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A Community in Transition

Deconstructing Breastfeeding Trends in Gibraltar, 1955–1996

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Introduction

Despite widespread scholarly interest in infant feeding practices, there are few long-term quantitative studies on the subject at the national or community-based level (see, for example, Martinez and Nalezienski 1981; Kinter 1985; McNally, Henericks, and Horowitz 1985; Liestøl, Rosenberg, and Walløe 1988; Siskind, Del Mar, and Schofield 1993; Ryan 1997). Reasons for the paucity of studies are complex, but some factors include: (1) lack of availability of medical and survey-based data on infant feeding, (2) the issue of deconstructing variation existing within and between complex social units at the local and national level, and (3) most importantly, a focus on more immediate outcome measures, such as low infant survivorship and poor infant/child growth and development.

The present study contributes to our understanding of secular change in infant feeding by examining four decades when rapid sociopolitical change was driven by both global and local events. Supported by a quantitatively based cohort construct and supplemented by qualitative information, we posit that rapid change in culturally mediated behavior such as breastfeeding is "best" examined and understood when the importance of time and place and its impact on collective social behavior is recognized.

Situating Infant Feeding Practices: Decades of Previous Research

There exists a staggering quantity of literature on the benefits of breastfeeding including its role in reducing infant mortality and morbidity and improving maternal health. Culturally mediated infant feeding decisions can have immediate and long-term biological consequences. It has been suggested that breastfeeding mediates infant exposure to pathogens, promotes healthy physiological and cognitive development, and protects against adult obesity, heart disease, diabetes, and allergies (Dettwyler and Fishman 1992; Cunningham 1995; Holman and Grimes 2003; Kramer and Kakuma 2002; Horta et al. 2007; but see Bauchner, Leventhal, and Shapiro 1986). Studies in the developing world tend to focus on protection against acute infectious diseases (for example Kramer and Kakuma 2002), while those in developed nations concentrate on long-term benefits (Horta et al. 2007). Because of its reported advantages, breastfeeding is promoted by national governments, advocacy groups, professional medical organizations, and global organizations including the WHO and UNICEF (Gengler, Mulvey, and Oglethorpe 1999).

The specialization of research on infant feeding—from disciplines as diverse as clinical nursing, medicine, public health, nutrition, psychology, sociology, and history—has led to what some authors term the “compartmentalization” of knowledge (Quandt 1998). Since anthropology is located at the intersection of biology and culture, it is well suited to the topic of infant feeding. Anthropologists are able to contribute to the literature by providing a “deep” analysis of a behavior that is both cultural and biological (Van Esterik 2002). By promoting interdisciplinary study (Dettwyler and Fishman 1992), the field moves away from a quest for simple solutions (Quandt 1995).

Supplementing breast milk with other foods has always been a feature of infant feeding (Fildes 1986), but became much more widespread when commercially prepared infant foods appeared by the mid-nineteenth century. In its earliest stages, supplementary feeding was a “death warrant” for babies (Apple 1987: 4). Infants were typically fed with pap, a mixture of bread and water, or cow’s milk, both of which are nutritionally insufficient for a human newborn (Apple 1987; Fildes 1986). Faced with high rates of infant mortality due to malnutrition, both the medical profession and mothers needed an acceptable substitute for breast milk. Artificial substitutes were manufactured as early as 1840; by the 1890s many different commercially prepared infant formulas were available throughout Europe and North America (Apple 1994).

The early 1900s was a time of rapid technological innovation. North America became a new frontier for the development of “scientific” infant formula (Apple 1987). At the turn of the twentieth century, physicians were experiencing an increase in prestige and authority. They were the guardians of science, holding knowledge the public did not possess (Shorter 1985). Science represented progress and the creation of complex infant formulas became the “modern” way to feed a baby. As infant formula became more popular, expertise on feeding increasingly became the domain of physicians (Apple 1987). Advances in bacteriology, nutrition, and physiology im-

proved the quality of formula, and artificial feeding became more widespread. The commercial production of infant formula was a highly profitable endeavor, and it was heavily marketed to both women and doctors. By the 1930s, following pressure from doctors, marketing was limited to medical professionals (Apple 1994). Over time, artificial feeding became a socially and medically acceptable substitute for the “old-fashioned” practice of breastfeeding (Apple 1994; Hausman 2003) and, by World War II, breastfeeding rates in many developed countries had plummeted.

From the end of World War II to the early 1970s, when breastfeeding rates reached their lowest point, breastfeeding initiation and duration rates continued to drop steadily in Europe, North America, and Australia (Jelliffe and Jelliffe 1978; Martinez and Nalezienski 1981; Hendershot 1984; Liestøl, Rosenberg, and Walløe 1988; Apple 1994; Ryan 1997). The medicalization of motherhood, which began with artificial formula, continued as birthing moved from the home to the hospital (Apple 1987). Hospitalized births required strict rules for mothers. Due to fear of diarrheal disease, babies were isolated in antiseptic wards except for routine feeding times. Early initiation of breastfeeding and mother-infant bonding was not possible under such a system, and the scheduled nature of breastfeeding likely led to problems of insufficient milk supply (Apple 1994). It is not surprising, then, that mothers would lose confidence in their ability to nourish infants solely by breastfeeding, and turn to artificial feeding as a substitute. The medical profession was also ambivalent about breastfeeding: it was not commonly taught in medical school and, at the time, artificial feeding was believed to be a nutritionally acceptable substitute for breastfeeding (Hirschman and Butler 1981).

