

Clinical Support Can Make the Difference in Exclusive Breastfeeding Success Among Working Women

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Summary

Exclusive breastfeeding has generally been considered incompatible with working separated from the infant. This prospective, controlled intervention trial shows that breastfeeding support, including anticipatory counseling and monthly clinical follow-up of the mother and infant, can significantly increase the percentage of infants exclusively fed with breastmilk at the end of 6 months of life. Over 80 per cent of women from control and intervention groups expressed a desire to breastfeed for more than 6 months and more than 50 per cent thought it was best for the infant to be exclusively breastfed for 6 months. Only 6 per cent of women in the control group were able to complete 6 months of exclusive breastmilk feeding compared to 53 per cent of those in the intervention group. The most important difference between the strategies used by both groups of mothers for maintaining exclusive breastmilk feeding after returning to work was that only 23 per cent of the control group practiced milk expression compared to 66 per cent in the intervention group. All women from the supported group stated that they would advise a friend to combine exclusive breastfeeding and work and that they would like to do so again with another child.

Introduction

The advantages of exclusive breastfeeding for infants' growth,^{1–3} development,^{4–8} health,^{9–22} and child spacing^{23–27} are well documented in the literature. However, exclusive breastfeeding in the modern urban setting is complicated by the increasing tendency for women to work in situations where they are separated from their infants. The inter-relationship between women's work and breastfeeding has been an issue of much debate among policy makers, health workers, and families, and the increase in the number of women working separated from their infants has been cited as a major reason for the decline of breastfeeding around the world. While studies show that initiation of breastfeeding is similar among women planning to return to work and those not planning to do so,²⁸ work decreases the duration of total breastfeeding, especially for those women who work more than 20 h a week,²⁹ or breastfeeding interferes with some women's return to work.³⁰

It is generally assumed by mothers, health professionals, and employers that returning to the workplace after childbirth is not compatible with exclusive breastfeeding unless there is support in the workplace. In the United States, there appears to be a growing trend among companies to offer employer

support for breastfeeding and several large corporations listed in the 'Fortune 500' report having these policies. In a breastfeeding support program for employees and students of the School of Nursing at the University of Minnesota, 47.4 per cent of the mothers in the program were able to feed their infants only breastmilk.³¹ However, another study found a negative attitude among employers surveyed toward offering breastfeeding support for their employees.³²

A hospital- and clinic-based breastfeeding promotion program was developed to help increase the duration of breastfeeding in urban women delivering at the Catholic University Hospital in Santiago, Chile. Among women who did not work away from their homes, there was an increase of exclusive breastfeeding at 6 months from 31 per cent of the women studied prior to the program to 66 per cent of the women studied after the program was established.³³ The breastfeeding promotion program included training of the healthcare team, prenatal breastfeeding education, reduction of mother–infant separation after delivery, support for the initiation of breastfeeding immediately postpartum, rooming-in, early follow-up after discharge, and access to a lactation clinic. The clinic focused on the prevention and management of breastfeeding problems and provided opportunities for frequent infant follow-up with special emphasis on maintaining exclusive breastfeeding for 6 months. As a consequence of this program, a lactation clinic has

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continued to offer support to breastfeeding mothers since 1990.

Subjects and Methods

This study, which took place from 1993 to 1995, was designed as a prospective follow-up of a group of mothers and infants who were exposed to a breastfeeding support program for working women (intervention group), compared to a control group. All women were entered into the study at day 30 postpartum because breastfeeding support during that period is available to all women who deliver at the Catholic University Hospital. Except for a few students, the majority of mothers in this study were covered by the Chilean legislation protecting working mothers which includes the following: maternity leave for 6 weeks prior to and 12 weeks after delivery at full salary, prohibition of dismissal for 1 year after delivery, two nursing breaks daily not exceeding a total of 1 h, sick leave for the mother due to infant illness during the first year, and mandatory day care in institutions that employ 20 or more women.

The control group consisted of 116 women who delivered at the Catholic University Hospital, who planned to return to work before 120 days after delivery, and who planned to receive regular well baby care at the Alameda Clinic. Mothers were contacted while in the maternity ward and invited to participate in the study. Control group mothers who agreed to participate were given a 12-month calendar and asked to fill in the following information: days and hours worked, time used in transportation, changes in infant feeding, infant illness, and sick leave due to mothers' or infant's illness. Women were entered into the study at 30 days postpartum if they were exclusively breastfeeding. The project nurse for the control group called the mother after each visit to the infants' pediatrician for well baby care, recorded the information she had entered on the calendar, as well as the infant's anthropometric information. She also inquired about the type of feeding, volume of expressed milk, and formula or other foods the infant received during the last 24 h. The calls were made monthly during the first 6 months and once again at 12 months.

