

REVIEW OF LITERATURE

Resolution of Breastfeeding Difficulties Following Chiropractic Care: A Review of the Literature

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Abstract

Objective: The purpose of this review is to investigate the role of chiropractic in breastfeeding challenges.

Methods: Index to Chiropractic Literature, McCoy Press, Journal of Clinical Chiropractic Pediatrics, PubMed, and Chiropractic Journal of Australia were searched. The searches included the terms chiropractic, breastfeeding, infant, and suboptimal.

Results: The reviewed items consisted of: 13 case reports, 5 articles, and 3 literature reviews.

Conclusions: Breastfeeding is beneficial for an infant's health as well as for the mother in the long and short-term. Chiropractic care has the potential to help assist in improving suboptimal breastfeeding. Further research is encouraged to explore the role of chiropractic in breastfeeding challenges.

Keywords: *Chiropractic, breastfeeding, infant, newborn, upper cervical, subluxation, adjustment, spinal manipulation, failure to latch*

Introduction

Breastfeeding is the process of feeding a mother's breast milk to her infant, either directly from the breast or by expressing the milk from the breast and bottle-feeding it to the infant. Breastfeeding provides essential nutrition. According to the NIH, among the other known health benefits of breastfeeding are some protections against common childhood infections and better survival during a baby's first year.¹ Breastfeeding provides an infant with essential calories, vitamins, minerals, and other nutrients for optimal growth, health, and development.

Methods

Index to Chiropractic Literature, McCoy Press Publications, Journal of Clinical Chiropractic Pediatrics, PubMed, and Chiropractic Journal of Australia were searched up to October 31, 2021. In those searches, there were 26 case reports, 12 articles, and 3 literature reviews that were related to breastfeeding and chiropractic. The searches included the terms chiropractic, breastfeeding, infant, and suboptimal.

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Discussion

Case Reports

There were 26 case reports that appeared in the searches and a common theme across the case reports was birth trauma and how that would lead to suboptimal breastfeeding if the mother was nursing her child. I reviewed 13 case reports that had a focus on birth trauma and how it had the possibility to lead to difficulties with breastfeeding.

Williams-Libs et al did a case report on a 9-day-old female with a history of birth trauma. The infant presented with difficulties breastfeeding and failure to gain weight. A lactation consultant recommended the use of a nipple shield to reduce any pain that was occurring with breastfeeding. The patient had their atlas and sacrum adjusted along with cranial adjustments. After the patient was seen for the first time, they were seen two times per week for two weeks for a total of four visits. After the visits, the mother reported more comfortable breastfeeding for both mother/infant dyad. The parents recorded an increase in weight gain.²

Santos et al reported a case of a 13-day-old male infant that was brought to a chiropractor for a consultation and possible care due to failure to thrive. The infant was described as “lethargic with a very weak cry.” His parents were providing around the clock care for their newborn to keep him alive. When taken to the chiropractor, he was cared for using a sustained contact “touch and hold” spinal adjustment to sites of subluxations at the cervico-cranio-mandibular complex. During his first 13 days of life, he had lost 27 ounces, but after eight visits within two weeks, the breastfeeding difficulty had resolved as his weight increased from 5 lbs. 1oz. to 6 lbs. 12oz. (27 total ounces).³

Hosaka et al had an infant that was brought in for care (the age of the baby was not specified in the case report). The infant had an asynclitic head presentation at birth and as a result was born with an elongation of the occiput due to cranial molding, bilateral flexion at the elbows and shoulders with decreased range of motion in the cervical spine with tongue and lip tie. There was bruising on the occiput along with hypertonicity of cervical musculature at C1. The infant also had decreased suck reflex and tongue retraction with sucking. An anterior subluxation of the left sphenoid was noted in the exam. The infant received a sphenobasilar adjustment from the chiropractor and following the adjustment, “significant reduction in occipital edema was noted along with normal suck pattern and breastfeeding normalized.”⁴

Beardsley had a case where a 14-week-old infant presented to her office with breastfeeding dysfunction, reflux, and a left lateral head tilt. The breastfeeding difficulties began around four weeks of age, and the onset of reflux was nine weeks of age which gradually worsened over time. The chiropractic care that was recommended was four visits over the course of three weeks. Modified chiropractic adjustments were administered to the areas of subluxation and there was complete resolution of breastfeeding following the first adjustment. Complete resolution of reflux and positional head preference occurred after the second adjustment. There were no outside referrals that were warranted. She went on to say:

