Expansion		15	52	297	1,862,455*
1975	*Stage II* (a)		26	–	124	3,634,875*
1975	*Stage II* (b)		–	113	485	5,625,000*
1976-1977		Balance				6,675,161*

N.B. *Figures are estimated. An on-going study will determine the exact coverage of the Rural Health Services. The rough estimate is approximately 50% of the rural population.

MHC – Main Health Centre
SHC – Sub Health Centre
MCQ – Midwife cum Quarters

Figure 2.


NUMBER OF ACCEPTORS
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
ACCEPTOR TREND BY AGENCY
LEGEND:
OTHERS i.e. Estate, FELDA, Village Midwives and Other Agencies
NFPB
MOH
FPA
OTHERS
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978

stations. two sub-health centres, and one each of their midwife-cum-quarters stations. (In one district there was no main health centre.) Thus the total sampled units included seventeen main health centres, 31 sub-health centres, and 49 midwife-cum-quarters stations, for a total of 97 operating units.

B. Performance Measures.

In Korea the project used the family planning performance score and the community development, or S.U., score provided in the official records. The family planning score is one developed and used by the Korean Institute for Family Planning and includes weighted measures of acceptors, clinic inputs, and rank orders. The performance measures used in Malaysia were somewhat more complex. First, two objective measures were used: family planning acceptors in 1978 divided by the staff in position at the end of 1978 for a measure of *family planning recruitment efficiency* and the number of new ante-natal cases in 1978 divided by the ante-natal staff in position at the end of 1978 for a measure of *MCH recruitment efficiency*. Second, questionnarie responses were used to measure the family planning and MCH *workload*, or the reported number of hours given per week to each of these activities. Third, responses of clinic directors, recorded on a five point scale, were used to assess the *perceived impact* of the family planning and MCH activities. Finally, each clinic supervisor was asked to rate on a five point scale the improvement of services in 1978 over that in 1977, identified in the study as *perceived improvement* of both family planning and MCH services.

C. Interaction Measures.

To assess the degree of integration, each project questioned clinic workers on the frequency and quality of contacts with personnel both within the family planning programme and outside of it. That is, integration is here operationally defined as the *interactive linkages* with other staff both in family planning and in other positions. The Korean project developed an elaborate recording system that questioned workers on contacts with 17 different dimensions of interaction, from simple frequency to a variety of perceived qualitative dimensions. As we shall see, the interrelations among these measures led us in this summary to focus attention only on the *frequency* of contact with specific personnel. The Malaysia project also used measures of both frequency and quality of interactions, but developed six distinct measures. Two concerned the *frequency* of contact with family planning and MCH personnel and with non-family planning-MCH personnel. Two additional measures concerned the *adequacy of information* both within and outside of the FP-MCH set of personnel. Finally, two measures concerned the degree of *cooperation* that flowed from both internal and external contacts.

D. Organizational Determinants.

The general model from the expert group meeting on Organizational Determinants of Integration in Family Planning Programmes (Figure 1) provided the basis for developing survey items used in the two studies. Rather than using this model in a literal and mechanical manner, however, each project created a series of questions specifically relevant to the country programme. In each case, this built upon the previous field research project on the comparative administration of family planning programmes. From the large number of questions used and the responses derived, two steps were employed to reduce the data to a few organizational variables. First, individual responses were aggregated at the clinic level, either using the mean of responses or the percent reporting at a certain level. Second, factor analysis (principal component analysis followed by a verimax rotation) was used to reduce the large number of individual variables to a smaller number of underlying factors. The factor scores thus became the variables used in the quantitative analysis. In effect, this procedure selects a number of variables that are closely interrelated and then reduces them to a

single score, which can be given a name based on the factor loadings or relative weight of the contributions of specific responses to a set of questions. For example, the Korean study used 16 questions to tap workers' attitudes toward their work, the family planning programme, their colleagues and the programme clients. The responses of the 404 workers were aggregated to give a mean score on each of the 16 questions for each of the 41 clinics. These 16 items were then subjected to factor analysis to give five distinct scores for the attitudes found in each clinic. One was the principal component, or an overall attitude score. In addition, there were single factor scores for attitudes toward the work, the programme, the colleagues and the clients. These were then conceived as measures of organizational conditions, whose relationship to interactions and to programme performance could be examined. Following is a list of organizational variables developed for each programme.

Republic of Korea:

Attitudes toward:

a. work
b. programme
c. colleagues
d. clients
e. summary

Personnel Background:

a. marital status & family condition
b. education and training

Organizational Resources:

a. physical
b. financial
c. staff
d. supplies & equipment

Goals:

a. micro-human health & welfare
b. macro-national economic development

Size: size of the clinic and the population served by the clinic.

Malaysia:

Attitudes towards family planning.

Size and Structure: size of population served and the size of work groups within the clinic.

Background: staff educational and training background.

Goals: agreement on service and welfare goals.

Personnel Resources: perceived adequacy for the work.

Financial Resources: perceived adequacy for the work.

IV. FINDINGS

A. Inputs and Programme Performance.

The first question we can ask is whether in the two programmes there is any relationship between the performance of the family planning elements and the other element with which they are in some sense integrated. The two country programmes are not really comparable, since the linkages examined are with different types of programmes, but there is nonetheless a difference in the performance relations. In Korea the correlation between the FP performance scores and the SU performance scores for the 41 clinic areas studied was -.205. This is not a statistically significant relationship, but it may be noteworthy that it is a negative relationship, or at least that it is not a substantial positive relationship. Thus, it appears that family planning programme performance is not related to performance in community development.

