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**The Effect of a Breastfeeding Clinical Support Program on the
Duration of Exclusive Breastfeeding in Working Women
and on Infant's Health and Mother's Satisfaction**

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Executive Summary

To identify programmatic interventions and gain clinical experience about the factors that enhance employed women's ability to continue to feed their infants exclusively breastmilk after returning to work, a prospective controlled intervention was conducted. The study took place in the hospital and out-patient clinic of the Catholic University in Santiago, Chile, from 1993 to 1995. The population consisted of low middle class urban women who worked outside of their homes and were separated from their infants during working hours. The intervention consisted of counseling and monthly clinical support during the first six months after delivery.

Selection Criteria

Women from both groups delivered at the maternity ward of the hospital of the Catholic University were they were invited to participate. The selection criteria were as follows:

- ▶ Women had to be exclusively breastfeeding at 30 days postpartum and planning to return to work before 120 days;
- ▶ Women had to have a telephone where they could be reached; and,
- ▶ Women had to plan to receive pediatric care at either the Alameda clinic or CEDIUC Out-patient Clinic.

Women assigned to the control group planned to receive routine pediatric care in Alameda Clinic whereas women assigned to the intervention group planned to receive pediatric care in the CEDIUC Out-patient Clinic. Women were free to choose either clinic for their infants' pediatric care, however, clinic selections were largely the result of geographical preference. Information about the special program of clinical support for working mothers in CEDIUC was not provided to eligible women.

The control group consisted of 116 mother/infant pairs; 146 mother/infant pairs were in the intervention group.

Description of the Intervention

The intervention population was cared for at CEDIUC, in the project's maternal/infant clinic. During the first interview at 30 days postpartum, the women from the intervention group, in a group session discussed their work and child care plans in a group session. Counseling on how to continue feeding breastmilk after returning to work was given depending on the individual situation. All women were taught hand expression and observed while they hand-expressed their milk. Instructions and written material were given on milk expression and storage. Mothers and infants in the intervention group were cared for together at follow-up visits with a pediatrician and a nurse-midwife every month for six months and at twelve months. These visits covered health, growth and development issues of the infant as well as the mothers' health and fertility. Lactation management and women's concerns and satisfaction with their different roles were also addressed in each session. Women were

encouraged to call or return to the clinic for health or breastfeeding problems. Women from the control group received routine pediatric care at the Alameda Clinic and were followed monthly by telephone for six months and at twelve months by a nurse from the research project.

Duration of Exclusive Breastfeeding

Both groups were comparable in age, parity, educational level, gestational age, birth weight, and type of delivery. Over 80% of women from both groups aimed to breastfeed more than six months and over 50% thought it was beneficial for the infant to be exclusively breastfed for six months. The results showed that with routine care and no special support only 6% of women were able to continue to feed their infants with breastmilk only for six months and 33.6% had weaned their infants. In the intervention group, with clinical support and the use of expressed breastmilk, 53.5% of infants were still exclusively breastfed at six months and only 8.2% had been weaned.

Strategies Used to Extend the Duration of Exclusive Breastfeeding

- ▶ Returned to work after sixth postpartum month or not at all: control, 12%, intervention 12.9%.
- ▶ Delayed returning to work until after the end of the postnatal leave: control 7.4%, intervention 12.8%.
- ▶ Took the infant to the work place or worked at home: control 5.6%, intervention 6.4%.
- ▶ Worked less than 33 hours per week: control 25%, intervention 14.7%.
- ▶ Took the infant to a day care center: control 19.4%, intervention 25.7%, and breastfed during working hours: control 57%, intervention 77%
- ▶ Combined the above alternatives with expressing their milk: control 23.1%, intervention 66.2%.

Methods Used for Expressing Breastmilk

Among the 90 women of the intervention group who expressed their milk, 69 were using hand expression, 24 were using hand pumps, and seven used both methods. In the control group, among the 25 women who expressed milk, 22 used hand expression, two used hand pumps, and only one used both methods.

Maternal Satisfaction

When rating the level of effort of accomplishing the role of mother and worker, women from the intervention group rated the effort at a lower degree than women in the control group. The level of satisfaction with the experience was rated slightly higher among women in the intervention group. When at six months women were questioned if they would try to feed a next infant with breastmilk only for six months while continuing to work; 84.2% of the control and 100% of the intervention group gave a positive answer on repeating the experience. Similar percentages, 84.2% in the control and 100% in the intervention groups would recommend it to a friend.

The factors considered helpful for breastfeeding were different for the two groups. Those who did not receive clinical support tended to rely on delaying the return to work, reduction or flexibility of working hours, and having a nearby day care for the infant. A lower percentage of women from the intervention group mentioned delaying returning to work. Women in the intervention group indicated that having a supportive work place and a place where they could express their milk or breastfeed the infant greatly influenced their decision to continue breastfeeding.

Maternal and Infant Illness

The sick leaves requested by women due to their own illness were similar in both groups. When comparing infants exclusively breastmilk-fed versus those partially breastmilk-fed in the intervention group, the relative risk for respiratory infection and diarrhea were 1.9 and 7.8, respectively.

Program and Policy Implications

- ▶ Clinic-based breastfeeding support is effective in extending the duration of exclusive breastfeeding among working women.
- ▶ Teaching of techniques for breastmilk expression and storage are essential program components.
- ▶ Time, space, support, and closeness to the infant are important components of work settings.

The Effect of a Breastfeeding Clinical Support Program on the Duration of Exclusive Breastfeeding in Working Women and on Infant's Health and Mother's Satisfaction

Background

The advantages of exclusive breastfeeding for an infant's growth and health, as well as for child spacing are well documented in the literature. Exclusive breastfeeding is complicated in the modern urban setting by the increasing tendency for women to work outside the home. The inter-relationship between women's work and breastfeeding has been an issue of constant debate among policy makers, health workers, and families. Work has been cited as a major reason for the decline of breastfeeding around the world, but this argument has not always been based on actual data. It is generally assumed by mothers, health professionals, and employers that returning to work in a formal work setting after childbirth is not compatible with exclusive breastfeeding, a perception that has been widely diffused by the marketing campaigns of formula companies. Nursing seems to be viewed as an extra burden for working women, but no research has been performed regarding mothers' perceptions of, or degree of satisfaction with, maintenance of lactation while working.