The Second World War also marked a change in women’s status in society. Women who worked in factories during the war were reluctant to return to the home, and female participation in the labor force grew steadily throughout the next few decades. Disposable incomes rose, and being able to afford “modern” infant formula was a status symbol (Quandt 1995). Women with more education and higher incomes were leaders in changes in infant feeding trends (Liestøl, Rosenberg, and Walløe 1988). Educated women were often more aware of current literature, which at the time promoted artificial feeding at least as actively as breastfeeding (Apple 1987; Van Esterik 1989; Knaak 2005).

After reaching a low in the early 1970s (Ryan, Wenjun, and Acosta 2002; see also Jelliffe and Jelliffe 1978), breastfeeding rates began to reverse their downward trend. The social activism of the 1960s and 1970s had spawned feminist movements that raged against medicalization of infant feeding and advocated a return to natural childbirth and motherhood (Liestøl, Rosenberg, and Walløe 1988; Quandt 1995; Hausman 2003).

By the late 1980s the upward trend in breastfeeding was well established, increasing at a rate of about 2 percent per year in the United States (Ryan, Wenjun, and Acosta 2002). Yet, breastfeeding initiation and duration have not yet met guidelines established by government agencies or the WHO. Many authors, particularly those

using an epidemiological approach to identifying risk factors, end their articles with the suggestion that more education will solve the problem. The implicit assumption is that if women just had the proper knowledge, they would automatically make the decision to breastfeed (Ryan 1997; Gengler, Mulvey, and Oglethorpe 1999; Van Esterik 2002). As in earlier time periods (Fildes 1986; Apple 1987; Dobbing 1988; Van Esterik 2002), there is currently little dispute that breastfeeding is the optimal method of infant feeding. Although today almost all women try to initiate breastfeeding at birth (Scott et al. 2001; Ryan, Wenjun, and Acosta 2002; Hofvander 2005; Lanting, van Wouwe, and Reijneveld 2005; Horta et al. 2007; Singh, Kogan, and Dee 2007), many stop soon after leaving the hospital (Liestøl, Rosenberg, and Wal-løe 1988; Scott et al. 2001). The high rates of breastfeeding initiation suggest that women want to try breastfeeding, but for some reason choose not to continue. In contrast to the beginning of the twentieth century, women who choose to artificially feed their infants today do so not because they are actively embracing bottle feeding, but because they are rejecting breastfeeding (Losch et al. 1995).

The Case Study Approach

The preceding discussion describes infant feeding trends primarily in Britain, Scandinavian countries, the United States, and Australia. The trends are often implied to be universal, although authors do acknowledge regional variation (Ryan 1997). An examination of secular trends in breastfeeding in Gibraltar complements these earlier studies by adding to our knowledge regarding the scope of variation in breastfeeding trends as well as how quickly change can occur in infant feeding practices, a fundamental culturally defined element of society.

The grounding for this research lies in case study methodology. While there are discipline-based variations inherent to the case study approach (see for example Tellis 1997), there are a number of common attributes collectively defining this type of investigation. Most importantly, the fundamental unit of study is the community. In Gibraltar, the community possesses a constellation of special qualities that render it akin to a "living laboratory" for research studies. It is self-defined, spatially bounded, and contains sufficient diversity to allow a changing range of responses over time, including those triggered by sociopolitical forces. Case studies adopt inherently triangulated research strategies—using multiple and independent sources of information encourages the desirable qualities of validity, reliability, and consistency. The case study approach aims for both a holistic perspective, to situate findings in a broader context, and a fine-grained perspective, to understand the peculiarities of local dynamics.

The Study Site: Gibraltar

Gibraltar is a small British overseas territory located at the western entrance of the Mediterranean. Connected to Spain at its northern extremity, Gibraltar is otherwise surrounded by water. The landscape of "the Rock" is dominated by a 1,396-foot limestone outcrop, with most Gibraltarians living in tightly packed housing clusters

around its base. The territory is a diminutive 6.5 square kilometers in size and, with a population size of just under 27,000 in 1991, Gibraltarians continued to live under very crowded and congested conditions over the duration of our twentieth-century study period. Agricultural and large-scale industrial undertakings are not possible on the Rock given its limited size and local resources. As a result, Gibraltarians are highly dependent on imports, including basic necessities such as food and petroleum, from other places such as Spain, England, and Morocco. For much of the twentieth century, the civil population was involved in wage earning connected with commercial activities, the civil service, the military establishment, the dockyard, and construction/development projects. When England drew Gibraltar into the European Economic Community (now the European Union) in 1973, it was with the provision that Gibraltar would be a value-added-tax (VAT)-free territory. It is therefore an attractive locale for tourist spending; an estimated 5.5 million tourists entered Gibraltar by land, sea, or air in 1995 alone (Abstract of Statistics 1995).

