

# EED-Development Tables

WASH Benefits, Bangladesh

12 March 2021

```
bg_tables <- readRDS('tables/all_bangladesh_tables.RDS')
k_tables <- readRDS('tables/all_kenya_tables.RDS')
```

```
every_hyp <- bind_rows(
  bg_tables,
  k_tables
)
```

```
every_hyp %>%
  arrange(hyp) %>%
  kable(booktabs = TRUE) %>%
  kable_styling(latex_options="scale_down")
```

Significant Hypotheses

```
sig_hyp <- every_hyp %>%
  filter(`Unadjusted P-value` <= 0.05 | `Adjusted P-value` <= 0.05 | `FDR Corrected P-value` <= 0.05 ) %>%
  mutate(significant_unadj = ifelse(`Unadjusted P-value` <= 0.05, "Unadj.", NA),
         significant_adj = ifelse(`Adjusted P-value` <= 0.05, 'Adj.', NA),
         significant_fdr = ifelse(`FDR Corrected P-value` <= 0.05, 'FDR', NA),
         dir = case_when(str_starts(`Adjusted Difference (95% CI)`,
                                     '-') ~ '-', TRUE ~ '+')) %>%
  unite("signif", significant_unadj, significant_adj, significant_fdr, sep = ', ', na.rm = TRUE) %>%
  select(`Outcome Domain`, Outcome, Exposure, n, t, `Adjusted Difference (95% CI)`, `Unadj. P-value` = `Unadjusted P-value`,
        `Adj. P-value` = `Adjusted P-value`, `FDR P-value` = `FDR Corrected P-value`, hyp, signif, dir)
```

Long Tables

```
sig_hyp %>%
  filter(hyp <= 3) %>%
  kable(booktabs = TRUE, longtable = TRUE,
        caption = 'Any Significant p-value (Bangladesh)') %>%
  kable_styling(latex_options=c("hold_position", "repeat_header"), font_size = 7)
```