“As positive results were obtained in this case report, it is suggested that chiropractic care may be efficient and effective in evaluating and treating these complaints.”⁵

Green et al had a 13-day-old male who presented for a chiropractic consultation and possible care. The infant had difficulty latching to his mother’s left breast, had torticollis and cranial distortion. He also had a tongue and lip tie that was released with a scalpel. A visit to his pediatrician for a check-up proved not to be beneficial. He was cared for with Diversified Technique and the Webster Coronal Suture Technique. He was cared for over seven visits over a 6-week period to address the infant’s presenting complaint. “This case report provides supporting evidence that infants born with muscular torticollis, cranial distortion and difficulty breastfeeding may benefit from chiropractic care.”⁶

Shtulman et al had a 3 ½-month old female that was presented from care suffering from severe infantile colic, poor weight gain, breastfeeding difficulties, and medically diagnosed as failure to thrive. At three weeks of age, the patient began struggling to eat and would pull away from the breast and arch her back with inconsolable crying. She was prescribed three different medications after consulting with medical doctors (i.e. Zantac, Prevacid and Kerafe) with no change in her symptoms. She was even hospitalized for a few days due to weight lost early in the first month of her life. She received chiropractic adjustments to reduce vertebral subluxations over a total of 8 visits. Medical follow-up found the infant’s pediatrician noting that the patient gained weight and without further concern canceled a referral to a gastrointestinal specialist.⁷

Drobbin et al had a four-week-old female infant that was brought in for chiropractic care by her mother. She was concerned that the infant was unable to effectively latch onto her left breast when held in any breastfeeding position. After receiving a specific adjustment to the upper cervical spine and temporomandibular joint there was increased right rotation of the infant’s head and a decrease in left head tilt. The mother attempted to breastfeed immediately after the adjustment with success and no further issues remained. “The use of subluxation-based chiropractic care showed positive results as described in the resolution of latching and breastfeeding issues in a four-week-old infant.”⁸

Collins et al had seven-month-old fraternal twin boys with chronic reflux, irritability, excessive crying, breastfeeding difficulties, plagiocephaly, and scaphocephaly were presented for chiropractic care by their mother. They both received spinal and cranial adjustments based on Sacro Occipital and Neuro Emotional Technique protocols. After the first initial 8 weeks of chiropractic care, the mother reported a decrease in severity of the twins’ reflux, breastfeeding difficulties and irritability. After 16 weeks of being under chiropractic care, the twins’ reflux had ceased, and their cranial symmetry had markedly improved.⁹

Hubbard had a 7-week-old present for chiropractic care and following a health history and physical examination, she was able to identify that the breastfeeding difficulties were a consequence of a combination of issues. The newborn had limited left rotation of the neck, which was a result of upper

cervical subluxations and cranial misalignments. There was further investigation via stool analysis, abdominal ultrasound, and blood testing that led to the diagnosis of fetal cholelithiasis with an underactive gallbladder. Chiropractic adjustments were implemented to correct the cervical and cranial motion. Mother and child were placed on daily probiotic supplementation and after one month of weekly chiropractic care, the child displayed complete resolution of the breastfeeding difficulties.¹⁰

Slak et al wrote about an 8-week-old female that was unable to suck properly and had difficulty nursing. The infant was described as distressed. She presented with left head tilt and subluxations that were present at occiput, atlas, sacrum, and the cranium. The cranial bones were evaluated utilizing the Turner Cranial Technique. The spinal and cranial adjustments were received using sustained contact, Logan Basic and cranial therapy utilizing the Turner Cranial Technique. After receiving the third adjustment, the patient latched on and breastfed for 20 minutes without any difficulty, and she continued to breastfeed normally thereafter. "More research is needed to explore this common problem in childhood."¹¹

