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**RECRUITMENT, SELECTION AND RETENTION OF CBD WORKERS:
AN ISSUE PAPER**

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The provision of family planning services to all those in need in developing countries is a complex and challenging endeavor. It has become clear that in addition to the conventional clinic-based model other means must be employed if these needs are to be met. The Community Based Distribution (CBD) model is one method particularly well-suited to reach the urban poor and rural populations. To attain their ultimate goals, CBD programs must carefully consider both human and administrative factors at every juncture. In fact, it is precisely this interaction between manpower and administration that moves a program along to meeting its stated objectives. It is appropriate at this time to study the important aspects at both ends of the manpower spectrum: recruitment and selection at the beginning and retention of personnel for a period of time after training. Although there are descriptive discussions of recruitment and selection in the literature, serious questions remain. These questions require further elucidation and study so that general rules can be developed to guide programs in personnel selection.

It is surprising that so much effort and resources have been expended in recruitment, selection and training with little attention paid toward maintenance of the investment, that is, retention of personnel in the system. Above all, the retention of an effective family planning worker is essential for long term program effects.

This issue paper reviews the literature and existing programs as related to the areas of recruitment, selection, and retention of workers. The paper examines the general aspects of selection criteria, reported experience with

specific criteria, e.g., age, sex, etc., recruitment processes needed to identify appropriate workers, and final selection methods. Retention of a cadre of satisfactory workers is explored, as well as methods for continuing worker motivation. Finally, current research issues are prioritized and recommendations made for further study.

GENERAL ASPECTS OF WORKER CRITERIA

Worker criteria are those characteristics of the candidate which are considered as prerequisites for effective training and satisfactory job performance. Usually they are personal, demographic, and cultural including age, sex, marital status, number of children, religion, ethnic group, socioeconomic level, schooling/literacy, work/employment, and present use of contraceptives. Tasks a worker will be expected to perform, the availability of eligible trainees and available training resources are a few of the factors that are integrally related to the establishment of worker criteria. It is impossible to set worker prerequisites or criteria without knowledge of program goals and objectives, training content and objectives, as well as program environment and community characteristics.

Cuca and Pierce (1977) have suggested that both the performance of the change agent (the CBD worker) and his or her characteristics are functions of the setting of the program, the stage of development of family planning in the area, and the scope of the experiment. When formulating criteria for worker selection two different sets of worker relationships must be considered. First, those worker characteristics most directly effecting the relationship between worker and client (worker/client fit) must be examined. The second set are those characteristics which make the worker easier to train and manage from

the programs operational point of view. It should be noted that these two sets of considerations may not dovetail. For example, literacy may be important from the program's viewpoint for the facilitation of training, agent recordkeeping, and other program duties. However, from the client's viewpoint literacy may be far less important than another attribute (such as living in the same village) that aids in the establishment of rapport and trust.

One theory focussing primarily on the importance of worker/client fit has been advanced by Everett Rogers (1973). According to this theory, within a given setting there are various stages in the adoption of an innovation such as family planning. Initially potential adopters must become aware of and subsequently be educated about the innovation. During this stage it is important that the change agent appear knowledgeable and of a higher status than the potential adopter. Rogers refers to this quality as heterophily. Heterophilic change agents possess competence credibility because they appear more informed. During the next stage of the process, persuasion, Rogers theorizes that it is most important for there to be similarity between change agent and adopter. Homophily, the term used to describe close worker/client fit, denotes safety credibility. Further, Rogers states that in urban areas where people are apt to be more medically sophisticated, it may be more important for change agents to be perceived as competent/heterophilic, whereas in rural areas safety/homophilic qualities may be more important due to more strict adherence to tradition.

In some developing countries the subject of family planning is still considered sensitive. As such, it is appropriate as a topic of discussion only in certain selected societal groups, homophilic circles. The more forbidden the subject of family planning is within a given society, the more necessary it might be for a change agent to command safety credibility in a young program. One way to mitigate the more threatening aspects of Family Planning when they

exist, employing the concept of homophily, is by conducting an intensive mass media campaign closely associating a family planning product with a popular, local person. Examples of this approach are seen in the Mechai program in Thailand and the Sri Lanka Uncle Preethi Program. Obviously, such intensive media campaigns designed to desensitize the issue of family planning are possible only when there is full government support for population planning activities.

Several studies can be cited that provide support for Rogers hypothesis. Azcona et al (1980) reporting on the Mexican rural health program used the number of family planning acceptors as a measure of worker performance and examined the effects of certain worker characteristics. The results generally support Rogers hypothesis that homophilic agents are the best rural change agents. Older, married, female workers with children had the greatest success in recruiting acceptors. Azcona also states it is the "credibility and acceptability of homophilic agents rather than greater effort" on the worker's part that appears to be important.

Repetto (1977) provides empirical evidence from the Indonesian family planning program indicating that the most productive agents were those most similar to clients. The productivity of a random sample of 864 field workers was analyzed with respect to age, sex, marital status and education. Productivity was measured as worker output: mean number of home visits, new acceptors and referral cards. Examination of all three measures substantiated Rogers' theory regarding the importance of worker/client fit; women did better than men, married workers did better than single workers, and less educated workers did better than their more educated counterparts.

On the other hand, there is also substantial evidence from the field that contradicts Rogers theory and emphasizes the importance of program factors. The Bertrand et al (1981) study in Guatemala is one of the most current and

convincing studies of worker characteristics to date. Characteristics of the change agents and program related factors were studied as they related to outcomes in the APROFAM program. Most of the workers had been associated with the program for less than 24 months. Five program related factors were identified:

- P1 Frequency of supervision
- P2 A formal training course
- P3 The number of months since the last training course
- P4 The length of the training course in days
- P5 The number of months the agent had worked in the program,

and nine sociodemographic and personal characteristics of the agents:

- S1 Sex
- S2 Age
- S3 Marital status
- S4 Number of living children
- S5 Ethnic group
- S6 Religion
- S7 Years of schooling
- S8 Other (paid) employment
- S9 Current use of contraceptives.

Evaluating the knowledge and performance (measured by quantity of contraceptives sold) of the agents in relation to these factors by analysis of variance they observed that:

"The results suggest that it is more important to focus attention on what happens to the distributors once they enter the program ... than to invest extensive efforts in trying to refine the screening processes for distributor selection..."

When multiple regression analysis was done of all variables which correlated with contraceptive knowledge, the single significant factor among urban distributors was a formal training course. Only 12.7% of the variance in knowledge was explained by all the factor variables.

For the rural workers, factors P3 and P4 were omitted from the analysis because some had not had training courses. Of the remaining factors, P2, the training course, was the strongest correlate. Monthly supervision and self-use of contraceptives were also important. For rural workers, the factors explained 38.2% of the variance in knowledge.