Outcome Domain	Outcome	Exposure Source	Exposure	t	n	Q1 mean	Q3 mean	Unadjusted Difference (95% CI)	Unadjusted P-value	Adjusted Difference (95% CI)	Adjusted P-value	FDR Corrected P-value	hyp
WHO Motor Milestone	Sum Total	fecal	Alpha-1 Antitrypsin	1	806	0.23	0.79	0(0,0)	0.00	0.03(-0.17,0.22)	0.80	0.84	1
WHO Motor Milestone	Milestones 2, 4, 5, 6	fecal	Alpha-1 Antitrypsin	1	806	0.23	0.79	-0.03(-0.24,0.17)	0.78	0(-0.17,0.16)	0.96	0.96	1
WHO Motor Milestone	Sum Total	fecal	Myeloperoxidase	1	808	4202.48	19091.30	0.05(-0.04,0.14)	0.25	0.05(-0.02,0.13)	0.16	0.29	1
WHO Motor Milestone	Milestones 2, 4, 5, 6	fecal	Myeloperoxidase	1	808	4202.48	19091.30	0.06(-0.01,0.14)	0.11	0.06(0.0,0.12)	0.07	0.27	1
WHO Motor Milestone	Sum Total	fecal	Neopterin	1	809	904.58	2331.48	0.36(0.14,0.58)	0.00	0.1(-0.09,0.28)	0.31	0.41	1
WHO Motor Milestone	Milestones 2, 4, 5, 6	fecal	Neopterin	1	809	904.58	2331.48	0.38(0.18,0.57)	0.00	0.12(-0.04,0.28)	0.15	0.29	1
WHO Motor Milestone	Sum Total	urine	Lactulose concentration	1	984	0.21	0.99	-0.17(-0.5,0.16)	0.31	-0.21(-0.47,0.05)	0.12	0.27	1
WHO Motor Milestone	Milestones 2, 4, 5, 6	urine	Lactulose concentration	1	991	0.21	0.98	-0.1(-0.37,0.18)	0.49	-0.13(-0.35,0.09)	0.25	0.36	1
WHO Motor Milestone	Sum Total	urine	Mannitol concentration	1	984	1.97	8.29	-0.14(-0.28,0)	0.05	-0.28(-0.48,-0.08)	0.01	0.06	1
WHO Motor Milestone	Milestones 2, 4, 5, 6	urine	Mannitol concentration	1	991	1.97	8.22	-0.08(-0.19,0.03)	0.17	-0.07(-0.16,0.02)	0.11	0.27	1
Communicative Development Inventories	Understanding	fecal	Alpha-1 Antitrypsin	1	797	0.23	0.80	-0.03(-0.22,0.17)	0.79	0.02(-0.02,0.05)	0.38	0.48	1
Communicative Development Inventories	Expressing	fecal	Alpha-1 Antitrypsin	1	793	0.23	0.80	0.02(-0.01,0.05)	0.24	0.01(-0.03,0.05)	0.62	0.69	1
Communicative Development Inventories	Understanding	fecal	Myeloperoxidase	1	799	4198.28	19174.39	0(-0.06,0.06)	0.96	-0.08(-0.3,0.14)	0.47	0.56	1
Communicative Development Inventories	Expressing	fecal	Myeloperoxidase	1	795	4244.68	19500.99	0(-0.08,0.08)	0.95	0.04(-0.02,0.1)	0.19	0.32	1
Communicative Development Inventories	Understanding	fecal	Neopterin	1	800	896.65	2320.84	0.33(0.14,0.53)	0.00	0.3(0.11,0.49)	0.00	0.05	1
Communicative Development Inventories	Expressing	fecal	Neopterin	1	796	896.65	2320.84	0.13(-0.07,0.33)	0.20	0.12(-0.08,0.33)	0.25	0.36	1
Communicative Development Inventories	Understanding	urine	Lactulose concentration	1	979	0.21	0.99	-0.17(-0.38,0.04)	0.11	-0.19(-0.4,0.02)	0.07	0.27	1
Communicative Development Inventories	Expressing	urine	Lactulose concentration	1	976	0.21	0.99	-0.11(-0.23,0)	0.05	-0.14(-0.27,-0.02)	0.02	0.16	1
Communicative Development Inventories	Understanding	urine	Mannitol concentration	1	979	1.96	8.25	-0.09(-0.18,0)	0.05	-0.09(-0.19,0.01)	0.09	0.27	1
Communicative Development Inventories	Expressing	urine	Mannitol concentration	1	976	1.96	8.29	-0.07(-0.17,0.03)	0.14	-0.09(-0.21,0.02)	0.12	0.27	1
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Alpha-1 Antitrypsin	1	696	0.23	0.81	NA(NA,NA)	NA	-0.01(-0.2,0.17)	0.89	0.99	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Alpha-1 Antitrypsin	1	687	0.24	0.81	NA(NA,NA)	NA	-0.02(-0.05,0.02)	0.36	0.81	2
Extended Ages and Stages Questionnaire	Combined	fecal	Alpha-1 Antitrypsin	1	694	0.23	0.81	NA(NA,NA)	NA	-0.04(-0.12,0.04)	0.32	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Alpha-1 Antitrypsin	1	694	0.23	0.81	NA(NA,NA)	NA	0.01(-0.03,0.04)	0.66	0.95	2
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Myeloperoxidase	1	697	4361.10	20173.21	NA(NA,NA)	NA	-0.06(-0.14,0.01)	0.10	0.81	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Myeloperoxidase	1	688	4492.04	20234.34	NA(NA,NA)	NA	-0.12(-0.37,0.13)	0.36	0.81	2
