

Evaluation of the action

Living with sun at primary school

a health education program for solar prevention

B. Pereira, H. Sancho-Garnier, J.C. Azorin, P. Cesarini, A. Kramar
CRLC Val d'Aurelle Paul Lamarque, Montpellier, France

bruno.pereira@valdorel.fnclcc.fr
www.soleil.info/ecole

The frequency of skin cancers has been increasing steadily for 20 years. Their prevention has become a public health priority for the WHO. Research in epidemiology aims to improve the effectiveness of the prevention of risky behaviours - such as excessive exposure to the sun - but is little developed in France.

School teachers have the opportunity to play an active role in providing prevention advice. The action **Living with Sun at school** (LWS) help teachers sensitize children (9/11 years old) to the risks link with sun exposure using a specific tool, a hands-on guide proposed by the Sécurité Solaire association. The 5-week program is composed of 12 lessons and 5 topics: sun and health, sun and ultraviolet rays, sun and atmosphere, protection and prevention, evaluation. The activities are interdisciplinary and present many opportunities for cross-curricular integration (science, maths, geography).

CONTEXT	OBJECTIVES	TOOLS
<p>› Skin cancers: the emergence of a public health problem</p> <p>Urbanization, development of entertaining and sporting activities in open air</p> <p>Increase and splitting up of the holidays</p> <p>› Childhood: one favourable moment for prevention</p> <p>Danger of the solar exposures</p> <p>Initiation to the sun behaviours</p> <p>Repercussions on behaviors at home</p> <p>› Implication of the teachers and opportunity for health education</p>	<p>Evaluation of an educational action</p> <p>To show that a process in health education involves:</p> <p>A progression of knowledge</p> <p>A modification of the attitudes and behaviors both in the children and their teachers toward sun overexposure prevention</p> <p>To heighten and imply all members of the educational community</p> <p>To induce in educators prevention reflex and to initiate scientific approach to health problem.</p>	<p>The Teacher Guide</p> <p>Course on environmental science and health education</p> <p>The children, confronted to observations and guided by the teacher, are developing a critical mind, a sense of experimentation and oral expression</p> <p>Organized activities:</p> <p>designed to be used by any teacher, coming from scientific formation or not</p> <p>described step by step and illustrated with necessary indications to carry out intervention</p> <p>Standard questions and conclusions are provided to facilitate the work of the teacher.</p>

METHOD 1

We carried out a cluster randomised trial in which the classes, rather than the individuals, are assigned into two intervention arms.

Cluster randomised trials are an important tool in the evaluation of nontherapeutic interventions including lifestyle modification, educational programs and innovations in the provision of health care.

This study allows comparing classes which did and did not carry out the LWS program.

METHOD 2

3 time points in 2007 to collect data: before the intervention on May (T0), after the lessons on June (T1) and September (T2).

The 70 participating classes (at T1) are distributed throughout France that is to say 1365 children included in this trial.

Attention focuses on methods of modelling change with a cluster corresponding in our case to a group of children with the same teacher (statistical analysis conducted with mixed effects linear regression extensions accounting for dependencies among cluster members).

RESULTS

Statistical analysis confirms that the rate of knowledge is significantly higher for the children in the LWS classes (figure 1, $p < 0.001$); age, colour of skin and predisposition to sun-damage have an impact on this progression.

For attitudes at T2, the results are encouraging. Children of the LWS classes affirm that it is necessary to be protected against the sun in mountains (OR=3.01, 95%CI[2.01:4.87], $p < 0.001$) and they applied sun lotion in order to avoid damaging their skin (figure 2, OR=1.54, 95%CI[1.05:2.27], $p = 0.03$). We also observe significant modifications at T2 of certain behaviours for these children such as increased use of a hat and renewed application of sun cream.

CONCLUSION

The approach proposed by the LWS program implies a significant progression of knowledge and a modification of children's attitudes and behaviours. The most favourable period to communicate messages about excessive exposures to the sun is certainly the primary school...

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Evolution of rates of knowledge
+ Evolution of Attitude

Figure 1: Evolution of rates of knowledge

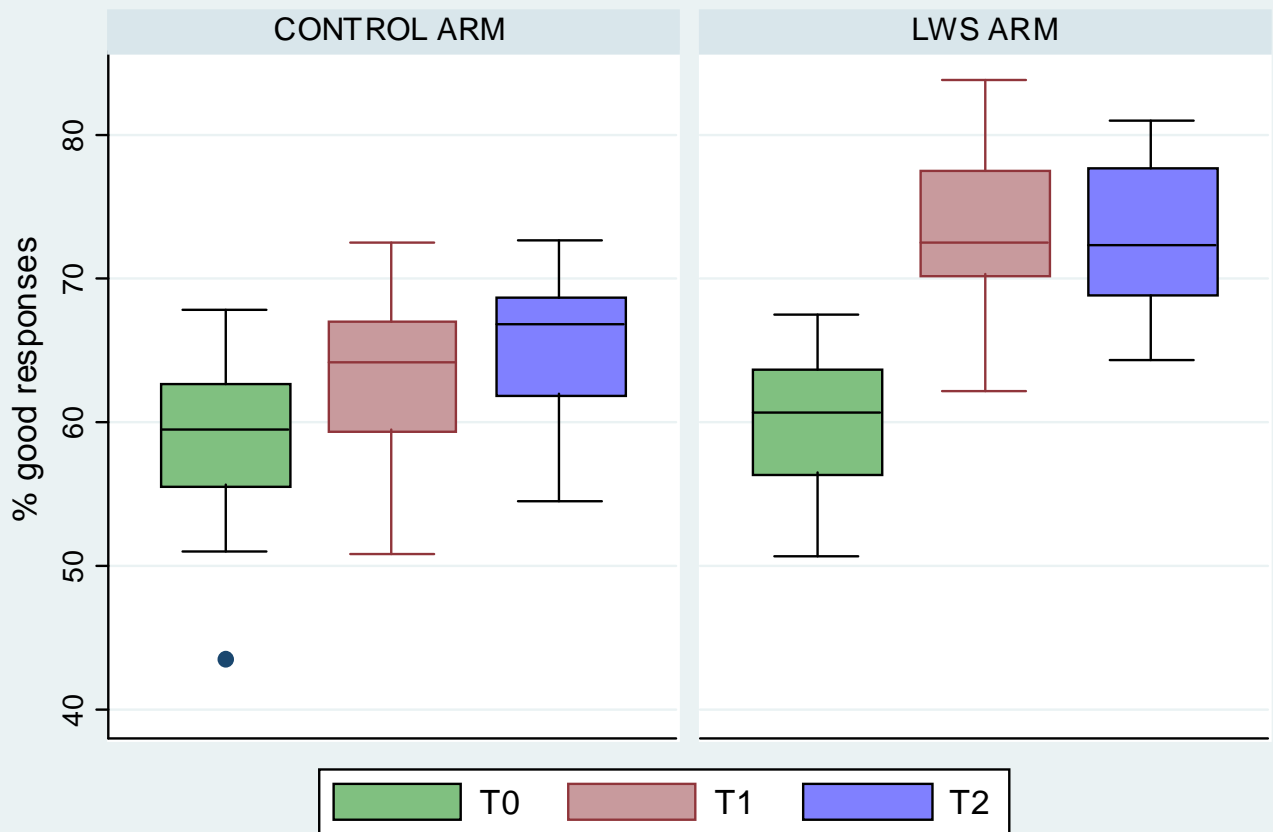


Figure 2: Evolution of attitude Sun lotion to avoid damaging skin?



