**Supplementary File 2: Comparisons between the MIOH-DS and MIOH/Control groups**

***Long-term effectiveness of the Midwifery Initiated Oral Health-Dental Service Program on maternal oral health knowledge, preventative dental behaviours and the oral health status of children in Australia***

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# Table 1: Knowledge comparison between the MIOH-DS and MIOH/Control groups

| **Variable** | **MIOH-DS*****n*(%)** | **MIOH/Control*****n*(%)** | **Pearson’s χ2** | ***p*-value** |
| --- | --- | --- | --- | --- |
| Having healthy baby teeth is not as important as having healthy permanent teeth because baby teeth will fall out (CR: False) |  |  |  |  |
| Correct | 67(98.5) | 125(91.9) | 3.586 | 0.058 |
| Incorrect | 1(1.5) | 11(8.1) |
|  |  |  |  |  |
| It is ok to use the same spoon to taste baby’s food (CR: False) |  |  |  |  |
| Correct | 60(88.2) | 115(84.6) | 0.502 | 0.478 |
| Incorrect | 8(11.8) | 21(15.4) |
|  |  |  |  |  |
| It is safe to put baby to bed with a bottle of milk (CR: False) |  |  |  |  |
| Correct | 67(98.5) | 113(83.1) | 10.413 | 0.001 |
| Incorrect | 1(1.5) | 23(16.9) |
|  |  |  |  |  |
| A good way to prevent cavities in children is to give sugary snacks only at meal times (CR: True) |  |  |  |  |
| Correct | 18(26.5) | 26(19.1)  | 1.449 | 0.229 |
| Incorrect | 50(73.5) | 110(80.9) |
|  |  |  |  |  |
| Dental caries is a disease in which bacteria in your mouth use sugar to produce acid that breaks down your tooth enamel. (CR: True)‡ |  |  |  |  |
| Correct | 66(98.5) | 133(97.8) | 0.118 | 0.731 |
| Incorrect | 1(1.5) | 3(2.2) |
|  |  |  |  |  |
| Early tooth decay appears as yellow areas that later break down into brownish holes. (CR: True) |  |  |  |  |
| Correct | 64(94.1) | 128(94.1) | 0.000 | \* |
| Incorrect | 4(5.9) | 8(5.9) |
|  |  |  |  |  |
| Undetected tooth decay can cause a child to suffer considerable pain and even hospitalisation (CR: True) |  |  |  |  |
| Correct | 68(100.0) | 134(98.5) | 1.010 | 0.315 |
| Incorrect | 0(0.0) | 2(1.5) |
|  |  |  |  |  |
| Children of mothers who have tooth decay are more likely to get tooth decay (CR: True) |  |  |  |  |
| Correct | 53(77.9) | 94(69.1) | 1.753 | 0.186 |
| Incorrect | 15(22.1) | 42(30.9) |
|  |  |  |  |  |
| Cheese is a snack that is least likely to cause decay (CR: True) |  |  |  |  |
| Correct | 50(73.5) | 93(68.4) | 0.573 | 0.449 |
| Incorrect | 18(26.5) | 43(31.6) |
|  |  |  |  |  |
| A pea sized amount of toothpaste should be used when brushing children’s teeth (CR: True) |  |  |  |  |
| Correct | 67(98.5) | 135(99.3) | 0.252 | 0.615 |
| Incorrect | 1(1.5) | 1(0.7) |
|  |  |  |  |  |
| Children should be assisted in brushing till the age of 8 years (CR: True). |  |  |  |  |
| Correct | 64(94.1) | 127(93.4) | 0.041 | 0.839 |
| Incorrect | 4(5.9) | 9(6.6) |
|  |  |  |  |  |
| Parents should regularly perform a ‘lift the lip’ check on their child (CR: True)‡ |  |  |  |  |
| Correct | 55(82.1) | 90(66.2) | 5.570 | 0.018 |
| Incorrect | 12(17.9) | 46(33.8) |
|  |  |  |  |  |
| A child’s first dental visit should be: (CR: At one year old) |  |  |  |  |