Extended Ages and Stages Questionnaire	Combined	fecal	Myeloperoxidase	1	695	4378.55	20199.17	NA(NA,NA)	NA	-0.03(-0.11,0.04)	0.38	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Myeloperoxidase	1	695	4378.55	20199.17	NA(NA,NA)	NA	-0.03(-0.25,0.18)	0.79	0.98	2
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Neopterin	1	698	921.92	2357.90	NA(NA,NA)	NA	0.04(-0.05,0.13)	0.37	0.81	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Neopterin	1	689	924.15	2332.48	NA(NA,NA)	NA	0.09(-0.07,0.25)	0.27	0.81	2
Extended Ages and Stages Questionnaire	Combined	fecal	Neopterin	1	696	923.40	2360.63	NA(NA,NA)	NA	0.12(-0.06,0.3)	0.18	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Neopterin	1	696	921.10	2355.02	NA(NA,NA)	NA	0.12(-0.06,0.3)	0.21	0.81	2
Extended Ages and Stages Questionnaire	Personal Social Score	urine	Lactulose concentration	1	865	0.21	0.97	NA(NA,NA)	NA	0.06(-0.23,0.35)	0.69	0.97	2
Extended Ages and Stages Questionnaire	Gross Motor Score	urine	Lactulose concentration	1	858	0.21	0.98	NA(NA,NA)	NA	0.11(-0.02,0.25)	0.10	0.81	2
Extended Ages and Stages Questionnaire	Combined	urine	Lactulose concentration	1	863	0.21	0.97	NA(NA,NA)	NA	0.09(-0.14,0.31)	0.46	0.83	2
Extended Ages and Stages Questionnaire	Communication Score	urine	Lactulose concentration	1	864	0.21	0.97	NA(NA,NA)	NA	0(-0.01,0.02)	0.64	0.94	2
Extended Ages and Stages Questionnaire	Personal Social Score	urine	Mannitol concentration	1	865	2.00	8.23	NA(NA,NA)	NA	0(-0.05,0.05)	0.94	0.99	2
Extended Ages and Stages Questionnaire	Gross Motor Score	urine	Mannitol concentration	1	858	2.00	8.31	NA(NA,NA)	NA	0.01(-0.03,0.06)	0.52	0.85	2
Extended Ages and Stages Questionnaire	Combined	urine	Mannitol concentration	1	863	1.99	8.22	NA(NA,NA)	NA	0.13(-0.07,0.33)	0.22	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	urine	Mannitol concentration	1	864	1.99	8.26	NA(NA,NA)	NA	0.11(-0.11,0.32)	0.33	0.81	2
Communicative Development Inventories	Understanding	fecal	Alpha-1 Antitrypsin	1	701	0.23	0.81	0(0,0)	0.16	0(-0.03,0.03)	0.99	0.99	2
Communicative Development Inventories	Expressing	fecal	Alpha-1 Antitrypsin	1	707	0.23	0.81	0(0,0)	1.00	0.01(-0.02,0.05)	0.46	0.83	2
Communicative Development Inventories	Understanding	fecal	Myeloperoxidase	1	702	4348.29	20129.58	0.05(-0.14,0.24)	0.65	0.1(-0.1,0.3)	0.35	0.81	2
Communicative Development Inventories	Expressing	fecal	Myeloperoxidase	1	708	4301.33	19890.26	0.05(-0.15,0.25)	0.63	0.18(-0.05,0.41)	0.13	0.81	2
Communicative Development Inventories	Understanding	fecal	Neopterin	1	703	920.02	2343.03	0.05(-0.02,0.12)	0.17	0.03(-0.04,0.11)	0.41	0.81	2
Communicative Development Inventories	Expressing	fecal	Neopterin	1	709	917.40	2332.48	0.05(-0.02,0.12)	0.18	0.06(-0.04,0.17)	0.24	0.81	2
Communicative Development Inventories	Understanding	urine	Lactulose concentration	1	870	0.21	0.97	0.12(-0.12,0.35)	0.34	0.11(-0.15,0.36)	0.42	0.81	2
Communicative Development Inventories	Expressing	urine	Lactulose concentration	1	878	0.21	0.97	0.09(-0.14,0.31)	0.47	0.08(-0.18,0.34)	0.55	0.87	2
Communicative Development Inventories	Understanding	urine	Mannitol concentration	1	870	2.00	8.16	-0.01(-0.07,0.05)	0.74	0.1(-0.09,0.3)	0.29	0.81	2
Communicative Development Inventories	Expressing	urine	Mannitol concentration	1	878	2.00	8.16	0.01(-0.05,0.06)	0.84	0.08(-0.13,0.28)	0.47	0.83	2
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Alpha-1 Antitrypsin	2	860	0.25	0.89	NA(NA,NA)	NA	0.01(-0.06,0.08)	0.79	0.98	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Alpha-1 Antitrypsin	2	849	0.25	0.89	NA(NA,NA)	NA	0(-0.07,0.07)	0.99	0.99	2
