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Background: The Haakaa and other similar style silicone breast pumps have become very popular over the past few years. There is very little research on this type of pump.

Methods: The results of two online surveys on Haakaa and other similar style silicone breast pump use are presented: one for families and one for professionals.

Results: With over 5,100 responses from families and over 500 responses from professionals, this new information helps reveal what is actually happening with families and the use of this common tool.

Conclusions: The majority of families and professionals are familiar with this type of pumpand have had positive experiences with it. A small number of families had negative experiences, especially when the pump was mis-applied or they had no instruction on use of the pump. IBCLCs need to provide accurate information as to when this type of pump might be an appropriate tool and instructions as how to use it properly.

Keywords: breastfeeding; Haakaa breast pump; lactation tools; breast pump; pumping; breast milk

Breast pumps have become a "must have" accessory in the USA. "The trend among women of childbearing age in this country is to think they need a breast pump. They buy one before the baby's born, so they have it ready" (Buckley, 2009) Consumerism and powerful marketing tactics help drive pump purchases. Researchers reveal that mothers express milk to reassure them about their supply and to exert control over breastfeeding (Dykes, 2002). "Mothers have reported that the ability to follow the numbers by more precisely measuring breastmilk is a benefit of using breast pumps" (Dykes, 2002).

The interpretation of Affordable Care Act requirement that insurers cover breastfeeding tools has led to the provision of a breast pump to each childbearing family. Each insurer chooses which pumps to provide, leaving families unsatisfied when they can only access inferior devices. Parents can spend hundreds of dollars or more of their own resources to purchase a more effective pump.

The Haakaa pump is an inexpensive, one-piece silicone breast pump originating in New Zealand in the past

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decade. It quickly became wildly popular among childbearing families and spawned multiple knock-offs of varying quality. see (Figure 1). I conducted a brief survey focused on the type of breast pump, but not the specific Haakaa brand, as families and professionals frequently use the term generically. This small, fairly inexpensive (under \$30) pump could be a good compromise for families feeling the need for a breast pump and satisfies the need to measure and control.

What is a Haakaa? The original Haakaa's website says, "The Haakaa Silicone Breast Pump is made of a single piece of 100% silicone and provides an easy, eco-friendly and effective pumping experience." Traditional breast pumps use cycling suction and relaxation. The Haakaa functions as an effective milk catcher that uses continuous vacuum to promote milk flow. Passive collection devices, such as the Milk Saver cup, are placed over the breast to catch milk that drips during feeding on the other breast. These rely on the parent's body to spontaneously eject or release milk.

Formal research on the Haakaa brand silicone breast pumps is not yet available. Families rely on product reviews from retailers such as Amazon. Of the 5144 Amazon reviews as of March 1, 2020, 77% gave a five-star review, 9% a four-star review, 5% a three-star review, 4%

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Figure 1. From left to right: Original Haakka, 2019 New Style Haakaa, Nature Bond silicone breast pump, Bumble Bee silicone breast pump, Lansinoh silicone breast pump, and Godehone silicone breast pump.



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a two-star review, and 5% a one-star review. There are many similar silicone breast pumps available (see Figure 2). These other products range in quality and have generated complaints about the quality and consistency of the silicone. Reviewers frequently complained about the silicone being to rigid or soft and the pump not staying in place well in the generic brands.

Method

Data Collection and Recruitment

In February and March of 2020, I developed two online surveys: one for families and one for lactation professionals, to gather more information about the Haakaa-style pump. Five thousand one hundred and fifteen families and 515 professionals completed the survey. The survey was primarily publicized on Facebook. It was shared it on The Breastfeeding Center of Ann Arbor's business page, Lactation Consultants in Private Practice (a conference attendee group), and Lactworld (a lactation professional discussion group). Several IBCLC colleagues also shared the survey link. The survey response period spanned several weeks but the bulk of the data came in within 1 week of the survey release in early March, 2020.

Purpose

The purpose of these surveys was to determine the current practices of families and professionals concerning Haakaa pumps and other similar products to address the lack of formal research in this field.

