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Barbara D. Robertson, BA, MA, IBCLC, RLC^a

Background: Most IBCLCs interact with nipple shields in their work whether families bring nipple shields they are already using into consultations or professionals are suggesting the mothers use this lactation tool. Are nipple shields being used too much or too little? What is working and what is not?

Methods: The results of two online surveys on nipple shield use are presented: one for families and one for professionals.

Results: With over 4,600 responses from families and 600 responses from professionals, this new information helps reveal what is actually happening with families and the use of this common tool.

Conclusions: For some families, nipple shields saved their breastfeeding experiences. Other families had negative experiences, especially when they were misapplied or given without follow-up. IBCLCs need standard protocols for nipple shield use. Providing support and guidance for nipple shield use greatly increases a family's odds of having a successful experience, and IBCLCs are the perfect people to provide this.

Keywords: breastfeeding; nipple shield; lactation tools

The history of nipple shield use has been filled with contention in the field of lactation. There are some IBCLCs who feel nipple shields can be an effective bridge to bring babies to the breast and others who feel they are more of an impediment than a helpful tool.

Nipple shields have been used for over 500 years. Before the 1900s, nipple shields were made out of bone, wood, ivory, silver, lead, and other hard materials. These nipple shields might allow a baby to be at a mother's breast, but because of the hard materials used these nipple shields were unlikely to sustain breastmilk production or be able to provide adequate nutrition for a baby. Nipple shields then progressed to being made from glass, thick rubber, or thick rubber over glass.

In the 1980s, nipple shields were manufactured out of latex and then later out of thin silicone. This change from making nipple shields with hard materials to soft, flexible silicone allowed the possibility of babies latching onto the breast, maintaining suction, and having the baby nurse in a way that removed breast milk from the breast. This breakthrough in nipple shield manufacturing was a huge leap for this tool and its possible use.

Research on Nipple Shields

In the 1980s, some studies were conducted that had mixed results about the effectiveness of nipple shields to help sustain and promote breastfeeding. However, many later studies found that nipple shields could be very helpful with premature babies, poor latching with term babies, and maternal discomfort. Research after 2000 agreed that if nipple shields were being used appropriately, with supervision, they could be an effective tool that helped initiate feedings at the breast, improved maternal pain, and breast milk transfer (Chertok, 2009; Chow et al., 2015; Eglash & McKechnie, 2010; Eksrom, Abrahamsson, Eriksson, & Martensson, 2014; Flacking & Dykes, 2017; Hanna, Wilson, & Norwood, 2013; Kronberg Foverskov, Nilsson, & Maastrup, 2017).

In a 2010 review, McKechnie and Eglash found that there was a lack of professional, peer-reviewed guidelines, protocols, policies, and algorithms for nipple shield use. This continues to be the case today (McCown & Smith, 2018). In her 2016 review of nipple shields, Marsha Walker points out that there are no standards for nipple shield manufacturing including sizing, shape, height, or thickness of the silicone. This leads to a great variation among nipple shields (Figure 1).

a. The Breastfeeding Center, Ann Arbor, MI. Barbara@BFCAA.com

Figure 1. Haakaa's new nipple shield (far right) is much more like the nipple shields of old, being made of thick material and having a long shaft.



Lactation Consultants in Private Practice, and Lactworld. I asked my IBCLC colleagues to share the survey as well. The collection period took place over several weeks but the bulk of the data came in within 1 week. There are many limitations to using an online survey, however, my purpose was to try to determine the current practices of families and professionals concerning nipple shields due to the lack of formal research in this field (Table 1).

Demographics of Robertson Survey

Over 4,034 (90.7%) respondents had used a nipple shield and 415 (9.3%) had not. This is a very high proportion of families using nipple shields. The reason for this is likely due to the nature of the survey subject. This does not represent actual nipple shield use among families. However, there is no data that tells us what this number is.

