Women and Infant Nutrition Field Support Project (WINS)

Child Care Options for Working Mothers in Developing Countries

PREPARED BY:

Rekha Mehra

Kathleen Kurz

Michael Paolisso

International Center for Research on Women
Subcontractor, WINS Project

Education Development Center, Inc.
1250 24th Street, N.W., Suite 300
Washington, DC 20037

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One of the most important trends in developing countries during the 1980s was the increase in the number of women joining the workforce (Sivard 1985). For many of these women, increased involvement in informal and formal employment, while bringing needed income to their families, also creates conflicts in reconciling income-earning activities and traditional child care responsibilities. For low-income women, balancing both work and child care is particularly difficult, since these women have access to only a limited range of child care services.

In Latin America, Asia and Africa, expanded income-earning activities are requiring women to increase their use of the available child care options, which range from sibling care to enrollment in child care centers and creches (Myers and Indriso 1987; Leslie and Paolisso 1989). In developing and technologically advanced countries alike, the basic child care options available to working mothers for children under six years of age are the following:

- **Informal Arrangements** Whereby children are provided care at home or outside the home by either of their parents, relatives or nonrelatives. In informal arrangements, caretakers are usually not paid in cash or in kind. This option includes women in the labor force who care for their own children while they work.

- **Family Day Care** This category involves paid child care by a nonrelative, usually outside the child's home, and may involve the care of several children. If caretakers look after four or more children on a regular full-time basis, their responsibilities most likely constitute their principal form of employment. Caretaking in this setting may be primarily custodial or it may include early childhood educational activities. Caretakers may or may not be trained or licensed.

- **In-Home Paid Care** Under this arrangement, a nonrelative (e.g., nanny) is paid to come into the home to care for children. This option is often more costly than family day care although caretaking in this setting may be primarily custodial. Compared to the previous

option, caretakers are less likely to be trained and licensed.

• **Institutional Day Care** The child is enrolled in a day care or nursery school. Though the absolute cost of this option can be quite high, it is the most commonly subsidized option, and thus the actual cost paid by the parent varies widely. The care provided in this setting usually emphasizes early childhood education and thus includes only children three to six years old. Day care centers and nursery schools are more likely than the other options to have trained staff and to be licensed.

For most developing countries, little information is available about which child care options are available, whether or not they resolve the time or scheduling conflicts experienced by women, and how they meet the care and nutritional needs of children.[1]

What is better known is that without adequate child care options, many working mothers in developing countries may be forced to either reduce their income earning activities or make child care arrangements which are unsatisfactory to them in terms of their children's nutritional status, health and psychosocial development. If women are forced to forgo income-earning opportunities this can result in lower nutritional status in their children (Engle 1991). In fact, after controlling for socioeconomic status of the family, some studies have shown that income earned by women has more of a positive effect on a child's nutritional status than does income earned by men (Kennedy and Cogill 1987; Johnson 1988; Buvinic 1992). Moreover, the nutritional status of preschoolers may be compromised when older siblings are the alternate care providers, which is of great concern since one pattern emerging from the literature is the widespread use of older siblings, primarily girls, as child caretakers (Engle 1991; Leslie and Paolisso 1989). In Brazil, 13 percent of preschool children in poor families with working mothers are taken care of by siblings aged seven to 13, or they are left alone (Levison 1990).

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[1] Annex 1 contains profiles of the child care options and their funding sources for nine developing and developed countries.

While there has been a recent surge of interest in child care options, especially from the work of the Consultative Group on Early Childhood Education associated with UNICEF, and the High/Scope Educational Research Foundation, there remain many information gaps about what constitutes successful child care programs and the types of policies required to establish them. Key issues that require further research include the identification of:

- Feasible options for meeting the child care needs of working mothers with children under two years of age. Compared with mothers of children between the ages of three and six, these mothers have an expanded set of child care needs that include more custodial care and different food and nutrition concerns;

- Qualities of existing successful child care services that make them accessible, affordable and sustainable to poor working mothers. Of special interest here is the successful mix of government support (e.g., subsidies) with community-level contributions in terms of funds, infrastructure, food and supplies and labor; and

- Possibilities for better integrating child care in the workplace, both in terms of location and in achieving a balance between women's work and child care responsibilities.

This paper reviews nine successful day care programs for which adequate information exists to derive some lessons learned that are relevant to the above issues. The objective of the review is to provide a comparative foundation from which to draw insights on the characteristics that have led to successful programs, in terms of outreach and recruitment, affordability, range of services, including nutritional interventions, and cost effectiveness. The paper concludes with recommendations for both research and action.

Day Care Options for Working Mothers: Programs and Lessons Learned

A review of the literature on child care options for poor working mothers demonstrates that there are a substantial number of examples of early childhood development programs, especially for children between the ages of three and six years. There are, in addition, a considerable number of nutrition intervention programs that sometimes also provide part-time child care and developmental activities for children. There are, however, relatively few programs that meet the intersecting needs of women and children by providing day care services during mothers' working hours and more than just custodial care for the children (Evans 1985, Myers 1991, Myers and Indriso 1987, UNICEF 1989). In fact, there are just a handful of examples of day care programs that can be regarded as "successful," in that they adequately meet the needs of mothers and children and have been in operation for a number of years. Most of these examples are fairly well-known and are frequently cited in the literature.

The discussion that follows is based on data from nine such programs that are described at greater length in Annex 2 and summarized in Table 1. They represent a selected sample, drawn from developing countries, that incorporate a number of features of interest for this study -- they provide care during mothers' working hours, enroll children below the age of three, and have been in operation for a long enough period of time to be considered reasonably "sustainable." Other criteria for inclusion in this sample included availability of information on costs, nutritional components and/or interventions, and nutritional impacts.

The information was mainly available in summary form in secondary sources. There was great variability in the type and quality of data. Information on program impacts, including nutritional impacts, was often anecdotal. Even when reference was made to evaluations in these sources, they did not provide any statistical data, describe methodology or provide the kinds of information that would make it possible to evaluate the results independently. They simply reported conclusions and results. Most of the evaluations were conducted within a year or two of the

Table 1. Summary Features of Day Care Option Models

Day Care Option Type of Program	Nutritional Components	Nutritional Impact	Costs Financing	Limitations	Features of Success
1. India: Mobile Creches NGO-sponsored Urban	Supplements Breastfeeding Maternal education	Positive	Donations, & fundraising by NGO	Small scale Mobility of target population	1. Location close to mothers' work site 2. Good quality care 3. Comprehensive program 4. Staff training
2. Senegal: Day Care Centers Community-sponsored Rural	Unspecified interventions Meals Adult education	NA	User fees in cash & kind Donations Users' labor contributions	Small scale Fees too high for poor Seasonal services	1. Community initiation and participation 2. Government agency & donor support
3. Ethiopia: Melka Oba Day Care Center Community-government-donor Rural	Balanced diets Breastfeeding Adult education	Positive	$17,388: start up (U) Cooperative funds operations	NA	1. Community support 2. Cooperation from government and donor agencies 3. Trained personnel
4. Ghana: Accra Market Women's Association Community-government Urban	Snack and lunch Breastfeeding	NA	User fees Municipal government	Small scale	1. Cooperation between government agencies and community 2. Trained personnel 3. Government financial support
5. Brazil: Creches Privately-sponsored Peri-urban	Four meals/day	Positive	Donations & some government support	Small scale Caretaking/not educational. Poor quality care	1. Meal provision

Table 1. Summary Features of Day Care Option Models (continued)

Day Care Option Type of Program	Nutritional Components	Nutritional Impact	Costs Financing	Limitations	Features of Success
6. Nepal: Home care Community-managed Rural	Caregiver training; nutrition, growth monitoring, & meal preparation	Positive	$120/group (U) start up Community support for operations	Small scale	1. Decentralized management 2. Group community support 3. Integrated approach 4. Collaboration of government & donors. 5. Training
7. Ecuador: Home-based care Community-managed Urban	NA	NA	$210/unit start up $1,850/year operating costs & government Fees (low)	Small scale	1. Community participation 2. Care & stimulation for children 3. Trained personnel
8. Colombia: Home care Community-managed	NA	NA	Government & NGOs	Limited quality	1. Good coverage 2. Community management 3. Trained personnel
9. Brazil: Home care Government-sponsored Urban	Regular meals	Positive	$26/child/month operating costs plus $10.75/child/month food contributions by mother	Small scale	1. Government sponsorship & support 2. Trained personnel 3. Elaborate administrative set up

NGO = Nongovernmental organization
NA = Information Not Available
U = UNICEF

program's start and very little additional information was provided about later years.

Day Care Programs for Poor Women

Programs were primarily of two types, either centers and creches, where a relatively large number of children (one hundred or more) were cared for simultaneously, or home care, provided for between six and 15 children at a time in a private home.

Program Objectives

The main objective of both types of programs was clearly stated, or could be inferred, as being the provision of day care services for working mothers. Other objectives included providing for the children's psychosocial development and improvements in their health and nutritional status. Some programs even aimed to help the entire community either directly, through such means as adult education or, indirectly, by involving the community in managing and running the program.

The broader objectives were not always explicitly stated and often tended to be added on as the programs expanded. Expansion often occurred when other agencies recognized that the day care facility could serve as a convenient vehicle for other types of interventions and service delivery.

Descriptions of Day Care Center Programs

The centers or creches in this sample, except for one, were targeted to meeting the specialized needs of mothers engaged in specific occupations, namely, construction in India, rice farming in Senegal, fruit growing in Ethiopia, and retail trade in Ghana. In the case of construction workers, this required the day care centers to be mobile because the workers migrated from site to site as buildings were completed. Four of the five centers were located at or near the mothers' place of work. Most of the centers were located in community halls or other types of buildings provided by the community served, the government, or a private agency. The mobile creches, for example, were often housed in semi-permanent sheds or tents provided by the building contractors employing the construction workers. The Ghana Market Women's Association persuaded several government agencies to cooperate in renovating a building near the market for their center.

In Senegal, Ghana, and Ethiopia, the women themselves initiated the process of setting up

the day care center. The actual establishment of the centers, however, required engaging the cooperation of government and/or donor agencies. In Ethiopia, for example, the women of the Melka Oba Cooperative obtained financial help from UNICEF to defray start-up costs while a variety of government agencies provided training for day care workers, and support for health care and other services for the children and the community (SEEDS 1991). The women in Ghana and Senegal also had to seek government support (Bashizi 1981 and Watoto wa Africa 1983). On the other hand, the two privately-sponsored day care centers, one in India and the other in Brazil, appear to have been established primarily by the voluntary agencies themselves.

Most centers kept children from infancy (as young as 45 days in the case of Melka Oba) to five or six years old. They stayed open from eight to 11 hours a day corresponding, as much as possible, to the mothers' work schedule. Most were open five to six days a week throughout the year, except the Senegal centers which seemed to function just during the rice transplanting season that lasted about two to three months.