Table 1. Family Survey (N = 5,115)	rvey (N = 5,115)					
Age	21-25 7.3% ($n = 373$)	$26-30 \ 30.2\%$ (n = 1,551)	$31-40\ 58.2\%$ ($n = 2,984$)	40 + 4% (<i>n</i> = 207)		
Race/Ethnicity	Black 1.3% $(n = 68)$	Hispanic 4.3% (<i>n</i> = 219)	Asian 1.9% $(n = 95)$	White 90.3% (<i>n</i> = 4,618)	Other races 2.2% (n = 115)	
Income level	Less than \$30,000 yearly 6.9% (<i>n</i> = 351)	Less than \$50,000 yearly 12.8% (<i>n</i> = 651)	Less than \$100,000 yearly 34.6% (<i>n</i> = 1,758)	Less than \$150,000 yearly 24.5% (n = 1,248)	More than \$150,000 yearly 20.6% (<i>n</i> = 1,049)	Unknown 0.6% (n = 31)
Education level	Less than high school 0.6% (n = 30)	High school diploma 16% (n = 818)	Associates degree 12.2 % (N = 628)	Bachelor's degree 38.4% $(n = 1,971)$	Master's degree 22.7% (n = 1,163)	Above master's degree 10.1% $(n = 517)$
Employment status	Full time outside of home 43% (n = 2,204)	Full time parent 22.2% (n = 1,138)	Part time outside of home 19.0% (<i>n</i> = 977)	Full time at home 3.3% (<i>n</i> = 167)	Working part time at home 6.8% (n = 348)	Other status 5.7% $(n = 296)$
Number of children	One 43.6% ($n = 2,237$)	$T_{WO} 37.4\%$ (n = 1,919)	Three 13.1% $(n = 671)$	Four 3.9% ($n = 202$)	More than four 2% (n = 102)	

Table 2. Professionals Survey ($N = 515$)	Survey ($N = 515$)					
Age	Less than 30 years old 8.2% $(n = 42)$	Less than 40 years old 49% (n = 245)	Less than 50 years old 25% $(n = 129)$	Less than 60 years old 11.5% $(n = 59)$	Over 60 years old 6% (<i>n</i> = 31)	
Level of education	High school diploma 5.3% (n = 27)	Associates degree or some college 10.3% ($n = 53$)	Bachelor's degree 40.5% (n = 208)	Master's degree 13.8% (n = 71)	Above master's degree 23.7% (n = 122)	MD 1.7% $(n = 7)$
Type of lactation professional (Can be more than one)	IBCLC 49.2% (n = 253)	MD or DO 25.1% (n = 129)	CCLS, CLC, CLE, CBS 20.6% (<i>n</i> = 106)	Doula 12% (n = 62)	Breastfeed- ing USA, LLL or WIC Peer Counselor 10.3% (n = 53)	Others Less than 3%
Primary work setting	Private practice 35.7% (n = 182)	Hospital 34.1 (n = 174)	Doctors office or clinic 14.5% (n = 74)	Public health/WIC 8.2% (n = 2)	Other 7.5% $(n = 253)$	
Number of clients per week	Less than 5 25.5% (n = 130)	Less than 20 35.4% (n = 180)	Less than 50 24.2% (n = 123)	More than 50 14.9% (n = 76)		

The demographics of the families and professionals who completed the survey are found in Tables 1 and 2.

Results

Family Survey

Forty-five percent (n = 2,258) of families received or purchased their Haakaa-style pump while pregnant. Fourteen percent (n = 689) received theirs in the first few days postpartum, and 24% (n = 1,175), in the first few weeks postpartum. This supports the idea that this is perceived as a "must have" item for families. This is not just families. One professional said, "I recommend to all families. Useful as a passive collection device on one side while nursing [the] other."

When asked, only 1% (n = 74) of families had never heard of the Haakaa pump, while 0.5% (n = 26) had heard of the Haakaa but didn't know anything about it. The great majority of professionals were also familiar with the Haakaa. Only 1% (n = 7) had never heard of the Haakaa and only 0.6% (n = 3) had heard of it but did not know anything about it.

Over 55% (n = 2,844) of families in this study and had heard of and used a Haakaa or similar product and "loved" it. Fifty-percent of professionals had heard of families using the Haakaa and the families reported loving it. One professional said, "I appreciate the design of gentle milk collection without overstimulation. Further, this is an affordable, simple design, accessible and easy to use in a wide variety of environments." Three-percent (n = 137) had used the Haakaa pump and "hated" it. These data does not capture the totality of Haakaa or other similar products use among families. There is no data available on the number of units actually used in the United States.

