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► [A brief image-based prevention intervention for adolescents.](#)

Werch C.E., Bian H., Moore M.J., et al.

Psychology of Addictive Behaviors: 2010, 24(1), p. 170–175.

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Across the sample, a brief face-to-face consultation highlighting how substance use might stop them becoming the sort of young adults they wanted to be generally did not prevent substance use among US high school pupils, but those already using substances were significantly more responsive, suggesting a selective if not a universal prevention role.

Summary The Behavior-Image Model approach to health promotion is based on the principle that portrayals of people attractive to the participant and their own improved possible future selves can integrate and motivate change in a range of activities which result in better health. Change is motivated by providing feedback on the participant's current health-related activities and their self-images, highlighting the discrepancy between them to foster commitment to setting goals to narrow this gap. Such interventions might prove more feasible for schools than single-target or lengthy programmes because in a short time they target multiple commonly used drugs and positive health promoting and personal development habits.

Two previous studies ([1](#); [2](#)) evaluating image-based prevention interventions among adolescents found improved substance use and other outcomes particularly among those already using substances at the start of the studies.

The featured article reports outcomes three months later in a third study. For the study 416 students (nearly two thirds girls) at a US school in grades intended for 15–17-year olds completed baseline questionnaires and were randomly assigned to the image-based intervention or to a [control](#) group who were simply given commercially available health promotion materials commonly used in schools. Of the 416, 87% completed the three-month follow-up.

The image-based intervention called Planned Success delivered scripted messages which

illustrated how health-promoting behaviours support positive social and self-images of a successful young adult attractive to the student, while behaviours which risk health do the opposite. Content was tailored to the individual's current health behaviours and the images most attractive to them. At the end they were given a 'goal plan' against which to make progress after the session. Sessions were delivered to individual pupils face-to-face by specially trained nurses and health educators and lasted about 20 minutes. Starting a week later, parents and guardian were sent three weekly mailings of five parent–youth cards with messages parallel to those given the children.

Main findings

Of the nine measures of drinking, smoking and cannabis use and one of substance use problems, just one (frequency of smoking) was reduced by the intervention to a statistically significant degree after adjusting for the risk that with so many tests some might have met this criterion purely by chance. However, children who had been through the intervention were more active in setting goals for health-related behaviour.

Results differed between the 28% of pupils who **were using** either tobacco, alcohol or cannabis before the start of the study. Compared to the bulk of non-using pupils, the intervention had led to stronger positive trends in the amount they drunk and smoked and on the number of problems related to substance use they experienced, but not in cannabis use.

The authors' conclusions

This study reinforces previous work suggesting that image-based messages, delivered in potentially cost-effective and translatable brief intervention formats, may foster health behaviour goal setting and reduce substance use, particularly among the older drug using adolescents in greatest need of an effective preventive intervention. These findings suggest that brief interventions targeting positive images linking health-promoting behaviours with avoiding substance use might have a role as 'selective' interventions to curb the drug use of adolescents who are already drinking, smoking or using illicit drugs.

FINDINGS The findings of this study in relation to youngsters already using substances indicate that the effect of the intervention was for them significantly greater than among non-users, but not necessarily that there had been significant effects among the users themselves. It is also a concern that in each case where significant differences were found, substance users in the intervention group started the study using more or more often than control group users. This raises the suspicion that what we are seeing is at least partly the 'regression to the mean' phenomenon of relatively extreme scores normalising over time regardless of intervention. **Some other studies** of a similar intervention (▶ final paragraph) raise the issue of whether the significant results seen at three months would have survived to say a year.

The study did however avoid very common methodological flaws. Unusually and commendably it set stricter criteria for statistical significance in light of the number of outcomes being tested. If as many studies do it had not been so diligent, it could have claimed another significant result in relation to drinking. It also seems to have decided in advance of seeing the results to test whether these differed among substance users, rather than capitalising on the results to segment the sample in ways which would

produce a significant difference. Finally, though rarely significant, all the differences in the sample as a whole were in favour of the intervention.

In respect of drinking, the findings seem in line with the conclusion [commonly reached](#) by policy analysts that interventions based on education and persuasion have a minor place in the prevention armoury compared to the much greater role of interventions which directly affect the availability of drink through restricting outlets and/or increasing price.

One of the [previous school-based studies](#) of a similar intervention included a specific alcohol component as well as one based on sport and fitness (the latter including how alcohol would impede these objectives). In no case did this focus on alcohol lead to better alcohol-related outcomes, and the presumed predisposing factors to drinking targeted by the alcohol component actually improved more when the focus was on sport. [Another school study](#) found that a sport and fitness image-based intervention curbed drinking and smoking not just three months but also 12 months later. However, a similar intervention [triallyed](#) among US university students had only fleeting effects. The students at first cut back their drinking and cannabis use in response to a brief face-to-face fitness consultation, but the gains were no longer apparent a year after intervention. Still at that time they had at least experienced more positive trends in how well they felt than students who had just read a fitness brochure.

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