The number of children in attendance at each of the centers ranged from between 28 and 200 in the Senegal centers to about one hundred in the Melka Oba Center in Ethiopia and 200 in Ghana. The number of children enrolled at any given time in each of the 13 creches in Brazil, reviewed by Rossetti Ferreira et al (1981), varied from 35 to 150 children, depending on the size of the facility and seasonality of mothers' employment. Attendance at the creches declined when mothers were seasonally unemployed.

The ratio of caregivers to children varied greatly between centers -- from 1:10 in the mobile creches of India and the centers in Senegal to 1:15 in the Brazil day care centers. Most programs appeared to have some minimum standard for selecting caregivers and making arrangements for their training in child development and nutrition, either on site or in special training programs. The mobile creches program in India offered on-going staff training. The centers in Brazil were the only ones that did not provide any training to their staff (Rossetti Ferreira et al 1981). Most programs designated a person, generally one with higher qualifications than the caregivers, to supervise the center.

The little information provided on activities within the centers suggests great variability, from the primarily custodial care provided in the Brazil centers, to the richer educational and recreational programs offered by the mobile creches in India. The other programs also seemed to offer some creative, educational and development activities such as music, dancing, art, language and number concepts.

The data showed considerable variability in managing the centers, the ones in Senegal being managed by the mothers; in India, by a managing committee (presumably of volunteers); in Ethiopia,

by a committee formed from among the members of the cooperative; and, in Brazil, by a board consisting of a group of middle and upper-middle class volunteers from the community.

Description of Home Care Programs

The home care programs examined also showed considerable variability in organization, management, and size. Care was provided in the homes of mothers, in community centers, or in the homes of community women who acted as caregivers. In the case of Nepal, mothers constituted a focal group to institute and implement the program. Children were taken care of in the homes of each mother in turn (SEEDS 1991). In Ecuador, the community selected the caregiver, one of the selection criteria being that she have a house that could accommodate additional children. She did not herself have to have a child requiring day care (SEEDS 1991).

Numbers of children per caregiver in the home care programs ranged from about six in Nepal to between ten and 15 in the programs in Ecuador and Colombia. The ratio of caregiver to child was thus quite similar to the ratio in the larger center programs. Each of the home care programs specified criteria for selecting caregivers. In Nepal, the mothers were self-selected in that they could start home care if they had a group of six and had received training. In the other cases, caregiver selection criteria included, besides a suitable home, literacy and experience in child care. All programs appeared to provide minimal training for the caregivers in child care, development, and basic nutrition.

None of the home care programs reviewed appear to have been initiated by the community. The Brazilian and Colombian programs were sponsored by the government, and the programs in Nepal and Ecuador by UNICEF, in cooperation with the governments. However, the home-based structure of the programs necessitated a high degree of community participation in that the caregivers were either mothers or community residents. In addition, mothers of children receiving care were required, in most cases, to take responsibility for providing meals. Finally, in Colombia and Nepal, mothers and/or other community members were expected to form committees or boards to manage and supervise the programs.

The organization of the Brazil home care program was more structured and hierarchical than the others, with an elaborate organizational system including the city and neighborhood government, social workers, educators, health workers and other personnel playing designated roles in the program. The community role was limited to providing the caregivers and their supervisors, the "visitors" (Boianovsky 1982).

Information on the types of activities undertaken during the day was provided only in the

Nepal case study. During training, mothers were provided with educational toys and materials and taught to use them. Nine different kits were available and the groups could trade between themselves to get more diversity (SEEDS 1991). No mention was made of program activities for the children in the other cases.

Funding Sources and Mechanisms

Most programs relied on a mixture of funders to finance start-up and, in some cases, operating costs. The Accra Center, for example, was fully funded by the Accra City Council, as were the home care programs in Colombia and Brazil. Start-up of the home care program in Nepal was financed by UNICEF which also funded the Melka Oba Center in Ethiopia, and 80 percent of the costs of the Ecuador program. In each of these cases, governments provided some support. In Nepal and Ethiopia, for example, government programs provided training for the mothers and child care workers, respectively. In Ecuador, the government assumed 90 percent of the cost of the program within eight years. In just two cases, those of the mobile creches in India and the day care centers in Brazil, funding came predominantly from private sources, such as donations and contributions. In both cases, government and donor agencies provided some support, mostly in the form of food, toys, equipment, etc.

Mothers who were clients of these programs often contributed towards operating costs, through either labor or fees. Approximately half the programs charged fees either in cash or kind. The Senegal centers were quite innovative in their approach to fees, permitting mothers to make payments in the form of specified amounts of rice, oil or dried fish, or the equivalent in cash. In some cases, as in Ghana, the fee was purely nominal. Fees were generally low, but even so, unaffordable for some communities. In Senegal, for example, inability to pay fees caused the closure of one of the day care centers in a very poor area. In Ecuador, the government provided scholarships to children so that their parents could pay the caregivers.

Clients, mainly mothers, sometimes contributed lunches or the labor to purchase and prepare food. Other members of the local communities contributed time to be on management boards in Nepal and Colombia. In Brazil, middle- and upper-class people who were not clients contributed their time to be on the management board for the day care centers.

In most cases, it appeared that operating costs were only partially covered by community contributions and client fees. All operating costs in the Nepal home care program were covered by the community (SEEDS 1991). This did not include the costs of on-going training, supervision, and other support for the Nepal program that are critical to the functioning of a community-led program. It is, however, important to consider these costs when planning future programs. However, as shown

below, it is very difficult to quantify these benefits and costs from the data currently available.

Benefits and Costs

As shown in table 1, cost figures for initial investments were available for just three programs (Ethiopia, Nepal and Ecuador), operating costs as a lump sum for just one (Ecuador) and partial operating costs for another (the Brazil home care program). Only Boianovsky (1982) provided an estimate of comparative costs. The discussion that follows, therefore, is based on very fragmentary data and should be viewed merely as suggestive. Somewhat more information was available on benefits but virtually none of it was quantified.

Costs: Among the programs reviewed, the per child cost of setting up a day care center in rural Ethiopia in the early 1980s was about $167. Start-up costs associated with the home day care program in Nepal were about $120 per group or $20 per child (SEEDS 1991). In urban Ecuador in 1983, start-up costs for home day care were about $17.50 (SEEDS 1991). In Brazil, Boianovsky (1982) estimated that the capital investment in land and buildings required for a center in Brasilia was three million dollars. These figures seem to support what is generally believed that home day care options may require lower capital investments than centers and that capital costs may be lower in rural than urban areas, but better data are needed to confirm these conclusions.

In general, the literature suggests that operating costs for each of the programs was relatively low but only Boianovsky (1982) provided numbers. He found that in 1980 the per child cost of the home care program in Brasilia was about $37 (including food). This compared favorably with about $54 per month per child in day care centers (Boianovsky 1982). Operating costs of this program were met jointly by the government and the mothers who provided lunches and paid part of the salary of the day care worker. Bashizi (1981) suggests that the operating cost per child at the centers in Senegal was about 250 francs and that it was fully covered by fees. In Ecuador, operating costs of the home-care program in 1983 were about $200 per child per year (SEEDS 1991).

The data suggest that operating costs of day care programs, like investment costs, vary greatly. This is supported by data from a rapid assessment of 31 day care centers and preschools of Greater Sao Paulo that was done in 1989. Operating costs varied substantially, even within fairly comparable types of services. For example, NGO-run day care centers for children 0 to four years of age cost an average of $306 per child for 11 hours care per day, 240 days per year. NGO centers that combined day care and preschool on a similar daily and hourly schedule, averaged costs of about $385 per child. Municipal facilities with similar services cost $306 per child (Levinson 1990). The variability is likely to be still greater between countries. It is, therefore, very difficult to make useful comparisons between programs.

A more useful finding from this review of operating costs is the fact that users appear to be willing to pay for the service. Although it is not always clear which costs are included when operating costs are specified, in some cases, these costs appear to have been fully met by the users. At the minimum, users are willing to pay a nominal amount. This is an important conclusion that should be taken into account in planning exercises.

Benefits: Although many of the benefits delivered by day care programs were not quantified in the data, the qualitative benefits were often specified for mothers, children, other family members, and workers associated with the programs. Some of these are described below.

Even when the quality of care in terms of psychosocial development was not adequate, children benefitted from being in a protected environment and eating regular meals under consistent adult supervision. In all cases, minimum care under virtually all types of adult-supervised child care options described above resulted in improvements in mortality and morbidity rates and in better health and nutrition overall. With better quality care and some stimulation, children also benefitted psychosocially.

Reported benefits to mothers included increased participation in productive work (Ethiopia and Nepal); reduction in absenteeism because children got sick less often (Ethiopia); increases in productivity that were not specified but are implicit in comments such as "mothers could work with a freer mind knowing that their children were safe and being cared for" (Senegal, Ethiopia, Brazil centers, Ecuador); and, in some cases, provision of child care enabled the mothers to obtain employment and engage in income-generating work at all (Nepal and Ecuador). Only one study (Boianovsky 1982) provided an estimate of mothers' earnings made possible by the availability of day care. It amounted to an average income of about $77 per month (at 1980 prices).[2]

The benefits described above, in most cases, can be quantified. Other benefits, more difficult to quantify, also accrued to mothers. In Nepal, for example, mothers benefitted by receiving training and developing their management and organizational skills and self-confidence as they participated in the community-managed day care program (SEEDS 1991). Presumably, similar benefits accrued to mothers in the other participatory programs (Senegal, Ecuador, and Colombia).

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[2] This may not, however, represent the actual benefit because it is possible that some of the mothers obtaining care would have worked anyway and made alternate arrangements to have their children minded. A more accurate estimate of benefits would have to take this dimension into account.

In some cases, child care freed up the time of older children who would otherwise have had to care for their siblings during their mothers' working hours (Bashizi 1981). The time thus freed, if used to invest in additional education could lead to long-term improvements in productivity which would accrue as a benefit to the individuals and society.

Paid caregivers benefitted from the day care programs in terms of obtaining employment and income, in virtually all cases. In many cases, caregivers' earnings were low, at or below the minimum wage for the country, but in the case of caregivers in Brasilia this represented a significant increase (more than 75 percent) in family income (Boianovsky 1992 and Rosetti Ferreira et al 1981). Other benefits to the caregivers included training provided by program sponsors that could be transferable and impart status (Myers and Hertenberg 1987). The mobile creche program offered caregivers bonuses, health care, and free meals (Mobile Creches, n.d.).

It is very difficult to draw useful conclusions or make meaningful comparisons between programs based on these limited data. This is not unusual in the literature. Other studies on the costs of day care and related child development programs have pointed out that information on costs of day care programs, especially in developing countries, is very difficult to obtain. Even studies that sought cost data directly from the records of day care agencies have found the numbers to be few and inconsistent within and between programs (Myers and Hertenberg 1987 and Levinson 1990). Financial records are poorly kept and procedures for record-keeping vary from organization to organization. Thus, there is great variation, for example, in which items are included as capital costs and which are not. Differences also exist between organizations in recording operating expenses. If, for example, volunteers are used, the cost of their services is often not taken into account.

