Introduction
A critical measure used to assess effectiveness of tongue tie intervention to resolve breastfeeding (also called chestfeeding) latch issues, is that of perceived maternal pain. There have been many studies that have shown improved maternal nipple pain post-intervention with improvements immediately after the procedure as well as up to 2-weeks post-procedure1,2,3. To date, there is no research comparing if perceived maternal breastfeeding pain changes over time, or if perceived maternal infant pain differs over time.

Objectives
1. To compare retrospectively-reported pre- and post-intervention maternal nipple pain between those with infants receiving surgical release <1 month prior to survey and those receiving it >1 month prior
2. To determine if maternal perception of infant surgical pain differed by time since intervention (TSI)

Methods
• Cross sectional, observational study
• Online survey (~15 minutes in length)
• Conducted from August to September 2020

Inclusion Criteria
> 18 years of age
With an infant < 12 months of age & with > 1 tethered oral tissue released
Who were breastfeeding this infant, or had done so in the past

Survey Instrument Domains Relevant to these analyses
➢ Demographics
➢ Experience with, and timing of, tethered oral tissue(s) release

Pain Scale
Fig. 1. Using a visual analog scale (VAS), ranging from “0” (no pain) to “10” (most pain) participants recalled:
- Perceived level of infant pain, within 1 hour of surgical release
- Nipple pain 1 week prior to and 1 week post-surgical release (right & left nipple)

Results
479 screens ➔ 226 eligible ➔ 115 consents
- 92 responses considered valid & complete for initial analyses
- 96% identified as white and either married or cohabitating
- 91% reported providing breastfeeding at time of survey completion
- 82% reported the surgical procedure occurred >1 month prior to survey completion (Time Since Intervention (TSI) variable)

Overall reported pain levels (Table)
- Pain variables not normally distributed - Reported as median & interquartile range (IQR)
- Only those responding to BOTH the pre- and post-release nipple pain questions included in relevant analyses (e.g., Obj. 1 – left: n=83; right: n=81)
  - Pain dropped 3 to 5 points, depending on nipple
  - Perceived child pain, within 1 hour of surgical release, was moderate

Table. Maternal Nipple Pain, Pre- & Post-release, and Perceived Child Surgical Pain (within First Hour)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pain Level (0-10)</th>
<th>Median (IQR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Week Pre-release</td>
<td>1 Week Post-release</td>
</tr>
<tr>
<td>Maternal Pain, Left Nipple (n=83)</td>
<td>5 (7)</td>
<td>2 (3)</td>
</tr>
<tr>
<td>Maternal Pain, Right Nipple (n=81)</td>
<td>7 (7)</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Perceived child pain (n=92)</td>
<td>5 (4)</td>
<td></td>
</tr>
</tbody>
</table>

Objective 1: Maternal pain, pre- and post-release, by TSI (Fig. 2)
- No differences in maternal pain detected by TSI (p>0.05)
- Regardless of TSI, mothers reported the same degree of pain relief experienced post-surgical release.

Fig. 1. Screenshot: VAS used to recall perceived infant procedural pain and pre- and post-surgical release nipple pain

Fig. 2. Maternal nipple pain 1 week prior to and 1 week post surgical release, by TSI

Objective 2: Perceived child surgical pain, by TSI
- No differences detected by TSI
- Regardless of TSI, both groups reported a median score of 5 and IQR of 4

Conclusion
Based on these results, pain experienced while breastfeeding an infant with “tongue-tie” may be reliably recalled, even if more than a month has passed since surgical intervention occurred. Similarly, maternal recall of perceived pain experience by the infant during surgical release of tissue may be reliable for some time after the event. However, future work should explore these concepts among a more heterogeneous sample and over a longer recall period.

Funding Sources
University of Tennessee professional development funds.

Sources