Evidence Profile

Health Status	Study No., authors and year	Design	Country	Population (source)	Primary & Secondary Outcomes	Sampling Methodology	Number of Participants	Age and Gender (%)
Alcohol and drug use								
Otherwise healthy	1. Acion, Ramirez, Jorge & Arndt (2013)	Observational and cross-sectional study using secondary data source; self-report online survey	USA	2010 statewide Iowa Youth Survey (IYS) of enrolled 6th, 8th and 11th graders. All schools in the state of Iowa are invited to participate.	Ever drink more than a few sips of alcohol and past 30-day use: binge drinking, marijuana use (classified separately due to higher frequency of use than for other drugs), illegal drug use (sniffing/breathed contents, methamphetamines, cocaine, stimulants) and prescription drug misuse. Data are reliable with >85% of community variation due to community differences.	Secondary analysis of statewide IYS alcohol and drug use outcomes data: response rate of 69%	*N* = 78,240 students, comprising: Deployed: *N* = 1,758 Non-military: *N* = 57,637 Plus *N* = 18,845 excluded from analysis	Deployed: Age: 13.1 (*M*) M = 58.9% Non--military: Age: 13.5 (*M*) M = 49.1%
Findings: The rate of alcohol and substance use was higher in the deployed group than in the non-military (NM) group: Deployed group ever drink alcohol (36.18%) *cf.* NM (28.31%); Deployed group alcohol 30-day use (22.31%) *cf.* NM (14.46%); Deployed group binge (>5 drinks in a sitting) (17.60%) *cf.* NM (9.58%); Deployed group marijuana 30-day use (10.12%) *cf.* NM (4.82%); Deployed group illegal drug 30-day use (10.19%) *cf.* NM (3.09%); and Deployed group prescription drug 30-day misuse (15.29%) *cf.* NM (6.71%).								

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Adolescence in military families presenting to either of two adolescent health clinics	7. Hutchinson (2006)	Cross-sectional study using self-report computer survey	USA	Adolescent offspring of active and retired military personnel, who present to one of two adolescent clinics in May-June 2004.	Current alcohol and marijuana use[1]	Rates of risk-taking behaviour were compared with 2003 statewide & national Youth Risk Behaviour Surveillance (YRBS) data.	N = 78,240 students, comprising: Deployed: *N* = 1.758 Non-military: *N* = 57,637 Plus *N* = 18,845 excluded from analysis	Deployed: Age: 13.1 *(M)* M = 58.9% Non-military: Age: 13.5 *(M)* M = 49.1%
Prevalence findings: Of students in grades 9 through 12, current alcohol and marijuana use were compared with YRBS state and national statistics and were consistently and significantly lower, with one exception: for 12th grade males, marijuana use was 20% in the study group, compared with 26% statewide and 30% nationally ($p < .06$). High school alcohol use overall was 20.8% compared with a national percentage of 44.9% in the YRBS data ($p < .0001$). Marijuana use for high school students in the study was 7.8%, compared with 22.4% in the YRBS data ($p < .0001$). Though school attendance or absenteeism was not explicitly investigated by the study, the proportion of the sample "not in school" was reported as being 5.1%.								

[1] Adolescents' history of sexual intercourse was also reported by the study; however, this measure was considered not explicit enough as to indicate "risky sexual behaviour".

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Otherwise healthy	9. Reed, Bell, & Edwards (2011)	Cross-sectional cohort study using secondary data source; self-report hardcooy survey.	USA	2008 Washington State Healthy Youth Survey collected in public schools grades 8, 10, and 12.	Binge drinking (yes/no): "Think back over the last 2 weeks. How many times have you had 5 or more drinks in a row (a drink is a glass of wine, a bottle of beer, a shot of liquor, or a mixed drink)?" Drug use: "During the past 30 days, on how many days did you use marijuana or hashish (grass, hash, pot))?" and "During the past 30 days, on how many days did you (not counting alcohol, tobacco, or marijuana) use another illegal drug?". Adolescents with self-reported frequency of 1 day or more on these questions were categorised as drug users.	Clustered sampling design: after randomisation, participation is voluntary for schools and students. Response rates were 77% of 8th grade, 60% of 10th grade and 50% of 12th grade students.	*N* = 10,606 students, comprising students with a military parent, deployed parent or civilian parent (proportions not reported) Adolescent girls in 8th grade (*N* = 2,097) and 10th & 12th grades (*N* = 3,137) Adolescent boys in 8th grade (*N* = 1975) and 10th & 12th grade (*N* = 2801)	Age: N/A (Grade reported) Gender: N/A reported as number of adolescent girls or boys per grade

Findings:

Binge drinking in past 2 weeks for adolescent girls in 8th grade was 9%[c] for girls with a military parent, 17%[b,c] for girls with a deployed parent *cf.* 9%[b] for girls with civilian parents.