Attempts to compare benefits and costs of various programs are complicated by a whole range of factors. Additional problems arise in interpreting the data because of variations in factors such as program objectives, services offered, and the quality of services. Comparability between programs is, therefore, difficult to establish even within a country. And, of course, costs change over time and nominal costs can be greatly affected by factors such as annual changes in inflation rates, which can be very high in developing countries. It is, therefore, critical in planning day care programs to conduct feasibility studies as close to the time and in the place where the site is planned.

Child Nutrition

Most programs reviewed here paid some attention to meeting the children's nutritional needs and a few consciously promoted child nutrition. At the minimum, the day care provider, the mother, the community, a donor, a government agency or some combination of these agents made

arrangements for feeding children while they were in day care. A number of programs provided training for caregivers in nutrition, preparation of low-cost nutritious meals, more effective use of local foods in improving child nutrition, and growth monitoring. Finally, a few programs made specific nutritional interventions such as providing nutritional supplements, including milk, vitamins and green leafy vegetables. Often, supplements were supplied by government, donor agencies, and local private contributors.

Breastfeeding was promoted in three of the day care programs, notably those that were located at work sites -- the mobile creches, Melka Oba, and the Accra Center. To encourage breastfeeding, the Melka Oba cooperative offered work points for time spent in breastfeeding.

Program evaluations often stated that day care had a salutary impact on children's health and nutrition. Reductions in morbidity and mortality were cited as evidence of better nutrition among the children. Benefits appeared to have accrued mainly from such factors as a clean, protected, and safe environment, provision of regular, adult-supervised meals, and immunizations which many of the centers required. Supplemental programs such as milk distribution, presumably provided additional benefits.

The programs reviewed here appeared to demonstrate that it is fairly easy to improve children's health and nutritional status through day care programs. Rossetti Ferreira et al (1981), for example, concluded that health and nutritional improvements are easier to obtain than emotional and mental development. Myers and Indriso (1987) also suggest that meals provided at day care represent an important nutrition strategy for poor children. Although these conclusions seem reasonable and logical, especially for very poor populations, the impact results reported here should be regarded as suggestive rather than conclusive. This is because the evidence on which they are based was mainly anecdotal and observational except for the Rossetti Ferreira et al (1981) study which was more systematic.

Other studies have reported that nutrition interventions are not often successful. Myers and Hertenberg (1987), for example, found that supplementary nutrition programs were more effective in motivating children to attend preschool programs than they were in improving the nutritional status of the children being fed. Studies have also shown that impacts of nutritional interventions are quite complex and that benefits can be easily undone, for example, if families adjust home feeding to channel food away from children being fed in programs (Evans 1985 and Myers and Hertenberg 1987).

It may be that most of the evidence supporting favorable responses to provision of basic meals came from observations among very poor groups and that responses among children of

somewhat higher income levels would be different. More careful and detailed studies are needed to verify beneficial nutritional impacts among poor children in day care.

Conclusions

Programs provided child care services year-round, from eight to 11 hours per day, up to six days a week. In some cases, program hours were flexible and child care was provided only in seasons and at times mothers worked outside the home. Infants as young as six weeks old were accepted and most programs provided care for children up to six years of age. Even though most programs functioned with minimal resources, they attempted to meet the basic needs of children for safety, health, nutrition, and psychosocial development. They also attempted to be creative with available resources and materials to meet children's needs at low cost.

Programs were readily accessible to clients who either lived in the neighborhood served by the program or the service was located close to the clients' work place. Ease of access is an important factor affecting utilization of day care services. Studies have found, for example, that women do not use programs located at work sites if this requires children to be transported over long distances in overcrowded and uncomfortable vehicles.

Caregivers, including mothers who served as caregivers, were given basic training in areas such as child development, nutrition, health, and hygiene. Although they did not always succeed in delivering good quality care, most programs had built in an element of quality control. This generally meant that people were appointed to supervise the work of caregivers and/or to act as resource persons.

The communities representing the client base for the programs were generally too poor to raise the capital required to establish day care programs. Even home care programs that required low investments in infrastructure needed other types of investments such as training, that were beyond the means of poor communities to provide. In all cases, the initial investment to start up day care programs for poor clients came from governments, NGOs, or international donors. One or more of these agencies were often also involved in providing operational support. It is worthwhile to note that the need for government or other subsidies to ensure access to day care for poor women was borne out by both the country and program reviews.

Volunteers were sometimes used in an effort to lower costs, especially in the home care programs. Cost estimates were not available, however, to estimate the extent of these savings. It is safe to assume that in low-employment low-wage communities, the savings were not substantial. Clients appeared quite willing to pay for day care services and most programs either charged fees

or required mothers to provide lunches. Except in one case, utilization seemed to be unaffected by whether or not fees were imposed.

The costs of programs varied greatly but not enough information was available to determine how costs were related to the type of program (center or home-based), types of activities undertaken, quality of services, or other factors. Comparisons between programs were also very difficult to make because financial information was either not available or records were poorly kept. Moreover, critical data were lacking to undertake benefit/cost analyses.

The data suggested that the basic care and meals provided at day care programs had a beneficial impact on children's health and nutrition. Little quantitative data were available, however, to confirm these reports. Day care centers located near work-sites enabled working mothers to successfully combine breastfeeding with work. The center child care programs seemed to serve as a convenient entry point for introducing child nutrition and other interventions such as immunizations and adult education.

Finally, it is important to note that while these conclusions are drawn from examples of day care programs that proved to be workable and sustainable for varying lengths of time, no particular program should be promoted as a "model" that is generally applicable because the needs of working mothers, children, and their environments differ so greatly.

It is also necessary to point out that while these programs can be regarded as "successful," their impact is very limited. Few examples are available of programs offering services to a relatively large number of people. Each program described, even when it operated at several sites, served at most a few thousand children. Thus, for example, the 58 centers of the Senegal program served just 6,000 children. The mobile creches in Bombay served about the same number in one hundred locations throughout the city and most of the children attended for very brief periods of time. Therefore, there is a critical need for many more day care programs accessible to poor working women.

Lessons Learned and Recommendations for Future Research and Programs

Efforts to design day care programs in the future can draw upon the relatively simple but important lessons learned from examining the experience of current programs.

Programming Lessons

- The better coordinated day care hours and schedules are with mothers' working times and

seasons, the more useful they are to working women.

- The larger the range of ages served by day care programs (especially if they include infants) the better they serve the needs of working mothers in finding work, increasing women's labor force participation, and raising women's productivity.

- Location, particularly ease of access, is a key determinant of utilization of day care programs.

- Basic training for caregivers in child development, nutrition, health and hygiene is necessary to ensure proper care for children in day care settings.

- Caregivers need the supervision and support of better trained personnel to maintain the quality of day care programs functioning with minimally-trained personnel and limited material and physical resources.

- Inability to ensure high quality at the outset should not be a deterrent in starting a program. High quality care is, obviously, desirable but not critical in the beginning. Once a program is underway, it can be upgraded.

Lessons on Costs and Financing

- It is necessary to determine carefully the feasibility of the particular program under consideration.

- Investment in day care programs for poor communities almost always requires external support (subsidization) from governments, private agencies, or international donors.

- Use of voluntary labor may be less cost-effective than is generally assumed. It may, in fact, be more costly than is commonly believed if, for example, the requirement that mothers contribute labor limits their employment and income-earning opportunities. Community participation and voluntarism may be desirable, however, for other reasons and may yield benefits in terms of building community cohesion and developing management and organizational skills.

- Even poor clients are willing to pay fees which can help meet operating costs. However, the level of fees must be set realistically to match clients' ability to pay. Flexibility in fee-paying options (cash or kind) enhances ability to charge fees.

Lessons on Child Nutrition

- Child nutrition can improve in adult-supervised child care programs that provide safe, hygienic environments and regular adult-supervised meals.

- It appears to be relatively easy to introduce health and nutrition interventions in day care centers. Making nutrition interventions in home care programs may be logistically more difficult but can be done. Myers and Indriso (1987) define a minimal set of promotional, preventive, and curative activities that can be undertaken through informal day care settings.

- Day care centers located at work-sites can enable working mothers to continue both work and breastfeeding. There is, however, a significant dilemma involved in attempting to promote employer-provided day care at work-sites because it has been shown to impact negatively on women's employment opportunities.

- Appropriate incentives, especially work credits, can promote breastfeeding but it is highly unlikely that employers (who are not also owners, as in the case of Melka Oba cooperative cited in this study) could be persuaded to provide such incentives.

Research Needs and Recommendations

As noted throughout this study, there is very limited information on day care programs, especially for low-income women in developing countries. There is a need for researchers to acknowledge the many productive and reproductive roles of women, to redefine concepts such as what constitutes the productive roles of women, and to recognize the multiplicity of child care strategies, of which mother care is only one option (Myers and Indriso 1987). Information is needed on women's work patterns, the roles of non-maternal and sibling caregivers, and the impacts of child survival, child care, and child development programs. Specifically, the following research issues need to be addressed:

- The nature of the demand for child care among poor women. Along these lines, data is needed on the proportion of working women with children, the type and length of women's work, the age distribution of children with working mothers, etc.

- Detailed information on currently-used child care strategies. A knowledge of the extent and nature of informal child care arrangements, such as the use of grandparents or siblings, is critical to determining current quality of care and feasibility of continuing these types of

arrangements.

- Improved cost data for guiding design and planning for future programs. The lack of comparative data on costs of current programs reinforces the need to conduct individual feasibility studies for future programs. Data is needed on investment costs, such as rent, equipment, educational materials, etc., and on operating costs, including wages and salaries, meal provision, and "hidden" costs such as that of voluntary labor.

- Evaluations of current health and nutrition interventions. Information is needed to identify nutritional needs, as well as to verify and quantify the impacts of nutrition interventions on a child's health and nutritional status.

Program Recommendations

While the lessons learned from our study suggest that it may not be appropriate to regard any one of the programs as a "model" for direct replication, the lessons do provide some practical guidelines for designing future child care programs.

- Day care programs must provide care during mothers' working hours. While working hours may vary considerably, planners need to carefully determine the hours care is needed for the specific target population. If working hours are seasonal and/or short, this may have cost implications that should be considered in the planning process. Most useful for mothers are child care programs that accept infants and children as young as six weeks old and continuing until school-age.

- Investment costs should be kept low by attempting to offer the bare minimum in terms of safety, health, nutrition, and psychosocial development at first, with a view to upgrading quality in the future as additional resources are obtained.