For Malaysia there is a decided positive relationship between FP and MCH performance. The two recruitment efficiency scores show a +.24 correlation; the two impact scores are correlated +.56; and the two perceived improvement scores are correlated +.45. (See table 3)

A related set of questions concerns inputs and performance. It is the simplest of propositions that in this type of public programme we expect a positive relationship between inputs and outputs, although we found in the previous Comparative Administration Study (5) that this is not always the case. In these two national programmes, however, we do find the same general type of positive relationship found previously. (Malaysia: r = +.38, +.36 for family planning and +.24, +.37 for MCH, Korea: r = +.206, +.222.) The more time or effort put into the programme at the clinic level, the higher is its performance. (See Tables 2 and 3). The input-output questions specific to the issue of integration are somewhat more complex, however. Do family planning inputs have any spill-over effect on the non-family planning activities; and do the non-family planning inputs have any impact on the family planning performance. These are, in effect, specific questions derived from the more general arguments for integrated programmes. In Korea and Malaysia the answers are mixed.

For Korea, time reported given to family planning is *negatively* related to SU (community development) scores. (Table 2: r = -.213, and -.445 for the two measures of time inputs given.) Time given to major SU activities also does not appear to promote the SU performance. The relation with SU performance is +.082;+.054 for time given to general social activities; and -.330 for time given to agricultural activities. The latter is significant at the 5% level, and may be a disturbing finding. Not only is there no spill-over from family planning work to community development, but the fact of using family planning workers to promote community development activities may detract from community development itself. Without knowing much more about the SU scores and how they are generated, it is best to be cautious about inferring too much from these findings. They do suggest, however, that the advantages of specialization in family planning may be considerable, and the spill-over from family planning to other community development activities is not something that can be achieved easily.

For activities closer to family planning, the picture is somewhat mixed. Time given to MCH and TB activities is negatively related to family planning performance (r = -.488 and

-.428), but time given to health is positively related (r = +.355). For Malaysia, the same general interpretation of no spill-over effect is supported. (See Table 3.) Family planning inputs show no relationship with MCH outputs, and MCH inputs show no relationship with family planning outputs. In no case, however, is there a negative relationship. If there is no spill-over, there is also no deleterious effect from integrating the two services.

In part these findings support the case for specialized as opposed to integrated services, but they also give some indication of how integration can be organized so that it does not reduce services. In neither Korea nor Malaysia is there any real spill-over of effort from one activity to another, which is one of the common assumptions of the argument for integrated services. Effort given to family planning increases family planning service, and effort given to MCH increases MCH service. But family planning effort does not increase MCH service, nor in Korea does it increase community development achievements.

The differences between the two programmes are also instructive, however. Malaysia's programme is formally integrated, giving specific MCH and FP tasks to all workers. At the same time it does not overload the workers with a wide variety of other tasks. Fur-

Table 2.
CORRELATION COEFICIENTS BETWEEN FP AND SU PERFORMANCE AND VARIOUS MEASURES OF INPUTS

Input Measures	Output Measures	
	FP Scores	SU Ranks
Hours/week to FP	+.206	−.213
Percent of time to:		
FP	+.222	−.445**
MCH	−.488**	+.356*
TB	−.428**	+.392*
Health	+.355*	+.302
Agric.[1]	+.192	−.330*
Taxation	+.078	+.105
Gen'l. Svc.	+.309*	+.185
Social Svc.[1]	−.260	+.054
SU[1]	−.081	+.082

*significant at 5% level
**significant at 1% level
[1]central SU activities

Table 3.
CORRELATION MATRIX OF PERFORMANCE MEASURES

	Family Planning Measures				Maternal and Child Health Measures			
	FP Recruitment Efficiency	FP Work Load	FP Impact	FP Improvement	MCH Recruitment Efficiency	MCH Work Load	MCH Impact	MCH Improvement
FP Recruitment Efficiency	1	.38	.21	.33	.24	n.s.	n.s.	n.s.
FP Work Load	.38	1	.22	.36	n.s.	.70	.17	n.s.
FP Impact	.21	.22	1	.32	n.s.	n.s.	.56	n.s.
FP Improvement	.33	.36	.32	1	n.s.	n.s.	n.s.	.45
MCH Recruitment Efficiency	.24	n.s.	n.s.	n.s.	1	.20	.17	.17
MCH Work Load	n.s.	.70	n.s.	n.s.	.20	1	.24	.37
MCH Impact	n.s.	.17	.56	n.s.	.17	.24	1	.20
MCH Improvement	n.s.	n.s.	n.s.	.45	.17	.37	.20	1

Note: n.s. implies p value 0.05. All other coefficients have p values $\leq$0.05.

ther, it is organized to provide both services at the clinic level. This implies that staff are trained, supervised and supplied specifically for the integrated services. In this case, if FP inputs do not increase MCH service, at least they do not reduce those services. In Korea, on the other hand, the field worker is given a large number of tasks, and there is considerable variation among clinics in how much the worker is actually expected to do. This implies that the programme is not specifically organized for the integrated services, that training and supervision are not specifically designed or organized for the integrated services. In this situation, time given to MCH, TB, and community development appears to reduce FP services. This implies that there may be some costs to loading a worker with a variety of tasks. It does not imply that integration cannot be achieved or that it always will mean a reduction in services. It does warn administrators, however, that if integrated services are to be achieved, proper attention must be given to training, supervision and logistical support tailored to the specific needs of the integrated programme. High quality integrated services will not be achieved merely by instructing workers to carry them out.

B. Organizational Conditions, Interactive Linkages and Programme Performance.

The major set of questions we have is what impact does the interactive linkage have on programme performance and what organizational characteristics affect interaction and performance. If the assumptions of the general argument for integration are correct, there should be a positive impact of interactive linkages on performance, and we should be able to identify specific organizational characteristics that affect interaction. If interaction does have a positive impact on performance, and if we can identify the determinants of interaction, managers might be able to improve programme performance by giving attention to those conditions that affect interaction. The answers to these questions are different for the two programmes and they provide important guidelines for managing truly integrated programmes.