When the level of knowledge was compared with volume of contraceptives sold, there was no correlation for urban workers (Pearson coefficient 0.04, $p > 0.05$). For rural workers, the better informed distributor was likely to have better sales (coefficient 0.19, $P < 0.01$).

Earlier results from the APROFAM-FECOAR project in Guatemala are inconsistent regarding the importance of worker/client fit. While married women using contraceptives performed better than non-contraceptors, the more educated men did better than less educated men. However, the findings were generally inconclusive and difficult to interpret (Cabrera et al, 1979).

In summary, the optimum selection of worker criteria should be based on an assessment of both client and program needs. It is also important to note that certain local practices may command the use of a particular type of worker; or the structure of a program may dictate the choice of characteristics.

ANALYSIS OF SPECIFIC WORKER CRITERIA

Sex

The majority of programs which emphasize motivation at the village or household level utilize women. There is now an increased emphasis on the need

to recognize men as a target for family planning motivation either alone or when the woman is contacted. Some earlier programs (i.e., Matlab, Bangladesh) utilized a male supervisor to supplement the work of a community based female change agent. In rural field areas, it has often been assumed that traveling would be more difficult for a female worker, although no study has demonstrated this. Certainly there are cultures where the acceptability of women traveling alone is questionable, and in such societies, sensitivity must be exercised.

The evidence from the field concerning the importance of worker gender on program acceptance remains inconclusive. The performance of men vs women as workers, as well as one worker of a given gender versus a couple have both been examined. However, the difficulty of isolating the effects of gender on worker productivity from other characteristics such as age and education is obviously difficult.

Most programs have assumed that a female worker, especially one that is married, has children, and is an active contraceptive user, will have the most success in recruiting acceptors. Evidence in support of this can be cited from several countries. A clinic-based study in the Philippines analyzed the performance of 60 workers and a significant correlation with productivity was found for female, married workers (Pearson correlation coefficient of +0.31, significant to the 0.05 level, UNPFPA, Varela and Pilar, 1980). A project in Haiti found that the most important variable determining the distributors performance was gender. Although males received higher scores on written training exams, female workers met with greater success recruiting acceptors in the field (MOH Haiti and Columbia University, 1979). Similar results were seen in the APROFAM-FECOAR project where women distributors recruited more users per month (1.80) than male distributors (.49) (Cabrera et al 1979). A program in the Philippines that employed 110 male family welfare auxiliaries to

involve husbands of acceptors showed improved acceptance rates and a decrease in dropouts. However, the effect of confounding variables limits the direct transferability of the experience: the men were also married, contraceptive users, and had two years of college (Mercado et al, 1976).

A review of a CBD project in Marrakech, Morocco, concluded that the acceptability of family planning services is independent of the sex of the agent providing the services (Nicholas and Labbok, 1981).

Evidence indicating the positive effect of using couples (male/female, husband/wife teams) to actively recruit or involve men is provocative although still unsubstantiated. The APROFAM rural program showed higher performance measured in quantity of contraceptives sold when spouses assisted workers (Bertrand et al, 1980). Couples also functioned better in Bombay (Rao, 1974). Couples working in Sialkot, Pakistan, increased acceptance from 3% to 20% in 22 months; however, no comparison group of single workers was employed (Osborn, 1974). In Guatemala the FECCAR project used couples as communicators for Indian groups; and PRINAPS is currently using couples.

In summary, there appears to be a movement toward inclusion of male workers although the data on outcomes is sparse and inconclusive. The cultural setting will play an important role in determining the degree of involvement men play in family planning decisions. The Gaichung study in Taiwan found female field worker visits to husbands and wives only slightly more effective than to wives alone (Rogers, 1973). Programmatic decisions concerning how important it is to direct interventions towards men will also effect the role men play as part of a worker unit. Decisions regarding the importance of gender when using single workers and the value of employing couples as a working unit must be made within the context of each cultural setting

Age

Pindointing the ideal age for a family planning worker is confounded not only by societal expectations, but also by the availability of preferred groups of potential workers. Available pools may also vary from rural to urban areas. While generally in traditional rural societies age and the knowledge gained through maturity is often highly respected, field experience favors the use of younger women.

In Bangladesh, traditional birth attendants over 50 had little interest in home visits. The younger dais had improved output and were more likely to have had some education (Rahman, 1977). Similar results were observed for the dukuns in Java (Niehof & Saatramihardja, 1978; Rogers & Soloman, 1975). In Thailand, only 23.5% of the Traditional Birth Attendants (TBAs) over 50 made home visits, compared with 47% of those under 50 (Peng et al, 1974; Porapakham et al, 1973). In Korea, the rural program acceptance rate showed positive correlation with the proportion of staff over 30; for urban workers there was no correlation (UNFPA, 1980). In Mexico, of 2419 agents, those over 25 had more acceptors per month than those less than 25 years of age (Azcona et al, 1980). In Mexico the New Strategies project used four criteria for selection including worker age between 18 and 50, married or in a stable union, literate, and currently using contraception (CPFH, 1981). However, limited success was met in fulfilling these criteria. "In the rural areas, approximately two-thirds of the agents were less than 25 years old and, of these, half were less than 19. Similarly 61% were unmarried and only 25% had ever used a contraceptive method. In the urban area personnel selected were closer to the desired criteria: 78% were 25 or older, 8% were married or living in consensual union, and 76% had used a contraceptive method." (CPFH, p.30-31, 1981).

It appears that CBD workers should be below 50 years of age and above 25. Yet more evidence is needed. As previously indicated, studies are difficult because of the need to control for numerous other variables.

Marital Status and Contraceptive Usage

In a UNFPA study the effect of worker's marital status on subsequent client use of family planning was examined (UNFPA, 1980). Married workers had better results in gaining acceptors in Bangladesh, the Philippines, Singapore, and Mexico (Rahman et al, 1978; UNFPA 1980; Azcona et al 1980). In Mexico, 5.4 acceptors per month were recruited by single workers, and 7.2 by married workers. Studies showed negative correlation or no correlation in Korean rural and urban areas (UNFPA, 1980), Guatemala both urban and rural (Bertrand et al, 1980) and Malaysia (UNFPA, 1980)).

It has been thought that distributors should be active users of contraceptives, necessitating the use of married workers in most programs. In Malaysia, the mean duration of staff family planning usage was significantly correlated ($p = 0.05$) with both recruitment efficiency and acceptor continuation. A similar comparison failed to show significance in a review of experience in Singapore, although the direction was positive. In Korea, contraceptive usage by workers was a significant factor in rural areas. In a different Mexican study contraceptive users had 7.5 acceptors per month compared with 5.7 for non-users (Azcona et al, 1980). In Guatemala, the use of contraceptives by distributors in rural areas was correlated with contraceptive knowledge, and knowledge was positively correlated with volume of distribution (Bertrand et al, 1981).