Wanting to know more about nipple shield use, in January of 2019, I created two online surveys. Using Google Docs, I created one for families and one for lactation professionals. Families ($N = 4,449$) and professionals ($N = 602$) completed the survey. The survey was distributed by Facebook primarily. I shared it on my business page, The Breastfeeding Center of Ann Arbor,

Reasons for Nipple Shield Use

The reasons for families using a nipple shield varied greatly. Six hundred twenty-five (15.5%) families had non-latching baby listed as the most important factor for using a nipple shield. Five hundred twenty-four (13.5%) families reported the baby was not able to stay latched to

Table 1. Demographics of Robertson Survey

Age of Mother	Self-Identified Race/Ethnicity	Level of Education	Level of Income	Birth Place
0.4% 15-20 Years of age	1.4% Chose not to identify	0.5% Less than high school diploma	23% Less than \$50,000 per year	30.6% U.S. Midwest
7.8% 21-25 Years of age	0.8% Black	18.8% high school diploma	43% Between \$50,000 and \$100,000 per year	54.6% Rest of U.S.
28.3% 26-35 Years of age	1.5% Asian	13.6% Associate's	36.9% Above \$100,000 per year	2.5% Canada
40.9% 31-35 Years of age	4.5% Hispanic	38.2% Bachelor's		
22.5% 36+ Years of age	0.8% Native American 93.3% White	22.4% Master's degree or higher		

the breast. The analogy of using nipple shields as “training wheels” (Robertson, 2019) for breastfeeding was true for these families.

For some families, just getting the baby latched to the breast is a victory even if the baby is not able to transfer breast milk. Many families felt the nipple shield made breastfeeding possible (968, 24%) or easier (667, 16.5%). Many families reported they had no idea as to why the nipple shield helped. It seems like “magic” to them. If the IBCLC does not explain the reasoning for the change of behavior with the nipple shield, families might not understand that there are possible underlying infant issues that could be resolved. “I think they can have a time and place but shouldn’t be a substitute for seeing an IBCLC and properly addressing the underlying issue of why a nipple shield is needed” (Family Survey Response).

Furthermore, if a baby does latch or stay latched with the nipple shield, the family needs to be taught about breast milk transfer and the signs of a well-fed baby (Figure 2). Pre and post weights are a wonderful way to do this yet only 533 (13.3%) of families said this happened during their time using a nipple shield. Clinically, I found it uncommon for a baby to go from poor breastfeeding to full breastfeeding just from adding a nipple shield. A comprehensive feeding plan needs to be agreed on by the family. This should include how often and how long to breastfeed; if, what, how, and when to supplement; and a breast expression schedule to help protect and/or increase a mother’s breast milk supply.

Follow-up is critical to help the family monitor how the plan is working. Only 554 (13.8%) of families reported having follow-up care. Almost as many families reported getting information from the internet as helping with

their success with using a nipple shield, 463 (11.5%), then having follow-up care. The family often supplies the nipple shield.

I did not know what I was doing with breastfeeding, had zero help from the ped or the hospital. First ped I went to told me to give formula, which made me think breastfeeding wasn’t working, but I really wanted to do it. My sister (who was not successful with breastfeeding) told me to get a nipple shield. I ended up using it for about a month. Looking back, I don’t remember actually having latch problems out of the normal range.

Nipple Shields and Pain

Pain and nipple shield use is one of the most controversial reasons for use in our profession. Many IBCLCs feel like nipple shields are given out too often without trying to work on better latching and positioning or if the underlying condition can be addressed quickly, to do so without introducing a device, which then has to be discontinued. Only 39.3% of professionals would suggest a nipple shield for pain. Eight hundred ten (20.1%) families said relieving pain was the most important factor. “Using the nipple shield at first helped to make my nursing experience possible. It was too painful without the shield so I’m incredibly thankful that the lactation consultant gave it to me to use. After my baby was a few weeks old, and we determined the shield wasn’t necessary, we weaned him off of it and have been happily nursing ever since!”