Fairest had a 6-week-old female that presented with left-sided cranial asymmetry indicating deformational plagiocephaly and favored left head rotation. The infant had additional complaints that consisted of occasional regurgitation of stomach contents immediately after breastfeeding, groaning when placed supine in an inclined position, and unsettled sleep patterns. The chiropractor used modified Diversified and Activator techniques to reduce subluxation findings. After the initial visit, there was improved upper cervical range of motion that was immediately observed, and sleep patterns and regurgitation also improved. The patient also experienced resolution of deformational plagiocephaly.¹²

Willis had a 4-week-old neonate with refusal to feed from her mother's right breast or turn her head to the right present for chiropractic care. The neonate was given a chiropractic adjustment and was immediately placed on her mother's right breast, where she was able to feed with no perceived difficulty. One week later at a follow-up, it was confirmed that the resolution was attained. "Further studies should be conducted to explore the importance of the role of chiropractic in the management of infants experiencing suboptimal breastfeeding."¹³

Anderson had a 3-month-old that was presented for chiropractic care by her mother. She had a medical diagnosis of gastroesophageal reflux disease. Complaints included frequently interrupted sleep, excessive intestinal gas, frequent vomiting, excessive crying, difficulty breastfeeding, plagiocephaly and torticollis. She had previous medical care that consisted of Prilosec prescription medication. Within four visits there was notable improvement in the patient's symptoms and total resolution of symptoms within three months of care.¹⁴

Articles

In the article by Hawk et al, they discuss the development of an outcome assessment that is for suboptimal breastfeeding. The outcome assessment is called the Musculoskeletal Infant

Breastfeeding Assessment Questionnaire (MIBAQ). They performed a cohort study that was performed in chiropractic offices that were using practice-based research methods. The chiropractors that were involved in the study all had previously provided chiropractic care for infants with musculoskeletal imbalances accompanied by suboptimal breastfeeding. Participants were mothers of breastfeeding infants who were younger than six months of age and were presenting for nursing dysfunction during the study period.¹⁵

"Data forms were a brief focused history, pre-MIBAQ, one-week post-MIBAQ and patient disposition. The post-form included the Patient's Global Impression of Change (PGIC). The MIBAQ consisted of 23 questions about suckling-related symptoms using a 4-point Likert scale. Responses were summed for a total score (0-69). The Pearson correlation between the change score and the PGIC was also calculated. The results were "highly significant." From May 15 through August 15, 2019, data was collected from 94 participants in 10 chiropractic offices; 100% collected the pre-MIBAQ and 81% the post-MIBAQ. Infants' mean age was 51 days. "The difference between the mean pre-MIBAQ score (23.5) and post (one-week) MIBAQ score (17.1) was highly significant ($p < .000$), as was the correlation between the change score (6.4 points) and the PGIC (76% reported improvement; Pearson correlation = .562)." Hawk et al then stated that "the MIBAQ appears to be a feasible instrument for use in chiropractic practices, and correlates highly with the PGIC, an established general outcome measure."¹⁵

Edwards et al wrote an article on a proposed pragmatic randomized comparison trial protocol about whether there is a difference between chiropractic care versus multidisciplinary care when it comes to treating infants for suboptimal breastfeeding. They discussed how "suboptimal breastfeeding is a problematic concern of mothers of newborns in all societies, with huge economic and sociological ramifications." They want to be able to determine whether there are superior benefits to one approach or another when it comes to treating mothers and infants in regard to suboptimal breastfeeding.

The proposed idea is as follows: "Randomize mothers and babies who consent to participate in two different treatment arms: (1) chiropractic manual therapy along with advice and (2) chiropractic manual therapy along with midwifery care and routine advice. Maternal report will provide the outcomes at the infant's ages of 6, 12 and 24 weeks." The reason for the trial is to investigate if there is an actual difference in effectiveness of chiropractic care alone versus a multidisciplinary approach. The purpose of the proposed publication is to receive recommendations from other professionals to strengthen the protocol.¹⁶