Ease of Use

Rating the Haakaa in ease of use on a 3-point Likert scale from 1 (hard to use) to 3 (easy to use), 70.9% (n = 3,435) of families found the Haakaa-style pump easy to use. "I love that I can put it on with just a little squeeze and it collects about 2 oz for me depending on time of day." Twenty-five percent (n = 1,215) rated it as a 2, and 4% (n = 195) found it hard to use. Many people complained it did not come with clear instructions.

Problems

Some families said the pump was easy to dislodge; failed to increase low breast milk production; or found it painful. Some were not being able to get the pump attached properly as noted by two parents.

I think if my anatomy was a little different it may have been easier, but for me, I found it easy to knock off and difficult to find a position that allowed the Haakaa and baby to exist [at breast] together.

I am smaller breasted and found that it was hard to keep the Haakaa attached to my breast. I had to lean forward uncomfortably to keep it on, and the pressure from the suction was painful at times.

Another family said, "Hard to get good suction that wasn't agonizingly painful." It seemed clear from the survey responses, and from Amazon reviews, that there are parents whose breasts or chests are not compatible with this pump. This author witnessed this with a woman who had more conical breasts. The pump flange would not seal to her breasts. Parents with either extreme of breast/chest size reported problems obtaining a good seal and/or sufficient suction, as these participants noted.

It was so painful and not very effective for me. I think due to my elastic breast tissue? Not made for bigger breasted women.

The strength of the milk-ejection reflex (which depends on the fullness of the breast) was another factor affecting the effectiveness of the Haakaa-style pump. Two parents reported,

I found it difficult to get the right amount of suction. Also, my breasts don't leak so I couldn't catch letdown from the other breast while nursing. I only ever got a few drops.

Instructions

Many families reported watching instructional YouTube videos if they had trouble using the Haakaa. Parents said using the Haakaa was, "Easy. But I used it wrong for a while until I saw a video." And "I'd recommend watching videos on it, that's how I figured it out." Perhaps if the families that reported difficulty using the Haakaa had

watched an instructional YouTube video it would have helped.

I thought you just had to put it on the breast and squeeze. I wasn't putting it on correctly. I watched videos on how to properly place it.

Sharing YouTube video links or demonstrating how to use the Haakaa-style pump might keep it from falling off and/or reduce pain. However, no tool is going to be right for all families.

Here are some images illustrating how to use the Haakaa-type pump properly (Figures 3 and 4).

Figure 3. Step two: Squeeze the pump gently (especially at first when you have not done this before) and center the nipple in the opening.



Note. Photo used with permission.



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Trouble shooting: If the pump falls off, squeeze more strongly to increase vacuum when the pump is applied. If the nipple rubs on one wall of the nipple tunnel once the vacuum is applied, gently remove the pump and move it to re-center the nipple in the tunnel.

Youtube instructions on Haakaa use can be found here: https://www.youtube.com/watch?v=jcisJU43Gn8 (2.24 minutes)

For professionals only: https://www.youtube.com/watch? v=WZuTBUGeu7s (7.28 minutes) Shows how much milk can be collected very quickly! This may provoke unrealistic expectations for families.

Possible Haakaa-Style Pump Uses

Professionals thought a Haakaa-style pump could be useful for leaking (n = 140), catching extra breast milk during milk ejection (n = 490), creating a fridge/freezer stash (n = 418), and for comfort and relief of full breasts (n =381). Some troubling data were that 30% (n = 156) of professionals felt the Haakaa could be used to help prevent plugged ducts. With any tool, proper instruction and accurate information on indications for use is important. One professional said,

Low tech, easy, quick way to catch leaking milk during initial let down for a couple of feedings per day to store for return to work or got bottle use if at that point...Risks and benefits should be discussed and considered.

Forty-six percent (n = 238) felt a Haakaa-style pump could be used to increase a family's breast milk supply. Because the Haakaa is primarily a passive system with steady vacuum the idea that using this pump could play a major role in preventing plugged ducts or increasing a milk supply seems unlikely. It might help, but having a baby nurse more, using a multi-user electric breast pump, or hand expression seem like more effective methods to resolve these issues. However, families did list preventing plugs, 15% (n = 756) and increasing milk supply, 22% (n = 1,103), as reasons they were using the Haakaa-type pump.

Amount of Milk

One of the interesting details that was revealed was how much breast milk was caught using a Haakaa pump. The 76% of families reported getting at least 30 mL/1 oz or more per use. Twenty-six percent (n = 1,321) reported

getting 30 mL/1 oz per use, 28% (n = 1,415) reported 60 mL/2 oz, and 21% (n = 1,087) reported getting over 60 mL/2 oz per use.