The results of the statistical analysis for the two programmes are summarized in the path diagrams in Figures 3 and 4. In both cases, interactive linkages do have an impact on programme performance, and it is possible to identify some of the organizational characteristics that have an impact on the level of interaction. The differences between the two programmes, however, are more instructive than their similarities. In Malaysia interactive linkages both within the programme and outside of it (see Figure 3) have a positive impact on family planning and MCH performance. Further, such organizational factors as a group structure, financial adequacy and staff backgrounds have both direct impacts on programme performance, and indirect impacts through the interactive linkages. In effect, the integration appears to be working as its supporters propose it will work, but there are important additional managerial processes that help the integration to work as it is planned to work. In Korea the results are far more meagre (see Figure 4). Two interactive linkages, with the clinic chief and the designated doctor, have a strong impact on clinic level performance. In effect, administrative or supervisory interaction, and professional medical interaction affect programme performance. It is difficult, however, to identify the organizational determinants of this interaction. Again in the Malaysian programme, specifically organized for integration, the interactive linkages seem to work as planned. For the Korean programme, less specifically organized for integration, only the interactive linkages within the programme boundaries appear effective. The more detailed analyses that follow can fill out this general finding.

(1) Malaysia

The importance of interactive linkages, both internal and external to the programme, for performance can be seen in the two Malaysian path diagrams in Figures 3 and 5. We note first (Figure 3) that all interactive linkages – quantity and quality, internal and external – have a positive impact on both FP and MCH performance. Interaction appears to be a good

Figure 3.

MODIFIED PATH DIAGRAM FOR THE ORGANIZATIONAL FACTORS / LINKAGE / PERFORMANCE CHAIN

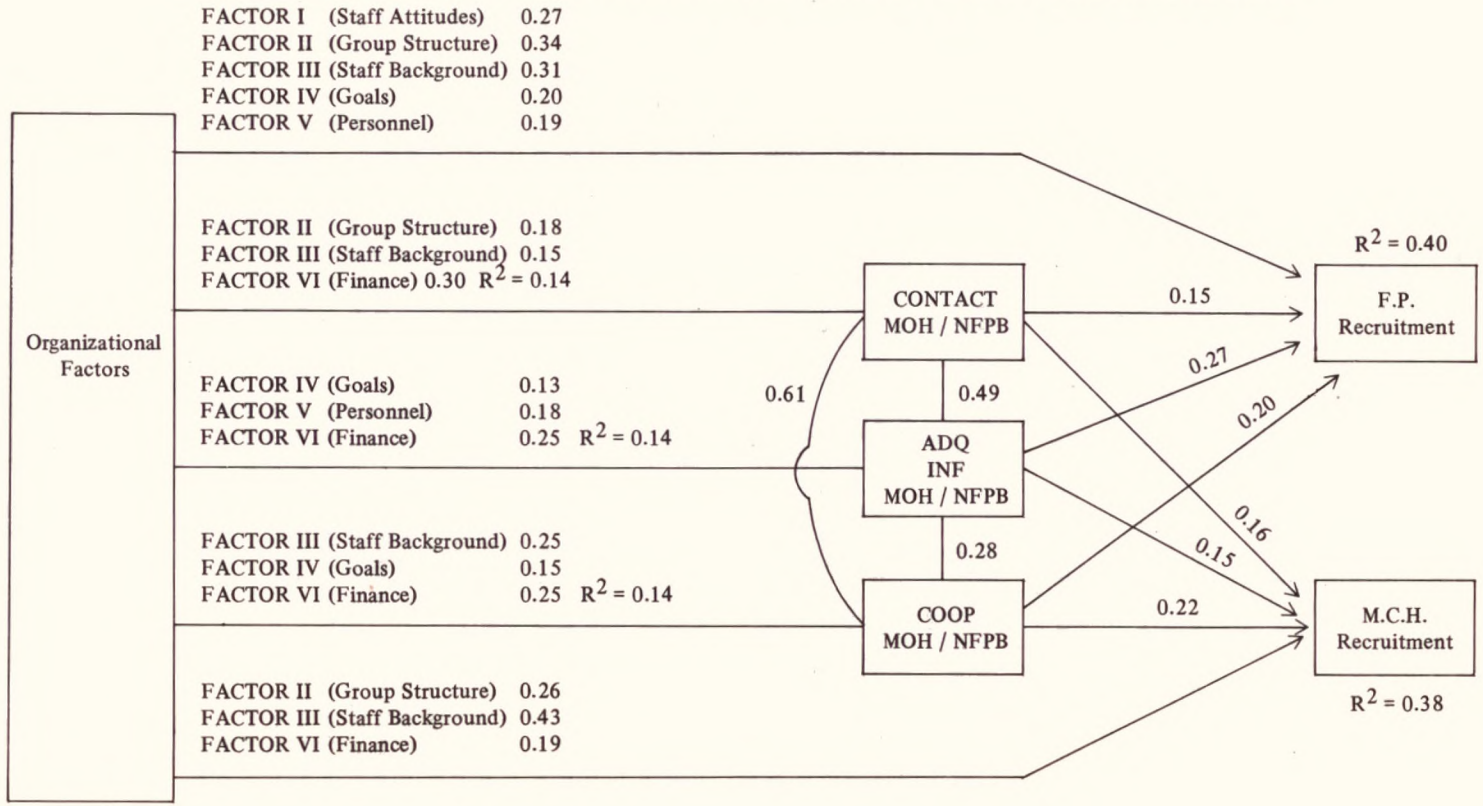


Figure 4.

PATH DIAGRAM SHOWING THE DETERMINATION OF FAMILY PLANNING CLINIC LEVEL PERFORMANCE BY INTERACTIVE LINKAGES AND ORGANIZATIONAL CHARACTERISTICS (STANDARD ERRORS IN PARENTHESES).

