

National school based group education to reduce alcohol consumption

Matrix Insight, in collaboration with Imperial College London, Kings College London and Bazian Ltd, were commissioned by [Health England](#) to undertake a research study to develop and apply a method for prioritising investments in preventative interventions for England. Seventeen preventative health interventions were included in the study. Each intervention was evaluated in terms of the following criteria: reach; inequality score; cost-effectiveness; and affordability. This report presents the results of the analysis for one of the interventions: national school based group education to reduce population levels of drinking. The full report of the study is available from the [H.E.L.P.](#) website.

Summary

Description of the intervention

It was not possible to model the classroom intervention so it was not necessary to eliminate all of the interventions to determine which one to model. Three interventions were identified, all of which were RCTs.

1. SHAHRP (curriculum based) alcohol reduction program
Sessions included utility information, skill rehearsal, individual and small group decision making and discussions based on scenarios suggested by students with emphasis on identifying alcohol-related harm and strategies to reduce harm. Resources and training used included teacher training, teacher manual, student workbooks, trigger video (featuring common scenarios to trigger discussion).
2. Skills for Adolescence:
Session curriculum for 7th grade students
Aim was to teach social competency and refusal skills
3. STARS programme (Start Taking Alcohol Risks Seriously) compared with minimal intervention control; nurse-led consultation regarding young person's alcohol use based on stages of initiation and change prevention model (transtheoretical model)
Brief consultation with nurse
Up to 10 prevention postcards sent to parents
Follow-up consultation in second year
Four family lessons

Cost effectiveness

Cost. The costs of the interventions varied from £20.3 to £150.7.

Effect. With all three RCTs there is a positive effect on the levels of alcohol consumed.

Benefits. Lifetime benefits of this intervention could not be estimated due to the lack of epidemiological data on the relationship between young peoples' alcohol use and alcohol use later in life (Jones et al, 2007a).

Effectiveness evidence

A literature review was undertaken by [Bazian](#) to identify evidence on the effectiveness and cost-effectiveness of school based group education to reduce population levels of drinking. Further details are available on the [evidence](#) methods page of the *H.E.L.P.* website.

The review of the evidence on the effectiveness of classroom interventions to reduce population levels of drinking identified three studies. Table 1 provides the following details of the studies identified:

- Population
- Intervention
- Results

The review of the evidence on the cost-effectiveness of school based group education to reduce population levels of drinking identified one economic study. Table 2 provides the following details of the studies identified:

- Population, intervention and model
- Perspective, discounting, inflation, cost year
- Utility/benefit
- Unit costs
- Efficiency

Table 3 and Table 4 provide a quality assessment of the studies. Further details are available on the [quality appraisal](#) methods page.

The following criteria were applied to select effectiveness evidence for undertaking the economic analysis:

- Location. Studies from the UK were preferred over studies from other locations.
- Population. Studies applied to the general population were preferred over studies applied to restricted population groups (e.g. pregnant women; individuals from specific communities/nationalities).
- Counterfactual. Studies for which the counterfactual intervention was 'usual care' or 'do nothing' in a UK setting were preferred over studies for which the counterfactual was different from 'usual care' or 'do nothing'.
- Method. Studies using more rigorous design methods (e.g. randomised control trials or quasi experimental designs with regression models controlling for confounders) were preferred over studies using less rigorous design methods (e.g. before-after studies or simple correlation analysis).