Professionals estimated that these numbers would be lower guessing that 37% of families would get 30 mL/1 oz, 17% would get 60 mL/2 oz, and only 7% would get over 60 mL/2 oz. A possible explanation is that lactation professionals work with many families who are struggling with their rate of milk production.

On the other hand, 13% (n = 666) of families reported getting between 10–15 mL/0.33–0.5 oz per use and many families, 4% (n = 209) no breast milk. Professionals felt that 15% would get less than 15 mls/0.5 oz per use. Over a 24-hour period, families reported getting anywhere from 30–90 mL/ 1–3 oz 31% (n = 1,573)—and up to over 600 mL/20 oz. Eighty-three percent of families using the Haakaa-style pump were not struggling with milk supply issues.

Length of Use

Professionals felt families would use Haakaa-type pumps for varying lengths of time. Twenty-nine percent of families would use them for a few weeks, 44% (n = 218) for 2–3 months, 16% (n = 78) for 4–6 months, and 12% (n = 58) for over six months. Families reported a wide variety of durations, from 7% (n = 338) saying just a few days to 18% (n = 917) over 6 months. Forty-seven percent primarily stopped using the Haakaa-type pump because "they just didn't need it anymore." However, 11% (n =515) stopped using them because "it never worked well for me."

Reasons for Haakaa Use

Many families felt the Haakaa-style pump allowed them to easily build up a "freezer stash" before going back to work. Families said,

Great for catching milk that would be wasted when your feeding from one side. Save it to create a freezer stash or add to pumped milk.

Great alternative to an electric pump. Easy to use at home. Can use at the same time as you are feeding your baby.

Ninety-three percent (n = 4,490) of families felt the Haakaa-type pump was easy to clean. One percent (n = 48) felt it was hard to clean and 7% (n = 316) felt it was in between.

Conclusions

Summary of Perceived Advantages

The Haakaa was:

- 1. Made out of non-toxic material, 100% silicone
- 2. Very portable
- 3. Relatively inexpensive
- 4. One piece (a new version has two pieces and converts to a feeding bottle)
- 5. Generally easy to use and clean
- 6. Good for collecting extra breast milk early postpartum

Summary of Perceived Disadvantages

The Haakaa:

- 1. Can be tricky to wash due to shape
- 2. Can cause pain, especially if used improperly
- 3. Pops off easily for some people
- 4. Can come off if the baby kicks while breastfeeding on the other side
- 5. Is mostly a short-term use item
- 6. Can create oversupply is used very frequently
- 7. Is easy to spill
- 8. Can fall off if it gets too heavy from collected breast milk
- 9. Has graduations/measurements on pump that are not necessarily accurate
- 10. If used passively, generally catches the less fatty breast milk

After an examination of my survey data and Amazon reviews, it appears that for most families the Haakaa-type pump was best for early postpartum use to catch extra breast milk that leaked on one side while the baby feed on the other. That does not mean it cannot be used other ways, nor will work for every family.

In many cases, breast pumps are used too much as a Band-Aid that interferes with breastfeeding. . .If

a mother is having trouble in the hospital, it's "Get her a breast pump" and not "Let's work with her more and get her to breastfeed." (Buckley, 2009)

Families live in a culture they distrust their bodies to complete the reproductive cycle.

They did not expect breastfeeding to just happen, nor did they trust their bodies to know intuitively what to do. (Avishai, 2007)

Because of this lack of trust, and because of consumerism, and marketing practices in United States, this product seems like it could work as a compromise, a transitional tool that could provide families with a breast pump that can perhaps serve as a bridge to learning to trust their body, trust their baby, and trust breastfeeding.

- Buckley, K. M. (2009). A double-edged sword: Lactation consultants' perceptions of the impact of breast pumps on the practice of breastfeeding. *Journal of Perinatal Education*, 18(2), 13–22. https://doi.org/10.1624/105812409X426297. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2684034/
- Dykes, F. (2002). Western medicine and marketing: Construction of an inadequate milk syndrome in lactating women. *Health Care for Women International*, 23(5), 492–502. https:// doi.org/10.1080/073993302760190092

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References

Avishai, O. (2007). Managing the lactating body: The breast-feeding project and privileged motherhood. *Qualitative Sociology*, 30(2), 135–152. https://doi.org/10.1007/s11133-006-9054-5



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