Binge drinking in past 2 weeks for adolescent girls in 10th & 12th grade was 29%[a] for girls with a military parent, 29%[b] for girls with a deployed parent *cf.* 18%[a,b] for girls with civilian parents. Binge drinking in past 2 weeks for adolescent boys in 8th grade was 10% for boys with a military parent, 14%[b] for boys with a deployed parent *cf.* 8%[b] for boys with civilian parents.

Binge drinking in past 2 weeks for adolescent boys in 10th & 12th grade was 33%[a] for boys with a military parent, 33%[b] for boys with a deployed parent *cf.* 23%[a,b] for boys with civilian parents.

Drug use in past 30 days for adolescent girls in 8th grade was 11% for girls with a military parent, 11% for girls with a deployed parent *cf.* 8% for girls with civilian parents.

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Drug use in past 30 days for adolescent girls in 10th & 12th grade was 26%[a] for girls with a military parent, 31%[b] for girls with a deployed parent *cf.* 19% [a,b] for girls with civilian parents. Drug use in past 30 days for adolescent boys in 8th grade was 12% for boys with a military parent, 13% for boys with a deployed parent *cf.* 10% for boys with civilian parents. Drug use in past 30 days for adolescent boys in 10th & 12th grade was 32%[a] for boys with a military parent, 37%[b] for boys with a deployed parent *cf.* 22%[a,b] for boys with civilian parents. [a] Association between civilian parents and military parent significant at $p < .05$ [b] Association between civilian parents and deployed parent significant at $p < .05$ [c] Association between military parent and deployed parent significant at $p < .05$								
Otherwise healthy	3. Gilreath, Cederbaum, Astor, Benbenishty, Pineda, & Atuel (2013	Cross-sectional study using secondary data source; self-report hardcopy survey	USA	Subsample of the statewide 2011 California Healthy Kids Survey (CHKD). Subsample comprised 5th, 7th, 9th, and 11th grade students in schools in Southern California in military-connected public school districts	Lifetime use of alcohol, tobacco, marijuana, other drugs or prescription drugs; and recent (past 30 days) use of alcohol, tobacco, marijuana and other drugs	Secondary analysis of subsample of CHKD students—those in class at military-connected public schools (i.e. having average daily attendance of more than 400 military students or 10%)—with a response rate of 86.5%.	*N* = 14,149 students, comprising: <u>No military connection:</u> 86.5% <u>Parent in military:</u> 9.2% <u>Sibling in military:</u> 4.3% AND <u>No deployments in past 10 years:</u> 73% <u>1 deployment in past 10 years:</u> 9.5% <u>2 or more deployments in past 10 years:</u> 17.5%	Age: N/A (Grade reported) <u>Overall sample:</u> F = 52.1% M = 47.9%

