

Supplemental Table 1: Demographic characteristics and nutritional status of mothers less than 19 years presenting to Shabelle Health and Nutrition Center, Somalia – November 2019 to March 2020 (N=133)

| | Pregnant Mothers ¹ | Lactating Mothers ² | Neither Pregnant nor Lactating Mothers ³ | All Mothers |
|----------------------------------------------------------|-------------------------------|--------------------------------|-----------------------------------------------------|-------------|
| | (15 – 18.9 years) | | | |
| N | 31 | 5 | 97 | 133 |
| Age (years) | | | | |
| Median (IQR) | 18 (18-18) | 18 (18-18) | 18 (18-18) | 18 (18-18) |
| Range | 17-18 | 18 | 15-18 | 15-18 |
| Access to care | | | | |
| Enrolled in antenatal care ⁴ , n(%) | 28 (90.3) | 5 (100) | - | 33 (91.7) |
| Nutritional Status | | | | |
| MUAC ⁵ (cm), mean (SD) | 24.6 (3.69) | 23.1 (2.80) | 24.1 (2.99) | 24.2 (3.16) |
| Low Mother MUAC ^{5,6} , n(%) | 10 (32.3) | 3 (60.0) | 48 (51.1) | - |
| Body mass index for age z-score ⁷ , mean (SD) | 0.64 (0.99) | -0.14 (1.09) | -0.12 (1.34) | 0.06 (1.29) |
| Body mass index for age z-score ⁷ < -2, n(%) | 0 (0.00) | 0 (0.00) | 5 (5.20) | 5 (3.80) |
| Body mass index for age z-score ⁷ < -3, n(%) | 0 (0.00) | 0 (0.00) | 2 (0.02) | 2 (0.02) |
| Parity, n(%) | | | | |
| 1-2 child | 21 (67.7) | 2 (40.0) | 81 (83.5) | 104 (78.2) |
| 3-5 children | 9 (29.0) | 3 (60.0) | 14 (14.4) | 26 (19.5) |
| >5 children | 1 (3.20) | 0 (0.00) | 2 (2.10) | 3 (2.3) |

Abbreviations: Mid-upper arm circumference (MUAC), kilograms (kg), meters (m), centimeters (cm), standard deviation (SD)

¹Pregnant mothers defined as mothers that self-identified as pregnant. Pregnant mothers may have also been breastfeeding a child.

²Lactating mothers defined as non-pregnant mothers breastfeeding a child between the ages of 0-5 months. The child enrolled in the study was not necessarily the child who was breastfeeding.

³Neither pregnant nor lactating mothers defined as women who were neither pregnant nor lactating a child 0-5 months.

⁴Denominator of women in all mothers column only includes pregnant and lactating mothers (n=36)

⁵Due to missing MUAC data or MUAC out of range 3 mothers were excluded from this analysis. The sample for neither pregnant nor lactating mothers n=94.

⁶Low MUAC defined as <23 cm for pregnant and lactating mothers and ≤24 cm for neither pregnant nor lactating mothers.

⁷Due to missing weight or height information or BMI values out of range, 1 mother was excluded from this analysis. The sample for neither pregnant nor lactating mothers n=96.

Supplemental Table 2: Model estimated differences in maternal BMI and MUAC by maternal parity, gestational status and age

| | | Model 1 – Model Estimated Maternal BMI based on child WHZ ¹ | | | Model 2 - Model Estimated Maternal BMI based on child MUAC ¹ | | | Model 3 - Model Estimated Maternal MUAC based on child MUAC ¹ | | | Model 4 - Model Estimated Maternal MUAC based on child WHZ ¹ | | |
|---------------------------------------------|--------------------------|------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------|------|------|--------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------|------|------|
| | | Age of mother (years) | | | Age of mother (years) | | | Age of mother (years) | | | Age of mother (years) | | |
| Maternal Gestational Status | Maternal Parity Category | 22 | 27 | 30 | 22 | 27 | 30 | 22 | 27 | 30 | 22 | 27 | 30 |
| Neither pregnant nor lactating ² | 1 to 2 | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| | 3 to 5 | 1.45 | 0.52 | 0.58 | 1.56 | 1.92 | 2.13 | 0.67 | 0.83 | 0.92 | 1.12 | 1.37 | 1.52 |
| | 6 to 15 | 2.04 | 0.73 | 0.81 | 2.14 | 2.62 | 2.92 | 1.00 | 1.22 | 1.36 | 1.47 | 1.81 | 2.01 |
| Lactating ³ | 1 to 2 | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| | 3 to 5 | 2.36 | 1.64 | 1.82 | 2.42 | 2.96 | 3.29 | 1.31 | 1.61 | 1.79 | 1.76 | 2.16 | 2.40 |
| | 6 to 15 | 3.13 | 1.94 | 2.15 | 2.96 | 3.63 | 4.03 | 1.58 | 1.95 | 2.16 | 2.55 | 3.14 | 3.48 |
| Pregnant ⁴ | 1 to 2 | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| | 3 to 5 | 1.38 | 0.29 | 0.33 | 1.13 | 1.39 | 1.54 | 0.59 | 0.72 | 0.80 | 0.96 | 1.18 | 1.31 |
| | 6 to 15 | 2.35 | 3.35 | 4.35 | 2.22 | 2.73 | 3.03 | 1.42 | 1.74 | 1.93 | 1.80 | 2.21 | 2.46 |

Abbreviations: Ref = Reference, BMI=Body Mass Index, MUAC = Mid-upper arm circumference, WHZ = weight for height z-score

¹Models adjusted for maternal parity, gestational status and age in addition to child nutritional indicator.