- Caregivers should receive training in the essentials of child development, health, hygiene, and nutrition, in order to ensure basic quality. In addition, caregivers should be supervised by and have access to trained resource people. This is particularly important if caregivers are illiterate or poorly educated, as most are in day care programs for poor children.

- Feasibility studies should be done to compare the costs of suitable alternative programs for the local clientele. Local communities should have an opportunity to participate in designing and planning programs, and external funds should be sought from governments, private donors, and international donors, for start-up costs.

• Care should be taken in seeking out voluntary labor from mothers. Women may be limited by time constraints from providing voluntary labor which does not conflict with their ability to engage in subsistence of income-generating work. It should be recognized that certain types of employment and mothers' other household responsibilities might preclude their participation.

• Clients' willingness and ability to pay for day care services should be factored into the planning process and feasibility studies, so that realistic fees can be set.

• Day care programs should be promoted for the children of poor women as part of a broader child welfare strategy. Participation in day care programs is a convenient vehicle for health and nutrition interventions. In fact, some day care programs may be made more affordable and feasible if costs of meals and snacks, for example, can be shared by agencies wanting to make nutrition interventions on behalf of children.

ANNEX I
Country Profiles

NIGERIA

The reference for the information below is Onibokun (1989), unless otherwise indicated.

Demographics

The vast majority (95 percent) of Nigerian women are economically active. This is true in both urban and rural areas, among educated or uneducated women, and regardless of the age of their children. A woman employed in the formal sector is entitled to a three-month maternity leave, six weeks before delivery and six weeks after.

Nigeria has a relatively youthful population, with children below the age of ten years making up about 32 percent of the population in 1985. This percentage continues to increase, due in large part to a decline in the infant mortality rate.

Major child care options

Mothers working in the informal sector often care for their children at the same time that they work. Mothers who work in urban areas in the formal sector, however, who must be away from their children during the day, require substitute care for their preschool children. In the past, this need for child care was met by young girls who had dropped out of school and migrated to the cities, or by unemployed relatives. Recently, the number of these traditional child care providers has declined because they have been able to get better paying jobs in the service sector.

With the reduced availability of traditional child care, many private day care centers have been set up to meet the needs of mothers employed in the formal sector in the urban areas with children 0 to two years old. Ninety percent of children of these mothers are placed in day care centers, where they receive primarily custodial care. Of the remaining 10 percent of women employed in the formal sector with children 0 to two years old, some hire in-home nannies, which may be more expensive than most day care centers, or take their children to be cared for in the homes of caretakers, generally a less expensive option. Children three to five years old whose mothers are employed in the formal sector are usually enrolled either in nursery schools, where their care is a combination of custodial and educational, or in kindergartens, where their care is mostly educational.

Funding and government involvement

Although day care centers are supposed to be registered and controlled by the Ministry of Health in each state, and receive on-going health supervision, many existing day care centers are not on record with the Ministry, and thus are not supervised. Mothers are expected to bring supplies such as food and diapers for their children. Fees for the centers range from 40 to 150 naira per month ($2.00 - 8.50), depending on the quality of services provided, and on the relative demand for institutional child care in the area (higher fees in more commercialized areas). Low-income families tend to use only centers whose fees are in the low end of this range, if they can afford any child care services, but data on use of child care services are limited, and are not available by income group.

Early childhood care and education in Nigeria is largely a family responsibility. The federal and state governments do not subsidize private preprimary school education, though both government levels provide guidelines for operating the programs. Guidelines are included for health, including hygiene and sanitation, and for inspections by officers of the State Ministry of Education. Preprimary education is provided by religious groups and private owners (85 percent), philanthropic organizations (5 percent), and colleges and universities with government support for model schools or centers attached to the government institutions of higher education (10 percent). No institution provides free child care, and no law limits the fees that can be charged.

A few schools provide a midday meal, while others expect children to bring their meals from home. Prior to 1984 some institutions provided milk, but this was discontinued due to its rising cost.

KENYA

The reference for the information below is Riak and colleagues (1989), unless otherwise indicated.

Demographics

According to a 1977-78 labor force survey, 87 percent of the adult female population of Kenya was employed. The majority is involved in agriculture-related occupations, and only a small portion has jobs in the formal sector.

Kenya has a relatively youthful population, like Nigeria, with 56 percent of the population estimated to be 16 years old or under by 1989, and 25 percent of the population estimated to be

five years or under. This is due in large part to a decline in the infant mortality rate, as in Nigeria, and to an increase in the birth rate in recent decades.

Major child care options

Children aged 0 to two years usually receive care in their homes by their mothers, other female relatives, or older siblings. Those whose mothers work in the formal sector sometimes receive care in their homes by paid caretakers, who often are girls who have dropped out of school, and have no training. Children aged three to five may enroll in a preprimary day care institution. The structure of their education as three and four year olds is similar to nursery school or kindergarten, whereas five year olds receive classes that prepare them for their first year in primary school.

In 1986, there were approximately 12,000 preprimary day care institutions, which served 650,000 children three to five years old. While these children represent only 27 percent of their cohort, their numbers have increased rapidly in the recent past. The number of children served, number of institutions, and number of teachers (including many trained teachers) have all roughly tripled since 1968. "Away from home" centers for young children in Kenya are established by members of the community. Usually mothers collectively decide to form a learning center for their children. With support from the community, they construct a building, appoint one of their members to be the teacher, and decide her salary and how funds for it should be collected.

Funding and Government Involvement

The federal government has not committed funds for the operation or subsidization of preprimary day care centers. Many government ministries and agencies, however, are involved in supervision, guidance, and personnel training for preprimary programs. The role of local government has been similar, with the provision of professional advice through inspection, supervision, curriculum development, and training of teachers. The centers are funded primarily by parents' fees, which range from 25 to 850 Kenyan shillings per month (US$ 1.30 - 45.00 per month).

THE PHILIPPINES

The reference for the information below is Palattao-Corpus (1989).

Demographics

According to UN statistics, 36 percent of women in the Philippines were economically active in 1990 (United Nations 1991). The population of three to six year old children in the Philippines is estimated at 6.3 million for 1985, based on census figures from 1980 and a 2.7 percent growth rate. They are 11.5 percent of the total population of the country, and about two-thirds live in rural areas.

Major Child Care Options

The authors did not find information about child care options for children 0 to two years old. If the UN statistic is accurate that only 36 percent of women in the Philippines are economically active, perhaps the demand for extrafamiliar care for children this age is low, and perhaps informal arrangements with relatives and neighbors are adequate to meet the demand, but this could not be determined from the existing information.

The focus of programs for children three to six years old is on early childhood education. The main objective is to prepare the children for elementary school, and the underlying philosophy at the schools is that children are valuable and therefore must be given opportunities to develop their competencies and potential early in life. There are four ways that these preschool education services are delivered: 1) a public sector school class, which is attached to a public elementary school; 2) a private sector school class, which may be run by private individuals, institutions, church organizations, or corporations; 3) day care services delivered in centers; and 4) day care services taught to mothers to be delivered to their children in the home. Classes in preschools and day care centers are held for two to three hours per session, five days per week. Provision of snacks is usually a component of the programs, as is experience in preacademic activities, daily living skills, and art and music. In a few of the private schools, medical services are also provided.

Early childhood education programs in the Philippines provide coverage for about 20 percent of the country's three to six year old children. The types of programs most frequently used by low-income families are public preschool programs (which enroll 52 percent of all preschool children attending an education program) and day care centers sponsored by the Ministry of Social Services and Development (which enroll 7 percent of all preschool chidlren attending). Since these programs are sponsored by local government, the costs to parents are the lowest.

Funding and Government Involvement

Public preschools depend mostly on the financial support of the local government through school board assistance. Additional support may be provided by parents and civic organizations. Most private preschools depend on support from parents, though some are sponsored by religious organizations, civic groups, or charitable foundations. The preschools, both public and private, are registered with and regulated by the Ministry of Education, Culture, and Sports (MECS).

Day care services in centers are facilitated primarily by the Ministry of Social Services and Development (MSSD). Although the services provided currently are similar to the services provided by the preschools registered under the MESC, the history of the day care services developed differently. A presidential decree in 1975 stated that every child has the right to an education, and that "day care service and other substitute forms of parental arrangement shall be provided a child, where parents and relatives are not able to care for him during the day." In 1978, the Barangay Day Care Law provided for the establishment of a day care center in every barangay or for every 100 families with preschool-aged children. MSSD centers are sponsored by local governments. Additional funding by UNICEF provided in the early 1970s for supplemental feeding, particularly for malnourished preschoolers.

The training of mothers to provide similar day care services to be delivered to their children in the home was begun in the 1980s, and is sponsored in part by the MSSD, with initial funding from UNICEF. Mothers are also trained by agricultural extension agents from the Bureau of Agriculture Extension (BAEx).

THAILAND

The reference for the information below is Passornsiri, Kutintara, and Suwannapal (1989) unless otherwise indicated.

Demographics

Passornsiri and colleagues (1989) estimate that the demand for preprimary institutions is increasing, according to the following demographic trends for female labor force participation and family structure. Female labor force participation rates have increased from 58 percent in 1980 to 65 percent in 1985 (and to 68 percent in 1990 [United Nations, 1991]). Also, the nuclear family structure is gradually replacing the extended family, leaving working mothers with fewer adult substitute caretakers within the household. For example, census figures from 1970 and 1980 indicate

that the proportion of one- or two-person households has increased from 12 percent to 22 percent.

There are roughly five million preschool children aged three to six in Thailand. While the number of children in this age group increased only 3 percent from 1979 to 1987, the number enrolled in preschool more than tripled, increasing from 8 percent to 26 percent of the country's preschool aged children during the same eight years.

Major child care options

In Thailand, there are three major types of preprimary programs: 1) two-year formal education in kindergarten for children four to six years, 2) one-year preprimary classes for children five to six years that take place within primary schools, and 3) nonformal education for children 0 to seven years that occurs within child development centers, child nutrition centers, day care centers, and child care centers.

Kindergartens are government operated or privately run. They include special education programs for preschoolers and preparation for formal school. The one-year preprimary schools also provide preparation for primary school. There are also Head-Start type centers (see United States profile for Project Head Start) operated in conjunction with rural schools in selected areas.

Nonformal education and child care occurs within a variety of settings. Child development centers are community-based preschool centers for three to six year old children aimed at child development, early preparation for schooling, and child care for working mothers. Child nutrition centers provide services to two to five year old rural children that emphasize improving their nutritional condition, as well as providing day care to them. Government day care centers provide day care services for working mothers of three to six year old children. Private day care centers serve 0 to five year old children, and are operated by individuals, groups, foundations, and factories. Children's homes give residential care to needy children 0 to seven years.

