

SUMMARY REPORT OF RESEARCH MOBILE PHONE CALL: INTERVENTION TO IMPROVE ORAL REHYDRATION SALT AND ZINC ADHERENCE FOR ACUTE DIARRHOEA IN CHILDREN SPECIALIST HOSPITAL, ILORIN.

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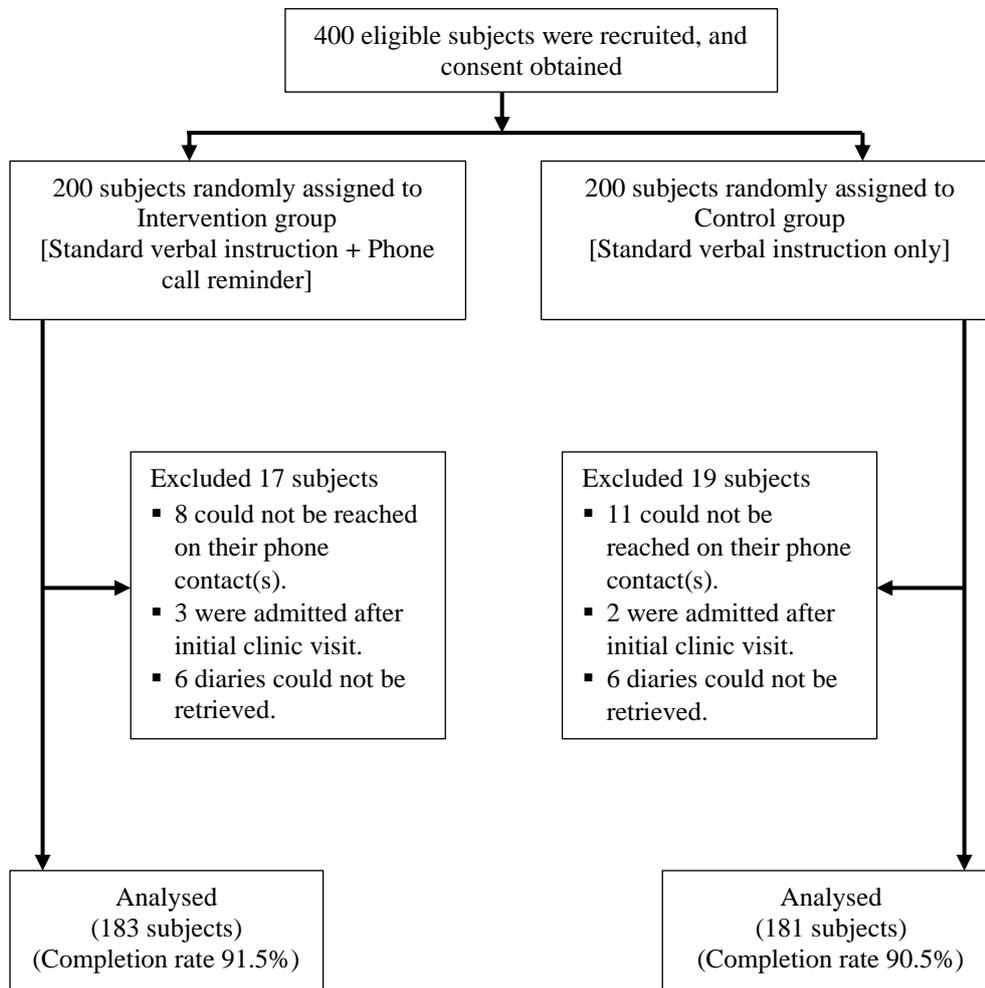
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1) Baseline characteristics of subjects