Chile has reached a stage of development where there is a great number of middle- and lower middle-class women who work outside the home. It is therefore strategically situated to serve as a model for interventions to promote exclusive breastfeeding among working women for other Latin American countries who are just beginning to reach this stage. Current legislation on maternity benefits and protection for working mothers in Chile includes: maternity leave for six weeks prior to and twelve weeks after delivery at full salary, prohibition of dismissal for one year after delivery, two nursing breaks daily not exceeding a total of one hour, sick leave for the mother or father for infant illness during the first year, and mandatory day care in institutions that employ twenty or more women. Except for students, the majority of mothers attending the out-patient clinic at the Catholic University in Santiago, are covered by these benefits.

The impact of a hospital- and clinic-based breastfeeding promotion program on the duration of breastfeeding in urban mothers from Santiago, Chile was previously studied by our team. The program included: training of the health care team, education of mothers on breastfeeding, reduced separation of mothers and infants after delivery, support for the initiation of breastfeeding immediately postpartum, rooming-in, early follow-up after discharge, and creation of a lactation clinic. The clinic focused on the prevention and management of breastfeeding problems, and provided frequent infant follow-up with special emphasis on maintaining exclusive breastfeeding for six months. This research project was funded by the Institute for Reproductive Health at Georgetown University in Washington, D.C. as a prospective clinical trial of the lactational amenorrhea method (LAM) of family planning. The results showed that among mothers who had received clinical support there was an increase in the percentage who were exclusively breastfeeding at six months postpartum from 31.3% in the control group to 66.8% in the intervention population.

As a consequence of the above mentioned project, since 1990 a Lactation Clinic has offered continual support to breastfeeding mothers. The Catholic University Hospital has two out-patient

clinics: CEDIUC and Alameda. Only CEDIUC has a Lactation Clinic which offers service for women from both clinics.

The Hospital of the Catholic University in Santiago has become a model for breastfeeding promotion and was designated as a Baby-Friendly Hospital in 1993. There, over 90% of the mothers discharged are exclusively breastfeeding. Since 1995, a Lactation Management Education Center in the Catholic University (CELUC) offers training on breastfeeding to health professionals from Chile and Latin America. The professional team from CELUC has been involved in the training of health professionals for the Baby-Friendly Hospital Initiative (BFHI) throughout Chile, and as participants of the National Breastfeeding Commission, are working towards changing Ministry of Health policies to better support breastfeeding at the national level.

Objective

To identify programmatic interventions and gain clinical experience about the factors that enhance employed women's ability to continue to feed their infants exclusively breastmilk after returning to work, a prospective controlled intervention was conducted.

Hypotheses

- ▶ Clinical support and counseling of working mothers regarding breastfeeding will significantly increase the percentage of women who are able to breastfeed exclusively for six months from 17% to 40%, as well increasing the average total duration of breastfeeding.
- ▶ Mothers will be able to find suitable, satisfying alternatives to maintain their milk production.
- ▶ Breastfed infants of working women will have less morbidity than formula-fed infants of working women.
- ▶ Women who are able to breastfeed exclusively for six months while working will be more satisfied with the feeding method used than those whose infants are formula fed.

Study Design

The study was a prospective follow up of an intervention group of mothers and infants compared to a control group. The study population consisted of 262 mother-infant pairs of women, 146 in the intervention group and 116 in the control group, who delivered at the maternity ward of the Catholic University Hospital, were exclusively breastfeeding at 30 days postpartum, and planned to return to work before 120 postpartum days. They were contacted at the maternity ward after delivery and invited to participate in the intervention. Mother and infant received an appointment for the 30th postpartum day when they were entered into the intervention if they were still exclusively breastfeeding.

Only women who were exclusively breastfeeding at 30 days postpartum were eligible to participate. The proportion of eligible women (i.e. exclusively breastfeeding) at each clinic out of the total number of women who were 30 days postpartum is not available. However, based on information about the breastfeeding practices of the general population attending these clinics, the proportion exclusively breastfeeding at 30 days postpartum is 84% for Alameda Clinic and 88% at CEDIUC.

Mothers and infants in the intervention group were cared for together by a team consisting of a pediatrician and a nurse-midwife. On the first visit at 30 days postpartum the nurse-midwife discussed with the mother, during a group session, the alternatives that can be used to exclusively breastfeed after returning to work, including a practical demonstration of hand expression of milk. All mothers were observed while breastfeeding and hand expressing their milk; any related problems were addressed and solved. The infant was examined and anthropometric data gathered. Mothers were encouraged to practice hand expression of their milk daily to develop the skill before returning to work, and to build up a stock of frozen expressed breastmilk. They also received handouts on milk expression and storage.

Mothers and infants in the intervention group were followed monthly by the team during the first six months and at twelve months. At each visit mothers were interviewed about their breastfeeding status, daily hours worked, sick leave due to maternal or infant illness, and number of nursing episodes. To document milk expression, records were kept about frequency of breastfeeding and milk expression, volume expressed, time required, and method used. The pediatrician also documented the type, frequency, and volume of feedings. All visits included a physical exam of the infant, which included measures of weight, length, and head circumference.

If the infant was found to be in good health and growing adequately, the mother was encouraged to continue exclusive breastfeeding. If the weight gain of the infant was lower than desirable and/or the mother was having difficulties in expressing enough milk, breastfeeding and expression behaviors were discussed.