In summary, although being married does not seem to be a prerequisite for success, workers who use contraceptives do appear to have better outcomes.

Years of Schooling

It is generally accepted that a higher educational background is accompanied by an increased ability to recommend a greater variety of contraceptive methods or to provide a more extensive range of primary care interventions.

While illiterate workers can be trained, learning is more efficient when they can read and write, even at a minimum level. Recordkeeping and data collection are likely to be more meaningful when workers are literate. The literacy factor is difficult to measure independent of confounding variables such as social status and gender. This is manifested in the paucity of studies in the literature.

CBD workers in Mexico exhibited no difference in the numbers of acceptors per month by education level (Azcona et al, 1980). Bertrand found only a weak correlation between years of schooling and the contraceptive knowledge of rural workers, and no correlation in urban workers (Bertrand et al, 1981). Although it has not been studied, it would seem that a motivated illiterate worker with established leadership potential could be more effective than an unmotivated literate worker.

If education requirements are increased, it may be more difficult to recruit and post workers. In one case, the Bangladesh government needed to drop standards to the fifth grade level to increase the likelihood of reaching the number of workers desired (Rahman et al, n.d.).

Social Status

Early APROFAM efforts in Guatemala utilized leaders of cooperatives or their close relatives for a successful program. The programs which used Ladino (westernized) distributors to reach the campesinos were ineffective (Cabrera et

al, 1979). Java felt it was important to select respected dukuns, which implies a strong role for the community in identifying these persons (Rogers, 1973; Niehof et al, 1978). On the other hand, agents in Korean urban setting who were strangers to the community had improved results (UNFPA, 1980). This supports Rogers' point that homophily may be extremely important in rural areas, less so among the urban population.

SUMMARY OF WORKER CRITERIA

The setting of selection criteria for CBD workers demands culture specificity. Criteria depend on program setting, whether urban or rural and the stage of development of family planning in the area. If Rogers theory proves valid, it would be more important for workers in rural areas to have personal and demographic characteristics similar to potential acceptors than it is for those in urban areas, at least in the early stages of a community's adoption process.

When one looks at the specific criteria of age, sex, use of contraceptives, and marital status, no firm conclusions can be drawn that would serve across all cultures. In a very general sense, one can say that it is preferable for workers to be between 25 and 50 years of age, married contraceptive users, and community leaders who can still maintain an affinity with potential acceptors. Although illiterate workers can do the same basic CBD job, literacy can be an aid initially in the training process and subsequently for accurate record keeping and perhaps for delivery of more complex services.

Since both women and men are family planning decision makers, workers of both sexes can potentially function well, depending upon local acceptability. The use of male-female CBD teams appears worthy of exploration. It should be determined whether it is the variable of both sexes or team work and esprit de corps that is important.

Both the Bertrand (et al, 1981) review and the experience of dais in the Matlab program (Rahman, 1977) clearly showed that personal criteria were not independent of program organization and supervision in gaining acceptors. In fact, one might draw the conclusion that once criteria are set for the cultural fit of workers, setting additional criteria is not as important as considerations of training, administrative factors and supervision.

RECRUITMENT

After the criteria have been prepared for the desired cadre of health workers, the focus of management activity becomes recruitment. Recruitment requires a broad dissemination of information about the program and the worker criteria in order to attract as many qualified candidates as possible. This can include the use of media for a broad regional or nationwide effort as well as a word of mouth and door to door campaigns at the village level. Community leaders and community organizations can be tapped to aid in finding suitable candidates. This village-based method requires a considerable amount of work for program staff, yet is important as one part of the assurance of fit with the community.

The simplest method in terms of time and paperwork has been to assign new tasks to an existing health worker, i.e., add "supervision" to the role of mobile worker or malaria inspector, or add "family planning education" to the dais responsible for diarrhea surveillance in Bangladesh (Rahman et al, 1978). The new tasks are then added to the curricula for all future workers of that level, and continuing education courses of hours or days are arranged for those already in the field. From published program reviews, it appears that the addition of such tasks is rarely accompanied by a functional analysis of the time

available for the previous let alone the new tasks, and the additional responsibilities are often expected at the old salary level, a problem further discussed below.

Another procedure is for managers to develop the worker criteria in order to recruit from the existing health system. The Nigerian Basic Health Service Program (BHSP) has prescribed both the previous background required for each cadre of the new plan and the method for advancing between cadres after specified field experience (Ladipo et al, 1981). In China, practicing "barefoot doctors" are selected for further training in family planning and other maternal child health activities (Parker, personal communication, 1982). Usually senior level supervisors select those workers who are to be upgraded, or those interested apply for vacancies. In the Lampang project of Thailand (Reinke, 1980), medical assistants were recruited from the midwifery, nursing, and sanitarian cadre, and health post volunteers were considered for positions as health communicators.

Frequently program managers have decided to recruit indigenous health personnel--traditional birth attendants or traditional healers. Mobile workers, public health nurses/health visitors, or clinic personnel are assigned to visit all indigenous workers in the area and to invite their participation in the "new" program. This method can involve the community if the central health personnel utilize community representatives as intermediaries who then must contact the traditional workers. This inclusion of the community can prevent the training of a traditional healer who may not be acceptable to a village (Imoagene 1976; Management Sciences for Health, 1979).

Personal contact was combined with radio advertisements in Nicaragua (Nicaragua, Progress Report, 1978) to reach the TBAs. In the Sudan (Simpson-Hebert et al, 1981; Chen, 1980) the community or the local leader selects the

TBA for further training to become a Village Health Worker. One supposed advantage of using this method for recruitment is that traditional medical workers may be less threatening to existing health personnel because they are already providing some of the health care in the area (Mohseny, 1981). Some family planning programs have set contraceptive usage by the worker as obligatory. It became one of the principal worker criteria in Indonesia and only active contraceptive users were recruited (Repetto, 1969).

The literature does not indicate that this method of using acceptors had been tried for other areas in primary health care. Should the mother of a child who has been "rehydrated" or "dewormed" be given coupons to distribute to friends? In many cultures it is assumed that word of mouth will spread the worth of health services.

Recruitment of health workers who are to become part of the existing health system (i.e., civil service status) usually must follow previously established recruitment methods inviting interested persons to apply. These include publicity on clinic and community center walls and bulletin boards, in newspapers, government circulars, and on television. The publicity should include the criteria desired and method of application. Storms, 1979, urges a defined, specified period for recruitment and cautions that the campaign must be appropriate to the social and economic level of the area. Application forms which fail to reach all parts of the area, or which are available only at a government headquarters may interfere with selection of workers who will live and work at the community level.