Within this small-scale community, face-to-face contact of its residents is a daily occurrence. Living in a "cradle-to grave" context, emigration is relatively rare. In recent years, immigration has become more common as people from Britain, the European Union, and Morocco come to live and work long term. Family, neighbors, and the community serve as primary units of social reference in this highly cohesive population. The Gibraltarian culture reflects a unique fusion of Mediterranean, European, and Northern African influences, coupled with the long-term and shared experience of living in a highly overcrowded military garrison and colonial outpost. Some vestiges of colonialism remain evident, including a relatively rigid class structure. Overall, education is relatively homogeneous, though disparities emerge at the postsecondary level since, until recently, access to colleges and universities typically meant the heavy financial commitment of leaving Gibraltar.

All civilian infant births occur at the only local government hospital (St. Bernard's). During the study period, the hospital was centrally located and within minutes of all Gibraltar's residents (it has since moved). Following the English system, health care is subsidized by the government; as a result, the possibility for differential pre- and postnatal care because of relative wealth is minimal. Midwives and nurses follow women through their pregnancies beginning at about three months after conception (Sawchuk, Burke, and Benady 1997).

A Population in Flux: Social Change Under Siege

Gibraltarians have enjoyed many generations of stability on the Rock, though their lives were shaken on two occasions in the twentieth century. The first disruptive force was World War II. As part of the British Government's wartime mandate, all Gibraltarians, except able-bodied men, were evacuated. Though all those wanting to come back to Gibraltar were eventually repatriated, the process was slow and many families spent years waiting to return (see Finlayson 1996). Our study period begins in the 1950s, just as the majority of Gibraltar's 15,700 repatriated citizens had trickled back

to the Rock from places as distant as England, Northern Ireland, Madeira, Jamaica, and Tangier (Government of Gibraltar 2001).

Just as the impact of this exceptional event was receding into memory, another disruptive force set in—the politically motivated border closure between Spain and Gibraltar, which began in 1969 and lasted some fifteen years until the border reopened in 1985. Characterized as the fifteenth siege of Gibraltar (Jackson 1987), the border closure was part of a deeply rooted Spanish irredentist campaign to regain sovereignty over Gibraltar after more than two-and-a-half centuries of British rule; this objective intensified during General Franco's dictatorship of Spain (for a thorough discussion on the twentieth-century politics between Spain and Gibraltar, see Gold 1994). The campaign intensified after World War II, as Gibraltarians established local government representation, a situation that Spanish authorities argued was in violation of the Treaty of Utrecht.

Spanish authorities first focused on depriving Gibraltar of Spanish laborers, in an attempt to strangle Gibraltar's local economy. In the words of one Spanish representative: "Economically speaking, Gibraltar cannot live without Spain. There it lives at the cost of Spain and constitutes a sort of cancer in the economy of our country" (PR no. 166/67 1967). For years, Gibraltar had been acknowledged in Spain as "la piedra gorda" (the fat rock) in light of Gibraltar's more prominent economy that allowed better pay and working conditions than in neighboring southern Spain (see Stewart 1967). By withdrawing Spanish laborers and goods, it was hoped that England would feel the burdens of supplying an isolated territory and come to view Gibraltar as an unwise investment. In 1965 restrictions were first placed on Spanish women working in Gibraltar. On 9 June 1969, there was a complete withdrawal of the 4,666 Spanish men who entered Gibraltar daily to work (constituting a full third of Gibraltar's workforce). Two weeks later, on 26 June, Gibraltar was completely cut off when Spain's border gates slammed shut. Although life became difficult for Gibraltarians and it was costly for England to provision the isolated community, local feelings of opposition remained ingrained. With both sides remaining obstinate, the border closure continued for fifteen long years. It ended when the post-Franco Spanish democratic government sought membership in the European Community, since such blatant hostility against a neighboring Community member would not be acceptable (PR 30 January 1981).

Gibraltar became a different community during the border closure. Cut off from Europe's mainland, tourism plummeted and the economy suffered. For the first time in Gibraltar's history the community had to learn to live with long-term isolation, effectively becoming an island community. Solidarity was cemented and a family-like feeling reigned as people united in a common cause to resist Spanish coercion (Burke 1999). Yet the border closure had negative repercussions as well. Since provisions could no longer be acquired from Spain, the cost of living rose dramatically. Despite hardships created by the border closure, population health continued to improve, reflected in declining infant mortality rates and increasing life expectancy (see Figure 5.1).

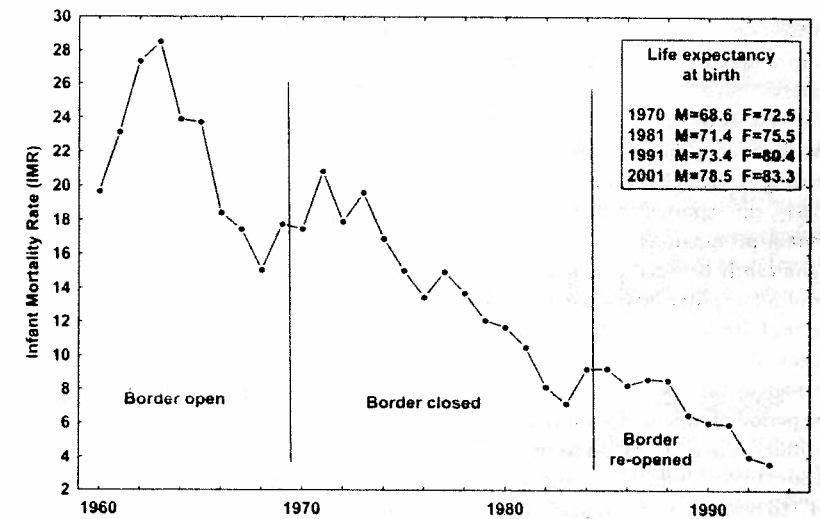


Figure 5.1. Health in Gibraltar, 1960–1993: Infant mortality rate and life expectancy by sex.