²Neither pregnant nor lactating mothers defined as women who were neither pregnant nor lactating a child 0-5 months.

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|------------------------------------------|--------------------------|------------------------------------------------------------------------|-------|-------|-------------------------------------------------------------------------|-------|-------|--------------------------------------------------------------------------|-------|-------|-------------------------------------------------------------------------|-------|-------|
| | | Age of mother (years) | | | Age of mother (years) | | | Age of mother (years) | | | Age of mother (years) | | |
| Maternal Gestational Status ² | Maternal Parity Category | 22 | 27 | 30 | 22 | 27 | 30 | 22 | 27 | 30 | 22 | 27 | 30 |
| Neither | 1 to 2 children | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Lactating | | -1.33 | -2.89 | -3.21 | -1.37 | -1.68 | -1.87 | -0.67 | -0.82 | -0.91 | -1.02 | -1.25 | -1.38 |
| Pregnant | | 0.24 | 0.95 | 1.06 | 0.49 | 0.60 | 0.67 | -0.46 | -0.56 | -0.63 | -0.57 | -0.70 | -0.77 |
| Neither | 3 to 5 children | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Lactating | | -0.43 | -1.78 | -1.98 | -0.52 | -0.64 | -0.71 | -0.03 | -0.04 | -0.04 | -0.37 | -0.46 | -0.51 |
| Pregnant | | 0.17 | 0.72 | 0.80 | 0.06 | 0.07 | 0.08 | -0.55 | -0.67 | -0.74 | -0.72 | -0.88 | -0.98 |
| Neither | 6 to 15 children | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Lactating | | -0.24 | -1.69 | -1.88 | -0.55 | -0.68 | -0.75 | -0.08 | -0.10 | -0.11 | 0.06 | 0.08 | 0.09 |
| Pregnant | | 0.58 | 1.23 | 1.37 | 0.57 | 0.70 | 0.78 | -0.04 | -0.05 | -0.05 | -0.24 | -0.29 | -0.33 |

Abbreviations: Ref = Reference, BMI=Body Mass Index, MUAC = Mid-upper arm circumference, WHZ = weight for height z-score

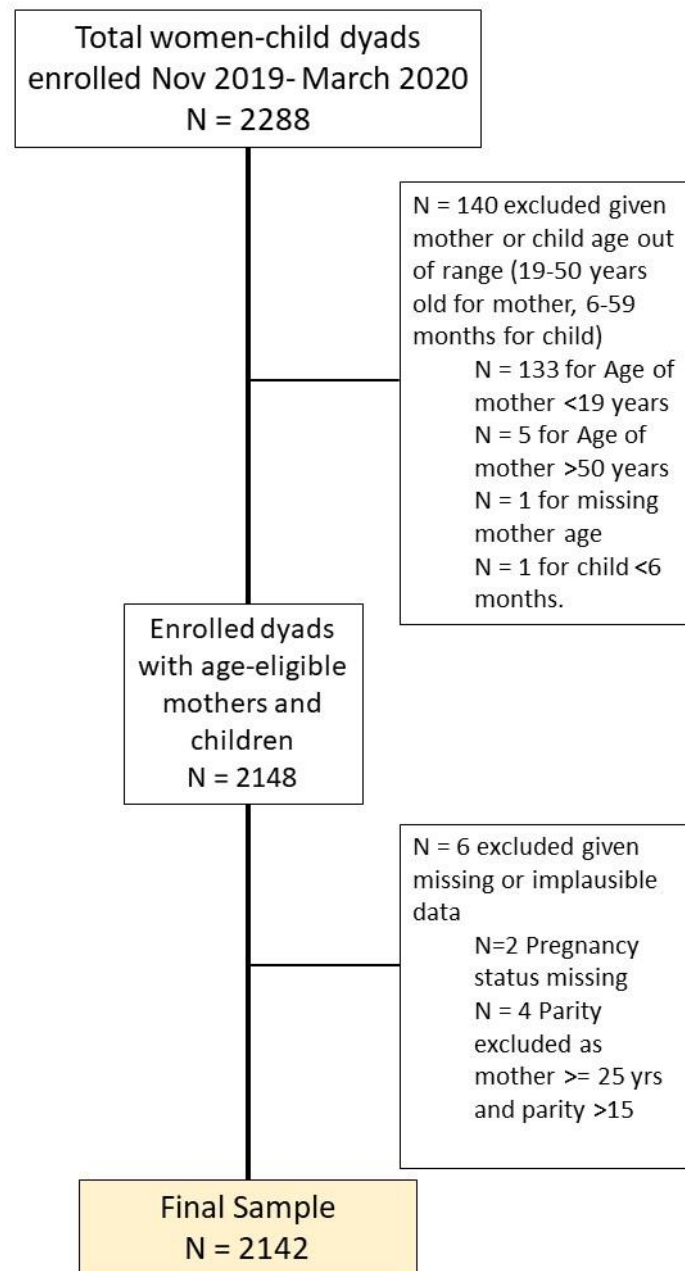
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Supplemental Figure 1: Flowchart showing exclusion criteria for mother-child dyads during statistical analyses



Final sample – 98.9% (2119/2142) subset with complete data on maternal BMI

Final sample – 96.4% (2064/2142) subset with complete data on maternal MUAC

Final sample – 98.3% (2106/2142) subset with complete data on WHZ

Final sample – 99.9% (2140/2142) subset with complete data on child MUAC