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Are alcohol prevention outcomes affected by baseline drinking behaviours?

Results from an adapted version of SHAHRP[1]

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INTRODUCTION

The School Health and Alcohol Harm Reduction Project (SHAHRP)[1] was adapted and implemented in Northern Ireland[2]. The objectives included improving alcohol-related knowledge and attitudes and reducing alcohol-related harms among 14-16 year olds. The present study examined the intervention's impact on students with different experiences of alcohol at baseline (e.g., abstainers, supervised drinkers, unsupervised drinkers, and those who were both supervised and unsupervised drinkers).

METHOD

The study used a non-randomised control longitudinal design. 2,349 students were recruited at baseline. Over two consecutive academic years, one group of students received the intervention from external facilitators (n=902), another group of students received the intervention from their teachers (n=600), and a control group received alcohol education as normal (n=847). Data were collected at baseline, and 12, 24, and 32 months afterwards. Alcohol-related knowledge and attitudes, frequency of consumption, quantity of alcohol consumed during last drinking episode, and self-reported harms associated with alcohol use were assessed using Multi-Level Growth Modeling.

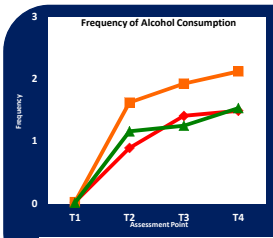
RESULTS BY BASELINE CONTEXT OF USE

RED LINE = CONTROL GROUP

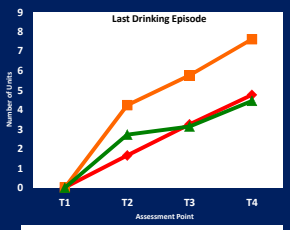
ORANGE LINE = TEACHER DELIVERY GROUP

GREEN LINE = EXTERNAL FACILITATOR GROUP

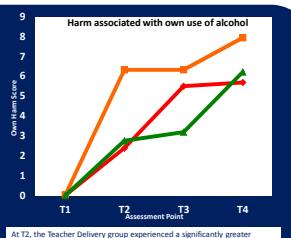
Abstainers



At T2, T3, and T4, the Teacher Delivery group consumed alcohol significantly more frequently than both the External Facilitator and Control groups.



At T2, T3, and T4, the Teacher Delivery group consumed a significantly greater quantity of alcohol during their last drinking episode than both the External Facilitator and Control groups.

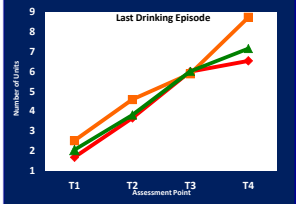


At T2, the Teacher Delivery group experienced a significantly greater number of harms than both the External Facilitator and Control groups. Furthermore, at T3, the Teacher Delivery and Control groups experienced a significantly greater number of harms than the External Facilitator group.

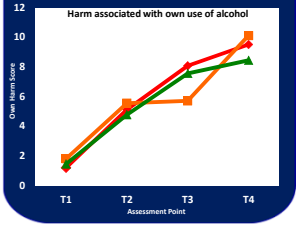
Unless otherwise indicated beneath each graph, there is no significant difference between the groups at T1, T2, T3, or T4

Supervised Drinkers

At T1, the External Facilitator group consumed alcohol significantly more frequently than the Control group.



At T1 and T4, the Teacher Delivery group consumed a significantly greater quantity of alcohol during their last drinking episode than the Control group.



RESULTS OF MULTI-LEVEL GROWTH MODELING

Abstainers

The intervention improved alcohol-related knowledge in both the External Facilitator (b=1.55, t(4.68), p<0.001) and Teacher Delivery groups (b=1.21, t(3.27), p<0.001) when compared to the Control group. However, the intervention did not improve attitudes toward alcohol in the External Facilitator (p=0.30) or Teacher Delivery (p=0.77) groups in comparison to the Control group. Furthermore, there was no significant reduction in frequency of alcohol consumption for the External Facilitator (p=0.67) or Teacher Delivery (p=0.17) groups when compared to the Control group. In terms of quantity of alcohol consumed during the last drinking episode, the analysis failed to identify significant estimates of effects within drinking groups, possibly due to the analysis being underpowered and thus, it is not possible to conclude with confidence that the intervention differentially affected consumption during the last drinking episode. Finally, results of the analysis suggest that the intervention failed to reduce harms associated with own use of alcohol in either the External Facilitator (p=0.69) or Teacher Delivery (p=0.82) groups when compared to the Control group.

Supervised Drinkers

The intervention improved alcohol-related knowledge in both the External Facilitator (b=1.73, t(7.94), p<0.001) and Teacher Delivery groups (b=0.78, t(3.18), p<0.05) when compared to the Control group. However, the intervention did not improve attitudes toward alcohol in the External Facilitator (p=0.88) or Teacher Delivery (p=0.31) groups in comparison to the Control group. Furthermore, there was no significant reduction in frequency of alcohol consumption for the External Facilitator (p=0.18) or Teacher Delivery (p=0.92) groups when compared to the Control group. As already alluded to in relation to the quantity of alcohol consumed during the last drinking episode, the analysis failed to identify significant estimates of effects within drinking groups, possibly due to the analysis being underpowered and thus, it is not possible to conclude with confidence that the intervention differentially affected consumption during the last drinking episode. Finally, results of the analysis suggest that the intervention failed to reduce harms associated with own use of alcohol in either the External Facilitator (p=0.97) or Teacher Delivery (p=0.45) groups when compared to the Control group.