Proposals to the then East Pakistan Family Planning Board in 1971 (Khan et al, 1971) suggested a mobile team of recruiters to visit each area and meet with local leaders. Members of the team would include the representatives of the project, the national FP organization, the training staff, and the person who

would supervise the eventual workers. Such visits could potentially produce a group of workers most responsive to the needs of both the program and the community. A mobile team could facilitate individual applications and allow the community to recommend candidates. Helping villages form health committees who make nominations (or in some cases, the ultimate selection) for the village health worker has been a component of the village health programs at Lardin Gabas and Yahe in Nigeria (Kipp, 1981; Ladipo, et al, 1981). In Sudan, a village development, village council, or Sudan Socialist Union makes recommendations for the primary care worker (Gerber, 1981). The health post volunteers in Lampang, Thailand, were nominated by a village health committee (PCDA, 1979). The cooperatives in the family health projects in Guatemala (Cabrera et al, 1979) often nominated from their own leadership, or selected a wife of one of their leaders. In Korea, family planning projects often chose from leaders of women's groups or leaders of church groups (KIFP, 1978).

An early family planning project in India (Bhende, 1971) asked members of community associations and women's groups to list and rank three persons from the community whom they would consider to be informal or potential leaders who would function as depot holders. Program managers then used structured group methods to have the leaders prioritize their candidates. Of further interest are the reasons given for their choices by the men and women interviewed. The men gave as the three main reasons for their nominations, "previous experience in community work, wide contacts, and a position of prestige." The first two reasons were also given by the women, but their third reason was "an ability to convince people."

The PRINAPS program in Guatemala sent rural health technicians (midlevel practitioners and supervisors) into the villages to obtain nominations. They went door-to-door as well as speaking to teachers, storekeepers, and other

leaders. In a few instances, it was difficult to maintain enthusiasm in this recruitment and the technicians were unable to even get past the storekeepers.

Another factor frequently not seriously enough considered before the setting of criteria is the effects of duration and place of training. The New Strategies Program found that the ability to attract recruits with the described characteristics (older, married or in stable union) was effected considerably by placement in urban or rural areas as mentioned earlier (page 10). In the rural areas the training period - six weeks of centralized training - proved to be an obstacle to the recruiting of older married women; while in the urban segment where training was held in the agent's own general area, recruitment was successful. In response to this experience further training of rural agents was to be held in stages of five-day duration (CPFH, 1981, Elkins, 1981).

Rarely does a family planning program restrict itself to only one of these methods. Motivators, distributors, and service providers may require different criteria for selection and thus use different methods of recruitment. And from discussions above, it can be seen that methods vary between urban and rural areas, and between areas with different literacy rates.

Evidence indicating that village based recruitment is more beneficial to the promotion of family planning is limited. It appears, however, that community involvement in the selection of workers has been successful in establishing a satisfactory group of workers in a variety of settings. In the FECOAR project in Guatemala, distributors selected by APROFAM promoters enrolled fewer new acceptors per month than those selected by cooperative or community leaders, this lends support to community involvement in the recruitment process (Cabrera et al 1979).

SELECTION

Choosing among eligible candidates to select for those who will be trainable and appropriate in the field can be accomplished in a systematic manner using worker criteria as outlined above, followed by other indices established as important to ensure effective work. Selection can be made by a central team or peripherally at the village level by a village council or village leaders.

Central Selection

The first step is matching objectively the candidate's personal and demographic characteristics against the worker criteria previously set by the program. A good recruiting program may already have accomplished this. More difficult to establish are literacy level and those criteria believed to be crucial for achieving program impact: leadership commitment, motivation, ability to communicate, and ability to work with others (Storms, 1979). Naturally, family planning programs should also include workers' attitudes toward contraception.

Civil-service regulations frequently require an examination and/or interview to select among the applicants or nominees. Commonly, this is a written exam to test for knowledge of facts in mathematics, health, basic sciences, current affairs, or general knowledge, which gives a numerical rating to the applicants (Author's experience). This formal method of knowledge estimation becomes difficult to apply to basic health workers who may be illiterate or semiliterate, and fails to estimate important leadership characteristics such as commitment and motivation (Storms, 1979). As noted by the experience in Haiti, the ability to do well on a written or oral test may not be related to performance in the field (MOH Haiti and Columbia University, 1979).

The Standard Progressive Matrices of Raven are an alternative measurement used with success in the Narangwal Project (DeSweemer personal communication 1980). It is a nonverbal test of a person's present capacity for intellectual activity, whatever language he/she speaks, or education acquired. The colored matrices were believed to be particularly suited to test observation and clear thinking without cultural bias. Their use in this area deserves systematic trials.

Another area which deserves further study to establish its usefulness is the use of self-designation of a leadership role. Fisher (1974), in writing on selection of family planning opinion leaders made use of two questions: "Have you recently been asked for advice on family planning," and "Compared with other women in your circle of friends, are you more likely or less likely to be asked for advice about...?"

Khan et al (1971), in their proposals for the old East Pakistan Family Planning Board, carefully outlined a method of recruitment and selection used for several levels of family planning personnel. They recommended that the mobile recruitment team, which included designated training and supervisory personnel, test in three phases the use of three activities to indicate leadership potential.

1. Film scripts or pictures to which the applicants react in group discussion; the team looks for those persons taking a leadership role, using persuasive communication, and demonstrating understanding of the media.
2. Written description by the applicants of a typical day's activity, with the team reviewing for legibility, clarity and appropriateness.
3. Personal interview with structured questionnaire.

Several other writers have also urged a prepared questionnaire to both cover key issues and to allow comparison among applicants. Khan et al (1971)

suggest that items such as the following be included:

- the applicant's willingness to have a field job
- the extent of personal worries
- his/her predisposition to family planning
- the approval of guardians.

It is important to have a set of clear guidelines for program personnel to use for this final selection perhaps a repeat interview, a performance record of accomplishment, or a knowledge assessment as developed in APROFAM, Guatemala (Bertrand, 1981). For family planning workers and others, a formalized discussion with the community could be planned for this phase to insure acceptance by the people the worker is to serve.

Peripheral Village Selection

In contrast to final central selection is selection by a village council or leaders. Program staff would have to assure that all candidates met the basic criteria. Once this was set and the policy clearly understood that the village selects, the program would then leave it up to the council or leaders who would make the decision. The one clear example where this is done exclusively by the village is the case of the barefoot doctor of China.

In the Mexican New Strategies Project a commitment was made to involve the community in the recruitment of community agents. Difficulties encountered were a shortage of time and manpower that did not adequately allow for community involvement. Only 4% of the cases in the rural and 13% in the urban program were selected by a community meeting or local health committee. As an alternative, 69% of the rural and 45% of the urban agents were selected by a community leader. Resorting to reliance on only one key person was seen as a reflection of the nature of authority at the community level in Mexico and the hurried selection process (CPFH, 28, 1981).

