

The mechanisms underlying a social network-implemented health intervention promoting water consumption among children

Introduction. This pilot study examined the underlying mechanisms of Smit et al.'s (2015) social network implemented intervention promoting water consumption among children. In this intervention, the most influential children in each classroom were successful in encouraging their classmates to consume more water and less sugar-sweetened beverages.

Method. We replicated the intervention in one fifth-grade classroom to examine the social influence mechanisms of the influential children ($n = 6$) and the psychosocial determinants responsible for behavioral change among their peers ($n = 18$). All children completed daily consumption measures and the influential children answered weekly questions about their influence mechanisms through a mobile research application. In addition, constructs of the theory of planned behavior regarding water consumption were investigated before and after the intervention.

Results. Findings confirmed that the intervention was effective in encouraging children to drink significantly more water and marginally significantly less sugar-sweetened beverages. Moreover, results showed that the influential children mostly used modeling as their influence mechanism and that a positive descriptive norm among peers predicted the largest intervention change.

Conclusion. These findings suggest that social network-implemented interventions promoting water consumption among children might benefit from taking both the actions of the influencer and the beliefs of the influencee into account.

Keywords: health promotion, obesity prevention, water consumption, peer influence, behavioral determinants, mobile data collection