| Correct | 21(30.9) | 42(30.9) | 0.000 | \* |
| Incorrect | 47(69.1) | 94(69.1) |
|  |  |  |  |  |
| Which is not a risk factor for tooth decay in early childhood? (CR: Sleeping with a bottle filled with plain water) |  |  |  |  |
| Correct | 68(100.0) | 136(100.0) | 0.000 | \* |
| Incorrect | 0(0.0) | 0(0.0) |
|  |  |  |  |  |
| Before infant’s teeth appear, parents should: (CR: Clean an infant’s gums with a damp washcloth after meals and before bed) |  |  |  |  |
| Correct | 33(48.5) | 83(61.0) | 2.888 | 0.089 |
| Incorrect | 35(51.5) | 53(39.0) |
|  |  |  |  |  |
| Tooth decay in early childhood is caused by a combination of many factors that include the following: (CR: All of the above) |  |  |  |  |
| Correct | 68(100.0) | 133(97.8) | 1.522 | 0.217 |
| Incorrect | 0(0.0) | 3(2.2) |
|  |  |  |  |  |
| Which of the following drinks do not cause tooth decay? (CR: Water) |  |  |  |  |
| Correct | 68(100.0) | 135(99.3) | 0.502 | 0.478 |
| Incorrect | 0(0.0) | 1(0.7) |
|  |  |  |  |  |
| Untreated tooth decay can lead to: (CR: All of the above) |  |  |  |  |
| Correct | 65(95.6) | 124(91.2) | 1.295 | 0.255 |
| Incorrect | 3(4.4) | 12(8.8) |
|  |  |  |  |  |
| When should you start brushing a child’s teeth? (CR: When the first tooth appears)˥ |  |  |  |  |
| Correct | 53(77.9) | 103(80.5) | 0.175 | 0.676 |
| Incorrect | 15(22.1) | 25(19.5) |
|  |  |  |  |  |
| Tooth decay in early childhood is: (CR: The single most common chronic childhood disease)˧ |  |  |  |  |
| Correct | 45(75.0) | 97(78.9) | 0.346 | 0.556 |
| Incorrect | 15(25.0) | 26(21.1) |
|  |  |  |  |  |
| What are factors that might increase the risk of tooth decay? |  |  |  |  |
| Taking too much sugary food or drinks (CR: True) |  |  |  |  |
| Correct | 68(100.0) | 135(99.3) | 0.502 | 0.478 |
| Incorrect | 0(0.0) | 1(0.7) |
|  |  |  |  |  |
| Not brushing teeth with fluoride toothpaste in the morning and at night (CR: True) |  |  |  |  |
| Correct | 68(100.0) | 133(97.8) | 1.522 | 0.217 |
| Incorrect | 0(0.0) | 3(2.2) |
|  |  |  |  |  |
| Eating or drinking too frequently (CR: False) |  |  |  |  |
| Correct | 21(30.9) | 56(41.2) | 2.044 | 0.153 |
| Incorrect | 47(69.1) | 80(58.8) |
|  |  |  |  |  |
| Not rinsing after meals (CR: True) |  |  |  |  |
| Correct | 62(91.2) | 106(77.9) | 5.464 | 0.019 |
| Incorrect | 6(8.8) | 30(22.1) |
|  |  |  |  |  |
| Lack of calcium (CR: False) |  |  |  |  |
| Correct | 5(7.4) | 17(12.5) | 1.248 | 0.264 |
| Incorrect | 63(92.6) | 119(87.5) |
|  |  |  |  |  |
| Breastfeeding beyond 12 months of age (CR: False) |  |  |  |  |
| Correct | 50(73.5) | 105(77.2) | 0.336 | 0.562 |
| Incorrect | 18(26.5) | 31(22.8) |
|  |  |  |  |  |
| Discontinuing bottle feeding before 12 months (CR: False) |  |  |  |  |
| Correct | 57(83.8) | 119(87.5) | 0.517 | 0.472 |
| Incorrect | 11(16.2) | 17(12.5) |
|  |  |  |  |  |
| Sipping from a bottle/cup throughout the day with something sweet in it (CR: True) |  |  |  |  |
| Correct | 66(97.1) | 111(81.6) | 9.412 | 0.002 |
| Incorrect | 2(2.9) | 25(18.4) |
|  |  |  |  |  |
| None of the above (CR: False) |  |  |  |  |
| Correct | 68(100.0) | 135(99.3) | 0.502 | 0.478 |
| Incorrect | 0(0.0) | 1(0.7) |

