

SUPPLEMENTAL MATERIALS

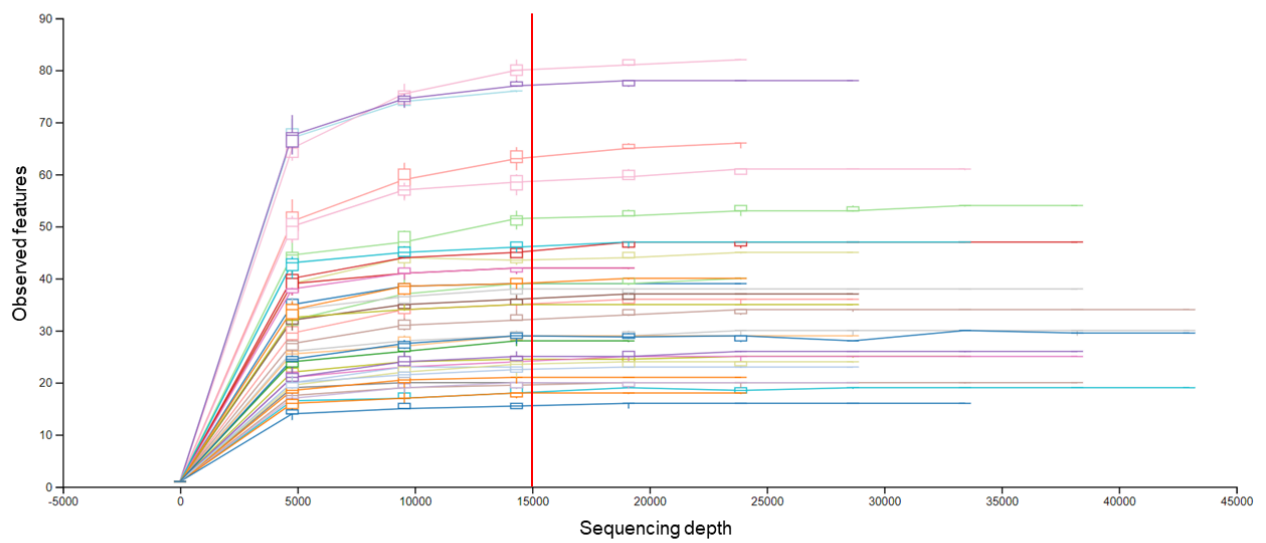


Figure S1. Observed features appear saturated at a sampling depth of 15,000. The QIIME2 generated alpha rarefaction curve displays observed features as a function of sequencing depth. The lines represent individual 2m_wlz samples. The red, vertical line represents the selected rarefaction depth.