Funding and Government Involvement

The government agencies that sponsor child care and preschool education programs include local governments of three different kinds - municipal, Bangkok Metropolis, and provincial (one province only), federal (from four ministries, and ten departments within the ministries). Government sources supplies only 29 percent of the financing for child care and preschool education programs. Private agencies that sponsor programs include the National Women's council, the YWCA, Save our Soul Children's village of Thailand, and Ban Tantawan Foundation for Children. Private sector sources account for 71 percent of their financing.

In government kindergartens, located in the urban areas, the government finances teachers' salaries, buildings and equipment. However, the government allocates very little for child development centers in the rural areas. In 1984 parents' fees for all types of centers ranged from 94 to 1000 baht per year (U.S.$3.60 - 38.50).

REPUBLIC OF KOREA

The reference for the information below, unless otherwise indicated, is Sook-hee (1991).

Demographics

According to a population estimate in 1988 there were approximately five million children aged 0 to five in South Korea. Of those, 1.5 million had working mothers and 54.6 percent of these children were in need of day care services. This number excludes those children with working mothers who are taken care of by family members. In a survey conducted by Rice and Wilber (1979) at Seoul National University of 212 low-income households, with at least one preschool aged child, most of the men and women expressed a desire to have children in day care due to their time constraints and for the educational components. Given this, if formalized child care were more accessible to low-income families the percentage of children needing it would probably be greater than 54.6 percent. In a study done by the Korean Women's Development Institute (1988) the most important reason for why employed mothers did not use formal child care facilities was due to the cost.

Major Child Care Options

In 1987, of the employed mothers who could not afford child care, 44.8 percent of the children went with their mothers to work, 32.7 percent were left at home with friends or family members, and 21.9 percent were left alone at home. This last option was more prevalent in urban than in rural areas.

There are five types of child care available in Korea:

1. Saemaul Nurseries - Under the auspices of the Ministry of Health and Social Affairs, in 1991, there were 1,201 Saemaul child care centers, the purpose of which is to protect and educate children of low-income families.

2. Seasonal Child Care Centers - These are child care centers which operate during the busiest

farming season to care for children 0 to three years of age.

3. Community Child Care Centers - In urban low-income areas non-profit community centers have been established for children whose mothers work. As of August 1989 there were 210 of these centers, the average number of children per center was 20.

4. Family Child Care - The Korean Women's Development Institute has developed a model for family child care centers to meet the needs of employed women and to provide employment to unemployed women. Regulations are set concerning the space to be provided to each child, meals, and training for the "family care mothers".

5. Working Place Child Care Centers - Under Equal Employment Opportunity Act 12 all employers are required to provide child care for their female workers. Although there were 12 such centers by 1989, the majority of companies and factories that would be required to abide by this law do not hire women with children.

The two types of child care most widely used in Korea are community day care centers and family day care centers. Working mothers stated that they were willing and or able to pay W13,000-W31,500 ($19-$46) per month for child care. Community day care centers charged W31,500 per month on average and family day care centers W99,700. Therefore, for low-income working mothers to utilize these child care options the government would have to subsidize 70 to 80 percent of the costs. As of 1991 these two day care options only served a total of 814 children in low-income urban areas.

Most of the community and family day care centers are full day-care centers (96.7 percent), and have a nutrition component. Lunch and a morning and afternoon snack are served in 94.9 percent of the centers and of these 84.7 percent use prepared menus that have been developed with a health care professional. Health care is also a component of these day care programs, 16.7 percent of family and 72.4 percent of community child care centers conduct health examinations more than once a year.

Funding and Government Involvement

The Korean government has adopted Child Care as a main policy and program objective particularly for low-income areas. In 1990, the Child Welfare Law was extended to include standards for establishing child care centers in the entire country. At that time the Ministry of Health and Social Affairs planned to establish child care centers in low-income areas under the direct supervision of government agencies. The Korean government in 1987 allocated 0.04 percent of the budget to child welfare.

BRAZIL

The reference for the information below is Levison (1990).

Demographics

In 1982, 9.9 percent of 0 to six year olds attended day care or preschool in Brazil. In the urban areas, this proportion is higher (23 percent), as most day care and preschool options are located in the urban areas. Participation in daycare/preschool programs depends largely on whether a family is female headed, and on the employment status of the mother. Daycare/preschool attendance tend to increase with per capita income. Furthermore, the higher the income the more likely that a child will attend a private center. Poor children are more likely to receive services in public programs. Single mothers use a wider range of child care strategies than do two-parent households, most likely due to the greater incidence of poverty.

The poor, including single mothers, are under-represented in the population of children attending daycare/preschool. Many single and poor employed mothers cite financial reasons for keeping a child out of daycare/preschool. Over 13 percent of children aged 0 to six with employed mothers in poor families stay home alone or are taken care of by an older sibling (seven to 13 years old). Of those 0 to six year old children who are left alone or are cared for by an older sibling, 10 percent on average come from poor female-headed families while only 3 percent are in two-parent families. Children from female-headed families who do attend daycare/preschool spend more time there (19 percent spend eight hours) than children from male-headed households (only 8 percent spend eight hours).

The type of employment of a mother in large part determines the rate of attendance for the child. Among mothers with prescnool aged children in metropolitan Brazil: 65 percent are employees, 30 percent self-employed, 2 percent employers, 3 percent unpaid family workers. The attendance rates of a 0 to six year old child almost doubles, from 23 percent to 40 percent, if their mother is a "formal sector" worker. Mother's employment also influences the time her child spends in a daycare/preschool, 21 percent of preschool aged children with employed mothers and 11 percent with unemployed mothers spent over four hours per day in a center.

Major Child Care Options

Child care programs in Brazil are quite varied and do not fall neatly into program types. There are, however, two sets of characteristics of the programs, formal and non-formal, and many programs tend to contain components of both sets.

Formal characteristics are that the physical structure was more likely constructed for the purpose of daycare/preschool; the staff tend to be highly trained; the services are oriented for four to six year old children; the schools tend to serve larger number of children for fewer hours per day. Public sector programs are generally formal.

Non-formal characteristics are that the physical space is provided by the community; mothers often serve as volunteer teachers aides, while a local person is trained as a para-professional; the services are oriented for toddlers and infants; and the program tends to be open long hours. Spontaneous creches, in which women care for children in their home in exchange for money or reciprocal services, is an example of non-formal care.

Neither formal or non-formal daycare/preschool is guaranteed to have a nutrition or health component, although feeding programs are often included in formal preschool programs.

Funding and Government Involvement

The 1990 constitution stipulates that access to free daycare and preschool be provided to all children aged 0 to six. This goal is far from being met due to the costs involved, especially for rural families, and for 0 to three year old children. Services for five to six year olds are most heavily subsidized, accounting for 76 percent of the free care overall. Only 3 percent of 0 to one year olds go to daycare/preschool in metropolitan Brazil. Attendance rates increase with age: 17 percent of two to four year olds and 52 percent of five to six year olds attend daycare/preschool.

Government agencies and ministries are responsible for different aspects of child care services at the federal, state and municipal levels. The Ministry of Justice, through the Conselho Nacional dos Direitos da Mulher (National Council on the Status of Women) played an important role in formulating the current national policy on child care. Each Ministry is responsible for a specific aspect of child care, for example, the Ministry of Health regulates the construction and operation of child care facilities, and the Ministry of Labor regulates and finances daycare associated with a place of employment.

The Federal Ministry of Education (MEC) and the state and municipal secretariats of education are major funders and providers of preschool. The MEC launched a nutrition intervention program for preschool children (Programa Nacional de Alimentacao Escolar), in which one million children were given free meals at daycare centers/preschools in 1987-88. Another agency, the Fundacao Legiao Brasileira de Assistencia (LBA), had instituted daycare centers in 74 percent of Brazil's municipalities by 1987 that served 1.7 million children. Its Projeto Casulo has health and nutrition interventions and targets low-income children. This project, like most others, serves

predominately four to six year olds.

UNITED STATES

The reference for the information below is Olmsted (1989), unless otherwise indicated.

Demographics

In the last 40 years there has been an increasing trend in the United States for many women, especially women with young children, to join the labor force. In 1950, 12 percent of women with children younger than six years old worked outside the home, while in 1985, 57 percent were employed. Of this latter group, 70 percent were employed full-time and 30 percent part-time. The portion of employed women with low incomes who have children younger than six is expected to be much higher. In the United States, demand for child care is great. It has increased rapidly in recent decades, and is expected to continue increasing in the future.

The number of children living in poverty (according to the U.S. government definition of the poverty line) varies by racial group, as does the number whose father lives with them. In 1985, 15 percent of white children lived in poverty, and 45 percent of these lived in female-headed households with no male present; 43 percent of black children were living in poverty, 67 percent of these in female-headed households; and 40 percent of Hispanic children lived in poverty, 72 percent of these in female-headed households.

Major child care options

Child care arrangements vary widely for children in the United States, according to parental needs, income level, and education. The United States has a highly decentralized system of early childhood care and educational services. Four major options used by women in the labor force (full-time and part-time combined) for their children 0 to four years old (52 percent) are described below. At five years, children enter kindergarten within the formal school system.

The first option is for women in the labor force to take care of their own children as they work. This option is used with surprising frequency, given the purported small size of the informal sector relative to other countries. It is used by 13 percent of employed women whose children are to two years old, and by 12 percent whose children are three to four.

The second option is a combination of care in own home by either a relative or nonrelative, or care by a relative in the relative's home. A nonrelative will usually be paid, in cash or in kind,

though a relative may or may not be. This is the most common option for children 0 to two years, used by 34 percent of employed women with children this age, and is used by 26 percent whose children are three to four years old.

The third option is a family day care home, in which child care is provided on a regular basis by a nonrelative outside the child's home. The arrangement can span from an informal agreement between friends to licensed homes of providers who often have young children of their own. Probably only 10 to 40 percent of such homes are licensed, though the provider is probably paid in the majority of these arrangements. This option is used by 25 percent of employed women whose children are 0 to two years, and by 19 percent whose children are three to four.

The fourth option is a combination of child care centers and part-day educational programs. In the child care centers, care and education are provided in special facilities devoted to child care, with an average capacity of 50 children. The centers might be administered as 1) private for profit, usually small and run by families; 2) private nonprofit, usually operated by churches or charitable organizations; 3) publicly operated centers, which serve children from low-income families who receive government subsidies for day care; 4) parent cooperative centers; or 5) employer-provided centers, which provide day care as a fringe benefit, and are rare. In part-day educational programs, care and education are usually provided for three hours, five days per week. Because this part-day schedule does not meet the needs of the large number of parents who work full-time, institutional efforts are being made to coordinate with other programs. This option is used by 16 percent of employed women whose children are 0 to two years, and it is the most common option for children three to four years old, used by 33 percent of employed women with children this age. (Note that the part-day educational programs are provided only for three to four year olds, or to children slightly older. Note also that women who are not in the labor force do not tend to use any of these options for their 0 to two year old children, but 32 percent enroll their three to four year old children in part-day educational programs or child care centers.)