Extended Ages and Stages Questionnaire	Combined	fecal	Alpha-1 Antitrypsin	2	857	0.25	0.89	NA(NA,NA)	NA	-0.01(-0.09,0.07)	0.85	0.99	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Alpha-1 Antitrypsin	2	859	0.25	0.89	NA(NA,NA)	NA	0.01(-0.06,0.08)	0.79	0.98	2
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Myeloperoxidase	2	860	2795.13	10462.68	NA(NA,NA)	NA	0(-0.05,0.05)	0.92	0.99	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Myeloperoxidase	2	849	2764.79	10366.81	NA(NA,NA)	NA	-0.01(-0.05,0.04)	0.81	0.98	2
Extended Ages and Stages Questionnaire	Combined	fecal	Myeloperoxidase	2	857	2787.01	10439.24	NA(NA,NA)	NA	-0.02(-0.07,0.03)	0.36	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Myeloperoxidase	2	859	2792.42	10352.33	NA(NA,NA)	NA	0(-0.05,0.04)	0.89	0.99	2
Extended Ages and Stages Questionnaire	Personal Social Score	fecal	Neopterin	2	860	638.65	2026.08	NA(NA,NA)	NA	0.04(-0.02,0.1)	0.20	0.81	2
Extended Ages and Stages Questionnaire	Gross Motor Score	fecal	Neopterin	2	849	639.82	2028.79	NA(NA,NA)	NA	0.02(-0.04,0.08)	0.60	0.91	2
Extended Ages and Stages Questionnaire	Combined	fecal	Neopterin	2	857	644.50	2025.18	NA(NA,NA)	NA	0.06(0,0.12)	0.06	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	fecal	Neopterin	2	859	646.63	2026.99	NA(NA,NA)	NA	0.05(-0.01,0.11)	0.14	0.81	2
Extended Ages and Stages Questionnaire	Personal Social Score	urine	Lactulose concentration	2	844	0.15	0.61	NA(NA,NA)	NA	-0.03(-0.21,0.16)	0.78	0.98	2
Extended Ages and Stages Questionnaire	Gross Motor Score	urine	Lactulose concentration	2	836	0.15	0.61	NA(NA,NA)	NA	-0.08(-0.18,0.01)	0.08	0.81	2
Extended Ages and Stages Questionnaire	Combined	urine	Lactulose concentration	2	841	0.15	0.61	NA(NA,NA)	NA	-0.14(-0.33,0.05)	0.14	0.81	2
Extended Ages and Stages Questionnaire	Communication Score	urine	Lactulose concentration	2	843	0.15	0.61	NA(NA,NA)	NA	-0.03(-0.21,0.14)	0.73	0.98	2
Extended Ages and Stages Questionnaire	Personal Social Score	urine	Mannitol concentration	2	844	1.06	4.84	NA(NA,NA)	NA	0(-0.06,0.07)	0.97	0.99	2
Extended Ages and Stages Questionnaire	Gross Motor Score	urine	Mannitol concentration	2	836	1.06	4.84	NA(NA,NA)	NA	-0.16(-0.29,-0.02)	0.02	0.81	2
Extended Ages and Stages Questionnaire	Combined	urine	Mannitol concentration	2	841	1.06	4.86	NA(NA,NA)	NA	0(-0.06,0.06)	0.94	0.99	2
Extended Ages and Stages Questionnaire	Communication Score	urine	Mannitol concentration	2	843	1.06	4.84	NA(NA,NA)	NA	0.01(-0.05,0.07)	0.85	0.99	2
Communicative Development Inventories	Understanding	fecal	Alpha-1 Antitrypsin	2	865	0.25	0.89	0.2(0.03,0.37)	0.02	0.05(-0.06,0.15)	0.40	0.81	2
Communicative Development Inventories	Expressing	fecal	Alpha-1 Antitrypsin	2	874	0.26	0.89	0.17(-0.01,0.34)	0.06	0(0,0)	0.03	0.81	2
Communicative Development Inventories	Understanding	fecal	Myeloperoxidase	2	865	2764.79	10439.24	-0.01(-0.04,0.03)	0.76	-0.01(-0.06,0.03)	0.58	0.90	2
Communicative Development Inventories	Expressing	fecal	Myeloperoxidase	2	874	2789.71	10421.13	0(0,0)	1.00	-0.02(-0.06,0.02)	0.41	0.81	2
Communicative Development Inventories	Understanding	fecal	Neopterin	2	865	648.77	2028.79	0.03(-0.02,0.08)	0.22	0.03(-0.02,0.09)	0.23	0.81	2
Communicative Development Inventories	Expressing	fecal	Neopterin	2	874	649.32	2027.89	0.01(-0.15,0.17)	0.89	-0.03(-0.13,0.07)	0.51	0.85	2
Extended Ages and Stages Questionnaire	Personal Social Score	NA	NA	NA	858	101.56	239.48	NA(NA,NA)	NA	0.02(-0.04,0.08)	0.58	0.58	3
Extended Ages and Stages Questionnaire	Gross Motor Score	NA	NA	NA	847	101.39	233.61	NA(NA,NA)	NA	0.1(-0.03,0.24)	0.14	0.44	3

