

# Reducing Malnutrition Prevalence In Children Through Mixed Modalities Of Specialized Nutritious Foods And Behaviour Change Interventions In Shuhuda And Shari Buzurg Districts Of Badakhshan Province

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## Background and Objectives

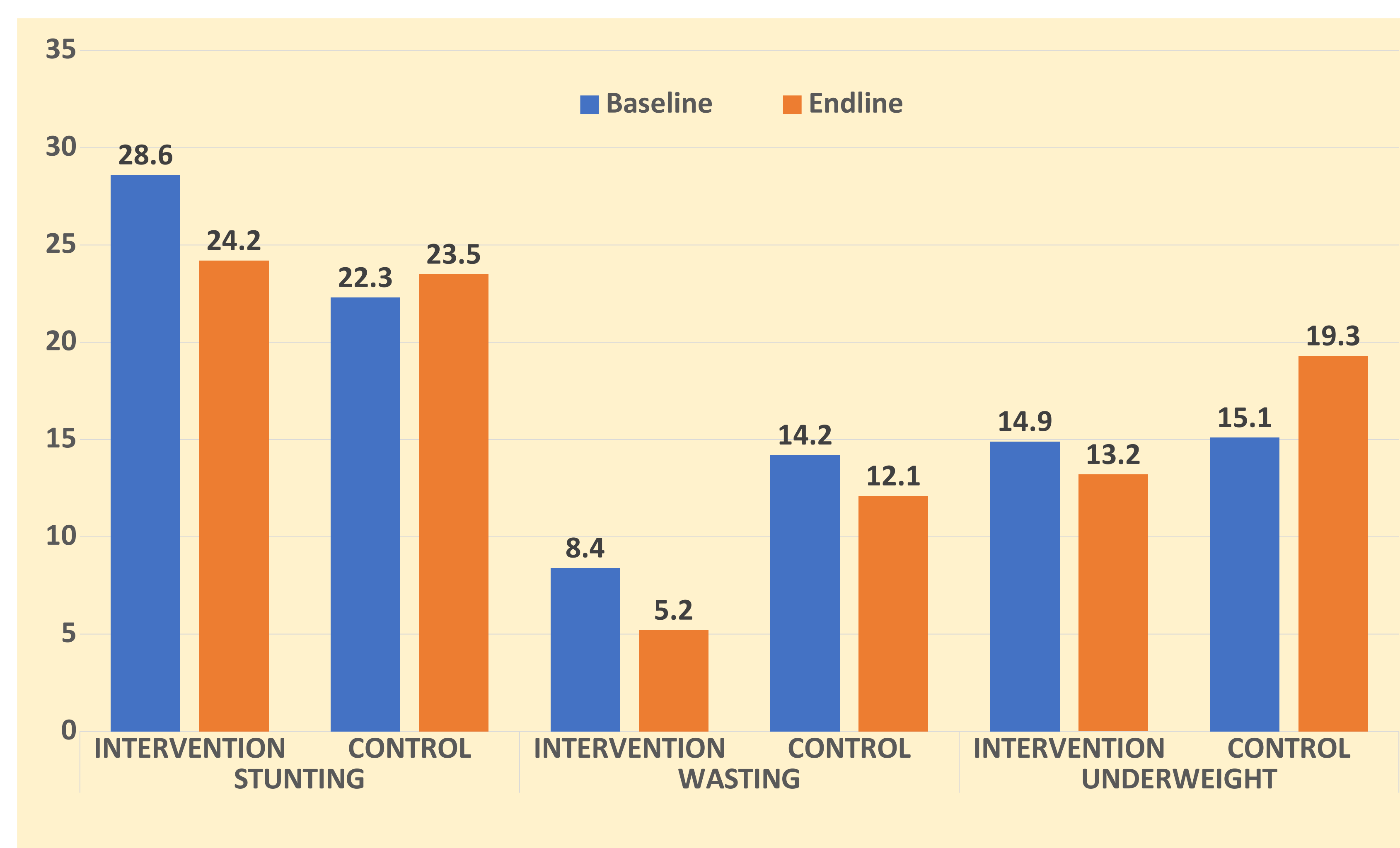
WFP invested in nutritional supplementation for pregnant and lactating women (PLW) and young children, counselling mothers on infant and young child feeding (IYCF) practices and hypothesized that mixed modalities of Specialized nutritious foods and social and behavior change communication interventions would reduce prevalence of malnutrition in children under 2 years of age

## Methodology

Interventions were in Shuhada and Shari Buzurg in Badakhshan. Rustaq and Worsaj in Takhar province served as control districts. A quasi-experimental pre-post study design with Cross-sectional baseline and endline surveys were conducted. There were 2,928 eligible households (1,461 in the intervention group and 1,467 in the control group). At endline there were 3,205 eligible households (1,601 intervention and 1,604 control) with children. Digital weight machine and length boards were utilized for anthropometrics. Surveys were conducted between October and December 2020, and July and August 2022. Prevalence of malnutrition was calculated using the z-score cut-off point of < 2 in accordance with WHO growth standards using ENA/SMART software.

## Results

Statistically significant reduction (-15.4%) in prevalence of stunting in the intervention group (28.6% at baseline; 24.2% at endline, p=0.006). In the control group, there was a small relative increase (5.4%) over the course of the study but was not statistically significant (22.3% at baseline; 23.5% at endline, p=0.42). In the intervention group, the prevalence of underweight reduced, however the difference was not statistically significant. Improvements were statistically significant among girls (a 26% relative reduction from 14.8% to 10.6%) and among the second and middle wealth quintiles (relative reductions of 42.4% and 33.1% respectively). Among the children who received nutritional supplements, the prevalence of wasting was significantly reduced (up to 38.1% relative decrease, p=<0.001).



Impact on Child Nutritional Status among Children < 2 Years in Control and Intervention Groups by DiD Estimates

	Intervention		Control		Unadjusted Difference in difference in % (95% CIs) <sup>a</sup>	P-Value	Adjusted Difference in difference in % (95% CIs) <sup>a,b</sup>	P-Value
	Baseline	Endline	Baseline	Endline				
<b>Stunting</b>	418 (28.6)	383 (24.2)	327 (22.3)	372 (23.5)	-5.7 (-10,-1.3)	0.010	-5.0 (-9.9, -0.2)	0.041
<b>Wasting</b>	121 (8.4)	82 (5.2)	207 (14.2)	190 (12.1)	-1.1 (-4.1,1.9)	0.455	-1.7 (-5.1,1.6)	0.315
<b>Underweight</b>	217 (14.9)	211 (13.2)	222 (15.1)	309 (19.3)	-5.8 (-9.5,-2.2)	0.002	-4.6 (-8.6,-0.5)	0.028

a. Unadjusted and adjusted difference in difference were obtained from mixed linear regression models with an interaction between study area (intervention vs control) and time (endline vs baseline).  
 b. Multivariable models adjusted for child gender, age, maternal age, education, skilled birth attendant, facility births, IYCF practices, maternal BMI and household characteristics

## Conclusion

Targeted mixed modality interventions are effective in the reduction of chronic malnutrition in children under 2 years. Policies should continue designing interventions that are scalable and have high coverage.