Funding and Government Involvement

U.S. child and family policy is based on the idea of not interfering in family affairs relating to care and education of young children. The policies that do exist are intended to promote family choice in the selection of child care, and consist of social benefits for specific types of families, services for special children, tax benefits for families, and tax incentives for employers. In the 1980s there was a decrease in federal funding and policymaking related to child care. In their place, state efforts have become more important, and some states have started new programs targeted to serve special families, such as those with low incomes. Funding and policymaking by states vary widely, however, from no guidelines and no funding for child care to licensing, registration, and state-

funded programs.

Six U.S. federal programs that assist families with the costs of child care are described: Project Head Start, Aid to Families with Dependent Children (AFDC), Title XX funds for child care services, the Family Support Act, the Child Care Tax Credit, and the Dependent Care Assistance Plan. Only the first is an education program per se. The programs are listed in order of their applicability to low-income families.

Project Head Start is the largest national effort on early childhood education for children from low-income families. It is a comprehensive program, providing education, health care, nutrition, and social services to three to five year old children and their families. At least one meal per day that meets one-third of the recommended daily allowance is given to the children. Nutritional training is given to both the children and their parents (personal communication, Craig Turner, National Head Start Office). With federal funds, Project Head Start operated 1,200 centers in 1988, serving about 446,000 children. In 1992, the program served 622,000 children (personal communication, Craig Turner, National Head Start Office). Despite the many federal funding cuts of the 1980s, this program has maintained strong political and economic support.

AFDC is a social benefit program primarily for low-income mothers with at least one minor-aged child. Although it is not a child care program, it has implications for the child care choices that low-income mothers make. The program gives money directly to mothers for basic living expenses. In some states, AFDC is available only to households that are female-headed with no male present, a requirement that may encourage family break-ups. By October 1990, according to the Family Support Act (known also as the welfare reform bill), all states were required to establish programs for education, training, and employment services to AFDC recipients. States will also have the responsibility to find, but not subsidize, child care services for those families participating in JOBS (Job Opportunities and Basic Skills Training) programs.

Title XX federal funds for child care services were converted in the 1980s to Social Services Block Grant funds, and passed through to states. The states use the funds primarily to subsidize child care for low-income families and to support training and counseling services for low-income mothers.

The Child Care Tax Credit is available to one- or two-parent families with children in which one or both parents work full-time. A family can deduct 20 to 30 percent of their child care expenses from their federal income tax, to a maximum of $2,400 per child per year. This tax deducation does not favor low-income families, who probably pay little in taxes anyway.

The Dependent Care Assistance Plan encourages employer-sponsored child care through a tax advantage. Salary monies spent by employees on child care are now allowed to be shifted to benefit plans, so that employers are paying for child care. Unfortunately, this Plan has led to only a small increase in employer-sponsored child care.

The estimated average cost of full-time child care in the U.S. is $3,000 per child per year, ranging from approximately $2,000-6,000.

BELGIUM

The reference for the information below is Delhaxhe (1989), unless otherwise indicated.

Demographics

In 1982, 39 percent of Belgian women over the age of 15 were economically active. Traditionally, working women have opted for part-time work and short-term careers, and they have been the targets for layoffs and employment termination during times of economic difficulties. Recently, women have begun to replace short-term careers with long-term ones. In 1989, 66 percent of women with children under the age of ten were economically active, either full-time, part-time, or are in search of employment.

Major child care options

Government child care laws provide employed mothers three-months of paid maternity leave and the option to take a two-year leave without pay. However, because of economic necessity, most mothers do not choose the two-year leave. Thus, working mothers depend on the government regulated child care system for the care of their infants and small children. Child care options for employed mothers with children up to age three consist mainly of the official system of nurseries, preschool day nurseries, registered caretakers, and children's homes. For working mothers with children aged two and a half to six, there is a system of preschool nurseries that are free of charge to parents. In 1989, 95 percent of three year old children attended nursery school.

Nurseries are registered and subsidized by the Oeuvre Nationale de l'Enfance (ONE) and the Ministry of Health of the French speaking community. Initiative for their establishment, however, comes from the local level. These include public authorities from the state, commune, and province and private authorities representing social, instructional, educational, charitable, and commercial organizations. Each nursery must meet the standards and regulations on admissions, medical

supervision, staff, and parental contributions set by the ONE. Care is provided for children from birth to three years, with hours from 7 am to 6 pm on working days. Infants are cared for by pediatric nurses, who group the children into three age groups from birth to three years. The ratio of children to nurses is set by the government at seven to one. In 1982, 13.8 percent of the 361,962 children under age three attended subsidized nurseries.

Preschool nurseries are also regulated and subsidized by the state, tend to be more paramedical than educational and are staffed predominantly by nurses, social workers, and pediatric nurses. They serve children from 18 months to three years, and provide service during holidays and hours of operation on work days are 7:30 am to 6 pm. They are organized by schools.

Independent caretakers are accredited and supervised by the government. However, they are not subsidized. The majority care for children up to age seven in private homes. Each caretaker is allowed by the government to look after up to five children. If more children are involved, then more caretakers are required and the setting becomes a children's home. In 1982, 5 percent of the 361,962 children under age three attended children's homes.

School nurseries for children aged two and one half to six form part of several school networks that are organized and completely subsidized by the government. In this case, it is the Ministry of Education that is responsible for overseeing their functioning. Nursery school hours of operation are the same as those of primary schools, 8:30 am to 3:30 pm five days a week during the school year. Children are grouped into three age-groups from youngest to oldest, and child-adult ratio ranges from 15 to 30 children per instructor. There is no charge to parents, who must only provide for their children's lunch. Ninety-eight percent of children aged two and one-half to six years attend these nurseries.

Funding and Government Involvement

Belgium has had a long history of government involvement in child care. By the time Belgium declared its independence, day care institutions were already in existence. They had been originally established as charitable institutions to protect the children of the working classes from vagrancy and accidents. Although their origins were charitable, today they have assumed other roles.

The government regulates nurseries that are either completely organized and subsidized by the state, funded partly by the state and organized by local authorities, or funded partly by state but organized completely by private institutions. The cost of nurseries for children aged 0 to three years and 18 months to three years is covered by the ONE and the Ministry of Health, the organizing authority, and the parents. The fee parents pay ranges from 50 to 426 Belgian francs per day, which

is about one to five dollars. Because of the economic downturn the country has been facing since 1981, nurseries have been granted the option of requiring parents to contribute with diapers, medicinal products, food, and clothes.

The Ministry of Education is responsible for the functioning of several school nursery networks for children aged two and one-half to six, which include school nurseries organized and subsidized by the state, those funded partly by the state and organized by local authorities, and those funded partly by the state but organized by private institutions. All must adhere to standards and regulations set by the Ministry of Education. Regulations cover sanitation, student-teacher ratio, equipment and teacher training. Parents are exempt from contributing to the cost of running these institutions.

ITALY

The reference for the information below is Pistillo (1989), unless otherwise indicated.

Demographics

The portion of women, in addition to their husbands, working in the labor force is only 27 percent, and these women tend to be from families with higher income levels. This reflects general family organization in Italy, in which the mother is the central figure, with most of the responsibility for the care and upbringing of the children. Relatives are a very important source of support for mothers. Uncles and aunts help out daily in a vast majority of families, especially for larger families or low-income ones. Grandparents may also help out daily, especially when both parents work, but their main functions are advising parents on nutrition, hygiene, and childrearing practices, and performing entertainment and socialization functions. Although the mother-centered family with support from relatives is quite strong, there is a trend of more women entering the labor force due to economic need.

In spite of a decrease in the birthrate in recent years, there has been a notable increase in the number of three to five year old children enrolled in nursery schools in Italy. From 1968 to 1984, the number of children enrolled in nursery schools increased more than ten-fold, and by 1984, about 87 percent of Italy's 2,500,000 preschool aged children were attending.

Major child care options

For 0 to two year old children, the main preschool provision outside the family is day

nurseries. Although the use of these is increasing, Italian families are generally reluctant to enroll their 0 to two year old children in extrafamiliar services, feeling more like they are abandoning their children than entrusting them to responsible caretakers. Consequently, the majority of 0 to two year old children in Italy are taken care of by their mothers, with help from relatives.

For three to five year olds, the main provision is nursery schools. Parents' philosophy about care and early education for their children of this age has changed rapidly in recent years such that 87 percent were enrolled by 1984. Nursery schools are either state- or non-state institutions, with enrollment divided almost evenly between the two. In 1968, the Italian government created a network of state (public) nursery schools throughout the country, under the Ministry of Education. Attendance is free of charge, and therefore is most likely to serve low-income families. The purpose of the nursery schools is to educate children, help with personality development, and prepare them for elementary school, which begins at age six. Their schedule usually accommodates full-time workers, though some nursery schools may have sessions for only five hours per day.

Funding and Government Involvement

Funding and administration of the state nursery schools occurs at three levels of government: national, regional, and community. The national government has the exclusive responsibility for paying nursery school staff, and for providing school furnishings, equipment, and teaching materials. The regional government is responsible for building new schools. And communities are responsible for medical and psychological services for students, assistance for handicapped students, and operation of the buildings and services, including provision of meals and bus transportation. Meals are requested by and provided to 82 percent of children attending state nursery schools.

Non-state nursery schools include those run by private organizations, religious institutions, community or regional (but not national) government, or public corporations. The Ministry of Education authorizes the opening and closing of these schools. Partial funding of non-state nursery schools is available from the national government, but if these are granted, the national government may restrict other charges made to parents. Although the demand for preschool services for three to five year old children has not decreased recently, many non-state nursery schools have closed due to economic difficulties for those run by community or regional governments, and due to reductions in religious staff available in those run by religious institutions. Parents (57 percent) tend to prefer the quality of the educational services at the state nursery schools, but may choose a non-state school because it is located nearer to their home, or because its hours are longer and more flexible.

ANNEX 2

1. India: Mobile Creches

An example of a successful day-care option, although one designed for a very specific clientele, that of women construction workers, is the Mobile Creches of India. The programs are run by a voluntary agency, Mobile Creches, which offers services in both Delhi and Bombay, two major urban areas of India where building construction is a burgeoning industry. Data on the program were obtained from the 1985-86 Annual Report of Mobile Creches (n.d.), Bombay, which was reporting on its fourteenth year of operation.

Program objectives and description: The program targets mainly the children of migrant construction workers and working mothers living in slums and resettlement colonies. The objectives are to provide "systematic day care for children most exposed to the ills of neglect, poverty, disease and drift," an opportunity for learning, and a sense of pride and belonging.

The four main areas of activities are health care, education, recreation, and encouragement of creative skills. The program operates six days a week, eight hours a day, year round, providing comprehensive day care for children from birth to six years of age. At construction sites, care is provided in semi-permanent sheds supplied by building contractors, or whatever accommodations are available at a construction site, such as tin sheds or tents (Myers and Indriso 1987). The care unit moves to another site when work on a particular site is completed. The program may or may not maintain contact with the same group of workers and children at the next site. In slum areas, the creches are housed in low-cost buildings constructed with donor help or in existing community halls.