Slettebo et al did a cross-sectional study on infants in Norway that were presenting for chiropractic care and had a prevalence of musculoskeletal dysfunction. "There are no gold standard routines for examination of the musculoskeletal system in infants, and very little research that investigates clinical examination of musculoskeletal findings in infants under the age of six months." The objectives of this cross-sectional study were to determine the prevalence of neck dysfunction, postural spine problems, and their possible association with parent reported behavioral problems such as suboptimal

breastfeeding. “The aim of this study was to observe any associations between MSK problems of infancy and common behavioral and public health issues.” There was a questionnaire that was filled out on the first visit, and this was followed by a clinical examination and questionnaire completed by the chiropractors on the same day. In total, 90 infants enrolled in the study. Suboptimal breastfeeding was reported by 22 (25%), and 10 (12%) of the mothers reported pain during feeding. “More study is needed to determine a gold standard reference for infant musculoskeletal examinations along with the importance in improving activities of daily living and public health through balance of the musculoskeletal system.”¹⁷

Miller et al performed a cross-sectional survey to find out if tongue tie is really the problem when it comes to suboptimal breastfeeding. The number of infants that are presenting to chiropractors with the problem of suboptimal breastfeeding is increasing which is leading to more questions being raised about this population. In this population, the incidence of ankyloglossia (tongue tie) diagnosis appears to be high. There is little literature on the role of ankyloglossia in the often-complex clinical presentation of feeding difficulties.

“This study was designed to describe a population of infants presented to a chiropractic teaching clinic with the problem of suboptimal breastfeeding and assess this population for diagnosis and management of ankyloglossia.” Data was collected using maternal questionnaires and a total of 131 infants were included over a period of five months. “Ankyloglossia had been diagnosed prior to presentation to the chiropractor in 39% of infants, and of these, 77% had undergone frenulotomy (tongue tie cut) once or more.

Given the high incidence of ankyloglossia diagnosis and frenulotomy in these infants with persistent feeding difficulties, both the diagnosis and management of this problem must be reflected upon and questioned.” They concluded that “this study highlights a clinical need for a) clearer diagnostic criteria for ankyloglossia and, b) further research with a focus on sustained breastfeeding following frenulotomy and other treatments.”¹⁸

Stewart wrote a case series study that included 19 cases involved with pediatric chiropractic and infant breastfeeding difficulties concluding: “Paediatric chiropractic may have a role in assisting infant breastfeeding difficulties.”

This pilot case series study sought to identify: 1. The percentage of infants with reported breast-feeding difficulties which improved with chiropractic care; 2. The most common subluxations in infants with breastfeeding difficulties and 3.

Specific subluxation patterns associated with specific dysfunctional breastfeeding behaviours.” There was a questionnaire that was developed to address these questions and 19 infants/mothers were prospectively reviewed. “Improvements in breastfeeding behaviour were found in every infant in this study. The most significant outcomes occurred with improved attachment to the breast (100%), reduced extension/arching (94%) and side shaking (88%) once attached, reduced overall stress of feeding (84%), reduced pain when feeding (77%), and side preference (64%).” The

most common subluxation patterns involved the upper cervical and shoulder joint complexes. “Given the possible benefits to community health, studies in this area should be given research priority.”¹⁹

Literature Review

Fry wrote a literature review on chiropractic and breastfeeding dysfunction. Searches were performed on PubMed, MEDLINE, Cumulative Index to Nursing and Allied Health, and Index to Chiropractic Literature. Inclusion criteria were written in the English language in a peer-reviewed journal, involving infant human participants and a focus on chiropractic for breastfeeding dysfunction. Fry concluded that “limited evidence exists to support chiropractic treatment for infants with breastfeeding dysfunction.”²⁰

Edwards et al performed a literature review on what evidence exists that chiropractic care helps suboptimal breastfeeding. They discussed that every country in the world fails to meet recommended breastfeeding standards. “The aim of this review was to investigate the impact of chiropractic care on the continuation of breastfeeding to determine whether there was sufficient evidence to under-pin a randomized trial.” The evidence of benefit for chiropractic care for the breastfeeding dyad exists only at low-to-moderate-level. “Randomized trials must be done because there is a lack of high-level evidence available on the effects of chiropractic intervention, a situation partly due to the ethical issue of assigning infants with suboptimal breastfeeding into a high level randomized controlled trial where some children would be allocated to a non-treatment group.”²¹

Gleberzon et al wrote a literature review that had two purposes. “These were: (i) to conduct a search of the literature between 2007 and 2011 investigating the use of spinal manipulative therapy (SMT) for pediatric health conditions and (ii) to perform a systematic review of eligible retrieved clinical trials.” There was one clinical trial that investigated the effectiveness of SMT on suboptimal breastfeeding. “For the studies that monitored both subjective and objective outcome measures of relevance to both patients and parents tended to report the most favorable response to SMT. Further research is required in this area of chiropractic health care.”²²

Conclusion

There are a handful of case reports that show breastfeeding difficulties were resolved following chiropractic care. In the case series performed by Stewart¹⁹, we see that “improvements in breastfeeding behavior were found in every infant in this study.” Due to the importance of breastfeeding for the infant, it is critical that more research is performed.