Table 1: Any Significant p-value (Bangladesh)

Outcome Domain	Outcome	Exposure	n	t	Adjusted Difference (95% CI)	Unadj. P-value	Adj. P-value	FDR P-value	hyp	signif
WHO Motor Milestone	Sum Total	Alpha-1 Antitrypsin	806	1	0.03(-0.17,0.22)	0.00	0.80	0.84	1	Unadj.
WHO Motor Milestone	Sum Total	Neopterin	809	1	0.1(-0.09,0.28)	0.00	0.31	0.41	1	Unadj.
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	809	1	0.12(-0.04,0.28)	0.00	0.15	0.29	1	Unadj.
WHO Motor Milestone	Sum Total	Mannitol concentration	984	1	-0.28(-0.48,-0.08)	0.05	0.01	0.06	1	Unadj., Adj.
Communicative Development Inventories	Understanding	Neopterin	800	1	0.3(0.11,0.49)	0.00	0.00	0.05	1	Unadj., Adj., FDR
Communicative Development Inventories	Expressing	Lactulose concentration	976	1	-0.14(-0.27,-0.02)	0.05	0.02	0.16	1	Unadj., Adj.
Communicative Development Inventories	Understanding	Mannitol concentration	979	1	-0.09(-0.19,0.01)	0.05	0.09	0.27	1	Unadj.
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	836	2	-0.16(-0.29,-0.02)	NA	0.02	0.81	2	Adj.
Communicative Development Inventories	Understanding	Alpha-1 Antitrypsin	865	2	0.05(-0.06,0.15)	0.02	0.40	0.81	2	Unadj.
Communicative Development Inventories	Expressing	Alpha-1 Antitrypsin	874	2	0(0,0)	0.06	0.03	0.81	2	Adj.

```
sig_hyp %>%
  filter(hyp > 3) %>%
  kable(booktabs = TRUE, longtable = TRUE,
        caption = 'Any Significant p-value (Kenya)') %>%
  kable_styling(latex_options=c("hold_position", "repeat_header"), font_size = 7)
```