Women who had breastfeeding problems were cared for more frequently and invited to attend the clinic or call in when needed. Fathers and other relatives caring for the infant were encouraged to participate in the visits to the clinic as a way of involving them in supporting the mother in exclusive breastfeeding. If a mother failed to show up, the nurse would contact her by telephone and reschedule her appointment.

The control group consisted of 116 women who delivered at the University Hospital, planned to return to work before 120 days after delivery, were exclusively breastfeeding at 30 days postpartum, and received well-baby care at the Alameda Clinic. The mothers were contacted and invited to participate in the study in the maternity ward. Women who agreed to participate were given a twelve month calendar and asked to fill in the following information: days worked, infant illness, sick leave due to maternal or infant illness, type and volume of infant feeding, and infant's anthropometric information. After each infant check-up by a pediatrician, monthly during the first six months and at twelve months, the nurse called the mother and recorded the information.

At six months postpartum, each group had a similar percentage of women lost to follow-up (6.9% in the control group and 7% in the intervention group).

Results

The intervention and control groups were similar in terms of age, educational level, marital status, parity, type of delivery, gestational age, birth weight, and infant's sex (Table 1). Women in both groups were employed as teachers, secretaries, nurses aid, factory workers, saleswomen, clerk women, college and university students.

The average time when women returned to work was 97 ± 43 days postpartum in the control and 91 ± 24 days postpartum in the intervention group. In the intervention group, 50 percent of women had returned to work by 91 days postpartum. In the control group, 50 percent had returned by 88 days postpartum.

Data on infant feeding expectations were collected at 30 days postpartum. Expectations were similar between the two groups. Virtually all women in both groups indicated that they would like to continue exclusively breastmilk feeding their infant when returning to work (98.1% of the control and 99.1% of the intervention group). In addition, there was no difference between groups in the duration of breastfeeding thought to be advisable (Graph 1).

The percentage of infants fed exclusively breastmilk at six months varied from 6% in the control group to 53.4% in the intervention group ($p < 0.001$) (Table 2, Graph 2). The proportion of infants weaned at six months in the control group was 34%, compared to 8.2% in the intervention group ($p < 0.001$).

Strategies Used to Extend the Duration of Exclusive Breastfeeding

- ▶ Returned to work after sixth postpartum month or not at all: control 12%, intervention 12.9%.
- ▶ Delayed returning to work until after the end of the postnatal leave: control 7.4%, intervention 12.8%.
- ▶ Took the infant to the work place or worked at home: control 5.6%, intervention 6.4%.
- ▶ Worked less than 33 hours per week: control 25%, intervention 14.7%.
- ▶ Took the infant to a day care center: control 19.4%, intervention 25.7%, and breastfed during working hours: control 57%, intervention 77%
- ▶ Combined the above alternatives with expressing their milk: control 23.1%, intervention 66.2%.

Method Used for Expressing Breastmilk

Among the 90 women of the intervention group who expressed their milk, 69 were using hand expression, 24 used hand pumps, and seven used both methods. In the control group, among the 25 women who expressed milk, 22 used hand expression, two used hand pumps, and only one used both methods. Information about the number of episodes of breastmilk expression, average time per day spent expressing breastmilk, and the volume of breastmilk expressed by method of expression are described in Table 3.

Maternal Satisfaction

Factors women believed to be supportive or would have helped them maintain exclusive breastfeeding are described in Table 4. Factors that made the maintenance of exclusive breastmilk feeding difficult are described in Table 5.

Women's expectations and satisfaction with the experience of breastfeeding and working are shown in Table 6. The rating women gave to questions related to the experience, effort, satisfaction, and appreciation of health professional support on a scale from one to seven are shown in Table 7.

Maternal and Infant Illness

When infants in the intervention group, who were fed only their mother's milk for six months, were compared to those still breastfeeding, but supplemented, the relative risk of respiratory infections was 1.9 and of diarrhea was 7.8 (Graph 4).

Regarding sick leave due to women's illness, seven (6.5%) women in the control group made use of it with an average duration of eighteen days. In the intervention group, eight (8.1%) women requested it, with an average of fifteen days of leave.

Thirty-four (32%) of women in the control group requested sick leave due to infant illness in the control group for an average of sixteen days compared with 52 (38%) of the women in the intervention group, with an average of ten days ($p=0.05$).

The total average sick leave days per infant during the first six months of life among the control group was 4.7 days and 3.5 days in the intervention group (Table 8, Graph 5).

Discussion of the Hypotheses

- ▶ The impact of clinical support and counseling on breastfeeding working mothers was higher than expected since the initial hypothesis involved an increase of the percentage of infants fed exclusively their mother's milk at six months from 17 to 40%. Actual results showed an increase from 6% to 53%.

- ▶ Women in the intervention group were able to find suitable and satisfying alternatives to maintain their milk production including hand and pump milk expression, feeding at the day care or at home during work hours, reducing the hours worked, and delaying the return to work.
- ▶ The higher relative risk of respiratory infections and of diarrhea among supplemented infants compared to those exclusively breastmilk feeding in this intervention confirm the results of previous studies.
- ▶ When compared to the control group, the women in the intervention group did not show a statistically different level of satisfaction with the type of infant feeding. Nevertheless, even though a large percentage of women from the intervention group felt that it was difficult to maintain exclusive breastfeeding, 95% of them scored a maximum level of satisfaction with this experience.

Discussion of the Research Questions

Are working women able to maintain exclusive breastfeeding for six months?

Yes, 53% of the women from the intervention group completed the six first months postpartum exclusively breastmilk feeding. Among those women who were not able to reach that goal, most of them were feeding predominantly their own milk with 24.7% of the infants supplementing with formula and only 8.2% weaned by that time.

Do clinical support and counseling increase the duration of exclusive and total breastfeeding among working mothers?

The intervention showed that clinical support and counseling can make a significant impact on the duration of exclusive and total breastfeeding considering that only 6% of the women in the control group were able to exclusively breastfeed for six months, most of whom chose to stop working. In the intervention group, 53% of women maintained exclusive breastmilk feeding with 87% of them returning to work.