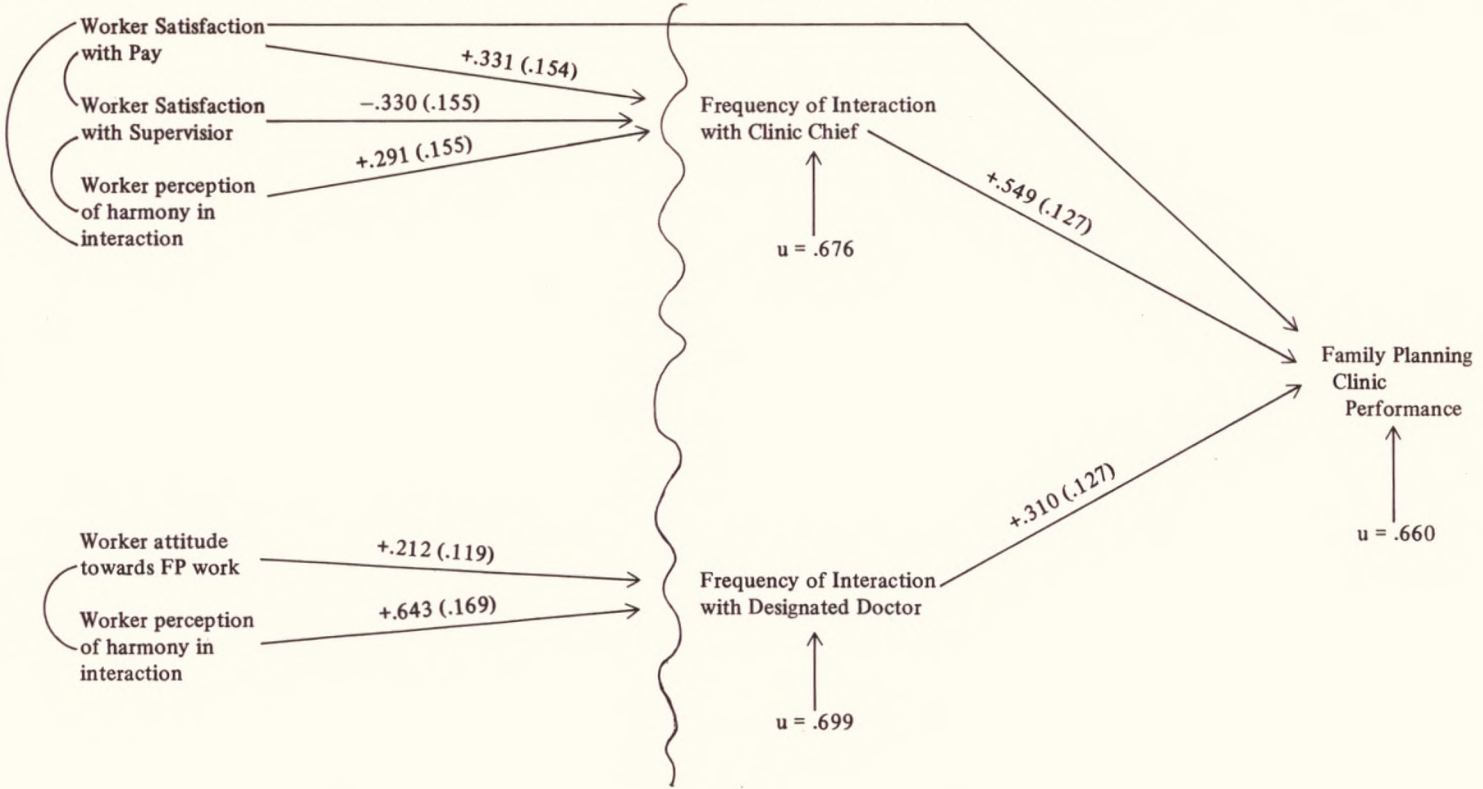
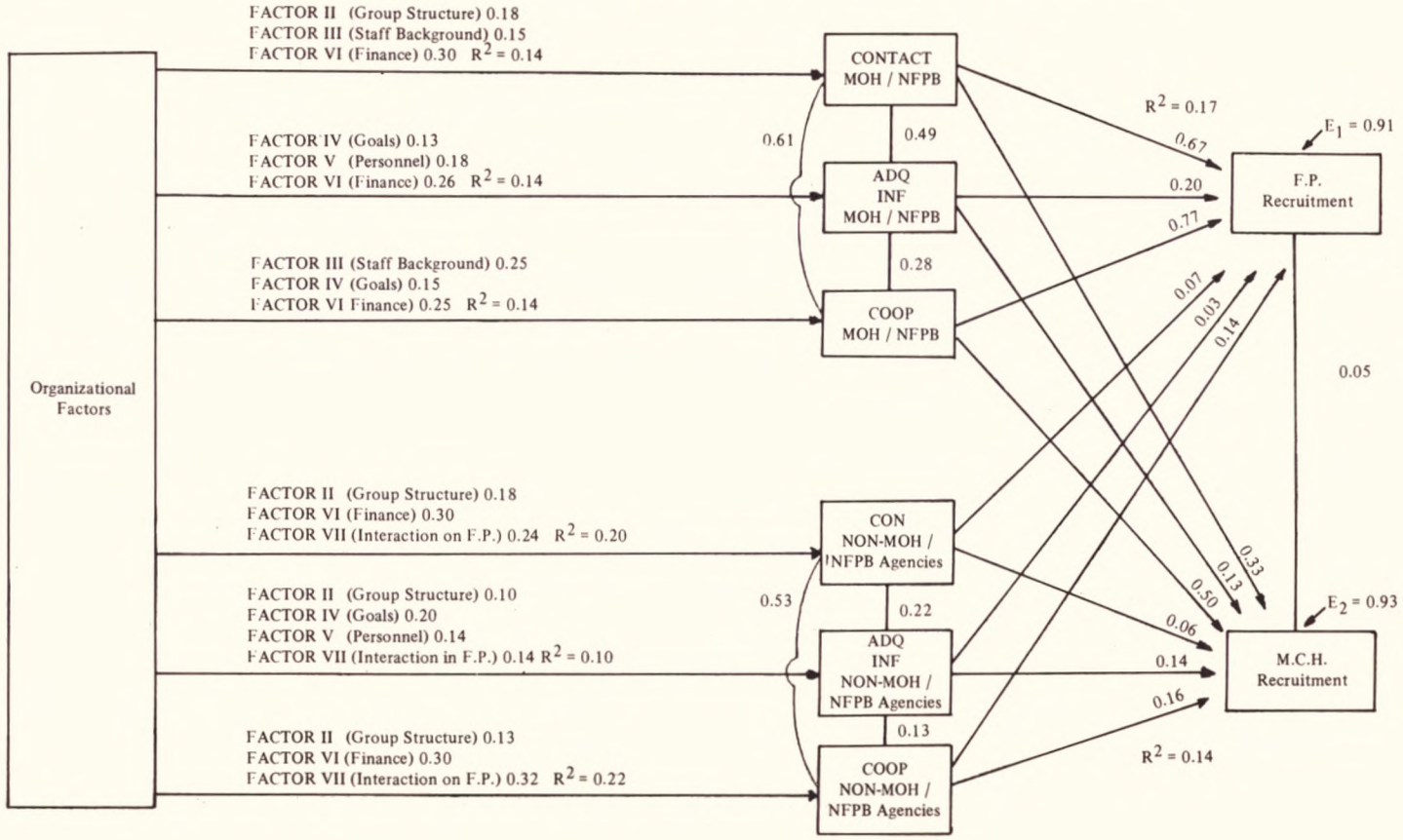


