

## **Title**

**The Support to Rural India's Public Education System (STRIPES) trial: A cluster Randomised Controlled Trial of Supplementary teaching, learning material and material support.**

## **Authors and Affiliations**

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**Background:** There has been little evidence of effective provision of primary school education in rural areas of India. The aim of the STRIPES trial was to assess the effectiveness of providing supplementary, remedial teaching and learning materials (and an additional ‘kit’ of materials for girls) on a composite of language and mathematics test scores for children in classes two, three and four in public primary schools in villages with a population of less than 2,500 people and at least one primary public school in the Nagarkurnool division of Andhra Pradesh, India.

**Methods:** STRIPES was a cluster randomised trial in which 214 villages were allocated either to the supplementary teaching intervention (n=107) or to serve as controls (n=107). Children living in villages at least 15 children available for baseline testing were eligible for trial entry. 54 of the intervention villages were further randomly allocated to receive additional kit for girls. The study was not blinded. Analysis was conducted on the intention to treat principle, allowing for clustering.

**Results:** Composite test scores were significantly higher in the intervention group (107 villages; 2364 children) than in the control group (106 villages; 2014 children) at the end of the trial (mean difference on a percentage scale 15.8; 95% CI 13.1 to 18.6;  $p < 0.001$ ; 0.75 Standard Deviation (SD) difference). Composite test scores were not significantly different in the 54 villages (566 girls) with the additional kits for girls compared to the 53 villages (548 girls) without these kits at the end of the trial (mean difference on a percentage scale 2.0; 95% CI -2.4 to 6.4;  $p = 0.4$ ). The cost per 0.1 SD increase in composite test score for intervention without kits is Rs. 382.97 (£4.45, \$7.13), and Rs.480.59 (£5.58, \$8.94) for the intervention with kits.

**Conclusions:** A 18 month programme of supplementary remedial teaching and learning materials had a substantial impact on language and mathematics scores of primary school students in rural Andhra Pradesh, yet providing a 'kit' of materials to girls in these villages did not lead to any measured additional benefit.

**Trial registration:** Current controlled trials ISRCTN69951502

<http://www.controlled-trials.com/ISRCTN69951502/69951502>

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