The differences in care of both groups were that in the intervention group mother and infant were cared together by a team of professionals who were motivated and knowledgeable about breastfeeding. Health matters of both infant and mother including family planning, sexual and gynecological issues were addressed during the visit. In the clinic attended by the control group, infants were seen by a pediatrician who focused only on the infant. Even though women attending this clinic have access to a natural family planning program, very few visit it.

Women from the intervention group could call up or visit the clinic any time they had concerns about their milk production or had any breastfeeding or health related problems. They always received help through the phone or at the clinic. This service was not available at the control clinic.

The kind of care received by the intervention group increased women's trust in their own resources. The clinic was the place where women who have to fulfill so many roles, (the family care giver, house keeper, worker), had the opportunity to be "mothered" herself.

The percentage of infants weaned by six months was also significantly different in both groups. In the control group, 33.6%; in the intervention group, 8.2%.

What methods are used by mothers to continue feeding their infants breastmilk after returning to work?

Even though women chose the variety of methods mentioned above, most of those in the intervention group combined the alternatives with expressing their milk.

Teaching women how to hand express their milk during the first postpartum weeks, counseling them to practice it daily before returning to work, and encouraging them to build a stock of frozen milk were key to the successful promotion of exclusive breastfeeding in the intervention group. Although 23% of the women in the control group at some time expressed their milk, they were not successful in maintaining the volume needed to maintain exclusive breastmilk feeding.

Much is discussed about the benefits of having a day care center for the infant. The difficulty of day care centers for women in this study is that most of the centers were not near the work place so at most they could go only once daily to breastfeed their infant. In general, the staff of these centers are not supportive of breastfeeding and often do not accept expressed breastmilk or, against mother's request, they feed the infants formula or other foods. In this study, written information about the benefits of breastfeeding and breastmilk storage was sent to day care personnel in the centers where intervention group infants were being cared for. In our experience, grandmothers caring for the infants at home, became much more supportive of breastfeeding, if they were involved in the clinical visit and their opinions were heard and discussed.

Are women satisfied with their method of feeding their infants?

Women in both groups had similar levels of satisfaction with their infant feeding method. Women in the control group felt bottle feeding as the norm because friends around them were bottle feeding and hence were satisfied with bottle feeding their infant. In contrast, women in the intervention group had the goal of exclusive breastfeeding for six months, so many of those who had to supplement even with a minimal amount felt discouraged that they were not doing the best for their infant.

In both groups, however, those who were successful in exclusive breastfeeding or in maintaining some kind of breastfeeding for six months, were very satisfied and over 98% in both groups would have liked to maintain exclusive breastfeeding for six months.

What kind of laws, employer policies, child care, and family support do working women find most helpful for supporting breastfeeding?

Except for students, almost all women had access to 84 days postnatal leave. Generally those who returned to work earlier had more flexible and shorter work schedules. Having the privilege of staying with the infant for almost three months indeed helps to support exclusive breastfeeding. However, counselling about how to combine work and exclusive breastfeeding during maternity leave is critical to continued exclusive breastfeeding after returning to work. Many mothers from the control group were counseled to "get the infant used" to the bottle and formula in preparation to returning to work. At month two there is already a difference in the percentage of exclusive breastfeeding between both groups. In contrast, in the intervention group mothers were taught to express breastmilk during their maternity leave and to build up a store of frozen breastmilk to use after returning to work.

When women in the intervention group described the factors that supported or interfered with maintaining exclusive breastfeeding issues such as a private place and time to express their milk as well as support from employers and from other employees were mentioned. These issues were less frequently mentioned among the control group as they were not expressing their milk. Because of the fact that in Chile there are no legal breaks during which women can express their milk and work places do not have private places available for milk expression, women from the intervention group complained of having to express their milk in a public bathroom, with people knocking at the door for them to hurry back to work.

Do infants of working mothers have a lower frequency of morbidity if they are exclusively breastfed in a day care setting versus at-home?

There are significantly higher incidences of diarrhea and respiratory infections among non-exclusive breastmilk feeders compared to those fed only their mother's milk. Also, infants cared for at home experienced significantly less diarrhea and respiratory infections compared to infants in day care centers. Exclusive breastmilk feeding reduced the risks of these illnesses in both settings compared to partial or no breastfeeding, however, because of small sample sizes only the relationship between risk of diarrhea among infants in day care centers was statistically significant.

Do breastfeeding mothers require less sick leave for infant morbidity than working mothers who do not breastfeed?

There is a law in Chile which allows mothers to stay home if the infant less than twelve months of age is sick. The fact that this intervention showed less days per infant of sick leave among the women of the intervention group can help motivate employers to support breastfeeding in their work places. Sick leave because of maternal illness was similar in both groups.

Which aspects of counseling were considered most useful by mothers to maintain lactation?

Teaching women how to hand express their milk in a practical way was key in the successful maintenance of exclusive breastmilk feeding in the infants of working mothers.

Impact and Replicability of the Findings

The most valuable aspect of this study is the feasibility of its replication in both developed and developing countries. There is a trend throughout the world to offer more comprehensive care for mothers, infants, and families. This intervention provides an example of such a comprehensive approach. The fact that most of our women were successful at hand expressing their milk makes this a model that is feasible in developing countries without the requirement of expensive equipment.

Our experience has been shared as a model in the training courses in CELUC and in all BFHI Trainers Workshops. Health workers of almost all community clinics in Chile have been trained in the BFHI and have developed lactation clinics. In these clinics, this type of support for working mothers is one of the main aspects covered.

The result of this and previous studies have been shared with Chilean Congresswomen and State Ministers. The concerns of this group of working women regarding legislative discrimination and options that would support breastfeeding for working women have also been presented. There is now a bill to change some discriminatory aspects of the legislation. The bill aims to allow any working woman (not only where there are twenty or more female employees) an hour for breastfeeding and to extend the duration of the postnatal leave.