Mixed Selection: Central and Village

The current selection process in SINAPS combines many of the above recommendations, including three major interactions with community or potential workers. Briefly summarized, the process follows these stages:

1. SINAPS managers inform civil, military, health and education authorities in the target area of plans and needs.
2. A date is set for a supervisor, the Rural Health Technician (TRS) to visit the area.
3. The TRS interviews community groups to ask for the names of three or more candidates. These groups include associations for health, sports, development, religion, economics, and education. Information recorded at this step includes the name and position of the person recommending as well as the name of the candidate.
4. The TRS reviews the list of names recommended, makes a home visit to each candidate, and interviews and scores them according to an established schedule (Table 1).
5. Candidates are ranked by number of points. The TRS returns to the community leaders for their confirmation of the rankings.
6. The District Health Officer then gives the final Ministry of Health approval. He may change the order of ranking based on his review of the data.

Number Selected

Given the surety of attrition, certain programs select extra candidates. Some programs recommend the selection of 25% more than the number of vacancies. This excess is supported by findings in Mexico, Guatemala,

Table 1

CANDIDATE SCORE SHEET

| DESCRIPTION | CRITERIA | POINT VALUE |
|--|------------------|-------------|
| Leadership in the community | proposed by 100% | 25 |
| | proposed by 50% | 15 |
| | proposed by 50% | 10 |
| Good health status | | 10 |
| Reads and writes | | 5 |
| Experience in community activities: | Maximum | 25 |
| | Much (3) | 25 |
| | Medium (2) | 15 |
| | Little (0-1) | 10 |
| Age: | 18-30 years | 10 |
| | 31-50 years | 5 |
| Sex: | Female | 10 |
| | Male | 5 |
| Mobility within assigned area: Much | 10 | |
| | Little | 5 |
| Commitment to other institutions whose activities would be incompatible with the program | | 5 |
| | Total | |

Bangladesh, Pakistan, and Narangwal (Azcona et al, 1980; Bertrand et al, 1980; Alam, 1967; Bhatia, 1980) of a dropout rate during training from 10 to 25%. Such rates depend on the length of training, recruitment procedures and the distance of the site from the place of residence of the applicant. The two candidates per village in Haiti helped to minimize the loss of workers in training and give an additional village resource for family planning education (MOH Haiti & Columbia University 1979).

The disadvantages include the need to pay per diem expenses for extra people during the training period. The extra candidates are usually not carried past the probation period. Where workers are paid a salary, the use of extra workers may be prohibitively expensive. In programs with heavy dropout experience, continued training of replacement workers may be the only solution.

It appears that the selection of excess workers should be considered, but it must be managed with utmost care to prevent extra expense and disruptive competition between two workers assigned to the same area.

In summary, once worker criteria are set, selection can be made centrally, at the village level, or through a mixed selection process. Central selection can theoretically tend toward a cadre of workers more in tune with program needs than to the priorities of villages. The danger of village selection independent of central involvement is in the selection of workers that may be difficult to train and manage. It is reasonable to assume that a well orchestrated blend of central and village level involvement in the selection process is most likely to yield workers who are both competent and acceptable.

RETENTION OF WORKERS: ITS DIMENSION

The study of the retention of workers in family planning programs has not been an objective of most programs. The majority of primary health care projects are recent developments and have published few reviews dealing with worker dropout or retention. However, there are some descriptions of percentage loss of CBD workers, time that they are retained, and general reasons for loss or retention. Many of the family planning programs have been reviewed at 18 or 24 months. Retention for this length of time is important for initial population coverage by a new program, but retention for a longer period should be of high priority to program planners and administrators. For example, in Guatemala, the performance of workers with over 25 months experience was significantly better than those of one to three months experience (Bertrand, 1981).

With the variety of workers in family planning programs - full time, part time, fixed salary, salary and commission, volunteer, sales agent - it can be questioned whether workers actually drop out or simply fail to continue recruiting new accepters. To attract workers to disadvantaged areas, governments often have to make special concessions, such as the personnel policy in Turkey which permitted transfer after two years in a rural service area (Tokgoz, 1979)

Some worker loss represents a positive result of the programs in health or family planning. Frequently the extra training, responsibilities, or experiences in the programs enable basic health workers and change agents to be considered for promotions or new job assignments: In Thailand, village distributors who serve for two years can become primary health care workers (Population and Community Development Association, 1979; Shrestha personal communication.

1981). In the program in Nepal, several staff expected to be sent on for further training after serving the minimum time in a rural community based health delivery system. Among barefoot doctors in China, those who leave usually advanced because of additional training into other higher status positions in the brigade, army, or party (Rogers, 1973).

Traditional birth attendants (TBAs) form a large cadre of workers who have trained for family planning. In a recent review by Simpson-Hebert et al (1980) the problem of retention of TBAs involved with family planning on a volunteer basis was addressed. In the Modjasar District of East Java in 1970, 127 dukun bajis were given an additional two-day training course to supplement their UNICEF training. Subsequent evaluation showed that after 2 months, 40% were actively recruiting acceptors and averaging 5 to 6 acceptors per month. The high level of performance deteriorated rapidly; within a year only 8% of the trained dukuns were still active, averaging only 2 acceptors per month. One reason given for low acceptor recruitment levels was that workers were unable to contact husbands at home and therefore were not able to discuss family planning with the men. Contact with men was deemed extremely important in this cultural setting, where men hold dominant roles in society (Simpson-Hebert, 1980). In a Malaysian program, initiated in 1972, 280 workers were trained and by 1976 168 were still active (Peng, 1979). The experience in Pakistan in 1968 also demonstrated a problem with the use of traditional birth attendants: 54% had depleted their pool of potential clients within a year (Gardezi and Inayatullah, 1969). In Thailand in the 1960s, 16,000 traditional birth attendants had been trained to assist with family planning programs; in the early 1970s, half were still active overall, but of those women over 50 years of age, less than 25% remained active. Of 2,425 traditional birth attendants approached in Nicaragua, 768 had received special training in family planning in a two-year period, but at

the time of evaluation only 497 returned for resupply, a 35% loss (Simpson-Hebert et al, 1980). Reviews of experience in the Philippines show a drop from 1,788 to 1,524 workers in 18 months, a 45% loss. Reasons given were lack of incentives, personal opposition to family planning, insufficient follow-up by supervisors, and their volunteer status and lack of time (Guadiz, 1974; Olizon, 1978).

The information presented in Table 2 summarizes some of the information available relative to worker discontinuation. This demonstrates a wide range of loss, from 5.1% in two years (Thailand, CBFPS) to 67% in three years (Taiwan Prepregnancy). The wide range may be due in part to measurement difficulties, but are more likely indicative of program differences, including program length, local culture and acceptability, and stage of program development. The stated reasons for leaving the programs discussed above may be grouped into the following areas: 1. lack of job security and low salary; 2. lack of supervision and a support system; 3. lack of understanding of training or program objectives. Strong incentives for remaining with a program were: 1. regular stipend, higher salaries, or full time status; and 2. effective back-up support from the health system and community endorsement and support for the project.