Table 2: Any Significant p-value (Kenya)

Outcome Domain	Outcome	Exposure	n	t	Adjusted Difference (95% CI)	Unadj. P-value	Adj. P-value	FDR P-value	hyp	signif
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	1027	1	0.08(-0.01,0.16)	0.01	0.07	0.22	4	Unadj.
WHO Motor Milestone	Sum Total	Neopterin	1027	1	0.08(-0.01,0.17)	0.02	0.09	0.22	4	Unadj.
WHO Motor Milestone	Milestones 2, 4, 5, 6	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.02	0.34	0.44	4	Unadj.
WHO Motor Milestone	Sum Total	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.01	0.35	0.44	4	Unadj.
WHO Motor Milestone	Milestones 2, 4, 5, 6	Mannitol concentration	1083	1	0.05(0,0.09)	0.66	0.03	0.15	4	Adj.
WHO Motor Milestone	Sum Total	Mannitol concentration	1083	1	0.05(0.01,0.1)	0.03	0.03	0.15	4	Unadj., Adj.
Extended Ages and Stages Questionnaire	Communication Score	Alpha-1 Antitrypsin	796	1	0.1(0,0.19)	0.10	0.05	0.60	5	Adj.
Extended Ages and Stages Questionnaire	Gross Motor Score	Lactulose concentration	862	1	0.04(-0.18,0.26)	0.00	0.73	0.96	5	Unadj.
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	865	1	0.06(-0.02,0.14)	0.01	0.15	0.69	5	Unadj.
Extended Ages and Stages Questionnaire	Combined	Lactulose concentration	861	1	0.16(-0.08,0.4)	0.01	0.19	0.74	5	Unadj.
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	861	1	0.03(-0.04,0.1)	0.00	0.43	0.95	5	Unadj.
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	862	1	0.01(-0.23,0.24)	0.05	0.97	0.97	5	Unadj.
Extended Ages and Stages Questionnaire	Personal Social Score	Mannitol concentration	865	1	0.11(0.02,0.2)	0.00	0.02	0.56	5	Unadj., Adj.
Extended Ages and Stages Questionnaire	Combined	Mannitol concentration	861	1	0.14(-0.05,0.33)	0.00	0.14	0.69	5	Unadj.
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	1078	2	0.07(-0.14,0.28)	0.00	0.52	0.96	5	Unadj.
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	831	2	0.05(0.01,0.09)	0.10	0.03	0.56	5	Adj.

Tables Arranged

```
sig_hyp %>%
  arrange(`Outcome Domain`, Outcome) %>%
  kable(booktabs = TRUE,
        caption = "By Outcome") %>%
  kable_styling(latex_options="scale_down")
```

Table 3: By Outcome

Outcome Domain	Outcome	Exposure	n	t	Adjusted Difference (95% CI)	Unadj. P-value	Adj. P-value	FDR P-value	hyp	signif	dir
Communicative Development Inventories	Expressing	Lactulose concentration	976	1	-0.14(-0.27,-0.02)	0.05	0.02	0.16	1	Unadj., Adj.	-
Communicative Development Inventories	Expressing	Alpha-1 Antitrypsin	874	2	0(0,0)	0.06	0.03	0.81	2	Adj.	+
Communicative Development Inventories	Understanding	Neopterin	800	1	0.3(0.11,0.49)	0.00	0.00	0.05	1	Unadj., Adj., FDR	+
Communicative Development Inventories	Understanding	Mannitol concentration	979	1	-0.09(-0.19,0.01)	0.05	0.09	0.27	1	Unadj.	-
Communicative Development Inventories	Understanding	Alpha-1 Antitrypsin	865	2	0.05(-0.06,0.15)	0.02	0.40	0.81	2	Unadj.	+
Extended Ages and Stages Questionnaire	Combined	Lactulose concentration	861	1	0.16(-0.08,0.4)	0.01	0.19	0.74	5	Unadj.	+
Extended Ages and Stages Questionnaire	Combined	Mannitol concentration	861	1	0.14(-0.05,0.33)	0.00	0.14	0.69	5	Unadj.	+
Extended Ages and Stages Questionnaire	Communication Score	Alpha-1 Antitrypsin	796	1	0.1(0,0.19)	0.10	0.05	0.60	5	Adj.	+
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	861	1	0.03(-0.04,0.1)	0.00	0.43	0.95	5	Unadj.	+
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	831	2	0.05(0.01,0.09)	0.10	0.03	0.56	5	Adj.	+
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	836	2	-0.16(-0.29,-0.02)	NA	0.02	0.81	2	Adj.	-
Extended Ages and Stages Questionnaire	Gross Motor Score	Lactulose concentration	862	1	0.04(-0.18,0.26)	0.00	0.73	0.96	5	Unadj.	+
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	862	1	0.01(-0.23,0.24)	0.05	0.97	0.97	5	Unadj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	865	1	0.06(-0.02,0.14)	0.01	0.15	0.69	5	Unadj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Mannitol concentration	865	1	0.11(0.02,0.2)	0.00	0.02	0.56	5	Unadj., Adj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	1078	2	0.07(-0.14,0.28)	0.00	0.52	0.96	5	Unadj.	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	809	1	0.12(-0.04,0.28)	0.00	0.15	0.29	1	Unadj.	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	1027	1	0.08(-0.01,0.16)	0.01	0.07	0.22	4	Unadj.	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.02	0.34	0.44	4	Unadj.	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Mannitol concentration	1083	1	0.05(0.0,0.09)	0.66	0.03	0.15	4	Adj.	+
WHO Motor Milestone	Sum Total	Alpha-1 Antitrypsin	806	1	0.03(-0.17,0.22)	0.00	0.80	0.84	1	Unadj.	+
WHO Motor Milestone	Sum Total	Neopterin	809	1	0.1(-0.09,0.28)	0.00	0.31	0.41	1	Unadj.	+
WHO Motor Milestone	Sum Total	Mannitol concentration	984	1	-0.28(-0.48,-0.08)	0.05	0.01	0.06	1	Unadj., Adj.	-
WHO Motor Milestone	Sum Total	Neopterin	1027	1	0.08(-0.01,0.17)	0.02	0.09	0.22	4	Unadj.	+
WHO Motor Milestone	Sum Total	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.01	0.35	0.44	4	Unadj.	+
WHO Motor Milestone	Sum Total	Mannitol concentration	1083	1	0.05(0.01,0.1)	0.03	0.03	0.15	4	Unadj., Adj.	+