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Findings: Youth who reported either one, or two or more familial deployments had the highest prevalence of substance use. Youth who reported a sibling in the military had highest prevalence of all lifetime substance use. Lifetime alcohol, marijuana and prescription drug use varied according to military-connection status. No differences were found in prevalence of recent drug use. Youth with a parent in the military lifetime drug use (yes): alcohol = 37.5%; marijuana = 23.6%; other drugs = 15.9%; prescription drugs = 17.2%. Youth with a parent in the military past 30-day drug use (yes): alcohol = 19.4%; marijuana = 13.7%; other drugs = 8.3%. Youth with one deployment of a family member in past 10 years lifetime drug use (yes): alcohol = 42.3%; marijuana = 27.6%; other drugs = 16.6%; prescription drugs = 19.5%. Youth with one deployment of a family member in past 10 years past 30-day drug use (yes): alcohol = 22.8%; marijuana = 16.1%; other drugs = 7.5%. Youth with two or more deployments of a family member in past 10 years lifetime drug use (yes): alcohol = 43.2%; marijuana = 26.8%; other drugs = 17.2%; prescription drugs = 18.7%. Youth with two or more deployments of a family member in past 10 years past 30-day drug use (yes): alcohol = 22.3%; marijuana = 14.3%; other drugs = 8.5%. Youth with a sibling in the military lifetime drug use (yes): alcohol = 45.8%; marijuana = 30.1%; other drugs = 17.3%; prescription drugs = 21.7%. Youth with a sibling in the military past 30-day drug use (yes): alcohol = 23.9%; marijuana = 15.3%; other drugs = 6.6%								
Seeking paediatric hospital care	8. Pressley, Dawson, & Carpenter (2012)	Cross-sectional study using secondary data source; parent report via baseline	USA	Military dependents aged 0.1 year to 17 years identified by expected primary or secondary medical insurance payer, using the 2006 Kids Inpatient Database of the Healthcare Cost and Utilisation Project (KID). KID contains data on paediatric admissions in 38 US states; 16 states had data meeting the military	Classification of patient diagnoses including: • motor vehicle driver; • poisoning by psychotropic agents (antidepressants, tranquilisers, antipsychotics, psychostimulants and hallucinogens); • poisoning by non-psychotropic medication and drugs (all other medications from antibiotics to specific systemic agents); • poisoning by non-medicinal substances (alcohol, carbon monoxide, pesticides, other gases, asbestos and lead)	Secondary analysis of paediatric admissions data for military children, adolescents and teenagers. Systematic random sampling used (every *n*th paediatric admission).	*N* = 742,375 children, teenagers and adolescents, comprising: <u>Military:</u> *N* = 12,310 <u>Non-military:</u> *N* = 730,065	<u>Military:</u> Age distribution provided: 0–4: 48.5% 5–9: 14.4% 10–14: 16.2% 15–17: 20.9% M = 51.4% <u>Non-military:</u> Age distribution provided: 0–4: 49.7% 5–9: 14.0% 10–14: 15.2% 15–17: 21.1%

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				dependents criteria.				M = 50.5%
Findings: For *all types of poisoning*, military dependents had 114.4 diagnoses per 1,000 injury-related hospital admissions *cf.* 84.3 diagnoses per 1,000 hospital admissions for non-military (NM) dependents ($p < .0001$). For *poisoning by psychotropic agents*, military dependents had 32.5 diagnoses per 1,000 injury-related hospital admissions *cf.* 25.5 diagnoses per 1,000 hospital admissions for non-military (NM) dependents ($p = .002$). For *poisoning by other medications/drugs*, military dependents had 88.1 diagnoses per 1,000 injury-related hospital admissions *cf.* 60.2 diagnoses per 1,000 hospital admissions for non-military (NM) dependents ($p < .0001$). For *poisoning by non-medicinal substances*, military dependents had 20.5 diagnoses per 1,000 injury-related hospital admissions *cf.* 21.8 diagnoses per 1,000 hospital admissions for non-military (NM) dependents ($p = .54$). For *motor vehicle injuries where the dependent was the driver*, military dependents had 16.3 diagnoses per 1,000 injury-related hospital admissions *cf.* 18.7 diagnoses per 1,000 hospital admissions for non-military (NM) dependents ($p = .90$).								
School absenteeism								
Mothers seeking medical and mental health care from the US Department of Veterans Affairs (DVA) and who have been, are, or are at risk of being, homeless	5. Harpaz-Rotem, Rosenheck, & Desai (2006)	Cross-sectional study using secondary data source; parent report via baseline in-depth interview with mother at time of entry into a medical and mental health care program	USA	Subsample of baseline (program entry) data collected as part of an outcomes evaluation of a specialised medical and mental health care program for homeless female veterans of the US armed forces. Sub- sample comprised female veterans who had minor children: 26.7% mothers were homeless; 34.6% were at risk; 24% lived in a residential facility; 14.7% were housed. The program was	Child school enrolment and attendance data collected from the mothers: school enrolment (yes/no); and, among those enrolled, typical number of days of school missed in a month.	Secondary analysis of a subsample of female veterans of the US armed forces engaged in a program outcomes evaluation—those with minor children (N = 195)—representing 33% of the total study sample (N = 582 women). Parent report data was collected for the youngest child.	*N* = 195	<u>Mothers:</u> Age: 40.2 (*M)* F=100% <u>Child:</u> Age and gender unreported