The initial investment incurred by the program in recruitment and training should make retention of agents a focal point of program concern. In the Mexican New Strategies program the agent discontinuation rates were 36% over a two year period in both the urban and rural programs. However, the cost per rural trainee was US\$ 208 at U.S. \$6.97 per training day as opposed to U.S. \$18 at U.S. \$6.97 per day for each urban trainee. Urban trainees were also easier to train as replacements as they could be trained in groups whereas rural replacement agents were trained one by one in their communities by supervisors at a program cost of \$45 a day (Elkins, 1981).

Table 2

LOSS OF CBD WORKERS BY PROGRAM

| <u>PROGRAM</u> | <u>LOST (%)</u> | <u>TIME PERIOD (years)</u> | <u>REASONS STATED</u> |
|------------------|-----------------|----------------------------|--|
| Brazil | | | |
| Pernambuco, | 20.0 | 1.00 | |
| Piaui | | | |
| Health posts | 18.4 | 1.25 | Rodrigues et al, 1981 |
| Homes | 26.0 | 1.25 | |
| County posts | 30.1 | 1.25 | |
| China | | | |
| Barefoot Doctors | 17.0 | 10.0 | Korten: Guadiz, 1974 |
| Guatemala | | | |
| APROFAM | 21.0 | 3.0 | Olligon, 1978 |
| Mexico | | | |
| New Strategies | 23.0 36.0 | .6 2.0 | AZCONA et al, 1980 Elkins, 1982 |
| Nigeria | | | |
| Lardin Gabas | 45.0 | 2-6.0 | Kidd, 1981 |
| Pakistan | | | |
| Lahore (Dais) | 45.0 | 3.0 | Rogers |
| Philippines | 45.0 | 1.5 | Ollizon, 1978, UNFPA, 1980 |
| Taiwan | | | |
| Pregnancy | 67.0 | 3.0 | Huang, 1975 |
| Thailand | | | |
| CBFPS | 5.1 | 2.0 | Porapakkham et al, 1973; Chen, 1981 |
| Malaysia | 40.0 | 4.0 | Peng, 1979 |

The Chinese barefoot doctor (BFD) system is often alluded to as ideal with very high retention. The BFDs are recruited by the brigade (village), trained at the commune level, and work part time, but at a regular salary. Besides these incentives, once selected and trained they have little choice but to be a barefoot doctor.

Certainly the problems of inadequate knowledge, unclear role definition, and lack of worker commitment to family planning can be modified through better selection and training. More efficient program planning can improve later difficulties with supervision and resupply. However, particularly in demonstration projects, the use of volunteers can lead to problems in sustaining motivation and maintaining adherence to program goals. Still, motivation is an important factor in continuing the work of volunteers or low paid part time workers. This will be discussed in the next section.

MOTIVATION OF WORKERS

Program evaluations have been primarily concerned with output - the number of acceptors, the number of cycles of pills or condoms distributed, the months of protection furnished. It is reasonable to assume that successful programs are more likely to have satisfied workers, and satisfied workers are less likely to drop out of programs. Thus the cycle can be completed with improved retention leading to better worker performance. This has led to a study of methods to motivate workers toward better performance. Managers are justified in considering worker motivation an important program priority. Roger (1972), Fulop (1978) and McMahon, et al (1980) have addressed this problem of motivation in some detail. What follows is an attempt to summarize their work, with case illustrations from past and present programs in community health care. McMahon et al (1980) use the term "dissatisfiers," of which they list six:

1. Inefficient administration
2. Incompetent supervision
3. Poor interpersonal relations (among staff and between staff and clients)
4. Poor qualities of the leader
5. Inadequate pay
6. Bad working conditions

These clearly overlap medical and nonmedical programs, family planning and basic health programs, and are important as a checklist for improved performance and retention.

It is difficult to delineate a set of factors that will explain the source of worker satisfaction or dissatisfaction applicable to all settings. Program duration and the program location, as well as the type of tasks performed and preparation of workers for those tasks, all contribute to variability in issues that seem important to the workers. For instance, a worker in a program based in a mountainous region difficult to traverse might be especially concerned with transportation to the exclusion of other elements. It is reasonable to assume that worker retention is directly related to the level of satisfaction of workers and therefore reported sources of worker discontent will be discussed.

In general, the reasons given from the field regarding worker attrition can be grouped into four categories and span the same categories used by McMahan et al, 1980: those originating from poor worker preparation, inadequate reward for work, cultural constraints and inadequate program infrastructure. Adequate training prior to working alone in the field is exceedingly important. The Korean Cheju study found that the canvassers used to motivate and provide contraceptives to rural areas did not fully understand the concepts and nature of the work; therefore the program suffered from low morale and productivity

(Park, 1978). A similar situation was described in the Magdamayan project in the Philippines. Workers were initially productive but failed to maintain enthusiasm for their work and, overall program efficiency was compromised (Olizon, 1978). Programs in Bangladesh, Indonesia and Thailand reported low worker morale and poor retention rates when client side-effects and medical complications were encountered and workers were not prepared to deal with these problems (Bhatia, 1981; Simpson-Hebert, 1981). It is clear that good initial training and subsequent retraining will be very helpful as a solution to the above sources of dissatisfaction.

Another set of issues frequently raised as a source of worker dissatisfaction centers around worker remuneration. Many techniques for paying workers have been utilized with varying success: salary, presentation to worker of work related items like motorcycles and/or uniforms, fee per acceptor, public recognition and promotion. Many programs report that predominant complaints of CBD workers are: insufficient pay, lack of job security, and lack of benefits such as old age pensions. Resolution of the reasons for discontent may be difficult to attain and will most likely necessitate establishment of a balance between financial resources available and creative and effective alternatives to monetary redemptions such as public praise and recognition that bring status and prestige to workers.

In addition, often constraints reflective of the local setting are the predominant factors leading to worker discontent. For example in Uttar Pradesh, India family planning in any form was very unpopular following the problems encountered after intensive sterilization campaigns and the introduction of the Lippes loop in the mid-1960s. In their efforts to promote and supply family planning, workers frequently met with clients who were distrustful and sometimes openly hostile (Elder 1972). Similar difficulties were encountered

in Pakistan. Performing work that is exceedingly unpopular is an obvious obstacle to worker retention.

Ineffectual program administration and planning are often the cause for worker dissatisfaction. Included in this category are lack of: supervision, medical back-up, punctual resupply mechanisms and timely payment of worker (Lubis and Budiningsih, 1978). A report from the Korean Institute for Family Planning (1978) showed initial difficulties with workers because the forms used by field workers were much too complicated. Simplification of the forms improved work morale as well as record-keeping. The Magdomayan project in the Philippines found workers complaints regarding shortage of personnel, stating that there was not enough staff to adequately coordinate and supervise workers (Olizon, 1978). Clearly efficient program administration and planning will help to retain a satisfied and productive cadre of workers.