Tongue-ties were a common theme among families who used nipple shields. I did not list this as a possible reason for nipple shield use, yet families listed this as an important reason for using nipple shields for pain and for helping the baby latch or stay latched (Figure 3). Of the 806 family responses to “If any other reason for nipple shield use applied to you that is not listed above, please explain,” over 600 specifically named tongue- and/or lip ties as the reason they used a nipple shield.

Lack of Success With Nipple Shields

Not all the families had a successful experience with nipple shields. Of the families who completed the survey, there was a group of 252 (6.3%) that did not find nipple shields to be “helpful at all.” There was an even larger group of 380 (9.5%) who would “not use a nipple shield again with a future baby or recommend one to a friend.” “I think the shields made the problem worse and because of them, the baby did not learn to latch effectively. And milk almost stopped.”

Figure 2. Using a nipple shield.



Figure 3. Tongue-tie.



A possible issue with nipple shield use is they are often given out early in the postpartum period. Fifty-three percent of families said they received their nipple shield in the hospital. More revealing was when families were given nipple shields. Twenty-six percent ($n = 954$) of families received a nipple shield when the baby was “a few hours old, less than a day.” Nineteen percent ($n = 692$) reported they received a nipple shield at 1 day of age, 6% ($n = 229$) at 1½ days of age, and 7% ($n = 272$) at 2 days of age. Fifty-one percent ($n = 2,147$) of families received a nipple shield before the baby was 2 days of age.

Parents’ Experiences With Nipple Shields

Many families felt nipple shields saved their breastfeeding relationship. Sixty-two percent ($n = 2,477$) felt the nipple shield was “integral to success.”

The hospital pushed formula; use of the shield made exclusive and extended breastfeeding goals possible.

The nipple shield saved my breastfeeding journey! I only used it for less than 2 weeks, but it definitely pushed me to stay motivated!

I was hesitant to spend money on a consultant as the one at the hospital wasn’t helpful but it was worth every penny. My baby was less than 2 weeks old when we went in with latch issues. She would have a poor latch on one side and no latch on the other side. Within 5 minutes my consultant had

me try a nipple shield and my baby was latched and eating. I was able to go home confident with the ability to feed my baby. I was able to purchase more from her when needed.

My first baby wouldn’t latch. The hospital was not helpful at all, they sent me home essentially to fail. I hired a lactation consultant to come to my house and I was in tears. She evaluated my breasts and baby’s mouth, watched me try to latch and helped me, then gave me a shield to try. She told me that I had flat nipples. She also then weighed baby before and after feeding. It was a miracle! From that day forward he had no issues latching with the shield. We were eventually able to phase the shield out . . .

Strong Milk-Ejection Reflex

Another reason for using a nipple shield that I did not list is a strong milk-ejection reflex. Several families told me this was important. “I also had a very forceful let-down, helped the baby be able to manage that. Lactation consultant at hospital and with my pediatrician’s office worked with me, and both suggested I use it.”

Overactive letdown, choking kid, wasn’t maintaining deep latch which caused significant nipple breakdown and pain. Infant born late preterm (37 weeks). First non-painful latch didn’t occur until 9 weeks. At 6 weeks I was ready to quit and going in I was VERY committed to breastfeeding. Shield got us from excruciating pain at 6 weeks to healed nipples at 9 weeks and weaning from their use.

History of Sexual Abuse

Sexual abuse was also brought up. “I had a long history of childhood sexual abuse, sexual abuse, sexual assault, and rape that made nipple sensation pretty unbearable. Once we introduced pacifiers, the baby couldn’t figure out normal nipples and could only latch to a plastic shape.” Nipple shields made this woman’s journey more successful in the beginning but then the IBCLC could have made sure this woman had access to counseling and helped her wean off of her nipple shield when she was ready.