During this period, the gendered division of labor changed dramatically. In response to the shortage of workers from nearby Spain, Gibraltarian women entered the workforce in unprecedented numbers. Former restrictions on women's work outlining the kind of work women could be expected to perform were necessarily modified or removed (Burke 1999). Despite the need for female labor power, and despite the equal pay ordinance of 1975, women's jobs remained poorly paid and lacking in prestige (Martens 1987). Women in the community continued to depend on men as primary breadwinners (Martens 1987). When the border reopened in 1985, it resulted in a social and economic transformation in Gibraltar (Sawchuk 1992), as if the residents were being "pulled out of the Victorian age" (Burke 1999).

Materials and Methods

The local hospital's maternity discharge register provided summary information on mothers and infants (see Sawchuk, Burke, and Benady 1997 for a more complete description). Since Gibraltar has only one maternity facility, our data are not a sampling of births, but represent the entire population (though some births were excluded from analysis, as noted below). Husbands' occupations were extracted through record linkage with the Gibraltar Government's Births Registry and used as a proxy to assign individuals to high, medium, or low socioeconomic status (SES). We acknowledge that this study is constrained by its retrospective protocol and indirect evidence drawn from sociodemographic information. Written information on breastfeeding

in Gibraltar is extremely limited and infant feeding is a subject matter that was seldom commented on directly, or in any great detail, by health officials in their annual reports.

This study examines trends in the incidence of breastfeeding, but does not track the duration of breastfeeding over infancy. Since women tend to switch from breastfeeding to artificial feeding, and not the other way around (Hirschman and Butler 1981), the reported rates are likely to be a maximum. We focus on feeding choices among primiparous women. It has been observed that feeding choices can differ significantly between primiparous and multiparous women, as women who had fed prior infants may be influenced by those individualized experiences (e.g., a failure to successfully breastfeed the first child may lead to a decision not to breastfeed subsequent children). Hirschman and Butler (1981) note that breastfeeding rates tend to be highest for first births. Had we included all women giving birth in Gibraltar in the period of time under study, breastfeeding rates would likely be lower. Our sample includes only Gibraltarian women (born in Gibraltar) in an effort to reduce heterogeneous cultural influences, experiences, and perceptions regarding infant feeding.

To remove any biologically derived confounding influences on feeding practices, the study is limited to infants who weighed at least 2500 grams and were full term at birth. Infant feeding choices were recorded in the maternity department summary register at the time of discharge. Consequently, our data concerns infant feeding behavior established in-hospital. Adjustments may have occurred once women returned to their homes. Our measure of 'breastfeeding' includes both exclusive breastfeeding and women breastfeeding with complementary feeds (of formula). The measure is intended to capture the general willingness to initiate breastfeeding (at least within the hospital setting).

We should note that there were changes in medical practice over the study period that could have implications for breastfeeding. Obstetric procedures, such as caesarean deliveries, have been found to contribute to a decreased likelihood of breastfeeding (Rajan 1994). Intuitively, any situation where either the mother or infant requires special care postpartum may influence breastfeeding. The relative impact of "child-birth technologies" (caesarean or forceps deliveries) varied over the study period. Changing obstetric trends may be reflecting the preferences of obstetricians and/or women in Gibraltar (and, of course, the availability of technologies to make these assisted deliveries possible). While forceps deliveries were more prominent in the 1970s, there was a marked increase in caesarian deliveries in the 1990s. Regression analyses on deliveries in this community between 1960–1992 revealed that caesarean deliveries, but not forceps deliveries, were associated with increased odds of artificial feeding (Burke 1999). As a result, we appreciate that the variable nature of medical practice in the community may have played a role in breastfeeding trends.

To undertake a quantitative examination of secular trends in breastfeeding behavior, a birth cohort approach was taken. Four temporal cohorts were reconstituted to capture the marked sociocultural, political, and economic conditions surrounding

the border closure: 1955–1964 (open border), 1965–1974 (early closing/closed border), 1975–1984 (late closed border), and 1985–1994 (reopened border).

Methodologically, breastfeeding trends were analyzed using the proportional analytic approach outlined by Fleiss (1981: 138–59). The method provides information in terms of proportions of women breastfeeding their children for a given cohort or group. Statistically, the analysis employs a series of chi-square tests. If appropriate, results are partitioned into a series of further hypotheses regarding cohort differences and tests of group homogeneity (pooled cohorts). Since partitioning was suggested by the data, not planned a priori, the values of both difference and group are referred to the chi-square critical value where the degrees of freedom equals the number of cohorts minus one.