The previously mentioned authors (Rogers, Fulop and McMahon) assess reasons for worker dissatisfaction and identify six valuable "motivators" to incorporate into a program:

1. Achievement: "Help people to achieve work objectives."

Targets must be set realistically, i.e., the number of households to visit per day or per month, so that the worker does not lose enthusiasm because the task is greater than the time available. A review in 1968 (Kar, 1968) suggested that targets should represent a moderate range of difficulty with perceived chances of meeting targets somewhere around 50:50. To set intermediate points on the way to the target can also be motivational. The variety of tasks assigned must be in balance: a full time health worker rarely devotes all work time to family planning. As other health tasks are assigned, particularly those of a curative nature, it has been found that less time is devoted to the motivational contacts

necessary to change behavior and reinforce the new practices. For this task the part time village motivators and satisfied users have been effective.

Several programs in family planning also emphasized the need for clear identification of the target population. Couples with two or more children or women who have just delivered are thought to be most likely to accept contraceptive methods and thus reinforce the efforts of the worker. The program in Sialkot, Pakistan excluded women over 40 whose youngest child was three or more years old and those between 25 and 29 with no children or a youngest child older than five. This increased the time available for concentrating on the couples most at risk (Osborn, 1974).

Programs in family planning cannot be static. Once basic knowledge has been shared with the potential accepters, mass media messages and the workers' continuing education must advance from emphasizing the need for the existence of family planning methods, to details of how and where to receive family planning assistance (Rogers, 1973). Reinforcement regarding the benefits and cultural acceptability, as well as information concerning effective use of different methods, is also appropriate. This is illustrated by the evolution of family planning programs from methods made available only at clinic locations to local provision by well-informed community based workers. Early Matlab experience points out this need. The initial workers, dais, were trained to inform people of the existence of family planning, yet were unprepared when confronted with side-effects and rumors of side-effects among clients. This example highlights the need for careful preparation of workers including knowledge and techniques for dealing with expected difficulties like side-effects and unforeseen impediments such as rumors (Rahman et al, 1978).

More basic to all the above is the need for proper training for whatever tasks are assigned. When trained to competency standards, the workers will feel more confident themselves and inspire confidence in their communities.

2. Recognition: "Give praise when due."

Private praise is part of effective supervision, but public appreciation of performance has been shown to improve program output (Rogers, 1973). Several programs advise a special diploma on completion of training (Taylor, 1979 - Brazil, BEMFAM; MOH and INCAP, 1980 - Guatemala, SINAPS) Newsletters, with photographs of workers, which exchange information and document performance can be used to recognise those workers who have excelled since the previous issue, stimulating others to achieve similar recognition. Public praise is a renewable reward as each worker has an opportunity to be acknowledged more than once.

Some countries use radio to announce the workers with outstanding performance (Storms, 1979). Some program directors write letters to local mayors complimenting the workers' performance. Personal letters written to the worker have been found to be useful (Taylor, 1979).

Regular meetings of all workers in a program, to share accomplishments and solutions to problems, can provide an opportunity for peer recognition and a stimulus for worker retention and increased output (Peng, 1979). In Korea such meetings were responsible for an improved and simplified recording form and for a modification of the urban portion of the program (KIFP, 1978).

Other means of recognition have included distribution of uniforms, raincoats, umbrellas, or bicycles (Hull, 1979, Indonesia) and elimination of the requirement for military services and provision of free food and free health care in Guatemala (SINAPS, Golden, 1981).

3. Program Context: Government and Administrative Support: "Explain the value of the work."

The need for government support of the program or its endorsement of the principles of family planning are important to the worker (Rogers, 1973), and

can facilitate an atmosphere of social acceptance (Mercado et al 1976) which strengthens the role of a family planning worker in the villages. This support is demonstrated clearly in certain states in Brazil where either the secretary of health or the governor attends the graduation ceremonies of the change agents (Taylor, 1979), or for example in those countries with centrally administered disincentive programs that reduce benefits to families with more than two children (Thailand, 1977; World Bank, China, 1979).

The staff must value their own work, and this is reinforced when higher level planners take time to share with the field workers the goals and successes of the program and the ongoing outcomes. Staff should feel that they can make suggestions. Again, it is important to have realistic targets and objectives. It is also important that workers at the next higher level health facility also have a favorable attitude toward the program. Persons referred to these facilities should be attended to promptly. If delay or staff attitude at the health post detracts from the field worker's efforts, this can severely undermine the workers credibility.

Even more basic is that supplies and benefits arrive when expected. Reviews of the program in Indonesia, which has been highly successful, comment that supplies arrive on time, workers are paid on time, and reports are analyzed and charted with the field staff promptly. This last item is extremely important if workers are to feel any need for completing the survey forms and data requests. Recommendations from experience in Nicaragua included design of the management information system for selective regular feedback to assist agent satisfaction (Korten, 1973).

4. Responsibility: "Help others to take responsibility.

This is a key task of the supervisors in basic health programs, to provide supportive supervision (Rogers, 1973) and move beyond a visit to collect data.

Check lists designed to assist the supervisor in covering key points are desirable (Helby, 1980). The visit must be designed to strengthen the position of the worker in the eyes of the village served, and to assist the worker in decision making rather than the supervisor making the decisions (McMahon et al, 1980). This supervision should include prompt followup of those persons identified by the field worker as needing referral or home visits.

5. Advancement: "Help others to train for promotion."
6. Self Improvement: "Give opportunities for development."

These two motivators are addressed through supervision and continuing education. Several programs such as PRINAPS (Golden, 1981) have demonstrated a loss of knowledge of family planning facts without regular repetition (Helby, 1980). As programs develop and new methods are added, or as rumors circulate, the field staff must be updated on these matters.

Workers who begin as volunteer motivators or distribution agents can at a later stage assume other tasks, particularly nutrition education and distribution and preparation of oral rehydration solution.

Promotion is not always as important as differential positions, such as recognizing those with more experience by giving them more responsibility or pay. Many programs actively recruit supervisors from the lower cadre. The family health worker program in New York (Torrey, 1973) labeled this position change "upward mobility." There are two important questions related to advancement. Do the workers have a clear identity and job title? Is licensure or diploma available to assure that their work can continue if they move to other areas? This is important where a variety of private and government programs using primary health care workers have developed concurrently.

Monetary Incentives, Motivation, and Retention

A general conclusion in most family planning programs has been that output is improved with worker incentives (Cuca & Pierce, 1977; Phillips et al, 1968). However, the more money available, the greater the opportunity for corruption.