This experience has also motivated UNICEF Chile to publish a booklet on "Breastfeeding and Work" to be disseminated to workplaces, day care centers, unions, and health centers.

Program and Policy Implications

- ▶ Clinic-based breastfeeding support is effective in extending the duration of exclusive breastfeeding among working women.
- ▶ Teaching of techniques for breastmilk expression and storage are essential program components.
- ▶ Time, space, support, and closeness to the infant are important components of work settings.

Tables and Graphs

Table 1.

	Control		Study	
Number of Cases	116		146	
Loss to Follow Up	8	6.9%	10	7%
	Ave.	S.D.	Ave.	S.D.
Age	28.3	4.8	28.1	5.1
Education	14.0	1.9	13.4	2.0
Marital Status				
Married/Cohabiting	86.2%		84.9%	
Single/Separated	13.8%		15.1%	
Parity Average	1.6	1.0	1.5	0.7
Parity %				
Primiparous	58.6%		61.6%	
2	26.7%		29.5%	
3+	14.7%		8.9%	
Vaginal Delivery %	77.4%		78.8%	
Gestational Age	39.1	1.4	39.3	1.3
Infant's Sex				
Male %	56.9%		60.3%	
Anthropometry				
Birth Weight	3368	508	3499	458
Birth Length	50.5	2.5	51.1	2.0

Table 2.

Months	1	2	3	4	5	6
Study	100	99.3	92.5	79.5	63	53.4
Control	100	90.5	61.2	34.5	19	6

Table 3. Characteristics of Milk Expression Intervention Group Only

Hand Pump					
Month	Cases	Average Times/Day	Average Minutes Total Time/Day	Average ml. Volume/Day (ml)	Nursing Episodes (median)
2	1	1.0	30.0	240.0	5.0
3	12	3.0	40.0	325.0	5.7
4	22	2.7	45.0	325.0	5.0
5	24	2.8	45.0	311.3	5.0
6	22	2.9	45.7	289.5	5.2

Table 4. Factors Which Helped or Would Have Helped Women Maintain Exclusive Breastfeeding for Six Months

Factor	Control	Study
Delay returning to work	64.7%	43.2%*
Reduce work hours	45.7%	37.0%
Have a private place to express milk	12.1%	39.7%*
Have time to express milk	16.4%	41.1%*
Support from employer	22.4%	45.9%*
Support from other employees	17.2%	45.2%*
Flexible hours to be able to breastfeed infant	44.0%	26.7%*
Having the privilege of the legal one hour for breastfeeding	30.2%	22.6%
Option of a day care center	36.2%	27.4%
Other	10.3%	4.8%

*Statistical difference 5% (Chi-Square)

Table 5. Factors Which Made it Difficult for Women to Maintain Exclusive Breastfeeding for Six Months

Factor	Control	Study
No private place to express milk	7.8%	32.2%*
Shortage of time to express milk	9.5%	43.2%*
Lack of support from other employees	6.9%	11.6%
Lack of support and flexibility from employer	14.7%	28.1%*
No access to a day care center	28.4%	30.8%
Denial of the legal one hour to breastfeed	15.5%	17.1%
Other	13.8%	4.8%*

*Statistical difference 5% (Chi-Square)

Table 6.

Percentage of Affirmative Answers	Control	Study
Before entering this study did you think it was possible to work and exclusively breastfeed your infant for six months?	61.4%	29.2%
Would you recommend exclusive breastfeeding for six months to a friend who works?	83.2%	100%
Would you try to breastfeed your next child exclusively for six months while continuing to work?	84.2%	100%

Table 7.

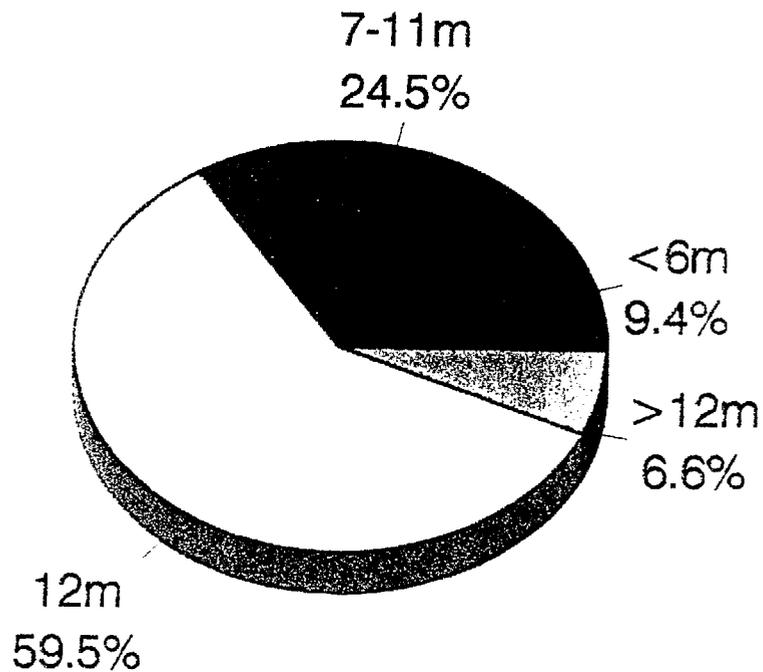
Rating from 1 to 7 (1 = negative; 7 = positive)		Control	Study
How would you rate the experience of combining work with caring and feeding your infant?			
Average	0.0011	6.2	6.6
Standard Deviation		1.1	0.8
P-Value			
Rate the level of effort that these implied.			
Average		4.9	4.2
Standard Deviation		1.8	2.1
P-Value	0.0035		
Rate the level of satisfaction with the experience.			
Average		6.5	6.6
Standard Deviation		1.1	1.1
P-Value	0.9758		
Rate the quality of health professional support that you received.			
Average		6.2	6.9
Standard Deviation		0.9	0.2
P-Value	0.0001		

Table 8.