Variable	Treatment group			χ^2	P-value
	Total N= 364 (%)	Intervention n= 183 (%)	Control n= 181 (%)		
Age (months)					
6 - < 12	164 (45.1)	86 (47.0)	78 (43.1)	4.176 ^f	0.378
12 - < 24	151 (41.5)	72 (39.3)	79 (43.6)		
24 - < 36	29 (7.9)	16 (8.7)	13 (7.2)		
36 - < 48	11 (3.0)	3 (1.7)	8 (4.4)		
48 - < 60	9 (2.5)	6 (3.3)	3 (1.7)		
Gender					
Male	202 (55.5)	97 (53.0)	105 (58.0)	0.923 ^{x2}	0.337
Female	162 (44.5)	86 (47.0)	76 (42.0)		
Mothers' age group (years)					
< 25	64 (17.6)	26 (14.2)	38 (21.0)	2.905 ^{x2}	0.234
25 – 35	265 (72.8)	139 (76.0)	126 (69.6)		
> 35	35 (9.6)	18 (9.8)	17 (9.4)		
Mother's level of education					
No formal	13 (3.6)	9 (4.9)	4 (2.2)	3.489 ^{x2}	0.322
Primary	16 (4.4)	9 (4.9)	7 (3.9)		
Secondary	142 (39.0)	75 (41.0)	67 (37.0)		
Post-secondary	193 (53.0)	90 (49.2)	103 (56.9)		
Socioeconomic class					
Upper	68 (18.7)	27 (14.8)	41 (22.7)	3.898 ^{x2}	0.142
Middle	174 (47.8)	90 (49.1)	84 (46.4)		
Lower	122 (33.5)	66 (36.1)	56 (30.9)		
Phone ownership/access					
Owned a phone	326 (89.6)	164 (89.6)	181 (89.5%)	0.001 ^{x2}	0.971
Had access to a phone	38 (10.4)	19 (10.4)	19 (10.5%)		

f: Fisher's exact test; χ^2 : Chi-square test; Figures in the parenthesis are percentages of the total in each column

1) Participant flow



2) Adverse events

None was recorded.

3) Outcome measures

3a. Comparison of ORS and zinc use

Variable	Treatment arm		Total N=364(%)	OR (95% CI)	χ^2	P-value
	Intervention n=183 (%)	Control n=181(%)				
ORS adherence						
Full	151 (82.5)	136 (75.1)	287 (78.8)	1.561 (0.939–2.598)	2.968	0.085
Partial	32 (17.5)	45 (24.9)	77 (21.2)			
Zinc adherence						
Full	132 (72.1)	110 (60.8)	242 (66.5)	1.671 (1.076–2.593)	5.268	0.022
Partial	51 (27.9)	71 (39.2)	122 (33.5)			
Combined adherence						
Full	107 (58.5)	79 (43.6)	186 (51.1)	1.818 (1.200–2.754)	8.002	0.005
Partial	76 (41.5)	102 (56.4)	178 (48.9)			

3b. Comparison of mean \pm SD adherence scores

Variable	Treatment arm		<i>t</i>	<i>p</i> -value
	Intervention	Control		
	Adherence score Mean \pm SD	Adherence score Mean \pm SD		
ORS	95.5 \pm 12.7	91.4 \pm 20.4	2.334	0.020
Zinc	94.3 \pm 11.8	87.0 \pm 21.4	4.008	<0.001
Combined	94.9 \pm 8.5	89.2 \pm 14.7	4.491	<0.001

4) Brief Summary

The purpose of this work was to evaluate whether phone call reminders can enhance adherence to ORS and zinc therapy or not.

This randomized control trial was conducted in 2019 at Children Specialist Hospital, Ilorin. Four hundred children, 6-59 months of age, who presented with acute diarrhoea were randomly allocated into two treatment arms. The control group (CG) received only standard verbal instructions, and the intervention group (IG) received phone call reminders in addition to standard verbal instructions. Only mothers/caregivers who owned a mobile phone or had access to one were included. Each mother/caregiver was given a pictorial diary where they ticked whenever: 1) a child passed loose/watery stool, 2) received ORS after the diarrhoeal episode, and 3) a zinc tablet was administered. All study participants (IG and CG) received reminders on day 10 of zinc therapy, while only those in IG were called on the third and seventh days of treatment. The adherence was evaluated on the 11th day through the medication diaries.

The overall study completion rate was 91.0%. The mean ORS adherence score was significantly higher in the intervention compared to the control (95.5 ± 12.7 versus 91.4 ± 20.4), $P= 0.020$. Similarly, the mean zinc adherence score was significantly higher in the IG (94.3 ± 11.8 versus 87.0 ± 21.4), $P= <0.001$. Furthermore, the combined adherence score was significantly higher in the intervention group compared to the control (94.9 ± 8.5 versus 89.2 ± 14.7), $P= <0.001$.

In conclusion, phone call reminders improved adherence to the independent and combined use of ORS and zinc among under-five children with acute diarrhoea.