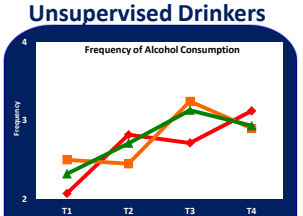
Unsupervised Drinkers

The intervention improved alcohol-related knowledge in both the External Facilitator (b=1.37, t(5.97), p<0.001) and Teacher Delivery groups (b=0.70, t(3.03), p<0.01) when compared to the Control group. However, the intervention did not improve attitudes toward alcohol in the External Facilitator (p=0.07) or Teacher Delivery (p=0.26) groups in comparison to the Control group. Furthermore, there was no significant reduction in frequency of alcohol consumption for the External Facilitator (p=0.53) or Teacher Delivery (p=0.627) groups when compared to the Control group. In terms of quantity of alcohol consumed during the last drinking episode, the analysis failed to identify significant estimates of effects within drinking groups, possibly due to the analysis being underpowered and thus, it is not possible to conclude with confidence that the intervention differentially affected consumption during the last drinking episode. **Finally, results of the analysis suggest that the intervention reduced the number of harms associated with own use of alcohol in both the External Facilitator (b=-2.89, t(3.69), p<0.05) and Teacher Delivery (b=-2.44, t=3.03), p<0.05) groups when compared to the Control group.**

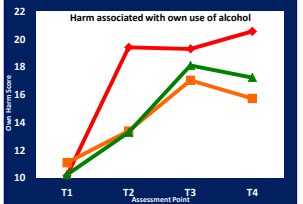
Supervised and Unsupervised Drinkers

The intervention improved alcohol-related knowledge in both the External Facilitator (b=1.74, t(9.84), p<0.001) and Teacher Delivery groups (b=0.95, t(4.86), p<0.001) when compared to the Control group. However, the intervention did not improve attitudes toward alcohol in the External Facilitator (p=0.420) or Teacher Delivery (p=0.975) groups in comparison to the Control group. **The intervention did help to significantly reduce the frequency of alcohol consumption in both the External Facilitator (b=0.41, t(3.62), p<0.001) and Teacher Delivery (b=0.32, t(2.53), p<0.05) groups when compared to the Control group.** In terms of the quantity of alcohol consumed during the last drinking episode, the analysis failed to identify significant estimates of effects within drinking groups, possibly due to the analysis being underpowered and thus, it is not possible to conclude with confidence that the intervention differentially affected consumption during the last drinking episode. Finally, results of the analysis suggest that the intervention failed to reduce harms associated with own use of alcohol in either the External Facilitator (p=0.145) or Teacher Delivery (p=0.236) groups when compared to the Control group.

Unsupervised Drinkers

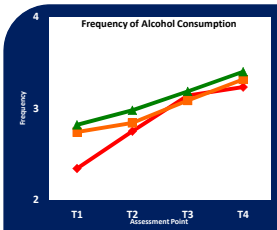


At T1, the External Facilitator group consumed a significantly greater quantity of alcohol during their last drinking episode than the Control group.

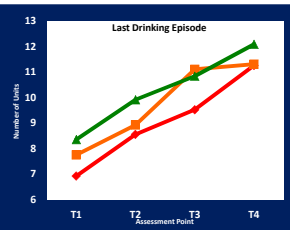


At T2, the Control group experienced a significantly greater number of harms than both the External Facilitator and Teacher Delivery groups.

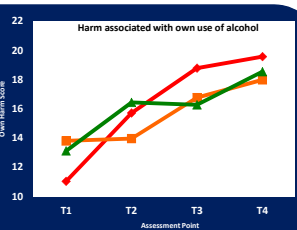
Supervised and Unsupervised Drinkers



At T1, the External Facilitator and Teacher Delivery groups consumed alcohol significantly more frequently than the Control group.



At T1 and T2, the External Facilitator group consumed a significantly greater quantity of alcohol during their last drinking episode than the Control group.



At T3, the Control group experienced a significantly greater number of harms than the External Facilitator group.

CONCLUSION

The results of Multi-Level Growth Modeling indicate that there was a significant improvement in alcohol-related knowledge in all baseline Context of Use groups who received the intervention. However, there was no significant improvement in attitudes toward alcohol in any group. In terms of frequency of consumption, there was no significant impact on those in the Abstainer, Supervised Drinker, and Unsupervised Drinker groups. However, there was a significant reduction in frequency of drinking in the **both Supervised and Unsupervised** Drinkers group. Furthermore, there was a significant interaction effect between baseline Context of Use and receiving the intervention on growth in quantity of alcohol consumed during the last drinking episode, although a failure to identify significant estimates of effects within the drinking groups means that it is not possible to conclude with confidence that the intervention was influential. Finally, there was a significant reduction in reported alcohol-related harms for Unsupervised Drinkers.

Using a Latent Class analytical approach, McKay et al. (2011) reported significant findings on all of the above measures. However, results herein suggest that universal interventions such as SHAHRP can differentially impact individuals depending on their baseline Context of Use. For example, the intervention helped to reduce frequency of consumption for those who were **both Supervised and Unsupervised** Drinkers and to reduce the number of harms experienced as a result of alcohol consumption among Unsupervised Drinkers.

REFERENCES

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2. McKay, M.T., McBride, N.T., Sumnall, H.R., & Cole, J.C. (2012). Reducing the harm from adolescent alcohol consumption: results from an adapted version of SHAHRP in Northern Ireland. *Journal of Substance Use*, *17*(2), 98-121

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