The intervention group consisted of 146 women who delivered at the Catholic University Hospital, planned to return to work before 120 days postpartum, and planned to have regular well baby care at the San Joaquín Clinic. Mothers were contacted at the maternity ward after delivery and invited to participate in the study. Mother and infant received an appointment to the project clinic for the 30th day postpartum. Mothers were entered into the study if they were still exclusively breastfeeding.

On that first clinic visit, the project nurse for the intervention group discussed the benefits of feeding the infant breastmilk exclusively for 6 months, the alternatives that can be used to maintain the milk supply after returning to work, and existing legislation that protects working mothers. Hand-expression techniques were also taught in small groups of mothers. All women were

observed while breastfeeding and hand expressing their milk. Any related problems were addressed and solved. Breast pumps were not recommended. However, if a woman wanted to use one, she was not discouraged. Plans for child care and a feeding plan for the infant were addressed individually. Mothers were encouraged to practice hand expression of their milk daily to develop the skill before returning to work, and to build up a supply of frozen expressed breastmilk. The mothers also received handouts on milk expression and storage.

Both mothers and infants in the intervention group were seen at the clinic together by the pediatrician and the nurse-midwife monthly for the first 6 months and again at 12 months. At each visit mothers were interviewed about their health; sick leave due to her or her infant's illness; fertility and family planning; breastfeeding status; number of nursing episodes; number of days and hours worked; and transportation time. During the visit, women were invited to share concerns regarding her health, infant care, family planning, sexuality, family issues, and work-related anxieties. The project pediatrician inquired about the child's health, as well as type, frequency and volume of feedings. Infants were examined, including measurement of their weight, length and cranial circumference, and all the above data were recorded.

If the infant was found to be in good health and growing adequately, the mother was encouraged to continue exclusive breastmilk feeding. If the weight gain of the infant was lower than desirable or the mother was having difficulty in expressing sufficient milk, the breastfeeding and hand-expression techniques were discussed in a supportive way. Women with breastfeeding difficulties or infants with health problems were cared for more frequently and invited to attend the clinic or call in when needed.

Women in the intervention group were cared for in a personalized way in which they were stimulated to open up and share their concerns. These were addressed by the health professionals in a non-judgmental fashion which created an atmosphere of trust. Mothers felt free to call or return to the clinic when in need of support. This helped to increase self-confidence in their ability to cope with the entire range of roles they play at home and at work.

Fathers and other relatives who cared 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 breastmilk feeding. If a mother missed a clinic visit, the nurse would contact her by telephone and reschedule her appointment.

Results

Table 1 describes and compares the intervention and control groups. Table 2 shows the type of work carried out by women in each group. There were more teachers, other professional and clerical women in the control group and more factory workers and students among the intervention group. However, these differences were not statistically significant.

TABLE 1
Description of the population

	Control		Intervention	
Number of cases	116		146	
Loss to follow-up	6.9%		7%	
Married/Living together	86.2%		84.9%	
Single/Separated/Widowed	13.8%		15.1%	
Primiparous	58.6%		61.6%	
2	26.7%		29.5%	
3+	14.7%		8.9%	
Vaginal delivery	77.4%		78.8%	
Male infant %	56.9		60.3	
	Mean	SD	Mean	SD
Gestational age (weeks)	39.1	1.4	39.3	1.3
Birth weight (grams) ^a	3368	508	3499	458
Mother's age (years)	28.3	4.8	28.1	5.1
Mother's education (years) ^a	14.0	1.9	13.4	2.0
Monthly income (US\$)				
Personal	323.60	206.81	316.30	155.71
Family	725.06	386.86	566.90	369.82
Women participating in family income (%)	50	28	55	22
Returned to work (days postpartum)	94	27	91.5	23
Hours worked per week	41.5	11.6	41	10.6
Transportation time (hours)	1.3	0.8	1.5	0.8

^aStatistical difference 5% (chi-square)

Women's expectations regarding infant feeding were assessed at 30 days postpartum. Mothers were asked if they would like to continue feeding their infant exclusively breastmilk after returning to work. The answer was affirmative in 98.1 per cent of the control and 99.1 per cent of the intervention groups. More than 80 per cent of women from both groups expressed a desire to breastfeed for more than 6 months and more than 50 per cent thought it was best for the infant to be exclusively breastfed for 6 months.