However, as Edwards et al stated: “There is a lack of high-level evidence available on the effects of chiropractic intervention, a situation partly due to the ethical issue of assigning infants with suboptimal breastfeeding into a high level randomized controlled trial where some children would be allocated to a non-treatment group.”²¹ It is suggested that chiropractic care may be effective for suboptimal breastfeeding, and as Stewart said, “studies in this area should be given research priority.”¹⁹

References

1. NIH - Office of Communications. (2018, July 27). What are the benefits of breastfeeding? Retrieved October 27, 2021. Available from: <https://www.nichd.nih.gov/health/topics/breastfeeding/conditioninfo/benefits>.
2. Williams-Libs S., Alcantara J., Resolution of breastfeeding difficulties and concomitant weight gain following chiropractic care in an infant with birth trauma: A case report and review of the literature. Vertebral Subluxation Research, 2021. Available from: <https://www.vertebralesubluxationresearch.com/2021/04/18/resolution-of-breastfeeding-difficulties-and-concomitant-weight-gain-in-an-infant-following-a-course-of-chiropractic-care-a-case-report/>
3. Santos J., Alcantara J. Resolution of failure to thrive in an infant following chiropractic care to reduce vertebral subluxation: A case report and review of the literature. Vertebral Subluxation Research, 2021. Available from: <https://www.vertebralesubluxationresearch.com/2021/01/03/resolution-of-failure-to-thrive-in-an-infant-following-chiropractic-care-to-reduce-vertebral-subluxation-a-case-report-review-of-the-literature/>
4. Hosaka K., Alcantara J. Resolution of breastfeeding difficulties following chiropractic in a neonate with birth trauma, plagiocephaly and edema from an asynclitic presentation: A case report. Vertebral Subluxation Research, 2019. Available from: <https://www.vertebralesubluxationresearch.com/2019/11/11/resolution-of-breastfeeding-difficulties-following-chiropractic-in-a-neonate-with-birth-trauma-plagiocephaly-edema-from-an-asynclitic-presentation-a-case-report/>
5. Beardsley K. Resolution of unilateral breastfeeding preference and reflux in a 14-week-old infant with a preferred head position following chiropractic care: A case report. Journal of Clinical Chiropractic Pediatrics, 2019. Available from: <https://jccponline.com/Beardsley.pdf>
6. Green S., Alcantara J. Resolution of torticollis, breastfeeding difficulties and cranial distortion in a twin infant undergoing chiropractic care for vertebral subluxation: A case report and review of the literature. Vertebral Subluxation Research, 2019. Available from: <https://www.vertebralesubluxationresearch.com/2019/06/26/resolution-of-torticollis-breastfeeding-difficulties-cranial-distortion-in-a-twin-infant-undergoing-chiropractic-care-for-vertebral-subluxation-a-case-report-review-of-the-literature/>
7. Shtulman I., Alcantara J. Resolution of failure to thrive, gastroesophageal reflux disease (GERD), infantile colic and breastfeeding difficulties following chiropractic care to reduce vertebral subluxation: Case study and review of literature. Vertebral Subluxation Research, 2018. Available from: <https://www.vertebralesubluxationresearch.com/2018/06/07/resolution-of-failure-to-thrive-gastroesophageal-reflux-disease-gerd-infantile-colic-breastfeeding-difficulties-following-chiropractic-care-to-reduce-vertebral-subluxation-case-study-review-o/>
8. Drobbin D., Stallman J. Resolution of breastfeeding and latching difficulty following subluxation based chiropractic care: Case report and review of literature. Vertebral Subluxation Research, 2015. Available from: <https://www.vertebralesubluxationresearch.com/2017/09/10/resolution-of-breastfeeding-and-latching-difficulty-following-subluxation-based-chiropractic-care-case-report-and-review-of-the-literature/>
9. Collins K., Alcantara J., Holt K. Resolution of breastfeeding and gastrointestinal complaints in infant twins with plagiocephaly and scaphocephaly following birth trauma: A case series. Vertebral Subluxation Research, 2015. Available from: <https://www.vertebralesubluxationresearch.com/2017/09/10/resolution-of-breastfeeding-and-gastrointestinal-complaints-in-infant-twins-with-plagiocephaly-scaphocephaly-following-birth-trauma-a-case-series/>
10. Hubbard MA. Pediatric cholelithiasis and breastfeeding difficulties: A chiropractic case report. Journal of Clinical Chiropractic Pediatrics, 2014. Available from: <http://www.jccponline.com/pediatric-cholelithiasis.html>
11. Slak L., Wilson KA. Breastfeeding difficulty resolved following subluxation based chiropractic care and cranial work. Vertebral Subluxation Research, 2013. Available from: <https://www.vertebralesubluxationresearch.com/2017/09/10/breastfeeding-difficulty-resolved-following-subluxation-based-chiropractic-care-cranial-work/>
12. Fairest C. Resolution of birth-related cranial asymmetry following chiropractic care: A case report. Journal of Clinical Chiropractic Pediatrics, 2013. Available from: http://jccponline.com/jccp_v14_n1.pdf
13. Willis SA. The restoration of optimal breastfeeding after chiropractic care in a neonate with breastfeeding difficulties: A case report. Journal of Clinical Chiropractic Pediatrics, 2011. Available from: http://jccponline.com/jccp_v12_n1.pdf