Results: Secular Trends in Infant Feeding in Twentieth-Century Gibraltar

Breastfeeding rates in Gibraltar reveal important changes in infant feeding over time. Table 5.1 presents the proportions of breastfeeding by cohort. From the first cohort (1955–1964) to the second cohort (1965–1974), the proportion of breastfeeding mothers fell by approximately 50 percent, a highly significant decline. While there was a significant increase in the proportion of breastfeeding between the second and third cohort (1975–1984), the difference was not as dramatic. Combining cohorts three (1975–1984) and four (1985–1996) proved not to be statistically significant, suggesting that over these two periods the proportion breastfeeding remained relatively stable.

Table 5.1. Proportion of infants breastfed in Gibraltar by cohort.

Cohort	Year	Proportion Breastfed	N
1	1955–64	.911	675
2	1965–74	.499	579
3	1975–84	.618	610
4	1985–96	.657	1002
Total		.657	2866

	Hypothesis tested	χ^2	df	Significance
Difference	Cohort 1 vs. Cohort 2	234.8	3	$p < .001$
Difference	Cohort 2 vs. Cohort 3	18.6	3	$p < .001$
Difference	Cohort 2 vs. Cohort (3+4)	21.1	3	$p < .001$
Group	Homogeneity (Cohort 3+4)	2.9	1	not significant
Total		275.21	3	$p < .001$

Overall, the incidence of breastfeeding in Gibraltar ranks much higher than observations in the United States at similar points in the twentieth century (see Jelliffe and Jelliffe 1978; Hirschman and Butler 1981). Gibraltar differs from other Western countries in that breastfeeding was nearly universal in the 1950s, while other countries had already begun to see a decline in breastfeeding rates. By the early 1970s, breastfeeding rates reached their lowest point, both in Gibraltar and other nations. Therefore, the steep decline in breastfeeding in Gibraltar in the 1960s represented, in effect, a “catching up” of Gibraltar to other industrialized nations. Both Gibraltar and the rest of the developed world have seen a resurgence of breastfeeding since the 1970s.

Using occupation as a proxy for SES, further analyses consider the effects of class differentials on breastfeeding behavior over time (Table 5.2). In the first cohort, 1955–1964, no significant class differences in infant feeding decisions are observed, with breastfeeding favored among women of all economic groups. The same is true for the second cohort, 1965–1974, when the decline in the choice to breastfeed occurred among all women, regardless of social class. Similarly, there are no class differentials in the third cohort, with the resurgence in breastfeeding being experienced by women in all socioeconomic groups. In contrast, significant class differences emerge during the last cohort (1985–1996), namely, those women giving birth to their first child after the border reopened. It is apparent that the discrepancy between the three classes lies principally in the rising rates of breastfeeding among the wealthy relative to the pooled women of middle and low SES. Therefore, SES is an important predictor of infant feeding choices only for the last cohort, implying that class differentials in infant feeding behavior is purely a recent phenomenon in Gibraltar.

Discussion: Gibraltar's Secular Trend in Infant Feeding

Pre-World War II

Written records on breastfeeding in Gibraltar prior to World War II are sparse but invaluable if we are to consider the issue of secular trends. Indirect information comes from the local newspaper, as advertisements for artificial formula were commonplace by 1910, if not earlier. Early medical perspectives come from the 1920 Annual Report on Public Health where it was reported that “in the great majority of cases infants have been breast-fed” (AR PH 1920: 41). The report also alludes to significant “propaganda work,” including the distribution of four thousand leaflets, to educate the public on the importance of breastfeeding for infant wellness.

A rudimentary Child Welfare Centre (see Figure 5.2) opened in Gibraltar in 1918 to assist with monitoring infant health in the postpartum period. Mothers brought along the Centre's “Weight Card and Food Record” to each visit so that infant weight could be carefully recorded. The support for breastfeeding is evident, as the card advises mothers that “no form of artificial feeding is generally so safe or

Table 5.2. Proportion of infants breastfed in Gibraltar by socioeconomic status (SES) and cohort

	Proportion Breastfed	N	CV*	
<i>Cohort 1: 1955–1964</i>				
High	.933	15	6.4	
Middle	.851	174	2.7	
Low	.902	41	4.6	
Total	.865	230		
<i>Cohort 2: 1965–1974</i>				
High	.600	45	7.3	
Middle	.514	403	2.5	
Low	.452	115	4.6	
Total	.508	563		
<i>Cohort 3: 1975–1984</i>				
High	.697	43	7.0	
Middle	.617	434	2.0	
Low	.629	124	4.3	
Total	.625	601		
<i>Cohort 4: 1985–1996</i>				
High	.778	99	4.2	
Middle	.600	585	2.0	
Low	.542	277	3.0	
Total	.601	961		
Hypothesis tested for Cohort 4		χ^2	df	Significance
Difference	High vs (Middle & Low)	14.31	2	$p < .001$
Group	Homogeneity (Middle & Low)	2.68	1	not significant
Total		16.99	2	$p < .001$

*CV is the coefficient of variation for the proportion breastfed. This parameter measures the relative amount of variability in the proportion of women who are breastfeeding within specified groups.