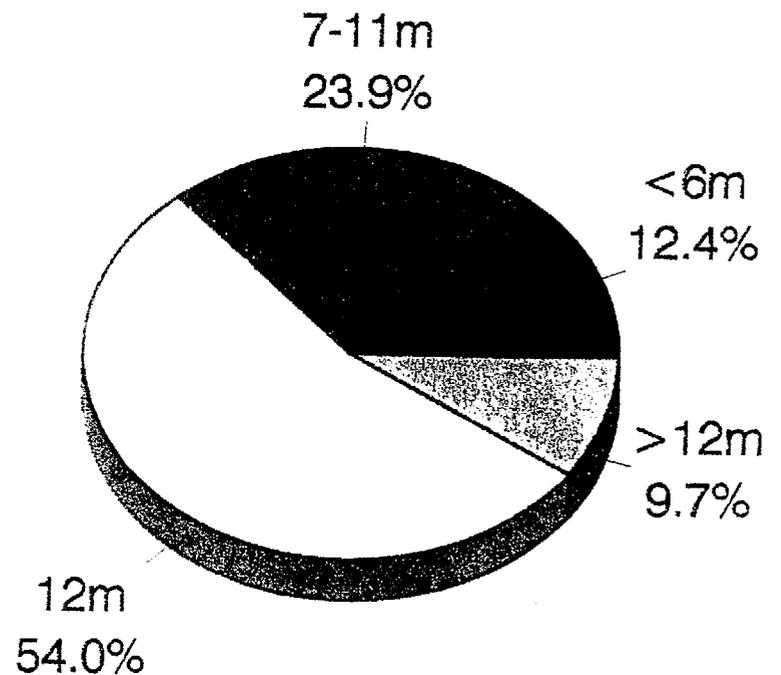
Sick Leave Due to Infant Illness	Control	Study
n	34	52
%	32	38
Average Days	16 (SD 15.4)	10 (SD 7.5) (p=0.05)
Sick Leave Due to Women's Illness		
n	7	8
%	6.5	8.1
Average Days	18	15
Average Days of Sick Leave Due to Infant Illness Among the Total Population	4.7 (SD 1.8)	3.6 (SD 0.4) (p=0.01)

Duration of Breastfeeding Thought Advisable by Women

CONTROL

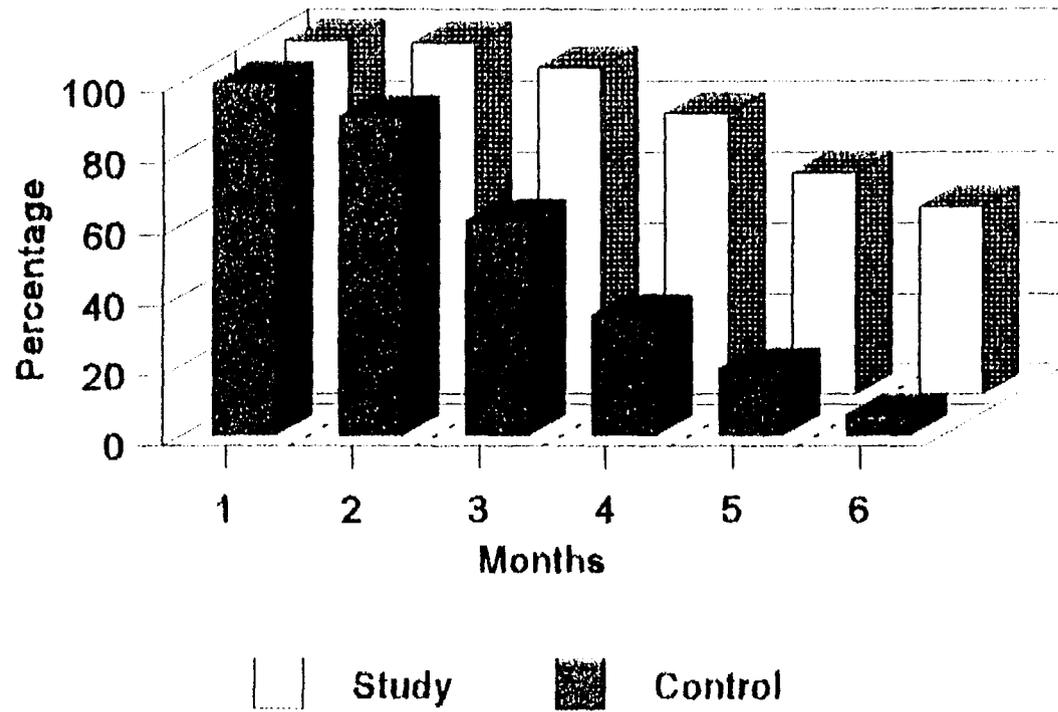


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Graphic 1.