Table 3 describes the strategies used by women to maintain breastmilk feeding. More women from the intervention group delayed the return to work for a short period, had access to day care, and expressed their milk. More women from the control group worked fewer than 33 h/week. Among women in the control group, 23.1 per

cent expressed their milk while 66.2 per cent of the intervention group did so. Of the 90 women from the intervention group who expressed their milk, 69 used 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 one used both methods. No electric pumps were used.

Figure 1 shows the percentage of infants exclusively fed breastmilk at each month for the first 6 months among the control and intervention groups. Figure 2 shows the type of feeding for both groups at 6 months. Women were followed monthly for 6 months with a loss to follow-up of 6.9 per cent in the control group and 7 per cent in the intervention group. At 6 months, 7 (6 per cent) infants in the control group and 78 (53.4 per cent) in the intervention group were fed exclusively with breastmilk. Among the seven women in the control group who continued feeding their infants breastmilk exclusively, five chose to quit work and two had access to infant day care at the workplace. Fourteen women (12 per cent) in the control group and 19 (12.9 per cent) in the intervention group chose to delay the return to work until after 6 months postpartum. Thirty-nine infants were weaned at 6 months in the control group (34 per cent) and 12 in the intervention group (8.2 per cent; $p > 0.0005$).

Table 4 shows the time used for milk expression, volume of milk expressed, and number of nursing episodes among women from the intervention group by those using hand expression and those using hand pumps. Both methods were similar in volume obtained and time used in milk expression.

TABLE 2
Type of work

Activity	Control (%)	Intervention (%)
Secretary	19.0	20.5
Saleswoman	9.5	8.9
Teacher	8.6	6.2
Cashier	7.8	6.2
Book keeper	6.9	7.5
Professional	6.1	4.1
Administrative	6.0	3.5
Factory worker	1.8	6.8
College student	2.6	4.7
Other	31.7	31.6

TABLE 3
Single or combined strategies used by women for maintaining exclusive breastmilk feeding after returning to work

	Control (%)	Intervention (%)
Returned to work after 6th month postpartum	12	12.9
Delayed return to work after the end of the postnatal leave	7.4	12.8
Took the infant to the workplace or worked at home	5.6	6.4
Worked less than 33 h/week	25	14.7
Took the infant to a day care centre	19.4	25.7
Expressed breastmilk	23	66.2

TABLE 4
Milk expression in the intervention group

Month	Cases	Number of expressions/day ^a	Total time/day ^a (min)	Volume/day ^a (ml)	Nursing episodes/day ^a
(a) Hand Pump					
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
(b) Hand Expression					
2	10	2.3	33.5	154.0	7.3
3	42	2.3	42.6	247.1	6.0
4	72	2.6	43.9	391.8	5.5
5	59	2.9	43.6	261.3	5.4
6	47	2.7	41.2	258.7	5.3

^aMedian

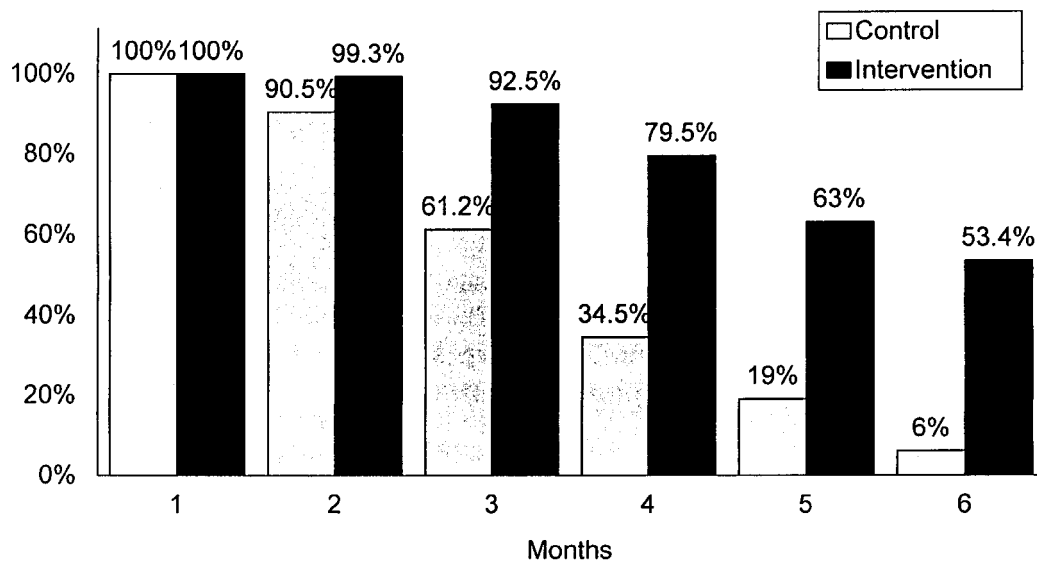


FIG. 1. A comparison between control and intervention groups of exclusive breastmilk feeding rates during the first 6 months.

