

ISRCTN46338401 Results Summary

Background. ‘Sticky mittens’ are Velcro-covered mittens that are used with Velcro-covered toys to enable pre-reaching infants to grab and move toys simply by swatting at them. Three-month-old infants from the general population show benefits to their exploratory behaviours from play involving sticky mittens.

Aims. Our study examined whether sticky mittens could similarly improve the exploratory behaviours of preterm infants and enhance their continuing development.

Methods. Preterm infants ($N = 62$, 25-33 weeks of gestation) were recruited at 3 months of age corrected for prematurity and assigned randomly to an intervention or active control group. Over three weeks, the intervention group used sticky mittens regularly while the control group instead watched their caregiver move the toys. Object-oriented exploratory behaviours were evaluated immediately before and after the intervention, and caregivers completed questionnaires about their infant’s development until 15 months’ corrected age.

Results. The intervention group made significantly greater gains than the control group in mouthing, $F = 9.24$, $p = .004$, $\eta_p^2 = .13$, and bimanual exploration of the toys at or near the mouth, $F = 8.07$, $p = .006$, $\eta_p^2 = .12$. However, the groups showed equivalent development over the next year as gauged by parent-report questionnaires p ’s $> .05$.

Conclusions and Implications. The sticky mittens intervention had immediate benefits for preterm infants’ exploratory behaviours. More research is needed before conclusions can be drawn regarding the longer-term impact on their development.