Figure 5.2. Interior of the Maternity and Child Welfare Centre: Gibraltar.

satisfactory as the mother's milk" and alludes to the problem of flies contaminating feeds of bottle-fed infants. The card is also revealing in that it succinctly links a focus on infant weight gain and anxieties over not producing enough breast milk. In this context, the attraction to supplemental feeds, or the altogether abandonment of breastfeeding, is evident.

The 1934 Annual Report on the Health of Gibraltar provides further insight into infant feeding practices in Gibraltar for a small number of women (n=108) in receipt of welfare support. In these cases:

The Nestlé and Anglo-Swiss Condensed Milk Company has again supplied milk and certain infant foods, also feeders, at a reduced rate. ... this assistance is greatly appreciated as the external maternity, home visiting and welfare work depend on a grant from the Colonial Government assisted by the small contributions by mothers for milk, etc., supplied at the Welfare Centre. (AR Health of Gibraltar 1934: 13)

Cow's milk, Glaxo, and Virol were all available through the Centre and, though health authorities continued to promote breastfeeding, offered as alternatives to mothers who could not or would not breastfeed, or as supplementary feeds for older infants. By the 1940s, the Infant Welfare Centre had stepped up efforts to ensure the health of infants, offering Adexolin (vitamin A and D preparation), Cod Liver Oil (vitamin D), Fersolate (iron for anemia), Ostocalcium tablets for healthy bones, vitamin C tablets, and Gentian Violet (for thrush) (AR 1946: 8). Unfortunately, well into the 1960s it was found that poor and uneducated mothers most in need of this service were less likely to attend the clinic.

Breastfeeding at Its Height: Pre-Border Closure (1955–1964)

The 1950s and early 1960s saw its own social turmoil with Gibraltarian families reuniting in the aftermath of World War II and resettling into their lives. Breastfeeding rates among primiparous women were high in the 1950s, with some 91 percent of women undertaking at least some breastfeeding prior to hospital discharge. Gibraltar is somewhat anomalous in its high breastfeeding prevalence; comparable rates in the United States and Norway at this time suggested dramatic declines in breastfeeding, with only one-third to one-half of women breastfeeding (Liestøl, Rosenberg, and Walløe 1988; Ryan 1997). However, breastfeeding rates in Gibraltar were still declining in this period, just not to the same extent as other industrialized countries.

In the 1950s, a local physician, Dr. Triay, began to voice concern that not all Gibraltarian women were breastfeeding their infants. He attributed the decline to an "ignorance on the serious consequences which omission of breast feeding may have on the future nutrition and health of ... babies," women's own doubts in their breastfeeding abilities, and the perception that artificial foods were just as good as breast milk (Triay 1955: 45–46). The same reasons are widely given for declines in breastfeeding in other countries (Apple 1987; Hausman 2003; Lutter 2000; Van Esterik 1989).

It is interesting that breastfeeding in Gibraltar, while following similar patterns to other countries, lagged behind in the breastfeeding decline. Gibraltar, due to its unique geography and position as a colonial outpost, is effectively an island, isolated linguistically, culturally, and politically from neighboring Spain. However, the displacement of women during the Second World War opened the eyes of the population to the outside world in a way that had not been done before. As women returned to Gibraltar after the war, they may have begun to practice behaviors they had witnessed during their years abroad. Since breastfeeding had been already largely replaced by artificial feeding in many of the countries that harbored Gibraltarian women during the war, it is not surprising that women returning to Gibraltar might be disinclined to breastfeed. The net effect of the evacuation could have shifted the "innovator effect" typically associated with SES, as the uniform removal of all women from Gibraltar meant that all were privy to new approaches, observations, and experiences.

Breastfeeding on the Decline: The Border Closing/Early Border Closure (1965–1974)

Perhaps one of the most often-cited factors associated with the decline in breastfeeding is the rise in women's paid employment in the twentieth century (Dobbing 1988; Gengler, Mulvey, and Oglethorpe 1999; Hirschman and Butler 1981). In Gibraltar, women's participation in the labor force rose dramatically, largely in connection with the profound local changes driven by the border closure. Prior to World War II, it was very rare that Gibraltarian women sought employment outside the home (AR DLW 1956: 22). After repatriation, there was a growing acceptance of unmarried Gibraltarian women in private industry resulting in an increase from 16 to 44 percent

employed between 1946 and 1956 (AR DLW 1956: 22). It was still Spanish women, however, who traveled across the frontier and accepted most of the available positions in domestic work, catering services, tobacco manufacturing, and dressmaking and tailoring (AR 1949: 8; AR DLW 1952/53: 20). Culturally, Gibraltar women's employment was viewed as incidental, something to "do" in between leaving school and getting married.

New opportunities for, and official encouragement of, Gibraltar women's employment grew out of Spanish-English tensions over Gibraltar. Though we will highlight a few salient points here, a more thorough discussion can be found in Burke and Sawchuk (2007). In the years leading up to the full border closure, the Spanish government enacted a number of restrictions on Spanish workers in Gibraltar. In the 1950s, the issuing of new work permits was discontinued so that only those holding previously issued permits could continue their employment on the Rock. In the 1960s, Gibraltar was also beginning to feel the effects of the wartime birth shortage and, paired with the declining number of Spanish workers, authorities appealed to Gibraltar women to enter into employment.