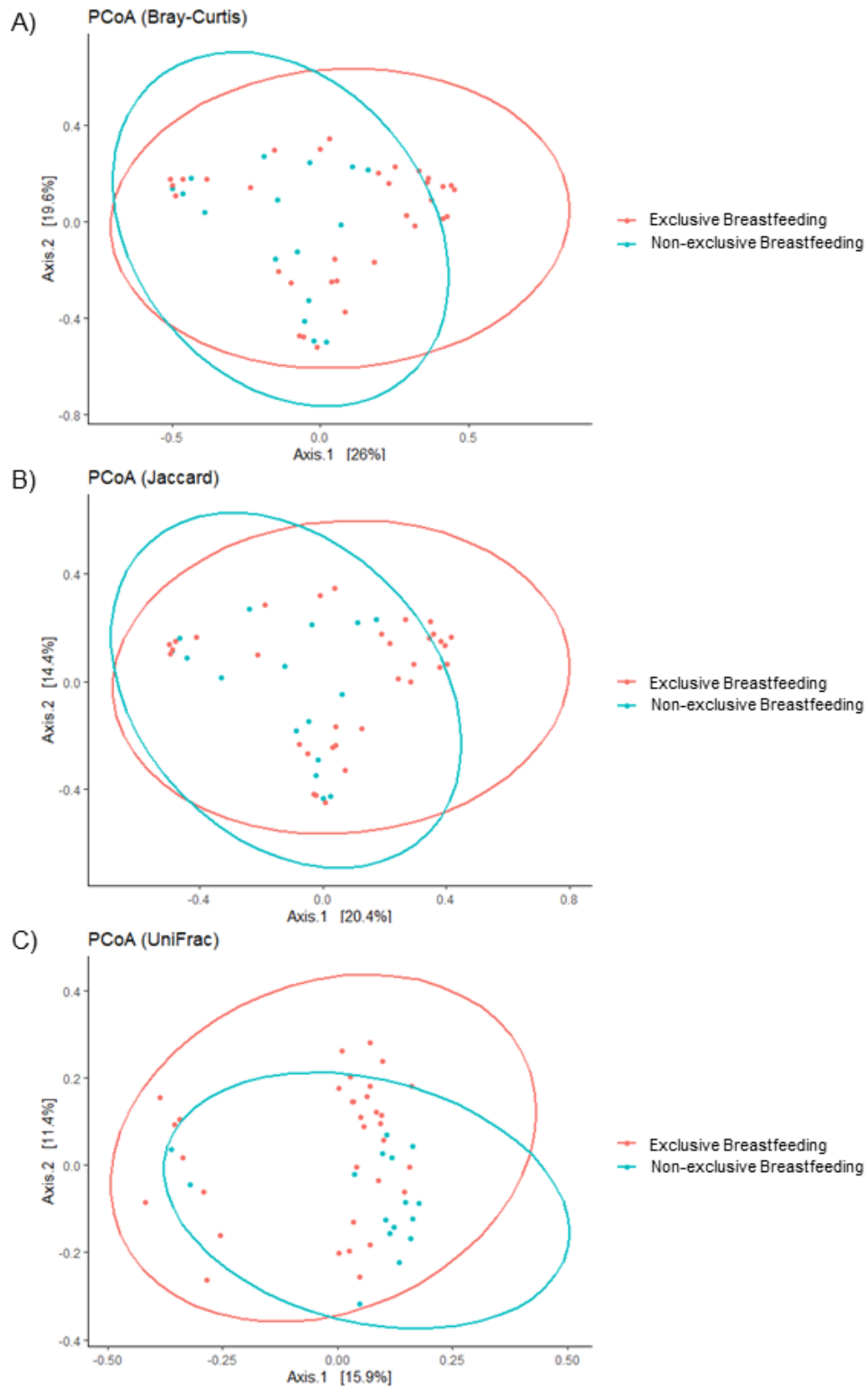


Figure S2. Beta diversity PCoA plots show substantial overlap between EBF and NEBF groups. Principle coordinate analysis derived from (A) Bray-Curtis, (B) Jaccard, and (C) unweighted UniFrac distances between EBF and NEBF groups as indicated in the legends. For each axis, percent variation is indicated within the square brackets.

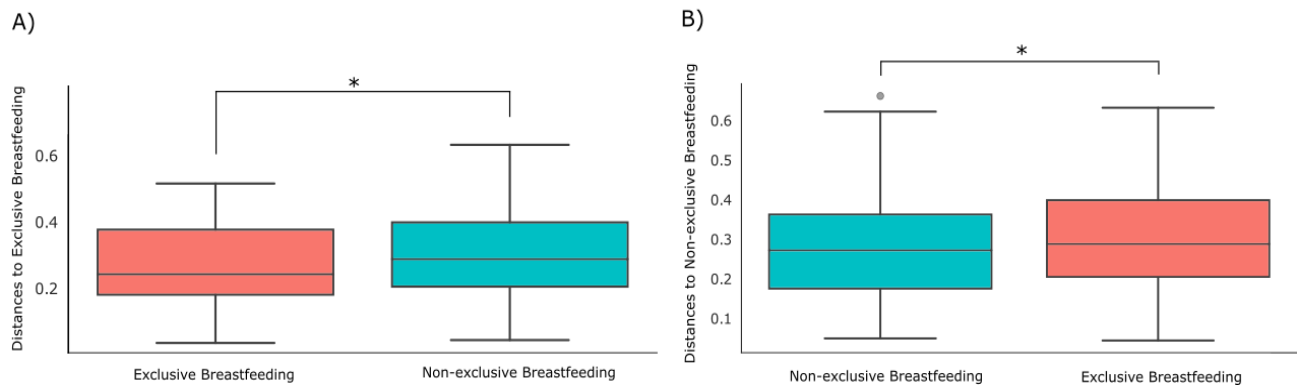


Figure S3. Weighted UniFrac Distance boxplots show a small, yet significant difference in distance between EBF and NEBF groups. Weighted UniFrac boxplots showing distances from (A) exclusive breastfeeding and (B) non-exclusive breastfeeding within and between sample populations. The box represents the interquartile range, and the middle line represents the median. Whiskers denote 95% confidence intervals. EBF n=33, shown in red, NEBF=16, shown in blue. * indicate a significant difference, p=0.006 (pairwise PERMANOVA test).

Table S1. Kruskal-Wallis statistical analysis on common alpha diversity metrics calculated in QIIME2.

Alpha Diversity Metric	Group 1: Exclusive Breastfeeding Diversity Averages	Group 2: Non-exclusive Breastfeeding Diversity Averages	Kruskal Wallis p-value
Observed features	31.79	40.19	0.012*
Faith's Phylogenetic Distance	5.471	5.801	0.208
Pielou's Evenness	0.379	0.462	0.052

The indicated alpha diversity metrics were calculated in QIIME2, and statistical difference between EBF and NEBF groups for each alpha diversity metric was calculated using the Kruskal Wallis test. EBF n=33, NEBF n=16. p-values are indicated in the table. *indicate a significant difference.

Table S2. Pairwise PERMANOVA analysis on common beta diversity metrics show statistical significance for all metrics.

Beta Diversity Metric	Group 1	Group 2	Pairwise PERMANOVA q-value
Bray-Curtis Dissimilarity	Exclusive Breastfeeding	Non-exclusive Breastfeeding	0.017*
Jaccard Similarity			0.003*
Unweighted UniFrac Distance			0.004*

The indicated alpha diversity metrics were calculated in QIIME2, and statistical difference between EBF and NEBF groups for each beta diversity metric was calculated using the pairwise PERMANOVA test. EBF n=33, NEBF n=16. p-values are indicated in the table. *indicate a significant difference.

Table S3. Relative abundance analysis on differentially abundant genera show non-significant or uninformative results.

Microbial Genera	Kruskal Wallis p-value
<i>Megasphaera</i>	-
<i>Proteus</i>	-
<i>Acinetobacter</i>	-
<i>Bacteroides</i>	0.95
<i>Lactobacillus</i>	-
<i>Staphylococcus</i>	-
<i>Veillonella</i>	0.14
<i>Haemophilus</i>	-
<i>Clostridium sensu stricto 1</i>	-

The relative abundance of differentially abundant genera were compared between EBF and NEBF groups in R and statistical significance was calculated using the Kruskal Wallis test. P-values are

indicated in the table where appropriate; genera with very low relative abundance medians in both groups and therefore are uninformative are represented in the table with a dash (-).