Supplementary Material

Appendix 1

Workshop 1: Alcohol and the growing adolescent brain
• Examine the outcomes alcohol and drugs are seen to deliver • 7 drug type categories (e.g. stimulants, empathogens, depressants etc.) • Drugs do not have fixed and predictable effects • Compare harms of different drugs • Personal definition of danger • How the brain works (neurons, neurotransmitters, parts of the brain and their function) • How drugs hijack naturally occurring systems to bring about intoxication • Developmental neuroscience and how the growing adolescent brain is different • The brain matures from back to front, with the prefrontal cortex being the last part of the brain to mature • Dose-dependent effects of alcohol in the body and blood alcohol concentration • Locate brain regions affected by alcohol and connect this to intoxicated behaviour • Long-term effects of alcohol on the brain • Understand how the brain changes based on our experiences, a concept called neuroplasticity i.e. the 'use it or lose it' principle • Recent trends in substance use in Australia compared to the individual (people are waiting longer to engage and using less) • Australian guidelines for low risk drinking limits • Normalise abstinence from drug and alcohol use • Tips to resist peer pressure to drink, including why peers should not pressure friends to drink • Respond to a series of situations involving alcohol E.g. Resisting peer influence, when to call an ambulance • How different societal figures are responsible for preventing alcohol and drug related-harm (government, parents, teachers, friends, the individual) • How the individual can minimise the harms of alcohol (short-term and long-term) • Goal-setting tools that increase self-efficacy and reduce the power of peer influence • Appreciate that brain health can be optimised by decreasing stress, using certain techniques such as mindfulness and exercise • Where to find e-resources and valid scientific research on alcohol and drugs
Workshop 2: Drugs, the reward pathway and responding to crisis
• Define society's perception of danger as risk to individual and risk to society • The three dimensions of harm: set, setting and drug • How the bio/psycho/social model can influence the progression of harms with on-going drug use • There is no such thing as a 'soft' or 'hard' drug, risk varies on the drug and the individual • Myth busting around MDMA and cannabis • Varying strength of MDMA and cannabis • Examine the impact of MDMA and cannabis use on the brain over a night • Examine the impact of MDMA and cannabis use on the brain over a year such as to the hippocampus (memory), the amygdala (emotions) and link to mental illness • Case studies and harm minimisation with MDMA and cannabis • Apply concepts in neuroplasticity to MDMA and Cannabis use • Cannabis is an addictive substance • Difference between physical dependence and psychological addiction • Learn the legal frameworks around use, possession & supply

• Apply concepts in 'the growing adolescent brain' - how to play to our strengths • Dispel common misconceptions around other recreational drug use. Including non-medical use of prescription drugs • Learn & share strategies to reduce stress elevate a low mood • Learn where to go for evidence-based drug and alcohol information
Workshop 3: Addiction & mental health
• Investigate factors that influence addictive behaviour • Understand the neurological mechanism behind cravings, urges and habit formation • Understand the way pleasurable things work to induce cravings and repeat behaviour • Define addiction as a developmental disorder that progresses over time • Analyse the bio/psycho/social influences that encourage repeat behaviour with alcohol and other drugs • Critical risk analysis around likelihood of running into problems with a particular behaviour • Understand the role of the prefrontal cortex in the loss of control over behaviour • Examine how to break habits and set positive ones • Understand the stages of change model in behaviour change • Learn how to use behavioural change tools such as a cost-benefit analysis and urge log • Brainstorm different psychological triggers, emotional responses and how we like to be treated when we are not feeling ok • Consolidate learnings and answer any questions around the program

Appendix 2 The Drug Literacy (knowledge) levels at baseline (n=272) and at post-test (bracketed; n=257).

Questions	*Correct (%)*	*Incorrect (%)*	*Did not know (%)*
1. Young people are starting to drink alcohol at a later age than before	17.3 (72.8)	62.9 (19.1)	19.9 (8.2)
2. Most people my age, have tried an illicit substance	42.6 (68.0)	29.0 (23.0)	28.3 (9.0)
3. If you do choose to do drugs, it's better to do them whilst your young than when you're older.	73.5 (89.9)	7.7 (5.1)	18.8 (5.0)
4. Alcohol is one of the most harmful drugs	47.1 (80.2)	41.5 (15.6)	11.4 (4.3)
5. The drinking age is 18 because that's when your brain is fully developed	30.5 (86.8)	59.9 (10.1)	9.6 (3.1)
6. If someone is heavily intoxicated, you should monitor their breathing and keep them aroused	40.2 (81.0)	19.9 (8.9)	29.8 (10.1)
7. There are 'SAFE' levels of some drugs	58.5 (51.4)	23.2 (42.0)	18.4 (6.6)
8. Cannabis can change the structure of your brain if you use it before your brain is fully developed	67.5 (89.5)	8.3 (4.7)	24.2 (5.8)
9. Cannabis is an addictive substance	34.9 (87.6)	49.3 (7.8)	15.8 (4.6)
10. It is reasonably safe for 15 to 17-year-olds to have up to 4 standard drinks on any one day, if they drink occasionally	14.3 (81.7)	69.9 (14.0)	15.8 (4.3)
11. Being an attendant at a festival gives the police a warrant to search you	47.6 (75.9)	18.3 (12.5)	34.1 (11.6)
12. Roadside drug tests can detect drugs in the body days after consumption	73 (90.3)	8.7 (4.7)	18.3 (5.1)
13. Australian youth (18-24 years old) experience mental illness more than any other age group	72.8 (86.4)	6.6 (2.7)	20.6 (10.9)
14. It is not always legal to possess prescription drugs	69.1 (80.2)	14.7 (4.3)	16.2 (15.6)

* Shaded area represents questions where over half (50%) of the participants answered incorrectly or did not know the answer. Note: the pre- and post-test data include total number of participants at each point.

Appendix 3 Drug Literacy (skill) levels at baseline (n=246) and post-test test (bracketed; n=240)

	Strongly Agree	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
A. I feel comfortable discussing the risks associated with illicit drugs with my parents (%)	33.7 (38.8)	39.0 (34.2)	20.3 (15.0)	4.1 (9.6)	2.8 (2.5)
B. I know where to go for help if I needed it (%)	37.0 (41.7)	45.9 (48.8)	12.2 (7.1)	2.4 (0.8)	2.4 (1.7)

C. The link between drug use and mental illness is clear to me (%)	32.9 (41.7)	43.5 (44.2)	18.7 (11.3)	4.5 (2.1)	0.4 (0.8)
D. I feel confident that I could minimise the short-term harms associated with drugs (%)	25.2 (33.8)	34.6 (50.0)	31.3 (11.7)	7.3 (3.3)	1.6 (1.3)
E. I feel confident that I could minimise the long-term harms associated with drugs (%)	26.0 (31.7)	32.9 (48.8)	29.3 (12.1)	9.3 (5.8)	2.4 (1.7)
F. I do not feel inclined to take drugs (%)	52.2 (43.3)	22.4 (31.7)	19.6 (16.3)	3.7 (5.0)	2.0 (3.8)

*Shaded area represents questions where over a quarter (25%) of the participants were neutral or disagreed with the statement.