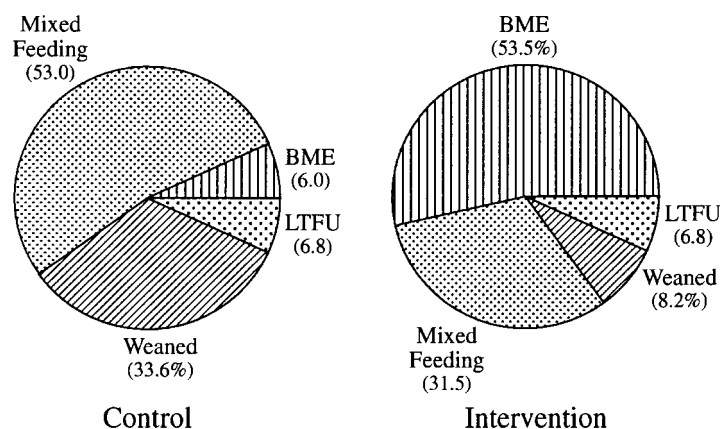


FIG. 2. A comparison between control and intervention groups of type of feeding at 6 months. (BME=exclusive breastmilk feeding; LTFU=lost to follow-up; Mixed Feeding=includes breastmilk, formula and/or solid foods; Weaned=completely off of breastmilk.)

Regarding women's satisfaction with the experience of exclusive breastmilk feeding and working, data showed that 100 per cent of the women in the intervention group would recommend the experience to a friend and would try to repeat this experience themselves with another child, compared to 83.2 per cent recommending it to a friend and 84.2 per cent willing to try it with a next child among the control group.

Discussion

The importance of this study is that it shows that even with relatively supportive legislation, only 6 per cent of women delivering in a baby-friendly hospital (a hospital that follows the Ten Steps to Successful Breastfeeding and has established policies to ban the use of free or low-cost supplies of breastmilk substitutes, feeding bottles and teats) and willing to breastfeed their infants, are able to maintain exclusive breastmilk feeding for 6 months without special clinical support and counseling. The study also shows that clinical interventions supportive of breastfeeding can make a great difference in the possibility of successfully combining exclusive breastmilk feeding and work. The follow-up and pediatric care between the groups differed principally in the health professionals' knowledge of, and motivation for, promoting and supporting breastfeeding, and in the provision of joint mother and infant follow-up which were not available to the control group.

Women in this study needed or wanted to work. Thus, in most instances quitting work to maintain breastfeeding was not a viable option. Delaying the return to work with a longer maternity leave is typically perceived as one of the only alternatives to extending exclusive breastfeeding in working women. Although staying at home with the infant certainly has its advantages from

the feeding point of view, this study has demonstrated the viability of other options. Having infant day care near the workplace is another useful but expensive alternative which was available to less than 26 per cent of the women in this study. Working fewer hours, taking the infant to the work place or working at home are also possible options although few of the mothers studied were able to do so.

Although hand expression of milk seems easy to perform, it is difficult to obtain enough milk without learning the proper technique and practicing the skill. That is why anticipatory counseling, practicing expression before returning to work and adequate support are essential. Hand expression is an easy technique that, when taught and practiced correctly, can be as effective as any pump and is available to every woman. Being effective in milk expression allows women to maintain exclusive breastmilk feeding when required to work separated from the infant and without nearby day care. Even with access to infant day care for breastfeeding, women might not be available at the time when the infant is hungry, so that leaving some expressed breastmilk can reduce mothers' and infants' stress about scheduling.

Concerns about overburdening women who work and have to manage multiple roles and responsibilities, by having to nurse her infant and express her milk, are commonly raised. This study found that 100 per cent of women, if cared for and supported, would repeat the experience of combining breastmilk feeding and work, and would recommend it to their friends. Clearly the experience for them was well worth the effort.

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