In an effort to encourage women into the workforce, government-associated "Official Employers" attempted to accommodate some of the needs of women with families. Married women received special maternity leave arrangements, a provision not necessarily offered by private employers (AR 1964: 42). Paid maternity leave can affect breastfeeding decisions since women with no maternity benefits must return to work quickly, and are less likely to breastfeed (Escribà et al. 1994; Liestøl, Rosenberg, and Walløe 1988; Quandt 1995; Van Esterik 2002).

Government measures to attract women to the workforce led to satisfactory results up to 1964 (AR 1965), but then there was another shock. In 1965, all married Spanish women were required to surrender their frontier working passes, effectively removing them from the Gibraltar workforce (AR 1965: 12). Then, in August 1966, all female Spanish frontier workers, some two thousand women, were denied their regular entry into Gibraltar by Spanish border guards (AR DLSS 1965/66: 14). A labor crisis ensued. Gibraltar women responded, offering their voluntary services to keep vital institutions running; Martens (1987) conceptualizes these actions as an expression of patriotism and commitment to Gibraltar. While initially working on a voluntary basis, many women eventually took up permanent paid employment, finding they were able to cope with the extra demands and welcoming the increased household income (AR 1966: 5).

With the full closure of the border and the Manpower Mission Report of 1969, it was determined that a "largely untapped group" of several thousand married women were not working because they had young children. According to the report, "opinion [was] very divided about the social desirability of encouraging a higher rate of employment in this group, but, because of the compactness of the city, the effects upon family life of mothers going out to work need not be as great as they are in other situations" (PR no. 162/69 1969: 6). A new Government Nursery opened late in

1969, the first of its kind. Though innovative, the nursery could only accommodate twenty children in its first year of operation (AR 1969: 31). Nonetheless, the very construction of the nursery sent a clear message that the government was interested in supporting employment ambitions among Gibraltar mothers.

According to one report from 1979, a rising trend towards young mothers returning to paid employment within two to three months following childbirth had been observed (AR DMHS 1979). When asked why they returned so soon, mothers responded that they needed the money or wanted to resume the pursuit of their careers (AR DMHS 1979: 25). Infants were typically left with their grandmothers. Sharing childcare with family members was also enhanced by the multigenerational households typical in Gibraltar until the 1990s, fueled, in part, by a lack of affordable housing. This aspect alone may have important implications since Mohrer (1979) found that young women living in parental homes were less likely to breastfeed since they were more likely to share childcare tasks with their mothers.

Alongside the changes occurring in the workplace, childrearing practices were also drawing attention. By 1973, declining interest in breastfeeding and a seemingly rising preference for chubby babies attracted concern from the local medical community:

There is very little desire to breast feed babies, but there seems to be an overwhelming need in mothers to spoon feed their babies on soups and cereals at a very early age. There are many overweight babies—my department is consistently trying to educate mothers in the intricacies of a well-balanced diet. Mothers continue to give all kinds of vitamins to their children, we try to discourage this practice and tell mothers that vitamins should be prescribed by the child's doctor (AR MHD 1973).

In interviews conducted earlier by Burke (1999), it became apparent that the significance of infant weight gain was not underappreciated in the community. Mothers reportedly favored bottle feeding since they could monitor the quantity of food consumed by their infants, a level of precision not possible with breastfeeding. The perception, either real or imagined, that the infant is not receiving enough food can cause a strong emotional response in the mother (Heinig et al. 2006), and anxiety over whether her milk supply is sufficient can biologically interfere with a mother's ability to produce milk (Quandt 1995). According to Heinig and co-workers (2006), mothers generally tend to be concerned if a child is underweight, but do not mind or are even proud if their child is a bit heavy.

A Return of Breastfeeding: The Late Closure (1975–1984) and Border Reopening (1985–1996)

It is important to frame social changes within larger-scale events that can impact human behavior. In the case of Gibraltar, two events exerted significant economic impacts: the border closure and the hyperinflation associated with the great oil hikes

of 1973 and 1979. These shifts resulted in a decade of economic instability when Gibraltar's economy was already troubled by the closing of the naval dockyard. Nonetheless, according to the government budget speech of 1984, financial repercussions for most Gibraltarians were held at bay through an overall increase in wages and a greater participation of women in the labor force. While it is impossible to directly attribute changing breastfeeding practices to the economy, it is possible that formula feeding became more affordable as the disposable family income rose.

The upswing in the rate of breastfeeding in the last two cohorts of the study correlates well with the general rise in breastfeeding observed in other Western industrialized countries of the time (see Hendershot 1984). Socially, however, these two cohorts are markedly different, with late 1970s–early 1980s Gibraltar still in the midst of the border closure, while 1980s–1990s Gibraltar saw an open border and a growing interconnectedness with Spain.