Equipment used is low-cost and locally provided. Culturally familiar materials are used. Day care workers are young women recruited from the local communities and trained on the job through observation and participation in on-going training programs (Myers and Indriso 1987). Staff are provided many opportunities for training, staff development and benefits such as nutritional supplements at meal-time, bonuses, and so on.

In 1985-86, the Bombay program ran 100 creches and serviced 6,360 children. Because of the clients' high mobility, and other factors, the childrens' attendance was very sporadic. Thirty percent of the children attended less than one month continuously while 50 percent attended irregularly. (Regularity was defined as children who attended more than 10 days per month for one or more months.)

Health and nutrition services: Health care services provided include maternal and child nutrition and maternal nutrition education. To combat protein-energy malnutrition and failure to thrive that are common among the children, they are given vitamin A supplements and green leafy vegetables at the midday meal. Mothers are encouraged to breastfeed infants by coming to the creche or having the children brought to them. Lactating mothers are given milk and iron supplements. A maternal education program provides information on child rearing and preventive health care.

As a result of these interventions, children who attend day care show substantial improvement in their health and nutrition. Their weight gain is not generally sufficient to bring them within the normal range for their age. The report suggests that this failure may be due to the fact that initial nutritional deprivation among these children is so great that it cannot be readily compensated.

Financing: No data were available on the cost of the program but the report information on sources of income. Almost two-thirds of program income in 1985-86, came from grants and donations earmarked for specific purposes, 13 percent was contributed by the building contractors, who also made contributions in kind including supplies of water, electricity, and storage space and materials. Other organizations provided food and milk, use of office space, accounting services, and so on. About 7 percent of income was obtained from fund-raising activities such as a benefit film premiere.

Impacts: A measure of the success of the program is that other institutions often seek the help of Mobile Creches for guidance in areas of child care and pre-school education. Students of many schools and colleges visit the program and share ideas, help with fund-raising or provide teaching materials. An outside evaluation rated quality of care provided as excellent. The overall program was also highly rated for its consistency in fulfilling the objectives of meeting the needs of the working mother at her place of employment and contributing to child development (Myers and Indriso 1987). A survey of users found more than 70 percent of the mothers rated the overall care good; nearly as many regarded the food and sanitation to be better than satisfactory; but the accommodation and equipment were generally rated unsatisfactory.

2. Senegal: Rural Day Care Centers

This day care program operates mainly in the Casamance region of Senegal and provides day care services for women farmers during the rice transplantation season which is a very busy time lasting about two to three months.

Program objectives and description: The purpose of the day care centers is to have a safe place to keep children between the ages of one to five years while their mothers and older sisters work in the fields. As the program expanded, health and nutrition objectives were added on (Bashizi 1981).

The initiative for starting the centers came from a group of mothers who faced with the problem of providing safe care for their small children during the rice transplanting season. Prior to the availability of day care, small children were often left alone as women and old daughters worked in the fields. The first day care center was started in 1962 in an Animation Center. The animatrices (government trainers) gave local women permission to use the Center for day care as long as they did not ask for funding and would themselves assume responsibility for running the service.

Since the first center opened with 110 children, the system has spread to 58 locations, mainly throughout the Casamance. It caters to more than 6,000 children. The system operates under the Department of Animation Rurale, Promotion Humaine. The centers accept children from six months to five years of age; they are open from 8 a.m. to 7 p.m. Enrollments range from 28 to 200 children, with one worker for every ten children. Mothers manage the program and take turns caring for the children, with supplemental help from the animatrices.

Health and nutrition services: At the first center, the mothers planted a garden to provide food for the children's midday meal and made contributions in cash or kind to supplement the children's diet. They also took turns to prepare the daily meal. From the start, other organizations, such as Catholic Relief Services, provided milk to supplement the children's diets.

As the day care program expanded, the community, local and national development agencies, and international organizations saw an opportunity to make the centers focal points for the provision of other services, including nutrition interventions for the children, and programs such as community education and training in hygiene, nutrition, disease treatment, etc. for the adults. These organizations now provide adult nutrition education for the mothers, teaching them to prepare balanced meals using local produce. They are taught, for example, to add egg yolk to corn semolina and chopped beef to millet flour. Trainers use food contributions made by the mothers to

demonstrate preparation of more nutritious meals. Children attending day care are also given immunizations and government and donor agencies basic drugs supply for the treatment of common diseases such as conjunctivitis and malaria.

According to Myers and Indriso (1987), the program provides an excellent example of ways in which a child care center can be employed to make health and nutrition interventions, but no information is available on the impacts of these interventions .

Financing: Operating costs of the centers are covered by monthly fees paid in cash and kind amounting, in the 1970s, to four kg. of rice, one liter of oil (or dried fish), and 250 francs in cash. In some locations, the fees have proved to be too high. One center was able to operate for only 20 days because mothers were unable to pay the fees.

Impacts: The most important contribution of the day care centers is to provide care for children while their mothers work. Prior to establishment of the centers, women wither take children to the fields where they were exposed to the weather and to attacks from wild animals or left them in the care of younger daughters who were too little to work in the fields and too small to take good care of their siblings.

3. Ethiopia: The Melka Oba Producers' Cooperative Day Care Center

Established in 1983, the Melka Oba comprehensive day care program provides care for infants and children of women employed by the Melka Oba producers' cooperative. The government provided the assistance of a cooperative organizer, a home economics agent and a development cadre from the Ministry of Agriculture.

Program objectives and description: The goals of the program are quite extensive and include: child care for working mothers; time off for mothers to breastfeed; immunizations; development and growth monitoring for the children, adult education in health, child care, nutrition, and family planning; alleviation of women's household work load; provision of appropriate technology; and training of traditional birth attendants. The center was founded at the request of the cooperative with the help of the UNICEF-supported Integrated Family Life Education project (IFLE), the government, and other donor agencies.

Children from 45 days to four years old are cared for in the creche while older children from four to six years old attend the kindergarten program. Hours are flexible and designed to correspond to the mothers' work schedule.

The cooperative provide space for the center and established a committee from among its members to manage the child development program. Eight child care givers (six women and two men), selected from among the cooperative's members, were given on-site training for about eight months in child development, language, number concepts, nutrition and hygiene, music, traditional dancing, and art. A woman with an eighth grade education who had been trained at the National Institute for the Training of Day Care Teachers heads the center.

Health and nutrition services: Mothers with infants visit the creche several times a day to breastfeed. As women are given work credits for time spent in breastfeeding, they have an incentive to continue breastfeeding longer than they did before the creche was established. The only information available on child health and nutrition is that children are provided a balanced diet, a healthy environment, immunizations, and other health services.

Financing: UNICEF provided $17,388 for start-up costs which included a local consultant employed for eight months to train care givers and equipment and materials for the day care center. The cooperative supports the day care center through a social development fund. Child care givers salaries are paid through this fund (Myers and Indriso 1987).

Impact: Prior to the establishment of the child care program, women were either overworked or unable to participate fully in the cooperatives' production work. As clean water and proper sanitation were not available, children suffered from common health problems such as diarrhea, conjunctivitis, and respiratory infections. The infant mortality rate was reported to be high. Mothers were given just 45 days leave after child birth and, because they returned to full-time work after that, breastfeeding declined rapidly. Young children were mostly left to fend for themselves while parents were at work. Primary school children were often kept away from school so that they could mind infants and smaller children. The children basically lacked sound physical, social, and mental development.

An evaluation of the day care program carried out by a university professor two years after the center started showed that program benefits accrued to women, children, and the entire community. The children's health had improved. Disease-related deaths among children one to five years of age had declined (Myers and Indriso 1987). The program enabled women to increase their participation in the producer cooperative. Absenteeism declined because children fell sick less often and farm production increased because women could concentrate on their work knowing their children were safe. Within two years, IFLE and UNICEF started a similar program in another cooperative.

4. Ghana: Accra Market Women's Association

Program objectives and description:

As its name suggest, the Accra Market Women's Day Care Center provides child care for the infants and children of women.

The Accra Market Women's Association initiated the establishment of the Market Day Care Center which was founded in 1975. Mothers worked with the City Council, the Department of Social Welfare, the Ministry of Health, and the Ministry of Water and Sewage to set up the center which is housed in a renovated building near the market.
The program is administered by the Regional Medical Officer of Health (Myers and Indriso, 1987).

The center caters to about 200 children ranging in age from infants to five and a half years of age. It is staffed by trained care givers and headed by a qualified member of the Department of Social Welfare. The care giver/child ratio is about 1:20. The center is open from 7 a.m. to 5 p.m.

Health and nutrition services: The programs offer health and nutrition services for children but very information is available. Children are given a physical and immunizations before they can participate in the program. A public health nurse visits the center once a month to inspect the facility, give vaccinations, and fill in growth and medical charts.

Mothers with children under one year of age are encouraged to come to the center during the day to breastfeed. Children are provided with a morning snack and a well-balanced lunch. No information was available on the effects of the health and nutrition interventions.

Financing: The center is funded by the Accra City Council and parents pay nominal fees.

5. Brazil: Day Care Center

This example of day care in Ribeirão Preto, north-east São Paulo State, Brazil, is included not because it represents a model program for a low-income population but because it is one that has been studied to obtain quantitative data on improvements in the nutritional status of participants (Rosetti Ferreira et al. 1981). The research project on which the study is based was part of a larger project attempting to document the degree of effectiveness of day care centers in and around Ribeirão Preto (Ferreira et al. 1981). Besides collecting and analyzing data, the researchers on the project were also involved in making nutritional, educational, and organizational interventions to improve the program.

The 13 creches included in the study are highly representative of day care institutions serving the urban poor in this region. Most women in the population work either as housemaids or migrant agricultural workers during the harvest. Mild-to-moderate malnutrition is endemic among children; and poverty, malnutrition, and inadequate stimulation combine to slow their psychosocial development.

Program objectives and description: The purpose of the day-care program is to provide care for infants and preschool children while their mothers are at work. Other important objectives are to improve the nutritional status of the children and to contribute to their physical and psychosocial development.

At the time of the study, a total of from 175-290 children were enrolled in the 13 creches, the number varying according to whether the mothers were able to obtain seasonal employment. The children ranged in age between six months and seven years. The size of the creches varied considerably, as did the physical infrastructure, equipment, and staffing. In general, staffing and equipment were quite inadequate.

The staff of each creche consisted of an administrator, caregivers in the ratio of 1:15 for children under three years of age and 1:25 for older children, two or more people to take care of housekeeping, a preschool teacher who worked half a day but was not available in 70 percent of the creches. Most caregivers had less than four years of schooling and did not receive training for their job. The creche staff worked from 7 a.m. to 5 or 6 p.m., was paid quite poorly, and was generally overworked. The mean salary of the staff fell between 50-100 percent of the minimum salary for this region ($40-80 per month) for a 10-hour working day.