Figure 5.

PATH DIAGRAM FOR THE ORGANIZATIONAL FACTORS / LINKAGE / PERFORMANCE CHAIN



thing for programme managers to promote. Second, we should note that the weight of this impact, or the amount of variance explained, is not very large. For MCH performance interaction explains only 14 percent of the variance, and for FP performance interaction explains 17 per cent of the variance. Third, for both FP and MCH performance, interactions within the programme are consistently more important than interactions with people outside of the programme. Finally, when organizational factors are added to the interaction factors (Figure 3), the amount of variance explained increases substantially (from 17 to 40 percent for FP and from 14 to 38 percent for MCH performance). This is important for programme managers, since it says that increasing the quality of these organizational factors can be expected to have a direct impact on programme performance, and an *additional impact* through the increasing interactive linkages at the clinic level.

What are these organizational conditions that can be expected to improve performance both directly and through their impact on interactive linkages? The individual factors can be identified through the variable specifications shown in the factor analysis table (see Table 4), but here we can draw attention to some of the important elements that appear in most of the paths. FP performance is directly affected by *positive attitudes* toward the programme, clients and colleagues; by training and education in the *staff background*; by having a *group structure* in which the clinic personnel meet together to discuss the programme and its problems; by the staff perception of *goals* of service; and by the adequacy of *personnel* or staffing in the clinic. MCH Performance is directly affected by adequate *finances*, an appropriate *group structure* and *staff backgrounds*. If we combine these with the more common factors that work through their impact on interaction, we can make the following general comments. Performance is enhanced when there is perceived adequacy of financial and personnel resources, when the clinic creates an internal purposive group for collective effort, and when the staff perceives client service to be a major goal of the clinic. For the clinic manager or state level supervisor, financial and personnel resources involve negotiations with the upper levels of management. Thus the extent to which the manager can control these factors may be in part dependent upon overall programme resources available at any specific time. This is a problem for the overall programme management, and not only for the local manager. The two other conditions, however, are more directly in the hands of the local manager. They fit well into the framework usually described as *participative management.* The state level or clinic level manager can help to build the individual clinic staff into an effective *work group* by arranging staff meetings and giving all staff a sense that they participate directly in decisions on clinic work processes. (Murthi, found this type of participative management style to have a direct and positive impact on performance in one management experiment in Indian family planning clinics.) In such group meetings it is also possible to reinforce the goal of service as a dominant group norm. Thus these two organizational factors are closely interrelated. It is also in such group settings that staff attitudes can be given attention so that they become more positive. It is worth noting that in other statistical manipulations done with the Malaysian data – canonical correlations (not shown here) – group structure and staff background and attitudes showed strongest correlations with programme performance, which reinforces the suggestions made above.

These findings supplement those in the previous ESCAP comparative administration study. At that time it was found that the Malaysian programme was on the whole well and rationally administered. A substantial amount of the performance of the individual clinics was determined by effective logistics and staffing, which are normal responsibilities of programme management. Even the best run programmes can be expected to show some variance in staffing and logistics at the local level. If these conditions do affect programme performance then programme management is in fact an important determinant of performance. Good managers and good management will improve performance. The findings in the present study help to specify what kind of management is good management and how it has an impact on clinic level performance. Building an effective work group at the local level, paying attention to norms of service and to ways that appropriate interactions with

Table 4

Principal Component Factor Loadings for Organizational and Environmental Variables