Inappropriate Use of Nipple Shields

Families are also using nipple shields for many reasons that are inappropriate. Families reported they used nipple shields for high bilirubin, thrush issues, breast reduction surgery, hypoglycemia, Reynaud’s Phenomenon,

being sleepy from birth, mastitis prevention, and re-training a bad latch. “I was given one at the hospital on day 2 and told I have flat nipples. I now believe I have only semi-flat nipples and I could’ve avoided using a shield with better coaching on how to get a good latch.” “Was told by lactation specialist that her latch was wrong and used the shield to re-train her latch.”

Disconnect Between Families and Professionals

There was a surprising disconnect between families and professionals. When asked how long families actually used nipple shields and how long professionals *thought* families used nipple shields, there was a big difference. Fifteen percent ($n = 616$) of families reported using them for a few days. Professionals thought over a third of families (35.6%) used them for a few days. Thirty-seven percent ($n = 1,487$) of families said they used nipple shields for a few weeks. Professionals thought 56.9% of families would use them for this amount of time. Families reported 34% used shields for a few months and 12.5% used them for 6 months or more. In contrast, professionals felt only 7.1% of families would use them for a few months and none thought families would use a nipple shield for 6 months or more.

Weaning off of a Nipple Shield

Most of the families did wean off of the nipple shield eventually. Forty percent ($n = 1,592$) said “it was easy. The baby just didn’t need it anymore.” Families reported “She got bigger and was able to latch to nipple without shield” and “I’d start feeding him with the shield and then pull it off to get him used to the bare nipple. It took a few days, but he breastfed for a year and half later without it.”

Twenty-four percent ($n = 937$) of families responded that “it was hard, but we were eventually able to breastfeed without it.” “Used shield for 6 mos. Breastfed for almost 3 years. It helped her learn to be at breast until she was strong enough to breastfeed without it.” “I started doing a ‘bait and switch’ letting her feel it and then just taking it away at the last second. About a month later she latched fine without it on a regular basis. She’s 26 months old and we are still breastfeeding.”

Addressing the Underlying Condition

Addressing the underlying condition was reported as important. Interestingly, even though it was not a choice

on the survey, 557 (14.1%) said that a tongue-tie revision led them to be able to wean off of the nipple shield. “Once her ties were corrected, we no longer needed it.” “Baby had a severe tongue-tie and couldn’t latch. An ENT came to the hospital and fixed baby’s tongue-tie and after that he could latch directly onto the nipple. The nipple shield was so useful.”

Sadly, tongue- and/or lip ties were the only intervention mentioned. Many other underlying conditions often don’t get addressed, such as the need for some type of body work (cranial therapy, cranial sacral therapy, or chiropractic), or occupational therapy or physical therapy. None of the respondents mentioned these types of interventions that could have helped wean off of the nipple shield.

Transitioning to Bare Breast

Babies sometimes weaned themselves off of the nipple shield. “Baby began rejecting the shield and preferring bare breast.” Another family said, “The baby rejected it by herself at some point and proceed latching for a year and a half after that.”

Need is often the impetus for transitioning to the bare breast. “One day he was really hungry and latched before I could get the shield on.” “Nipple shields are hard to keep track of due to them being clear and I actually lost mine on multiple occasions but the final time I lost it we just went with it and my daughter was ok with it.” “Baby was hungry and I didn’t have it on me so we tried without it and it was no problem!” “Pure determination while having a hungry infant and no shield at the grocery. It showed me that yes, I COULD nurse shield free and it was time.”

Long-Term Use

Families often feed for very long periods of time with the nipple shield or never wean off of it. “He’s 11 months and we still breastfeed with a nipple shield.” “He wouldn’t nurse at all without the shield so we used it the entire time.” “Baby breastfed with help of nipple shield for 14 months with no issues to the formation of her mouth/tongue/teeth.” This directly contradicts professional’s ideas of how families are using nipple shields. We often think of them as a very temporary tool but they can be used for years.