Table 1. Effectiveness of school based group education to reduce alcohol consumption

Study reference	Population	Intervention	Results
<p>Studies on which NICE PH7: "Interventions in schools to prevent and reduce alcohol use among children and young people" bases economic models and evaluation (3 RCTs) are extracted here. Cost modelling associated with these studies is detailed in cost-effectiveness table.</p>			
<p>McBride, 2004; Australia</p> <ul style="list-style-type: none"> ▪ randomised controlled trial ▪ one of three studies in a review of effectiveness of school based interventions to reduce alcohol consumption that were used in further cost modelling by NICE 	<p>Metropolitan, government secondary schools in Perth, Western Australia; phase 1 were children in first year of secondary school (most students were 13 years old); phase 2 was in the second year of secondary (most aged 14 years); 2,343 students in total</p>	<p><i>Intervention</i></p> <p>SHAHRP (curriculum based) alcohol reduction program</p> <p>Phase 1: 17 consecutive skills-based activities in first year (over 8 to 10 lessons of 40-60 mins per lesson) commencing when students were 13 years old.</p> <p>Phase 2: 12 consecutive activities (over 5 to 7 weeks) including skill rehearsal and group decision-making and discussions in second year</p> <p>Sessions included utility information, skill rehearsal, individual and small group decision making and discussions based on scenarios suggested by students with emphasis on identifying alcohol-related harm and strategies to reduce harm. Resources and training used included teacher training, teacher manual, student workbooks, trigger video (featuring common scenarios to trigger discussion)</p> <p><i>Control</i></p> <p>Regular alcohol education classes during phase 2 of study; some schools used one or more of these resources: Western Australian K20 health education curriculum</p>	<p>RR of hazardous/harmful drinking:</p> <ul style="list-style-type: none"> ▪ 0.66 (0.57 to 0.77) at 20 months ▪ 0.95 (95% CI 0.83 to 1.09) at 32 months

Study reference	Population	Intervention	Results
		alcohol education support materials, 'Rethinking Drinking' resource for harm minimisation, 'How will you feel tomorrow' resource for harm minimisation and School Drug Education Project pilot lessons	
Eisen, 2003; USA <ul style="list-style-type: none"> ▪ randomised controlled trial 	7,426 11 to 14 year olds in 34 schools; two year post-test (1-year post-intervention) data were collected from 5691 eighth graders	<i>Intervention</i> <ul style="list-style-type: none"> ▪ Skills for Adolescence: ▪ 40 session curriculum for 7th grade students ▪ Aim was to teach social competency and refusal skills <i>Control</i> <ul style="list-style-type: none"> ▪ Usual drug programming 	Binge drinking 3+ 30-day (12 months): WMD -0.44% (95% CI -2.79 to 1.91)
Werch, 2003; USA <ul style="list-style-type: none"> ▪ randomised controlled trial 	650 sixth-grade students from two middle schools in Jacksonville, FL	<i>Intervention</i> <ul style="list-style-type: none"> ▪ STARS programme (Start Taking Alcohol Risks Seriously) compared with minimal intervention control; nurse-led consultation regarding young person's alcohol use based on stages of initiation and change prevention model (transtheoretical model) ▪ Brief consultation with nurse ▪ Up to 10 prevention postcards sent to parents ▪ Follow-up consultation in second year ▪ Four family lessons <i>Control</i> <ul style="list-style-type: none"> ▪ Alcohol education booklet 	(Results in format presented in NICE review) <ul style="list-style-type: none"> ▪ Short-term effects: 30-day heavy use: 0.42 (95% CI 0.18 to 1.00) ▪ Medium term effects: 30-day heavy use: 0.58 (95% CI 0.30 to 1.12) (Meta-analytic results from the NICE review are not used here because they combine studies with slightly different programme content). Results from those using the intervention described here are quoted

Table 2. Cost-effectiveness of school based group education to reduce alcohol consumption