Variable No.	Item	FACTORS I Staff Attitudes Towards Clinic	II Group Structure for Interaction	III Staff Background & Relationship to Environment	IV Goals of Clinic	V Personnel Resources	VI Financial Resources	VII Staff Interaction on F.P. Matters	Commonality
18	Mean score on moral of clinic staff	.90							.82
19	Mean score on feeling of belonging to work group	.95							.91
20	Mean score of staff's feeling about moving to another job	.99							.99
21	Mean score on staff's ability to get along with supervisor	.94							.90
22	Mean score on staff's ability to get recognition from supervisor	.98							.97
24	Mean score on degree of supervisor's understanding of worker's problems	.21				.24	−.27		.23
39	Existence of group within clinic for work discussion		.70					−.22	.58
40	Existence of group between clinic and other agencies for work discussion	.24	.31			.34			.37
43	Size of group within clinic for work discussion		.76						.59
44	Size of group between clinic and other agencies for work discussion		.49						.27
45	Frequency of meeting of discussion group within clinic		.30						.12
46	Frequency of meeting of discussion group between clinic and other agencies		.17		−.18				.10
48	Type of authority for existence of discussion group within clinic		−.56		.26			.26	.50
49	Type of authority for existence of discussion group between clinic and other agencies		−.42			.35		.17	.36
50	Population of clinic's environment		.70	.25		.30		.20	.69
2	Per cent of staff that are nurses or doctors		.68	.30		.35		.21	.75
4	Average educational level of staff		.24	.34			.26		.26
6	Average duration of staff training in maternal and child care			.10			.31		.19
7	Average age of staff			.77					.63
9	Per cent of single staff in clinic			−.50		−.32		.26	.42
14	Per cent of staff who feel they have been more than adequately trained in MCH work			.71					.32
11	Average duration of staff's residence in clinic's locality			.59					.38
12	Per cent of staff who feel they know local people very well			.57					.42
13	Average length of service in clinic			.66					.48
35	Per cent of staff who feel main goal of clinic is to provide health service to those who come to clinic for it				.71				.52
36	Per cent of staff who feel main goal of clinic is to motivate people to maintain goal health				.66				.48
37	Per cent of staff who feel main goal of clinic is to provide F.P. to those who come for it				.77				.63
38	Per cent of staff who feel main goal of clinic is to motivate people to improve their welfare through having an appropriate family size				.64				.43
27	Clinic's experience of shortage of professional staff					.66			.47
28	Clinic's experience of shortage of semi-professional staff					.62			.52
29	Clinic's experience of shortage of clerical staff					.60			.44
30	Clinic's experience of shortage of semi-skilled staff		.36			.38		−.27	.37
31	Clinic's experience of adequacy of funds for overtime			.24			.68		.60
32	Clinic's experience of adequacy of funds for travelling						.72		.58
33	Clinic's experience of adequacy of funds for supplies and equipment						.74		.67
5	Average duration of staff training in F.P.							.28	.12
15	Per cent of staff who over practiced F.P.							.26	.12
41	Frequency which discussion group within clinic discusses F.P. matters.	−.20						.22	.10
42	Frequency which discussion group between clinic and other agencies discusses F.P. matters.							.40	.28
									.55

external agencies can be promoted, are thus effective keys to effective management of the human resources managers have at their disposal. Upper level programme personnel can include instruction on this type of management in their training courses and can pay close attention to the financial and staffing needs of the clinics. These are the specific managerial actions that can be expected to increase programme performance. Further, they increase performance directly and also through promoting more effective interactive linkages among staff at the clinic level.

(2) Republic of Korea

The importance of interactive linkages in the Korean family planning programme can be seen in Figure 4, and Table 5. The frequency of interactions that workers have with the clinic chief and the designated doctor together explain about 50 percent of the variance in clinic level performance. These interactive linkages thus have a far greater impact on performance than we found in Malaysia, where the interactions alone explained less than 20 percent of the variance in clinic level performance. As interesting as the strong impact of these two interaction patterns are those that show little or no impact on performance. Contact with the village leaders, the SWA President and the Ri (Village) Chief show only weak and statistically insignificant relationships with performance. Contact with the SU head shows a weak negative relationship, which reinforces earlier observations of some competitive nature of the two programmes. Contact with the MCH and TB supervisors is not related to performance, which reinforces the earlier interpretation of the advantage of specialization rather than integration. Finally, note that interaction with all supervisory positions – clinic chief, clinic administrative chief, and family planning supervisor – show positive relationships with performance. It can also be observed that the relationship between frequency of contact for all of these three positions is strong and positive. That is, they represent together an administrative or supervisory network for the family planning worker. (Substituting either two for the clinic chief in the multiple regression equation maintains the same pattern of positive impact on performance, but the amount of variance in performance explained is reduced from about 50 percent to about 25 percent.)

The search for determinants of interaction frequencies proved less successful for Korea than for Malaysia. None of the organizational conditions – staff background, organizational resources, or clinic size – had any impact at all on the frequency or quality of the contacts. Our search did yield some results, which we have included in the path diagram, but it is only with difficulty that we see these as organizational conditions. They are essentially individual attitudes – perceived satisfaction with pay or with the supervisor, the perceived quality of the interaction or attitudes towards the FP work. Theoretically, they can be seen either as determinants or as results of interaction frequencies, but we believe they are in fact caused by some other condition that also determines frequency of contact. To understand this complex relationship, we must turn to an examination of the relationship between frequency and perceived harmony in the contacts.

Table 6 shows the correlation coefficients for the relation between the amount of reported contact and the degree of perceived harmony in the contact with various officers. Here an interesting pattern emerges. For the network of administrative or supervisory personnel there is no relationship. In effect, contact with these people is designated by the structure of the organization. Family planning workers must be in contact with these officers whether or not they find that contact pleasant, helpful and harmonious. For the Myon Chief, the village leaders, and the designated doctor, however, the relationships are strong and positive. This is understandable given the discretion family planning workers have for initiating contact in the actual field situations. These are officers with whom the worker is not compelled to be in contact. She will visit these people only to the extent she finds the contact useful, helpful and harmonious. Field observation leads us to argue that it is the style of leadership of these officers that determines how the family planning worker will perceive them. If they are open, accessible, supportive and helpful, and if they feel

the family planning programme is important, the worker will find contact with them helpful and pleasant, and will initiate more frequent interaction. If the officers are aloof, autocratic, or denigrating of the family planning programme, the workers will find the contact unpleasant and will withdraw from them.