‡1-5 missing cases

˥6-10 missing cases

˧11-25 missing cases

\*Not applicable

# Table 2: Mean total Knowledge comparison between the MIOH-DS and MIOH/Control groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **MIOH-DS**Mean(SD) | **MIOH/Control**Mean(SD) | **Mann-Whitney U** | ***p*-value** |
| Mean total knowledge score˧ | 22.51(2.06) | 21.39(2.90) | 2710.5 | 0.029 |

˧30 missing cases

# Table 3: Dental behaviour comparison between the MIOH-DS and MIOH/Control groups

| **Variable** | **MIOH-DS*****n*(%)** | **MIOH/Control*****n*(%)** | **Pearson’s χ2** | ***p*-value** |
| --- | --- | --- | --- | --- |
| **Dental Visits** |  |  |  |  |
| Sought dental professional for oral health problems/concerns˩ | 7(43.8) | 18(51.4) | 0.259 | 0.611 |
|  |  |  |  |  |
| Hospitalisation related to dental problems‡ | 2(3.1) | 2(1.5) | 0.558 | 0.455 |
|  |  |  |  |  |
| Child regularly visits dentist every year‡ | 33(50.8) | 59(43.7) | 0.882 | 0.348 |
|  |  |  |  |  |
| Last visit within past 12 months‡ | 22(30.1) | 51(39.9) | 3.518 | 0.475 |
|  |  |  |  |  |
| Age of first dental visit˩ |  |  |  |  |
| Under one year old | 2(4.3) | 3(3.6) | 2.008 | 0.848 |
| One year | 8(17.0) | 18(21.4) |
| Two years | 15(31.9) | 23(27.4) |
| Three years | 12(25.5) | 25(29.8) |
| Four years | 1(2.1) | 4(4.8) |
| Never | 9(19.1) | 11(13.1) |
|  |  |  |  |  |
| Setting of child’s last dental visit˩ |  |  |  |  |
| Private practice | 26(63.4) | 50(65.8) | 1.404 | 0.843 |
| Government dental service | 8(19.5) | 14(18.4) |
| School dental service | 0(0.0) | 2(2.6) |
| Other | 5(12.2) | 7(9.2) |
| Don’t know | 2(4.9) | 3(3.9) |
|  |  |  |  |  |
| Received information about child oral health˧ | 46(71.9) | 73(56.6) | 0.4228 | 0.040 |
|  |  |  |  |  |
| Received ECOH program˧ | 2(3.2) | 1(0.8) | 1.564 | 0.211 |
|  |  |  |  |  |
| **Oral hygiene** |  |  |  |  |
| Frequency of tooth brushing with toothpaste‡ |  |  |  |  |
| Less than once a day | 4(6.0) | 10(7.4) | 0.715 | 0.870 |
| Once a day | 34(50.7) | 63(46.3) |
| Twice a day | 28(41.8) | 62(45.6) |
| More than twice a day | 1(1.5) | 1(0.7) |
|  |  |  |  |  |
| Type of toothpaste used‡ |  |  |  |  |
| Standard fluoride toothpaste | 7(10.4) | 13(9.6) | 0.590 | 0.899 |
| Children’s toothpaste | 56(83.6) | 117(86.0) |
| Non-fluoride toothpaste | 2(3.0) | 4(2.9) |
| None | 2(3.0) | 2(1.5) |
|  |  |  |  |  |
| Amount of toothpaste used‡ |  |  |  |  |
| Less than a pea sized amount | 16(24.6) | 35(26.1) | 0.087 | 0.957 |