How IBCLCs Can Help

I was told that using a nipple shield was the correct thing to do for my flat nipples and pain (which was

Figure 4. Baby nursing well from a nipple shield.



caused by ties in my child that were not even looked for or at) by nurses in the hospital after my child was born. I was NOT told that nipple shields are hard to wean from and can cause issues like slow weight gain, inability of baby to drain the breast, and medical problems for myself like clogged ducts, yeast infections, etc.

As IBCLCs, if nipple shields are being suggested, there is a responsibility to help families use the tool properly. Teaching families why a nipple shield might be helpful is important. Also crucial is explaining the underlying issues from the baby that might need to be addressed (tongue-tie or prematurity) so that weaning off of a nipple shield is easy. Helping to find the right size nipple shield, teaching mothers how to put the nipple shield on, the signs that the shield is working well (Figure 4), and then having great follow-up are key. Providing this support and guidance for nipple shield use greatly increases a family's odds of having a successful experience, and IBCLCs are the perfect people to provide this.

References

- Academy of Breastfeeding Medicine. (2018). Clinical Protocol #12: Transitioning the breastfeeding preterm infant from the neonatal intensive care unit to home. *Breastfeeding Medicine*, 13, 230–236. doi:10.1089/bfm.2018.29090.ljn
- Chertok, I. R. (2009). Reexamination of ultra-thin nipple shield use, infant growth and maternal satisfaction. *Journal of Clinical Nursing*, 18, 2949–2955. doi:10.1111/j.1365-2702.2009.02912.x
- Chow, S., Chow, R., Popovic, M., Lam, H., Merrick, J., Ventegodt, S., Popovic, J. (2015). The use of nipple shields: A review. *Front Public Health*, 3, 236. doi:10.3389/fpubh.2015.00236
- Eglash, A., & McKechnie, A. C. (2010). Nipple shields: A review of the literature. *Breastfeeding Medicine*, 5, 309–314. doi:10.1089/bfm.2010.0003
- Eksrom, A., Abrahamsson, H., Eriksson, R. M., & Martensson, B. L. (2014). Women's use of nipple shields—their influence of breastfeeding duration after a process-oriented education for health professions. *Breastfeeding Medicine*, 9, 458–466. doi:10.1089/bfm.2014.0026
- Flacking, R., & Dykes, F. (2017). Perceptions and experiences of using a nipple shield among parents and staff—an ethnographic study in neonatal units. *BMC Pregnancy Childbirth*, 17, 1. doi:10.1186/s12884-016-1183-6
- Hanna, S., Wilson, M., & Norwood, S. (2013). A description of breastfeeding outcomes among US mothers using nipple shields. *Midwifery Today*, 29, 616–621. doi:10.1016/j.midw.2012.05.005
- Kronborg, H., Foverskov, E., Nilsson, I., & Maastrup, R. (2017). Why do mothers use nipple shields and how does this influence duration of exclusive breastfeeding? *Maternal & Child Nutrition*, 13. doi:10.1111/mcn.12251
- McCown, T., & Smith, E. (2018). We need a standardized approach to use of nipple shields. *International Journal of Childbirth Education*, 33, 26–27.
- McKechnie, A. C., & Eglash, A. (2010). Nipple shields: A review of the literature. *Breastfeeding Medicine*, 5(6), 309–314. doi:10.1089/bfm.2010.0003
- Robertson, B. (2019, Spring). The great nipple shield debate. GOLD Online Learning Conference. Retrieved from doi: <https://www.goldlactation.com/conference/registration>
- Walker, M. (2016). Nipple shields: What we know, what we wish we knew, and how to best use them. *Clinical Lactation*, 7(3), 100–107. doi:10.1891/2158-0782.7.3.100

Disclosure. The author has no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.



Barbara D. Robertson, BA, MA, IBCLC, RLC, is the owner of The Breastfeeding Center of Ann Arbor and was a founding Associate Editor of *Clinical Lactation*. Barbara was Director of Professional Development for the United States Lactation Consultant Association from 2009 to 2014. She received the Michigan Breastfeeding Network, Outstanding Community Breastfeeding Support Award in 2009.