



Examining the relationship between resilience and adolescents' intention to use tobacco, alcohol, and marijuana

Richardson, C. G., Russell, L. R., Memetovic, J., Ratner, P. A.
University of British Columbia

Presented at the Canadian Public Health Association Annual Conference in Toronto, Ontario,
June 13-16, 2010.

ADOLESCENTS AND SUBSTANCE USE

Tobacco, alcohol and marijuana pose a threat to the health of adolescents. Findings from surveys suggest that among Canadians aged 15-19, 15% smoke tobacco, approximately 30% have tried marijuana more than once, about 8% use marijuana at least once per week, and 44% drink alcohol 1 to 3 times per month.

RESILIENCE

The concept of resilience has been defined in multiple ways, but a common theme in many definitions is the presence of adversity and the ability to overcome it. Luther et al. (2000), defined resilience as a “dynamic process encompassing positive adaptation within the context of significant adversity” (p. 543), while Braverman (1999) stated that “[t]he core components of resilience are successful adaptation and exposure to significant stressors or other risks” (p.568).

Adolescence is a period of transition that includes increased exposure to the availability and peer use of substances combined with the experience of many novel stressors. Given that resilience is an ability to adapt positively to stress, it is not surprising that high resilience has been associated with lower levels of substance use. To date, most studies have focused on examining the relationship between levels of resilience and the

initiation or regular use of substances. However, much less is known about the relationship between resilience and the *intention* to use tobacco, alcohol and other drugs, or the ability to resist the temptation to use these substances in adolescents. Do adolescents with higher resilience have less intention to use? Do they find it easier to refuse to try tobacco, alcohol, and other drugs?

The goal of this study was to examine the relationship between resilience and intentions to use tobacco, alcohol, and marijuana, as well as difficulty in resisting these substances, in grade 8 students in British Columbia, Canada.

METHODS

Sample

Participants were 655 grade 8 students taking part in the BC Adolescent Substance Use Survey (BASUS), a prospective cohort study of substance use that is administered online. The median age of participants was 13 years, 47.5% were male, and the ethnic composition of the sample was as follows: 66.0% Caucasian, 10.4% Aboriginal, 15.3% Asian, 1.8% of African descent, and 7.8% Other.

Measures

14-Item Resilience Scale (RS-14, Wagnild, 2009): The 25-item Resilience Scale (Wagnild & Young, 1993) was administered as part of this study. More recently, a 14-item short form of the RS was developed (RS-14, Wagnild, 2009). The RS-14 contains five categories or characteristics: self-reliance (6 items), meaning (3 items), equanimity (2 items), perseverance (2 items) and existential aloneness (2 items). Responses to are provided on a 7-point scale ranging from 1 (disagree) to 7 (agree). Scores of more than 90 suggest high resilience, scores of 61-89 indicate moderately low to low resilience and scores below 60 indicate low resilience.

Intention to use tobacco and marijuana: Intention to use these substances in the future was measured using single items. Only participants who indicated that they had never tried cigarettes or marijuana responded to these items (*see table 2*).

Intention to binge drink: Participants who had tried alcohol in the past were asked if they could see themselves drinking 5 or more drinks in a row within the next 3 years (*see table 2*).

Resisting the use of tobacco, alcohol, and marijuana: Participants who indicated that they had not tried cigarettes, alcohol, or marijuana were asked how difficult it was for them to avoid trying these substances (*see table 3*).

ANALYSES and RESULTS

Due to the negatively skewed distributions and unequal group sizes, non-parametric tests were employed. Differences in the median RS-14 scores were tested using Kruskal-Wallis tests for multiple groups. For tobacco ($p < .01$) and marijuana ($p < .01$), higher resilience was significantly associated with lower intention to use in the future. Participants with higher resilience scores also found it easier to not use tobacco, marijuana and alcohol though only the relationship between resilience and marijuana was significant ($p < .01$). See Tables 2 and 3 for further details.

DISCUSSION and IMPLICATIONS

Among non-using adolescents, higher resilience appears to be associated with lower future intentions to use tobacco and marijuana, but not alcohol. This may be due to the greater social acceptability of alcohol consumption, in general. Greater resilience also is associated with finding it easier to resist using marijuana. These findings suggest that interventions focused on developing and maintaining resilience will contribute to reductions in adolescent substance use, however, social and peer norms should be taken into consideration.

REFERENCES

Braverman MT. Research on resilience and its implications for tobacco prevention. *Nicotine Tobacco Res.* 1999;1:S67-S72.

Luthar SS, Cicchetti D, Becker B. Research on Resilience: Response to Commentaries. *Child Dev.* 2000;71(3):573-575.

Wagnild G, Young H. Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement* 1993;1(2):165.

Wagnild G,M. The Resilience Scale User's Guide: for the U.S. English version of the Resilience Scale (TM) and the 14-item Resilience Scale (TM). 2009;1:96.

Table 1: Resilience Scale Items

Resilience characteristics	Resilience Scale item wording
Self-Reliance	I usually manage one way or another
	I feel that I can handle many things at a time
	I can get through difficult times because I've experienced difficulty before
	In an emergency, I'm someone people can generally rely on
	When I'm in a difficult situation, I can usually find my way out of it
Meaning	I feel proud that I have accomplished things in my life
	Keeping interested in things is important to me
	My life has meaning
Equanimity	I usually take things in stride
	I can usually find something to laugh about
Perseverance	I am determined
	I have self-discipline
Existential Aloneness	I am friends with myself
	My belief in myself gets me through hard times

Table 2: Mean resilience scores across levels of intention to use substances

Item	Mean Resilience Scale Scores			
	Definitely and probably yes	Probably not	Definitely not	
Do you think you will try smoking in the future? *	57 (n=25)	65 (n=132)	72 (n=413)	
Do you think you will try marijuana in the next 3 years? *	64 (n=44)	63 (n=116)	72 (n=423)	
	Definitely yes	Probably yes	Probably not	Definitely not
Do you think you will binge drink in the next 3 years? **	54 (n=11)	66 (n=42)	65 (n=50)	74 (n=18)

Note: * p<.01; ** p<.06

Table 3: Mean resilience scores across levels of difficulty refusing substances

Item	Mean Resilience Scale Scores		
	Not at all difficult	Not very difficult	Fairly, Very, Extremely difficult
How difficult is it for you to not smoke cigarettes? ^{ns}	70 (n= 534)	70 (n=28)	63 (n=7)
How difficult is it for you to not drink alcohol? **	72 (n=382)	71 (n=56)	60 (n=14)
How difficult is it for you to not use marijuana? *	71 (n=525)	61 (n=42)	63 (n=11)

Note: * p<.01; ** p<.06, ns=not significant