Table 4: By Exposure

Outcome Domain	Outcome	Exposure	n	t	Adjusted Difference (95% CI)	Unadj. P-value	Adj. P-value	FDR P-value	hyp	signif	dir
WHO Motor Milestone	Sum Total	Alpha-1 Antitrypsin	806	1	0.03(-0.17,0.22)	0.00	0.80	0.84	1	Unadj.	+
Communicative Development Inventories	Understanding	Alpha-1 Antitrypsin	865	2	0.05(-0.06,0.15)	0.02	0.40	0.81	2	Unadj.	+
Communicative Development Inventories	Expressing	Alpha-1 Antitrypsin	874	2	0(0,0)	0.06	0.03	0.81	2	Adj.	+
Extended Ages and Stages Questionnaire	Communication Score	Alpha-1 Antitrypsin	796	1	0.1(0,0.19)	0.10	0.05	0.60	5	Adj.	+
Communicative Development Inventories	Expressing	Lactulose concentration	976	1	-0.14(-0.27,-0.02)	0.05	0.02	0.16	1	Unadj., Adj.	-
WHO Motor Milestone	Milestones 2, 4, 5, 6	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.02	0.34	0.44	4	Unadj.	+
WHO Motor Milestone	Sum Total	Lactulose concentration	1083	1	0.02(-0.02,0.06)	0.01	0.35	0.44	4	Unadj.	+
Extended Ages and Stages Questionnaire	Gross Motor Score	Lactulose concentration	862	1	0.04(-0.18,0.26)	0.00	0.73	0.96	5	Unadj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	865	1	0.06(-0.02,0.14)	0.01	0.15	0.69	5	Unadj.	+
Extended Ages and Stages Questionnaire	Combined	Lactulose concentration	861	1	0.16(-0.08,0.4)	0.01	0.19	0.74	5	Unadj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Lactulose concentration	1078	2	0.07(-0.14,0.28)	0.00	0.52	0.96	5	Unadj.	+
WHO Motor Milestone	Sum Total	Mannitol concentration	984	1	-0.28(-0.48,-0.08)	0.05	0.01	0.06	1	Unadj., Adj.	-
Communicative Development Inventories	Understanding	Mannitol concentration	979	1	-0.09(-0.19,0.01)	0.05	0.09	0.27	1	Unadj.	-
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	836	2	-0.16(-0.29,-0.02)	NA	0.02	0.81	2	Adj.	-
WHO Motor Milestone	Milestones 2, 4, 5, 6	Mannitol concentration	1083	1	0.05(0,0.09)	0.66	0.03	0.15	4	Adj.	+
WHO Motor Milestone	Sum Total	Mannitol concentration	1083	1	0.05(0.01,0.1)	0.03	0.03	0.15	4	Unadj., Adj.	+
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	861	1	0.03(-0.04,0.1)	0.00	0.43	0.95	5	Unadj.	+
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	862	1	0.01(-0.23,0.24)	0.05	0.97	0.97	5	Unadj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Mannitol concentration	865	1	0.11(0.02,0.2)	0.00	0.02	0.56	5	Unadj., Adj.	+
Extended Ages and Stages Questionnaire	Combined	Mannitol concentration	861	1	0.14(-0.05,0.33)	0.00	0.14	0.69	5	Unadj.	+
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	831	2	0.05(0.01,0.09)	0.10	0.03	0.56	5	Adj.	+
WHO Motor Milestone	Sum Total	Neopterin	809	1	0.1(-0.09,0.28)	0.00	0.31	0.41	1	Unadj.	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	809	1	0.12(-0.04,0.28)	0.00	0.15	0.29	1	Unadj.	+
Communicative Development Inventories	Understanding	Neopterin	800	1	0.3(0.11,0.49)	0.00	0.00	0.05	1	Unadj., Adj., FDR	+
WHO Motor Milestone	Milestones 2, 4, 5, 6	Neopterin	1027	1	0.08(-0.01,0.16)	0.01	0.07	0.22	4	Unadj.	+
WHO Motor Milestone	Sum Total	Neopterin	1027	1	0.08(-0.01,0.17)	0.02	0.09	0.22	4	Unadj.	+

```
sig_hyp %>%
  arrange(Exposure) %>%
  kable(booktabs = TRUE,
        caption = 'By Exposure') %>%
  kable_styling(latex_options="scale_down")
```

```
sig_hyp %>%
  filter(signif != "Unadj.") %>%
  arrange(hyp, Exposure) %>%
  kable(booktabs = TRUE,
        caption = 'Only Significant Adj/FDR Corrected' ) %>%
  kable_styling(latex_options="scale_down")
```