This interpretation is in accord with a study of leadership in the Korean family planning programme conducted by Dr. Dae-woo Han in 1973-4 (10). He found that he could

Table 5

Zero Order Correlations Between Interactive Linkages and Family Planning and SU Performance (Ns are shown in parentheses)

Interactive Linkages	FP Score	SU Rank
Frequency of Interaction with:		
Myon Chief	+.29 (36)*	+.19 (32)
SWA President	+.26 (38)	+.30 (32)*
SU Head	−.23 (38)	+.22 (32)
Ri Chief	+.10 (37)	+.33 (32)*
Designated Doctor	+.47 (39)***	−.23 (33)
Clinic Chief	+.64 (37)***	−.13 (33)
Clinic Adm. Chief	+.35 (40)**	−.13 (33)
FP Supervisor	+.39 (40)**	−.17 (33)
MCH Supervisor	+.12 (34)	−.09 (30)
TB Supervisor	+.13 (40)	−.19 (33)
Perceived "Harmony" in Interaction with:		
Myon Chief	+.21 (36)	+.08 (32)
SWA President	−.05 (38)	+.02 (32)
SU Head	−.30 (38)*	+.19 (32)
Ri Chief	−.06 (37)	+.28 (32)
Designated Doctor	+.36 (39)**	−.06 (33)
Clinic Chief	+.15 (37)	−.24 (33)
Clinic Adm. Chief	+.19 (40)	−.22 (33)
FP Supervisor	+.07 (40)	−.06 (33)
MCH Supervisor	+.09 (34)	+.09 (30)
TB Supervisor	+.01 (36)	+.17 (36)

*significance level .10
**significance level .05
***significance level .01

measure five different dimensions of leadership and that these measures explained differences in the effectiveness – or acceptors per MWRA – of the county level clinics. They were, in fact, more powerful predictors than other individual background characteristics or than county-level socio-economic conditions.

In the present study, we did not attempt to assess leadership styles or interpersonal styles of the clinic managers. We believe, however, that these are critical determinants of programme performance, and deserve to be studied in greater detail. Without this detail, we consider that the patterns shown in the path diagram are incomplete. In effect, we report the statistical findings as they appear out of our attempt to identify determinants of interaction frequencies, but we do not believe this diagram accurately represents the dynamics of the programme itself. We believe there is some unmeasured personal quality of the clinic chief and the designated doctor that determine how much interaction will occur, but that this determination will vary with the two positions. For the clinic chief there are normal organizational constraints of supervision that determine a large portion of the frequency of contact. When we hold these constant, however, we expect that the style of leadership will produce different perceptions of harmony in the interaction and the frequency of contact. For the designated doctor, the more routine demands of supervision are not important, and the style of leadership will have a more powerful impact on both the perceived harmony and the frequency of the interaction. This overall interpersonal dynamic will then have a profound impact on the level of performance at the county level.

There are important policy implications to be gleaned from these findings. They are in accord with earlier findings and their policy implications. Following the 1974 ESCAP study, which found a positive relation between the workers' perceptions of support from other officers and clinic level performance, the Korean Institute for Family Planning con-

Table 6

Zero Order Correlations between reported frequency of contact and perceived "harmony" in interaction between family planning workers and various officials (Ns are shown in parentheses)

Official	Correlation
Myon Chief	+.56 (36) ***
SWA President	+.31 (38) **
SU Head	+.43 (38) ***
Ri Chief	+.42 (37) ***
Designated Doctor	+.68 (39) ***
Clinic Chief	+.21 (37)
Clinic Adm. Chief	–.09 (40)
FP Supervisor	–.07 (40)
MCH Supervisor	+.26 (34)
TB Supervisor	-.37 (35) **

*significance level .10
**significance level .05
***significance level .01

ducted a leadership training course in which these findings were presented. At that time the organizers argued that much of the performance depended on the leadership and interpersonal styles of the medical and civil administrators. If they saw performance as something determined by their own actions, rather than by the acceptance or resistance of the clients or the workers, they could act in such a way as to increase performance. If they worked closely with their field workers, took an active interest in their problems and helped them to solve those problems, the programme would provide better services to the population and would achieve higher levels of acceptance. The current study reinforces those policy implications. To increase performance, it is necessary to make local leaders more aware of their own responsibilities and their own powers.

Our findings on the relationship between family planning and community development (SU) are somewhat troublesome for the proponents of integration. We have found a mild negative relationship between clinic level performance in these two programmes. Further, we found that family planning inputs were not related to SU performance and that family planning worker inputs into SU may even detract from family planning performance. Finally, we find that none of the interaction measures that have such a powerful impact on family planning performance are related to SU performance. We have observed in the field that SU is a more favored and powerful programme than is family planning. Local leaders and indeed even the central government appear to give greater emphasis to SU than to family planning. Although family planning is officially declared to be an important element in the overall SU programme, we find in actual practice a sharp distinction between the two. Family planning is oriented more toward women than men, and is staffed more by women than by men. The opposite is true for SU. In effect, although the two programmes are supposed to be integrated, they are rather separate. Without clear administrative planning for their integration, attempts to link the two are not successful, and may even detract from family planning performance. This finding stands in contrast to the findings from Malaysia. There we saw a programme deliberately designed to achieve a limited form of integration, including family planning in rural health and MCH services. With that deliberate, careful and long term planning, the integration appears to be working well. It has increased the number of programme acceptors without reducing acceptors from the specialized family planning programme, and the interactions designed for the programme do enhance the acceptability of both services. The policy implications of these contrasting findings are clear and important. If family planning is to be effectively integrated with other services, two conditions should be met. First, family planning should be integrated with similar health and MCH services, and not with a diffuse range of different services. Second, the integration itself must be carefully planned. It must take into account the needs of both services and take great care to assure that all needs are met. This is usually not something that can be done by simple direction from above. It will require protracted discussions and negotiation between all of the relevant specialized services. Integration can help to enhance service delivery, but it will not be done simply by ordering it to be done.