14. Anderson R. Chiropractic care of a pediatric patient with symptoms associated with gastroesophageal reflux disease, fuss-cry-irritability with sleep disorder syndrome and irritable infant syndrome of musculoskeletal origin. PubMed, 2008. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2597889/>
15. Hawk C., Vallone S., Young J., Lavigne V. Development of an outcome assessment instrument for suboptimal breastfeeding in infants with musculoskeletal dysfunction. *Journal of Clinical Chiropractic Pediatrics*, 2020. Available from: <http://jccponline.com/Hawk2020.pdf>
16. Edwards CN., Miller J. Treating infants for suboptimal breastfeeding, is there a difference between chiropractic care versus multidisciplinary care: A pragmatic randomized comparison trial protocol. *Journal of Clinical Chiropractic Pediatrics*, 2019. Available from: <http://jccponline.com/Comparison.pdf>
17. Slettebo CA, Miller JE. Prevalence of musculoskeletal dysfunction in infants presenting for chiropractic care in Norway: A cross-sectional study. *Journal of Clinical Chiropractic Pediatrics*, 2017. Available from: <http://jccponline.com/Musculoskeletal01.pdf>
18. Miller AS., Miller JE. Is tongue tie really the problem? Incidence of ankyloglossia in an infant population presented with suboptimal feeding: A cross-sectional survey. *Journal of Clinical Chiropractic Pediatrics*, 2017. Available from: <http://jccponline.com/Ankyloglossial01.pdf>
19. Stewart A. Paediatric chiropractic and infant breastfeeding difficulties: A pilot case series study involving 19 cases. *Chiropractic Journal of Australia*, 2012. Available from: <http://cjaonline.realviewdigital.com/?iid=67811> or https://www.chiroindex.org/?search_page=articles&action=&articleId=22554&search1=
20. Fry LM. Chiropractic and breastfeeding dysfunction: A literature review. *Journal of Clinical Chiropractic Pediatrics*, 2014. Available from: <http://jccponline.com/LITreview.html>
21. Edwards CN., Miller J. What is the evidence that chiropractic care helps sub-optimal breastfeeding? *Journal of Clinical Chiropractic Pediatrics*, 2019. Available from: <http://jccponline.com/Edwards.pdf>
22. Gleberzon BJ., Arts J., Mei A., McManus EL. The use of spinal manipulative therapy for pediatric health conditions: A systematic review of the literature. PubMed, 2012. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3364062/>