Table 5: Only Significant Adj/FDR Corrected

Outcome Domain	Outcome	Exposure	n	t	Adjusted Difference (95% CI)	Unadj. P-value	Adj. P-value	FDR P-value	hyp	signif	dir
Communicative Development Inventories	Expressing	Lactulose concentration	976	1	-0.14(-0.27,-0.02)	0.05	0.02	0.16	1	Unadj., Adj.	-
WHO Motor Milestone	Sum Total	Mannitol concentration	984	1	-0.28(-0.48,-0.08)	0.05	0.01	0.06	1	Unadj., Adj.	-
Communicative Development Inventories	Understanding	Neopterin	800	1	0.3(0.11,0.49)	0.00	0.00	0.05	1	Unadj., Adj., FDR	+
Communicative Development Inventories	Expressing	Alpha-1 Antitrypsin	874	2	0(0,0)	0.06	0.03	0.81	2	Adj.	+
Extended Ages and Stages Questionnaire	Gross Motor Score	Mannitol concentration	836	2	-0.16(-0.29,-0.02)	NA	0.02	0.81	2	Adj.	-
WHO Motor Milestone	Milestones 2, 4, 5, 6	Mannitol concentration	1083	1	0.05(0,0.09)	0.66	0.03	0.15	4	Adj.	+
WHO Motor Milestone	Sum Total	Mannitol concentration	1083	1	0.05(0.01,0.1)	0.03	0.03	0.15	4	Unadj., Adj.	+
Extended Ages and Stages Questionnaire	Communication Score	Alpha-1 Antitrypsin	796	1	0.1(0,0.19)	0.10	0.05	0.60	5	Adj.	+
Extended Ages and Stages Questionnaire	Personal Social Score	Mannitol concentration	865	1	0.11(0.02,0.2)	0.00	0.02	0.56	5	Unadj., Adj.	+
Extended Ages and Stages Questionnaire	Communication Score	Mannitol concentration	831	2	0.05(0.01,0.09)	0.10	0.03	0.56	5	Adj.	+