

Summary of Results

Baseline Characteristics: The mean age of participants was 26 years. Many of the participants 144 (36.0%) and 180 (45.0%) in the intervention and control groups respectively had primary education as their highest educational qualification. Only 16 (4.0%) and 3 (0.8%) of them had college degree as their highest educational qualification. About 14% (n = 55) of the intervention group did not have any formal education compared to all of the participants in the control had at least a primary education. About 353 (88.2%) and 332 (83.0%) in the intervention and control groups respectively were not employed. About a quarter of the intervention (n = 96, 24.0%) and control (n = 88, 22.0%) groups had five or more deliveries. The mean age of the babies of participants in the intervention and control groups was 2 days. More of the babies of the mothers in the control (n = 315, 78.8%) group were of term gestational age compared to that of those in the intervention (n = 260, 65.0%) group. Most of the babies were of normal delivery, had normal birth weight and breast feeding initiated less than an hour after delivery.

Outcome Measures: The within group comparison showed that the mean difference in the practice of hand washing between the control group's posttest 1 and pretest (B-A) was equal to 0.03 and that of their posttest 2 and pretest (C-A) was 0.08 respectively. Similarly, the mean differences between the intervention group (B-A) was found to be 1.50 and that of its (C-A) was 0.09. This show that, the differences in mean of the two groups was noticeably different. However, the mean differences in the practice of hand washing between the intervention and control groups were higher (\bar{X} diff = 1.47 and 0.11) than what were obtained in the within group comparison of the control group. The result of the multivariate analysis of covariance (MANCOVA) shows that, the mean score of the intervention group during the posttest 1 (\bar{X} = 18.76; SD = 2.89) was significantly higher than that of the control group (\bar{X} = 17.76; SD = 2.84, F (1, 797) = 39.96, p <.05). However, in the post-test 2, the reverse was found to be exhibited as the control group was found to have a higher mean score (\bar{X} = 17.65; SD = 2.73) than the intervention group (\bar{X} = 17.38; SD = 3.11, F (1, 797) = 378, p <.05). Hence, the intervention 1 and employment status of the study participants were the best predictors of hand washing practice (p = 0.004). This indicates that the first intervention is a significant fit of the data (the 10%) while surprisingly, the second intervention accounted for only 1% of the variance in the maternal washing practice making it not significant.

More of neonates of the study participants in the control showed signs of diarrhoea during the post-test 1 (n = 64, 16%) and 2 (n = 88, 22%) than that of those in the intervention group (n = 17, 4.3%) and (n = 26, 6.5%) respectively. Similar trend was also seen in the prevalence of ARI among the neonates. The prevalence of sepsis was high in both among the neonates of the mothers in the control and intervention groups especially during the post-test 2, 18% and 15% respectively. However, the control group had higher number of neonates who were sick during the post-tests 1 (n = 10, 2.5%) and 2 (n = 81, 20.3%) than those in the intervention group (n = 6, 1.5%) and (n = 9, 2.3%). Neonatal infections were low in both groups during the pre-test because it was the first day of delivery and signs of infections might not be detected

The combination of all the predictor variables (age, education level, ethnic group, employment status, parity, marital status, family type, religion, interventions 1 and 2) were not joint predictors of neonatal infections. Overall, the model accounts for only 3% at interventions 1 and 2 respectively of the variance in neonatal infections due to hand washing. The first and second interventions were not a significant fit for the data (3% each) as they accounted for a variance that can be explained as not a significant amount. Furthermore, the regression ANOVA revealed that the model does not significantly improved our ability to predict the outcome variable (neonatal infections prevention due to hand washing), because the F-ratio was not significant.