When the border reopened in 1985, Gibraltar changed dramatically. Unprecedented levels of tourism shot through the community, well beyond those observed before the border closed in the 1960s. More than ever before, Gibraltar was exposed to individuals and cultures from far and wide. As the exposure of women to other cultures during World War II had the potential to shape and change perceptions on infant feeding, so too did the increase in tourism and interconnectedness that followed the reopening of the border. However, while the fashion in the 1950s was to use artificial formula, this time Gibraltarian women were exposed to trends of increased breastfeeding. The economic boost instilled by tourism and government support meant that an increasing number of Gibraltarians could leave temporarily for extended education abroad (typically in the UK). On all levels, the community that emerged when the border reopened was increasingly cosmopolitan. This did not mean an easy or equal transition for all, however, since the open border meant the return of Spanish workers and employment became more competitive. Within this context of opportunity mixed with competition, socioeconomic stratification of Gibraltarian women and their families became more apparent, the effects of which potentially extended to infant feeding choices.

The Emergence of Class Differentials in Breastfeeding Rates

A recurrent theme in the literature is that women of high SES drive breastfeeding trends in communities depending on what is perceived as desirable (or even “fashionable”) at the time (Liestøl, Rosenberg, and Walløe 1988; Lutter 2000; Van Esterik 2002). The findings from Gibraltar on social class and breastfeeding cannot directly address the issue of high SES as forerunners of social change. However, two salient points can be made about infant feeding and class.

First, in the three cohorts from 1955 through 1984 there were no statistically significant socioeconomic-related differences in breastfeeding practices. The data suggests that until the last cohort, Gibraltarian women responded as a collective whole in

the broad ebb and flow of rates. Coefficients of variation in proportions of breastfeeding over the four cohorts are very low, never exceeding the 7 percent range (see Table 5.2). High SES women display the greatest levels of relative variability in proportion breastfeeding (ranging from 4.2 to 7.3 percent), while middle SES women show the smallest variability in proportion breastfeeding (ranging from 2.0 to 2.7 percent) (low SES is intermediate). The coefficient of variation suggests that the response to breastfeeding trends was relatively homogenous over time, with the greatest potential variability observed among high SES women. Given that infant feeding decisions are a highly complex aspect of human behavior, the uniformity of response is remarkable and suggests a shared communal response to complex factors over time.

Second, it is only in the last cohort (1985–1996) that significant differences with respect to SES emerge, with higher rates of breastfeeding observed among women of higher SES. As evident in Figure 5.3, there is a marked divergence in breastfeeding patterns with rising rates of breastfeeding rates among high SES women and declining rates among middle and low SES women, roughly corresponding with the border reopening. A retrospective study of this nature cannot address the factor(s) responsible for the observed divergence, but it is worth commenting that with the reopened border and greater access to information, educational differences emerging among women, and the widening of the economic gap between the rich and poor, what was once a community with shared values now sees fundamental differences emerging at its very core.

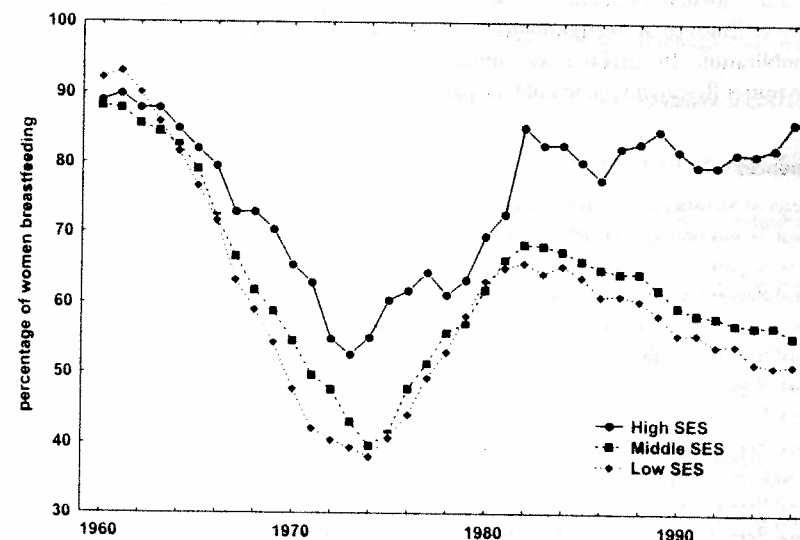


Figure 5.3. Breastfeeding rates in Gibraltar: 1955–1996, by socioeconomic status.

Conclusion

As a tightly knit population, Gibraltar experienced its own unique sociopolitical disturbances, including the evacuation/repatriation of World War II and the fifteen-year border closure with neighboring Spain. Yet, despite the singularity of these experiences, Gibraltarian women would eventually join other industrialized populations in the decline and return of breastfeeding. The perceived scientific value and convenience of artificial feeding infiltrated Gibraltar, as elsewhere, by the media, and by women who had lived abroad during the war years or spent time in British schools. Our research shows that there can be important local variations in breastfeeding. The effects of SES in relation to breastfeeding has captured significant attention, with women of high SES often pegged as driving forces in secular trends. A complex factor, SES is often tied to differences in wealth, education, access to information and support, and employment patterning in the postpartum period. Our research suggests that over much of the study period, high SES women were not innovators of secular change in infant feeding. Significant socioeconomic differences emerge only in the latest cohort since 1985, as high SES women departed significantly from either middle- or low-SES groups in favoring higher levels of breastfeeding.

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