Exclusive breast milk feeding by month

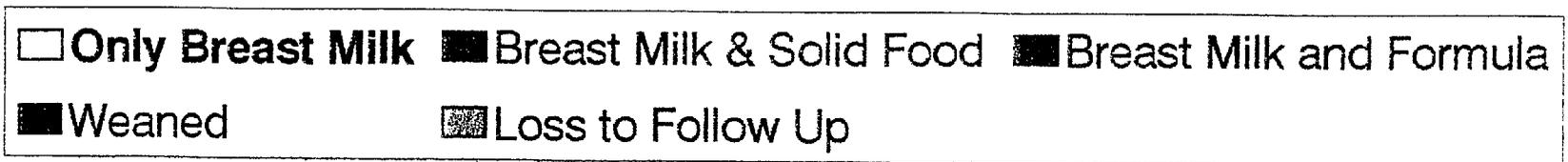
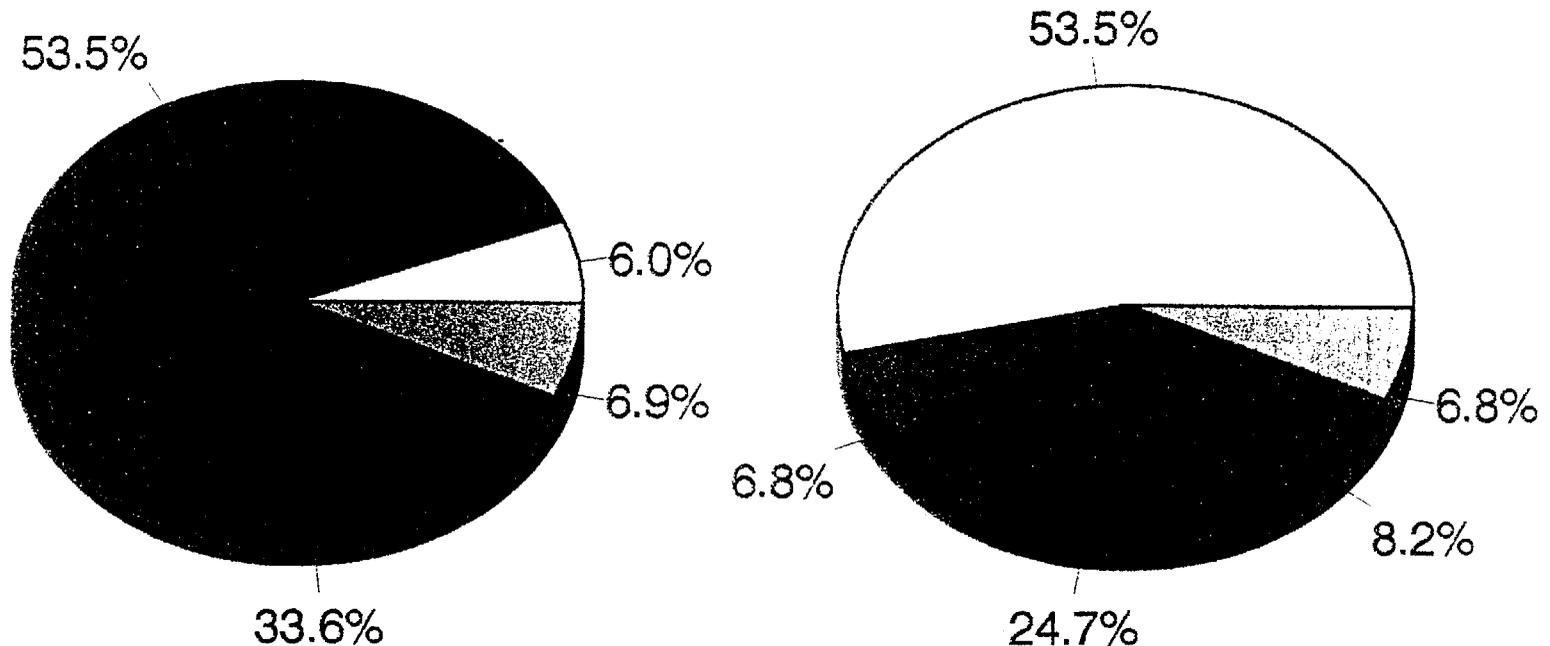


Graphic 2.