| A pea sized amount (recommended)  | 45(69.2) | 90(67.2) |
| More than a pea sized amount | 4(6.2) | 9(6.7) |
|  |  |  |  |  |
| Assists child with tooth brushing‡ | 67(100.0) | 132(97.1) | 2.010 | 0.156 |
|  |  |  |  |  |
| **Dietary and other habits** |  |  |  |  |
|  |  |  |  |  |
| Consumes juice at least once per day‡ | 18(26.9) | 38(27.9) | 0.026 | 0.872 |
|  |  |  |  |  |
| Consumes soft drink at least once per day‡ | 2(3.0) | 4(2.9) | 0.000 | 0.986 |
|  |  |  |  |  |
| Consumes biscuits, cakes donuts or muesli bars at least once per day‡ | 21(31.3) | 30(22.1) | 2.057 | 0.152 |
|  |  |  |  |  |
| Consumes confectionary at least once per day‡ | 9(13.4) | 13(9.6) | 0.697 | 0.404 |
|  |  |  |  |  |
| Drinks from bottle at least sometimes | 7(10.3) | 28(20.7) | 7.015 | 0.135 |
|  |  |  |  |  |
| Always drinks from regular cup | 56(82.4) | 83(61.0) | 11.734 | 0.019 |
|  |  |  |  |  |
| Child currently using bottle | 22(32.4) | 42(30.9) | 0.046 | 0.831 |
|  |  |  |  |  |
| History of regular pacifier use | 28(41.2) | 57(41.9) | 0.010 | 0.920 |
|  |  |  |  |  |
| Shares eating utensils with child | 41(33.3) | 82(66.7) | 0.000 | \* |
|  |  |  |  |  |
| Used mouth to clean pacifier for child | 8(30.8) | 18(69.2) | 0.088 | 0.767 |
|  |  |  |  |  |
| Coated pacifier or teat with sweet substances | 3(42.9) | 4(57.1) | 0.296 | 0.586 |
|  |  |  |  |  |
| Given a bottle when lying down to sleep | 28(34.1) | 54(65.9) | 0.041 | 0.840 |
|  |  |  |  |  |
| Current problems or concerns with oral health | 25(36.8) | 65(47.8) | 2.237 | 0.135 |
| Perceptions of child oral health |  |  |  |  |
| Good | 58 (65.2) | 31 (34.8) | 1.923 | 0.588 |
| Very good | 55 (64.7) | 30 (35.3) |
| Average | 17 (73.9) | 6 (26.1) |
| Poor | 6 (85.7) | 1 (14.3) |

‡1-5 missing cases

˥6-10 missing cases

˧11-25 missing cases

˩More than 25 missing cases

# Table 4: Oral assessment comparison between the MIOH-DS and MIOH/Control groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **MIOH-DS*****n*(%)** | **MIOH/Control*****n*(%)** | **Pearson’s χ2** | ***p*-value** |
| *Streptococcus mutans* positive˩ | 14(25.5) | 18(17.8) | 1.272 | 0.259 |
|  |  |  |  |  |
| Lactobacilli positive˩ | 10(18.2) | 22(21.8) | 0.283 | 0.595 |

# Table 5: DMFT assessment comparison between the MIOH-DS and MIOH/Control groups

| **Variable** | **MIOH-DS*****Mean*(SD)** | **MIOH/Control*****Mean*(SD)** | **Mann-Whitney** | ***p*-value** |
| --- | --- | --- | --- | --- |
| Mean DMFT  | .57(1.454) | .55(1.235) | 3047.0 | 0.535 |