

A CLUSTER-RANDOMIZED CONTROLLED TRIAL TO DECREASE HAND, FOOT AND MOUTH DISEASES IN CHINESE KINDERGARTENS: THE CLEAN HANDS, HAPPY LIFE PROGRAM

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Objectives: To evaluate the effect of the clean hands, happy life intervention on the incidence of hand, food and mouth disease (HFMD) and on school absences due to sickness in kindergarten students.

Methods: The intervention consisted of four hand hygiene (HH) promotion components and was evaluated in a cluster-randomized controlled trial among 8275 children and 18 kindergartens from May to October, 2015 in Shenzhen, China. We compared two intervention arms - received the intervention in kindergartens only and in both kindergartens and families, respectively - to the control arm that continued usual practice.

Results: During the follow-up, the incidence of HFMD in both intervention arms was significantly lower than in the control arm (IRR1: 0.40, 95% CI: 0.26-0.62; IRR2: 0.35, 95% CI: 0.22-0.57); the duration of absence due to sickness in both intervention arms was significantly shorter than in the control arm ($\beta_1=0.58$, 95% CI: 0.41-0.74; $\beta_2=0.34$, 95% CI: 0.17-0.50), controlling for the area type of kindergarten and grade level of children. Furthermore, during the follow-up we found that there were fewer episodes of absence due to respiratory, skin and eye infections ($P<0.05$).

Conclusions: Our intervention is effective at reducing HFMD infections and absence due to sickness in children attending kindergartens in China.

BIOGRAPHY

Xiaona Liu is a Postdoc Researcher at the Department of Public Health, University Medical Center in the Netherlands. She holds two research master degrees and one doctoral degree in Public Health and Infectious Disease Control. She is specialized in the development and evaluation of public health interventions for preventing diseases (both communicable and non-communicable), combining with strong interests in behavioral change techniques, health psychology, and implementing research findings into practice. Her work currently involves Dutch-China joint research on hand hygiene improvement, as well as evaluation of the implementation of preventive programs at different clinical wards of the Erasmus Hospital in Rotterdam, the Netherlands.

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