

Mobile phone short messages service (SMS) related to healthy lifestyle for high school students: The CONVERGI Study.

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Objective: The widespread use of mobile phone among younger people could provide a new cost-effective tool to disseminate information on healthy lifestyle and to encourage modifications. This study evaluated the efficacy of SMS in promoting correct behaviours and improving metabolic health.

Methods: 430 boys and girls, aged 14-17 years, from two high schools in Campobasso (Italy), were assigned to either intervention or control according to their home school. At baseline, all students received biometric evaluations and answered a questionnaire on lifestyle and a one-week frequency food recall. Conferences and meeting with experts were organized in both schools to enhance knowledge and understanding correct lifestyles. Both groups received nine different SMSs, one every three weeks for one year. SMSs sent to the intervention group contained specific news and messages about healthy behaviour, while those sent to the control group contained scientific news. At the end of the intervention period, a follow up evaluation was carried on.

Results: Both groups showed an increase in all anthropometric parameters. The increase in waist circumference was significantly lower in the SMS group as compared to the control one, in both girls and boys (2.58 cm (0.99 to 4.16) in controls vs (0.24 cm (-0.99 to 1.48) in SMS, $p < 0.001$ in girls and 2.14 cm (0.35 to 3.94) vs -0.47 cm (-2.36 to 1.42) in boys, $p < 0.0002$, after adjustment for age and baseline levels). Similar results were observed in girls, but not in boys, for hip circumference (2.77 cm (1.69 to 3.86) vs 0.24 cm (-1.32 to 1.79), $p < 0.06$).

No significant difference was observed neither in physical activity nor in food frequency consumption.

Conclusion: Short messages delivered to teenagers through mobile phone may exert a favourable influence on anthropometric parameters. Further research is warranted on the efficacy of this new tool on behaviour and lifestyle.