

# UNIVERSITY OF CALIFORNIA, SAN FRANCISCO



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August 4, 2011

The middle school years are peak years for substance use initiation.<sup>1</sup> For example, in 2009, 7% of those age 12 or 13 report lifetime cigarette use compared to 21% of 14 or 15 year olds; 2% of 12 or 13 year olds report past month binge drinking compared with 7% of 14 or 15 year olds; and 2% of youth age 12 or 13 report lifetime marijuana use compared to 15% of those age 14 or 15.<sup>2</sup>

Alcohol and drug use in adolescence is associated with substantial adverse consequences, such as drinking and driving, risky sexual behaviors, criminal activity, and delinquency.<sup>3-5</sup> Although initiation of some of these behaviors in middle or late adolescence may reflect psychologically healthy experimentation,<sup>6,7</sup> adolescents who initiate health risk behaviors at an early age appear to be at greater risk for negative consequences later in life.<sup>8</sup>

Prevention programs designed to delay or prevent the onset of alcohol or drug involvement have commonly taken place in schools where large groups of adolescents can be reached. Being Adept, a multi-component prevention intervention for Middle School students in Marin County, was designed to prevent the onset of substance use through increasing students' knowledge about the effects of these substances and empowering them to resist using alcohol and marijuana through coping skills training. The intervention is delivered by mental health professionals familiar with the latest research on the effects of substance on the human brain and peer leaders who share their experiences managing the pressures to use alcohol and drugs in adolescence.

Interventions designed to prevent alcohol and drug use during the middle school years often target hypothesized mediators of substance use initiation, or psychological constructs that are expected to account for an observed deterrence of substance use onset.<sup>9-12</sup> Below we report preliminary evidence of the effects of one (5<sup>th</sup> and 6<sup>th</sup> grades) or two (7<sup>th</sup> and 8<sup>th</sup> grades) sessions of the Being Adept curriculum on three hypothesized mediators of substance use initiation: students' knowledge about the effects of drugs and alcohol, their perceived harms, and intentions to use these substances.

## Methods

Assessments were administered to 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> graders at one Middle School in Marin County immediately before and 1 day after they received the Being ADEPT intervention delivered in Spring, 2011. The intervention consisted of one 45-minute session for 5<sup>th</sup> and 6<sup>th</sup> grades and two 45-minute sessions for 7<sup>th</sup> and 8<sup>th</sup> grades. Content for Day 1 (all grades) included an interactive lecture on the science of alcohol and drugs delivered by a mental health professional, a film with peer leaders discussing ways they coped with alcohol and drug use, and a presentation/question and answer session with the peer leaders. Day 2 (7<sup>th</sup> and 8<sup>th</sup> grades only) consisted of a presentation by a California Highway Patrol officer about Blood Alcohol Content, including a simulated interactive exercise and a question and answer session. Measures examined knowledge about alcohol and marijuana, perceived harm caused by

moderate and heavy alcohol and marijuana use, and intentions to use alcohol or marijuana within the next year. Each grade received slightly different knowledge questions tailored to the curriculum they received.

## Results

### 5<sup>th</sup> grade

**Knowledge:** There was a significant increase in knowledge about alcohol and drugs between the pre- and post- assessments, with students answering an average of 44% of alcohol and drug questions correctly before the intervention and 61% correctly after the intervention ( $p < .05$ ).

**Perceived harms:** There was a significant increase in the proportion of students that reported "great harm" from occasional alcohol use (13% vs. 22%,  $p < .0001$ ) and binge drinking (52% vs. 64%,  $p < .01$ ) after the intervention. There was also a significant increase in the proportion of students that reported "great harm" from occasional marijuana use (29% vs. 39%,  $p < .01$ ) after the intervention.

### 6<sup>th</sup> grade:

**Knowledge:** There was a significant increase in knowledge about alcohol and drugs between the pre- and post- assessments, with students answering an average of 9% of alcohol and drug questions correctly before the intervention and 35% correctly after the intervention ( $p < .01$ ).

**Perceived harms:** After the intervention, significantly more students reported that binge drinking would cause "great harm" (51%), compared to before the intervention (36%,  $p < .01$ ). There were no differences in perceptions of the harm of occasional drinking or marijuana use.

### 7<sup>th</sup> grade:

**Knowledge:** There was a significant increase in knowledge about alcohol and drugs between the pre- and post- assessment scores, with students answering an average of 16% of questions correctly before the intervention and 50% correctly after the intervention ( $p < .01$ ).

**Perceived harms:** There was a significant increase in the proportion of students that reported "great harm" from occasional alcohol use (26% vs. 55%,  $p < .0001$ ) and binge drinking (43% vs. 80%,  $p < .0001$ ) after the intervention. There were no differences in perceptions of the harm of marijuana use.

### 8<sup>th</sup> grade:

**Knowledge:** There was a significant increase in knowledge about alcohol and drugs between the pre- and post- assessments, with students answering an average of 8.5% of questions correctly before the intervention and 45.8% correctly after the intervention ( $p < .01$ ).

**Perceived harms:** After the intervention, significantly more students reported that occasional alcohol use would cause "great harm" (22%), compared to before the intervention (4%,  $p = .007$ ). There were no differences in perceptions of the harm of binge drinking or marijuana use.

## Intentions

There were no differences in the proportion of students reporting intentions to use alcohol or marijuana in the next year between the two assessments. However, there was a grade effect such that younger students had lower intentions to use alcohol or marijuana than older students. For example, after the intervention, 97% of 5<sup>th</sup> graders said they would "definitely not" use alcohol and 99% said they would definitely not use marijuana in the next year; 78% of 6<sup>th</sup> graders said they would definitely not use alcohol and 91% said they would definitely not use marijuana in the next year, 77% of 7<sup>th</sup> graders said they would definitely not drink alcohol

and 98% would definitely not use marijuana in the next year, and 36% of 8th graders said they would definitely not use alcohol and 66% said they would not use marijuana in the next year.

### Discussion

Being Adept appears to impact some hypothesized mediators of substance use onset, including knowledge about the effects of drugs and alcohol and perceived harms of using these substances. Intentions to use alcohol and marijuana were not affected by this one- or two-session intervention; however, this is likely due to the high number of students reporting they would "definitely not" use alcohol or marijuana before or after the intervention in all grades. It is possible that a more extensive curriculum designed to address cognitive and behavioral correlates of substance use would be more effective at reducing intentions to use. Being Adept has a new, expanded 8-session curriculum for the 2011-2012 academic year, and future studies will examine the effects of the expanded curriculum on both hypothesized mediators and substance use outcomes of youth.

Questions about the specific analyses conducted should be directed to Dr. Ramo at [Danielle.ramo@ucsf.edu](mailto:Danielle.ramo@ucsf.edu) or (415) 476-7071.

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