Type of Feeding at 6 Months

CONTROL

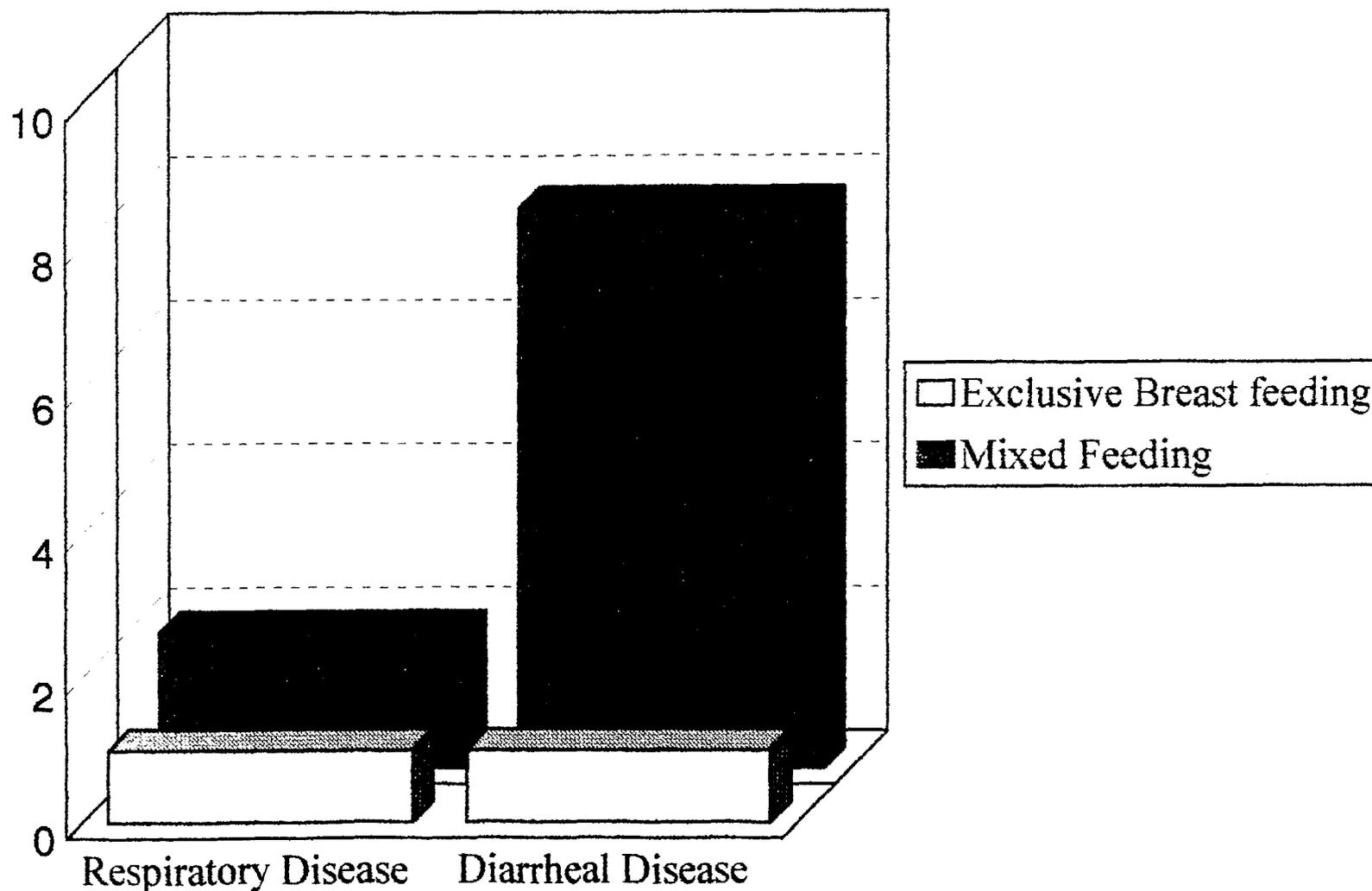
STUDY



Graphic 3.

Relative Risk of Respiratory and Diarrheal Disease According to Type of Feeding

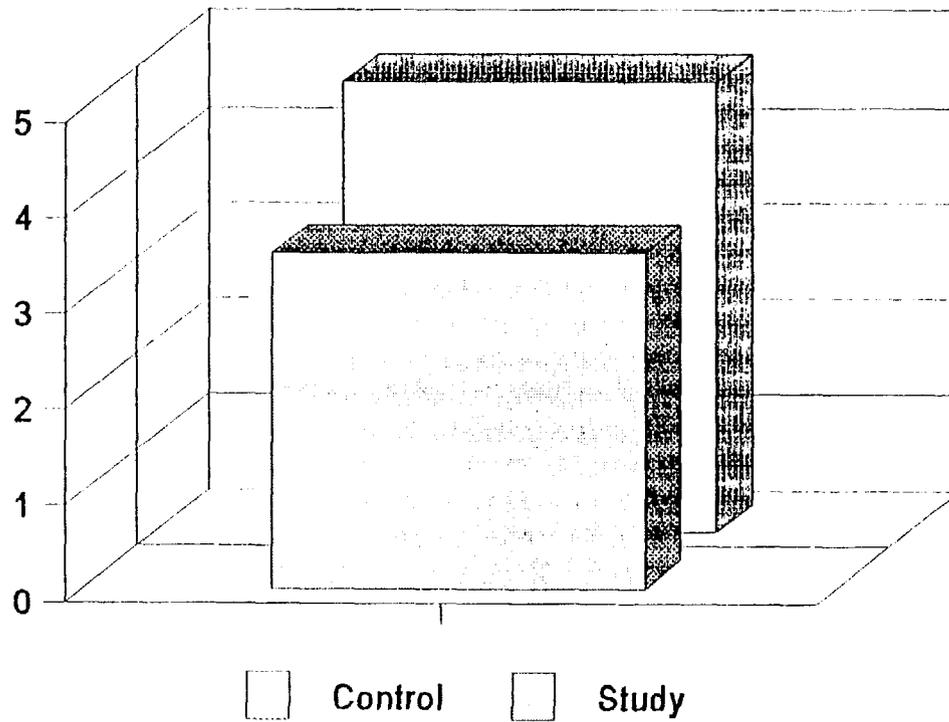
(Reference = Exclusive Breastfeeding)



Graphic 4.

Graphic 5.

**Average days of sick leave due to Infant Illness
Among total population**



WELLSTART INTERNATIONAL

Wellstart International is a private, nonprofit organization dedicated to the promotion of healthy families through the global promotion of breastfeeding. With a tradition of building on existing resources, Wellstart works cooperatively with individuals, institutions, and governments to expand and support the expertise necessary for establishing and sustaining optimal infant feeding practices worldwide.

Wellstart has been involved in numerous global breastfeeding initiatives including the Innocenti Declaration, the World Summit for Children, and the Baby-Friendly Hospital Initiative. Programs are carried out both internationally and within the United States.

International Programs

Wellstart's *Lactation Management Education (LME) Program*, funded through USAID/Office of Nutrition, provides comprehensive education, with ongoing material and field support services, to multidisciplinary teams of leading health professionals. With Wellstart's assistance, an extensive network of Associates from more than 40 countries is in turn providing training and support within their own institutions and regions, as well as developing appropriate in-country model teaching, service, and resource centers.

Wellstart's *Expanded Promotion of Breastfeeding (EPB) Program*, funded through USAID/Office of Health, broadens the scope of global breastfeeding promotion by working to overcome barriers to breastfeeding at all levels (policy, institutional, community, and individual). Efforts include assistance with national assessments, policy development, social marketing including the development and testing of communication strategies and materials, and community outreach including primary care training and support group development. Additionally, program-supported research expands biomedical, social, and programmatic knowledge about breastfeeding.

National Programs

Nineteen multidisciplinary teams from across the U.S. have participated in Wellstart's lactation management education programs designed specifically for the needs of domestic participants. In collaboration with universities across the country, Wellstart has developed and field-tested a comprehensive guide for the integration of lactation management education into schools of medicine, nursing and nutrition. With funding through the MCH Bureau of the U.S. Department of Health and Human Services, the NIH, and other agencies, Wellstart also provides workshops, conferences and consultation on programmatic, policy and clinical issues for healthcare professionals from a variety of settings, e.g. Public Health, WIC, Native American. At the San Diego facility, activities also include clinical and educational services for local families.

Wellstart International is a designated World Health Organization Collaborating Center on Breastfeeding Promotion and Protection, with Particular Emphasis on Lactation Management Education.

For information on corporate matters, the LME or National Programs, contact:

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