V. SUMMARY OF OUTCOME AND PROGRAMME IMPLICATIONS

The basic questions asked in these two research projects were:

(a) To what extent does integration, in the form of interactive linkages between clinic level staff, affect the performance of family planning and allied programme performance?

(b) What are the organizational determinants of the extent of clinic level interactive linkages?

The overall findings of the studies confirmed that interactive linkages do have an impact on programme performance, but the direction of this impact depends on how the integrated programmes are organized.

Specifically the findings of the Malaysian study supplement those in the previous ESCAP comparative administration study. At that time it was found that the Malaysian programme was on the whole well and rationally administered. A substantial amount of the performance of the individual clinics was determined by effective logistics and staffing, which are normal responsibilities of programme management. Even the best run programmes can be expected to show some variance in staffing and logistics at the local level. If these conditions do affect programme performance then programme management is in fact an important determinant of performance. Good managers and good management will improve performance. The findings in the present study help to specify what kind of management is good management and how it has an impact on clinic level performance. Building an effective work group at the local level, paying attention to norms of service and to ways that appropriate interactions with external agencies can be promoted, are in this view effective keys to effective management of the human resources managers work with. Upper level programme personnel can include instruction on this type of management in their training courses and can pay close attention to the financial and staffing needs of the clinics. These are the specific managerial actions that can that can be expected to increase programme performance. Further, they increase performance directly and also through promoting more effective interactive linkages among staff at the clinic level.

Thus in Malaysia, where the programme is specifically organized to integrate family planning with maternal and child health:

(a) the integration appears to have increased service delivery and resulted in larger numbers of family planning acceptors,

(b) family planning inputs do not increase MCH services, and MCH inputs do not increase family planning services. There is no spill-over from the input of one activity into the output of another,

(c) at the same time, family planning inputs do not reduce MCH outputs, nor do MCH inputs reduce family planning outputs,

(d) the overall positive impact of integration and the lack of service reduction due to integration appears to result from specific planning for a limited degree of integration—family planning and maternal and child health.

Korean findings

Several findings related to policy implications may be gleaned from the Korean study, which are in accord with earlier findings and their policy implications, as summarized by the authors below.

Following the 1974 ESCAP study, which found a positive relation between the workers' perception of support from other officers and clinic level performance, the Korean Institute for Family Planning conducted a leadership training course in which these findings were presented. At that time the organizers argued that much of the performance depended on the leadership and interpersonal styles of the medical and civil administrators. If they saw performance as something determined by their own actions, rather than by the acceptance or resistance of the clients or the workers, they could act in such a way as to increase performance. If they worked closely with their field workers, took an active interest in their problems and helped them to solve those problems, the programme would provide better services to the population and would achieve higher levels of acceptance. The current study reinforces those policy implications. To increase performance, it is necessary to make local leaders more aware of their own responsibilities and their own powers.

Findings on the relationship between family planning and community development are somewhat troublesome for the proponents of integration. We have found a mild negative relationship between clinic level performance in these two programmes. Further, we found that family planning inputs were not related to the Saemaul Undong (SU) performance and that family planning worker inputs into SU may even detract from family planning performance. Finally, we find that none of the interaction measures that have such a powerful impact on family planning performance are related to SU performance. We have observed in the field that SU is a more favoured and powerful programme than is family planning. Local leaders and indeed even the central government appear to give greater emphasis to SU than to family planning. Although family planning is officially declared to be an important element in the overall SU programme, we find in actual practice a sharp distinction between the two. Family planning is oriented more toward women than men and is staffed more by women than by men. The opposite is true for SU. In effect, although the two programmes are supposed to be integrated, they are in effect rather separate. Without clear administrative planning for their integration, attempts to link the two are not successful, and may even detract from family planning performance. This finding stands in rather strong contrast to the findings from Malaysia. There we saw a programme deliberately designed to achieve a limited form of integration, including family planning in rural health and MCH services. With that deliberate, careful and long term planning, the integration appears to be working well. It has increased the number of programme acceptors without reducing acceptors from the specialized family planning programme, and the interactions designed for the programme do enhance the acceptability of both services. The policy implications of these contrasting findings are clear and important. If family planning is to be effectively integrated with other services, two conditions should be met. First, family planning should be integrated with similar health and MCH services, and not with a diffuse range of different services. Second, the integration itself must be carefully planned. It must take into account the needs of both services and take great care to assure that all needs are met. This is usually not something that can be done by simple direction from above. It will require protracted discussions and negotiation between all of the relevant specialized services. Integration can help to enhance service delivery, but it will not be done simply by ordering it to be done.

The implications of the above findings are that in Korea, where the programme is not specifically designed to integrated family planning with other services:

(a) interactions with the clinic chief (for supervision) and the designated doctor (for professional assistance) have a strong and positive impact on family planning clinic level performance,

(b) MCH, TB, and community development inputs and interactive linkages do not contribute to family planning performance, and may even detract from it.

Conclusion

The major conclusion to be drawn from this comparative intepretive summary is that integration can help to improve family planning services, but it must be carefully planned; all parties to the integration should be included in the planning; and integration works best when family planning is linked to another service similar to it. It is difficult to link family planning to services that are different in character in the major target population, or in the degree of government support or emphasis.

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