The children were kept in a single room for most of the day and interaction between the age groups was not allowed. Discipline was strict and the children were taught to be silent and obedient. Only the five to seven years old were engaged in educational activities which consisted mostly of paper and pencil exercises.

The centers were run by a board consisting of middle and upper middle class volunteers from the community. Contact between creche staff and families occurred during meetings held about once every two months at which the administrator or a board member spoke about such matters as hygiene, nutrition, education, and discipline. Board members tended to be critical of the mothers who in turn lacked interest in the lectures which they perceived to be irrelevant.

Health and nutrition services: Despite the shortcomings of the day care program, it

succeeded in making a noticeable difference in children's nutritional status. This was because the children were fed well four times a day on food supplied through government programs. Researchers evaluating the children's nutritional status based their observations on 187 children, primarily at two creches. They employed weight for height as an indicator of the present nutritional status of the children and height for age as an indicator of past nutritional status. These data were then used to place each child in the appropriate centile of weight for height and height for age, based on the growth charts of the U.S. National Center for Health Statistics.

The results of the analysis showed that the nutrition of most children was adequate although there was some indication of malnutrition in a small proportion of them. The relatively higher weight for age as compared to height for age obtained by most children suggests that the creche's diet may have helped them overcome acute malnutrition.

Financing: The creches were supported mainly by money raised by the board from members of the religious or philanthropic groups that they represented, through donations, and promotions. Some financial help also came from the government. As noted above, the food was also provided by governmental programs.

Impacts: The program was quite successful in having a positive nutritional impact on children, as described above. However, it made very little contribution to the children's psychosocial development, mainly because numbers of staff were inadequate and they lacked training. Caretaking predominated over educational development.

6. Nepal: Home Care Program

This is a home-based program for infants and children associated with a credit program for low-income rural women which is designed to help women enter or expand their income-generating activities.

Program objectives and description: The objectives of the program are to provide home-based day care for children up to three years of age so that their mothers' time is freed up to take advantage of the UNICEF-supported Production Credit for Rural Women PCRW project. This is a multi-component community development project that besides day care, provides child care for children three to six years of age, parent education classes, and has a child-to-child program to train older children in caring for younger ones (SEEDS 1991).

The program works with groups of about six women who function as focal points to institute and implement the day-care service. Care is usually provided in the house of each of the mothers

on a rotational basis. The mothers are trained on-site for four days by the Seto Gurans National Child Development Services in such matters as child development, hygiene and nutrition. Care may also be located in community-donated sites, a specially-constructed building, or a in room donated by one of the mothers. In 1989, 54 groups were in operation in 11 districts of Nepal and proposals were pending for 50 other groups to receive training.

The mothers meet weekly to ensure that the program is running smoothly and determine organizational details such as the schedule. As the women are mostly illiterate, a pictorial chart illustrates the day's activities. Each group is provided with a basic supplies kit and a play materials kit. The supplies kit includes cooking utensils, cups, plates, personal hygiene materials, a rug, and a few toys. Nine different play kits containing a variety of educational toys and materials are available and each group can have one kit at a time. They can diversify the materials available to them by exchanging kits between neighboring groups.

Health and nutrition services: In the nutrition module of the mothers' training they are taught the basic principles of nutrition and growth monitoring. They are taught to prepare nutritious meals using locally grown food.

Financing: Establishing, equipping, and training one home-based group is $120 and no external support is needed for the day-to-day operation of the program. Although the initial cost is relatively low, a community-led and managed program such as this requires on-going training, supervision, and supervisory support. These follow-on costs have not been estimated but could become substantial if the program were to be expanded. Thus, the replicability and sustainability of the program are open questions.

Impacts: Anecdotal evidence suggests that the program is having a beneficial effect. It has succeeded in reducing the mothers' time constraints and enabled them to pursue their income-generating work more freely. The women's involvement in running the program has helped them develop self-confidence, management and organization skills, and leadership. When the children in the program are compared with those outside of it, it is evident that the children in the program have better health and nutrition. Moreover, the children from the program go on to primary school in a region where generally only a third of all children attended school previously. Program children's school performance is also better as they drop out less often and repeat classes less frequently.

7. Ecuador: Home Care Programs

Under this program, day care is provided to preschool children as a sub-project of a larger integrated program of urban services for low-income families living in the "suburbios" or slums and squatter settlements of Guayaquil, the second largest city in Ecuador. Other services offered under the program include primary health care and employment promotion for women. The preschool program, started in 1979, provides child care for children from three months to six years old either in a home or a community setting. The focus in this discussion will be on the home care model which provides full day care whereas the community centers provide just half-day programs (SEEDS 1991).

Program Objectives and description: A trained woman provides child care for about ten to 15 children ranging in age from three months to six years in her home for eight-nine hours per day, five days a week. The community selects the care givers and the program provides training. Care-giving mothers must have experience raising children, be literate, and have a house that can accommodate additional children. Supervisors are university-level professionals with experience in child-care programs. Criteria for access to the program include low family income, a working mother or one who is looking for work, and no appropriate family member available to take care of the children.

The program relies on community participation and mothers with children in day care form a committee to oversee the care and rotate weekly food purchases among themselves (Myers and Indriso 1987). During the day, children participate in a variety of stimulating and recreational activities such as painting, dancing and singing.

Health and nutrition services: The only available information on this aspect of the program is that the children are given three meals during the day.

Financing: In 1983, the estimated cost of starting each home care unit was $210 while operating expenses, supervision, technical support, and monitoring costs amounted to $1,850 per year. Initially, UNICEF funded 80 percent of the cost of the programs with national agencies assuming responsibility for the remainder. The idea was for national agencies to increase their contributions over time. This has happened but with difficulty because of the slowness and inefficiency of public sector funding mechanisms. By 1987, the Ministry of Social Welfare funded 90 percent of the cost of the child care program. Parents pay a small amount for the child care services. They are, also, expected to participate in meetings to discuss management of the programs.

Impact: The child care program has been evaluated by external evaluators three times since its inception. The evaluations show that the home care program meets a critical need for child care and that the demand is greater than the program's capacity. The program has helped to improve the children's health, nutritional, and psychosocial development. Regular feeding, care, and diarrhea control have been the main contributors to improved health and nutrition among the children. The program provides employment and income ($35 per week in 1988 or about 40 percent of the salary earned by a primary school teacher) for the child care givers. The full day program is very beneficial for working mothers. However, few families are involved because in 1987 there were just 69 home centers. With a maximum of 15 children in each home, the total number of children affected was just over 1,000. In August 1988, the government announced its intention to expand coverage under the child care program to 108,000 children throughout the country.

8. Colombia: "Homes of Well-Being"

Program objectives and description: The objectives of the "Homes of Well-Being" program in Colombia are to foster child care and development, improve the economic status of the community by providing employment to care-givers and bringing business to local merchants, and free other women to engage in or upgrade their economic activities (Myers 1991). The program provides care for children aged one to seven years old in groups of about 15 children in neighborhood homes. Children stay in the home of a trained care giver for about eight hours a day. The care giver is assisted on a rotating basis by the mother of one of the children in the group. Within three years of its start in 1986, the program had 800,000 children enrolled and, by the end of 1992, it is expected to expand to 1.5 million children.

As the program is community-based, community members are expected to conduct the initial assessment of the need for services by taking into account factors such as children's ages, family income and employment and physical and environmental variables. The community also determines the numbers of child care homes that will be required and selects local women to be the care givers. A board, consisting of parents, is responsible for local management and for purchases and payments. The care givers are provided training in child development and care, nutrition, and health.

Health and nutrition services: No information was available on this aspect of the program.

Financing: The program is funded primarily by the Colombian Institute of Family Welfare, the Ministry of Public Health, the National Apprenticeship Service, the Institute of Territorial Credit and other government and private organizations. The children are given scholarships to the pay the home day care mother.

Impact: Preliminary results of an evaluation suggest that the program has been effective in meeting the child care needs of parents at low cost and with benefit to the community. There are some questions, however, about the quality of the program.

9. Brazil: Home Care

In 1979, the government of Brasilia established a home day care program for low-income women living in the outskirts of the city to enable them to engage in income-generating work. Within a year, 1,700 children were receiving day care in 472 homes. The program is run by the Federal District Social Services Foundation (FDSSF) that has a management unit at the center and one in the satellite town in which the day care homes are located (Boianovsky 1982).

Objectives and description:

Selected from the community, care givers are required to be literate, below 65 years of age, and to provide a home comparable to those of the children in their care. They are registered, trained and paid by FDSSF. Training started immediately, was continued on a weekly basis for a while, and then reduced to monthly sessions. The training is practical, building on the knowledge the minder already has and encouraging her to use materials and equipment on hand to meet child care needs. The care givers are given information on developing low-cost menus and the best places to buy food. Each care giver is permitted to have a maximum of six children under seven years of age in the house including her own.

Care givers are supervised once a week by "visitors," who are female community residents between the ages of 18 and 22 with at least primary level schooling. They are hired and trained by the FDSSF to perform such functions as monitoring the activities of the child minders, following the growth and development of the children, and minding children while the minder goes to periodic meetings or training sessions. The visitors keep records of the children and the day care program and activities in each house. Health cards on the children are also kept.

Health and nutrition services: Children are given immunizations. Mothers provide for lunches in cash or kind and caregivers are given training in nutrition.

Financing: The caregivers are paid by the FDSSF and the mother. The mother provides the child's food in kind or by making a payment and shares with the caregiver the cost of items of hygiene. Details of the arrangements are worked out between mother and child minder and the government bureaucracy intervenes only in the case of disagreements between them

The FDSSF gives the caregiver a fixed sum of money for each child under her care. In 1980,

this amounted to $14 per month. If the caregiver takes care of the maximum number of six children allowed under the rules of the program this would give her an income close to the minimum wage. This represented an increase of more than 70 percent in family income. In addition, the caregiver is given such items as water filters, wooden toys, children's shoes waste paper baskets, and so on.

At December 1980 prices, the per child cost of this program was $26.15 per month not including the mother's share in providing food. Mothers' food costs amounted to $10.75 per child per month for a daily average intake of 1,400 calories. This compared favorably with the cost of $53.85 per month required to care for a child in a traditional day care center. The program also did not require any capital investment which could be more than $3 million for land and buildings.

Impact: The program enabled 729 mothers to engage in income-generating work that yielded an average income of $76.92 per month which represented a significant addition to family income even when the cost of $26.92 of providing food for an average of 2.5 children per mother is taken into account. Reductions in morbidity and mortality among children were observed. Boianovsky (1992) concluded that this was a significant program for delivering primary health care because it was able to reduce malnutrition and prevent common childhood diseases.

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