Monetary incentives generally involve one or more of the following methods:

1. Fixed salary, prorated for full or part time.
2. Salary plus bonus for meeting period quotas.
3. A per acceptor commission, with or without salary
4. Retention of all or part of the fees charged for drugs or family planning supplies.

Salaries can be paid by the family planning program, the government, or the community. Quotas can be set to be reached by an individual worker or by a supervisory or regional area.

Methods 2 and 3 require a means of measuring the accuracy of reporting, which combines appropriate recording forms and selected home visits by supervisors to confirm the reported contraceptive use or referral (Burusphat, 1977). Record forms should be designed to indicate whether the acceptor is a new or continuing user. Programs which set quotas often fail to enforce them, which makes comparisons of program effectiveness between workers with and without quotas difficult. In addition, commissions have often varied in amount by the type of contraceptive chosen. Staff may then pressure acceptors into those choices for which they get the most reward, or misrecord the choice that was made.

Administering incentives becomes even more involved. In Thailand the workers often used most of the incentive money to accompany acceptors to the clinic for referral or to report monthly to collect the money (Peng et al, 1974).

In Malaysia, the TBA who referred an acceptor might have to accompany her to prevent the clinic from claiming the credit (Peng et al, 1979).

The issue of remuneration must be viewed in relationship to the tasks assigned. In programs where family planning activities are added to an existing position, it would seem unfair to expect those workers to do the previous tasks plus the new ones at the former level of pay. This is most noticeable when some workers remain with the old assignments and others are given the additional responsibilities and tasks of another provision of services with no commensurate pay increase. To minimize the number of different categories of staff with essentially similar duties, it is possible to reward workers by advancing one or two increments on the same salary level and thus recognize their additional training or new responsibilities. However, to pay workers doing family planning a bonus for these extra responsibilities can contradict the principle of an integrated family planning and health service (Burusphat, 1977) by rewarding the performance of one section.

Studies done in the Philippines (Phillips et al, 1968) and in Taiwan (Cuca & Pierce, 1977) demonstrated an increase in the number of acceptors when a fee or commission was paid per acceptor. Workers in Indonesia prefer a fixed but high salary rather than salary plus commission. The dukans' monthly meeting was more important than a monetary incentive in gaining acceptors (Rogers, 1973). In Mexico, however, workers receiving a fixed high salary performed better than those on a medium salary plus commission (Isaacs & Elkins, 1979).

Although maintaining workers for an extended period of time after training should be an important program goal, the retention of workers has rarely been studied as a distinct subject. Retaining trained workers is not only more cost-effective, but also more likely to result in a cadre of workers more technically skilled and knowledgeable about their pool of clients. Supervisory and

administrative factors are extremely important if workers are to remain active and competent.

SUMMARY

This section summarizes the important factors in the recruitment, selection and retention of CBD workers. Worker criteria are the personal and demographic prerequisites set by program personnel and recipients of care to assure workers who can be trained and who will perform well. Homophily is the word used when workers are similar to the people in the community where they work and heterophily when they are different. Culture plays a large role in criteria setting, as do program setting and the developmental stage of family planning in the area. It is thought that rural workers may need more homophily than those in urban areas.

It is difficult to draw conclusions about criteria that would serve across all cultures. It appears that workers should be from 25 to 50 years of age, contraceptive users, and have influence in their community. Although illiterate workers can perform well, those with literacy can provide a broader range of services and are easier to train and manage. Male CBD workers are increasing in number; and there is some evidence that male-female teams are a worthwhile subject to study as they become greater in numbers.

The research by Bertrand in Guatemala suggests that program factors may be more important than personal factors in program outcome. This is an extremely important finding which, if duplicated in other settings, would diminish the importance of specific criteria and increase the value of administration and training.

Recruitment can vary, depending upon worker criteria, availability of eligible workers, and whether the program is urban or rural. For the latter,

village based methods that use community leaders and organizations plus door-to-door communication with villagers appear important to assure worker fit with the community.

Selection of workers to be trained from candidates recruited may be done exclusively by village level leaders and groups or by the centrally based team. Usually, however, selection is accomplished through a combination of the two, better assuring workers who are responsive to both community and program needs.

Retention of workers has not been studied in depth. Loss of workers ranges from 67% in three years to 17% in ten years (China). Important reasons for remaining with a program include regular stipend, full time status, and good support systems; while reasons for leaving include lack of job security, low salary, inadequate supervision and other supports, and lack of understanding of the program. Related to these factors are factors of motivation. Motivation has been shown to relate directly to worker success in gaining family planning accepters, and is probably directly related to retention.

THE RESEARCH ISSUES

As pilot and demonstration CBD family planning programs become permanent efforts and other health activities are added, retention of workers in the program is of paramount importance. Although retention depends to a certain extent on worker criteria and training, administrative factors are extremely important. Studies can be designed which look at the effect of program elements that elicit dissatisfaction among workers, as well as motivational efforts (incentives) on worker retention. One set of studies should look specifically at monetary incentives and retention.

On the other hand, precise checklist definitions could be developed to assist workers in identifying elements of their program that need to be changed (dissatisfiers) and those that are positive (motivators), including: 1. efficiency of administration; 2. competency of supervision; 3. interpersonal relations; 4. project leadership qualities; and 5. working conditions. Included in the five areas could be the motivators of: a) efficient program management that results in a feeling of worker achievement; b) the use of recognition; c) emphasis on the value of the work; d) instilling a deep sense of responsibility; and e) advancement (WHO, 1980). These checklist definitions could be related separately to retention or an overall administrative index developed. In studying retention and administration, one set of studies should control for worker criteria and training.

Another set of studies could look at the correlation between worker, criteria, program administrative factors, retention, and performance. In the same setting with the same training, workers retention and performance should be studied and compared to different types of worker criteria. The research question is whether the criteria make a difference in performance and can thus be predicted across cultures.

The use of male-female pairs, especially married couples, is worthy of further exploration. Studies are needed to determine if they perform better than single workers and are retained longer on the job. It has been hypothesized that same gender pairs may perform better because of greater ease of males working with potential male acceptors and females working with female acceptors. This may be true, although the elements of teamwork, mutual support, and esprit de corps could be a more important variable than the gender composition of the teams. The initial research question should be whether male-female worker pairs perform better and remain on the job longer than single workers, and if this

is shown to be true, further studies should be pursued to determine if the factors causing this are gender related or due to other variables

A related study could investigate the effect of incentives and motivators on teams and single workers to determine if there is any difference in performance and retention.

The issue of the "balance" of community and program inputs to recruitment and selection remain. The research questions are:

1. Who should do initial recruitment and selection?
2. Who should make the final selection?
3. How should the community and programs mesh their efforts?

If the community is to have a large role, then some determination should be made of the operational principles of community participation.

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