Study reference	Population, intervention and model	Perspective, discounting, inflation, cost year	Utility/benefit	Unit costs	Efficiency
NICE base their cost modelling on three studies found in a review of effectiveness of school-based interventions to prevent or reduce alcohol use. Results of the modelling are provided here					
<p>Jones et al (2007a)</p> <ul style="list-style-type: none"> ▪ cost modelling by NICE ▪ based on studies found in review of effectiveness 	<p>Costs were based on 30 students receiving SHAHRP intervention (see effectiveness table – McBride, 2004).</p> <p>Cost per case averted derived from indicative cohort of 900.</p>	<ul style="list-style-type: none"> ▪ Public sector perspective ▪ No adjustment for inflation ▪ No discounting ▪ Cost year: GBP2005 	<p>NS</p>	<p>Total cost per student: £31.16</p> <p>Breakdown</p> <p>Staff cost: £377.00</p> <p>Training cost: £557.80</p> <p>Consumable cost: £0.00</p>	<p>Cost per case of hazardous/harmful drinking averted:</p> <p>20 months: £284.54</p> <p>32 months: £1,869.71</p>
<p>Jones et al (2007a)</p> <ul style="list-style-type: none"> ▪ cost modelling by NICE ▪ based on studies found in review of effectiveness 	<p>Costs were based on students receiving Lion’s Quest Skills for Adolescence intervention (see effectiveness table – Eisen, 2002).</p>	<ul style="list-style-type: none"> ▪ Public sector perspective ▪ No adjustment for inflation ▪ No discounting ▪ Cost year: GBP2005 	<p>NS</p>	<p>Total cost per student: £150.67</p>	<p>Cost per case of binge drinking averted: 12 months: £34, 254.70</p>
<p>Jones et al (2007a)</p> <ul style="list-style-type: none"> ▪ cost modelling by NICE ▪ based on studies found in review of effectiveness 	<p>Costs based on students receiving STARS for Families intervention (see effectiveness table – Werch, 2003)</p>	<ul style="list-style-type: none"> ▪ Public sector perspective ▪ No adjustment for inflation ▪ No discounting ▪ Cost year: GBP2005 	<p>NS</p>	<p>Total cost per student: £20.30</p>	<p>Cost per case of 30-day heavy use averted: 2 years: £540.25</p>

Table 3. Quality assessment for effectiveness studies

Study reference	QA for trials/RCTs					Score	Grading (++ 4-5; + 3; -0-2)
	Follow-up	Intention to treat?	Attrition	Groups similar or controlled?	Randomised?		
McBride, 2004; Australia	Yes	No	Yes	No	Yes	3	+
Eisen, 2003; USA	Yes	Yes	Yes	Yes	Yes	5	++
Werch, 2003; USA	Yes	Don't know	Yes	Yes	Yes	4	++

Table 4. Quality assessment for economic studies

Study reference	QA for economic studies						Score	Grading (++ 4-6; + 3; -0-2)
	All costs of intervention included?	Market values used for costs?	Perspective reported?	Sensitivity analysis?	Reports base year adopted?	Effectiveness data from RCT or MA?		
Economic modelling based on above studies conducted by Jones et al (2007a)								
SHAHRP	Yes	No	Yes	No	No	Yes	3	+
Lion's Quest	Yes	No	Yes	No	No	Yes	3	+
STARS	Yes	No	Yes	No	No	Yes	3	+

References

Eisen, M., Zellman, G.L., Murray, D.M. (2003) Evaluating the Lions-Quest "Skills for Adolescence" drug education program, Second-year behavior outcomes, *Addict Behav*, Vol. 28, Nr. 5, 883-97pp.

Jones, L., James, M., Jefferson, T., Lushey, C., Morleo, M., Stokes, E. (2007a) A review of the effectiveness and cost-effectiveness of interventions delivered in primary and secondary schools to prevent and/or reduce alcohol use by young people under 18 years old, PHIAC 14.3a – Alcohol and Schools: Review of effectiveness and cost-effectiveness, *Liverpool: Centre for Public Health, Liverpool John Moores University*. Available from: <http://www.nice.org.uk/nicemedia/pdf/AlcoholSchoolsConsReview.pdf>.

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McBride, N., Farrington, F., Midford, R., Meuleners, L., Phillips, M. (2004) Harm minimization in school drug education: final results of the School Health and Alcohol Harm Reduction Project (SHAHRP), *Addiction*, Vol. 99, Nr. 3, 278-91pp.

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