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				founded by DVA at 11 sites nationally				
Findings: 66.2% of veteran mothers' children ages 5 and older were enrolled in school. Children of homeless veteran mothers, regardless of their current custodial status, were significantly less likely to be enrolled in school ($p < .05$) than children whose veteran mothers were not homeless. The average number of days of school children missed during a 30-day period, although measured, was not reported. However, children of homeless veteran mothers ($p < .01$) and married mothers ($p < .01$) were reported to have missed significantly more days of school than those children whose veteran mothers were not homeless or who were single, separated or divorced.								
Otherwise healthy	10. Weber (2005)	Cross-sectional correlational study; adolescent self-report via hardcopy survey	USA	Students at four US secondary schools receiving Military Impact Aid (funding stream for schools with large numbers of military attendees)	Individual objective data on school suspensions	US secondary schools receiving Military Impact Aid were invited; four schools participated. Sampling method was not reported.	*N* = 179	Age: 15.8 (*M*) F = 54.7% (N=98) M = 45.2% (N = 81)
Findings: School suspensions (10.6%) were rare in the study population and were not strongly associated with lifetime geographic relocation frequency.								
Mothers seeking medical and mental health care from the US Department of Veteran Affairs (DVA) and who have been, are, or are at risk of being, homeless	6. Harpaz-Rotem, Rosenheck, & Desai (2009)	Cross-sectional study using secondary data source; parent report via in-depth interviews with mothers over the course of one year, occurring every three months after entering a medical and mental health program	USA	Mothers who were veterans of the US armed forces.	Youngest child school enrolment and attendance data collected from the mothers: school enrolment (yes/no); and, among those enrolled, number of days of school missed in the past month.	Secondary analysis of a subsample of mothers who were veterans of the US armed forces and who completed two or more clinical evaluation interviews. Parent-report data was collected for the youngest child.	*N* = 142	<u>Mothers:</u> Age: 39.9 (*M*) F = 100% <u>Children:</u> Age: 9.54 (*M*) Gender unreported.

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Findings: 86.6% of veteran mothers' children ages 5 and older were enrolled in school. Children missed an average of 1.52 days of school during a 30-day period. Changes in the number of days the mother was homeless were significantly associated with reduced school enrolment (*p* = .01). Children were estimated to be about 20% less likely to be enrolled in school for every 10 days of the previous 90 that their mothers spent homeless.								
Adolescents seeking medical care from a military medical facility that provides outpatient services	11. Wickman, Greenberg, & Boren (2010)	Cross-sectional study; adolescent self- report hardcopy survey.	USA	Adolescents of active duty and retired military personnel	Students responded to 25 invincibility items via the Adolescent Invincibility Tool (AIT), an instrument developed for the study (measurement reliability examined). Specific risk behaviours (including alcohol and other drug use, risky sexual behaviour, risky driving and aggressive behaviour/delinquency) were measured using the National Institute on Drug Abuse Problem Oriented Screening Instrument for Teenagers (POSIT) questionnaire, of established reliability	Convenience sample obtained at a large military medical facility	*N* = 125	<u>Age:</u> 14–17: 24.8% 16–17: 36% 18–19: 35.2% 20: 4% F = 62% M = 38%
Findings: Where possible, results were compared with concurrent findings from the national 2001 Youth Risk Behavior Surveillance System (YRBSS) survey. Substance and sexual risks behaviours were fewer among military teens. 6.8% (*n* = 9) of military teens stated that family or friends had told them they should cut down on their drinking or drug use ("problem/episodic drinking"), *cf.* 29.9% of YRBSS adolescents; 3.8% (*n* = 5) of military teens reported driving a car while drunk or high in the past month, *cf.* 13% of YRBSS adolescents nationally; and 30.1% (*n* = 40) of military teens indicated having sex without a condom, *cf.* 42% of YRBSS adolescents nationally. Additionally, 5.4% (*n* = 7) of military teens indicated that they felt addicted to alcohol or drugs; and 7.5% (*n* = 9) of military teens stated that they had started using more and more drugs to get the effect they wanted. A significant relationship was demonstrated between aggressive and delinquent behaviour and the AIT (*r* = .39, *p* = .000) at *p* < 0.01. Teens who engaged in aggressive and delinquent behaviours had highest levels of invincibility as indicated by higher mean AIT scores.								
Otherwise healthy	2. Forrest, Edwards, & Daraganova (2014)	Quantitative self-report questionnaire by offspring of Vietnam (i.e. army personnel	Australia	Adult children (sons and daughters) of VV and VEP.	Drug use ever: Binary indicator of whether son/ daughter has ever tried marijuana/hashish. Drug use last 12 months: Binary indicator of whether son/daughter has used	The analyses were restricted to members of a random-select sample of VV and least one child who had	*N* = 2,200 offspring, comprising: *N* = 1,509 sons and daughters of 1,407 VV fathers VEP offspring: *N* = 691 sons and daughters of 505 VEP fathers	Age: 37.4 (*M*) F = 63.1% M = 36.9% VEP offspring: Age: 37.7 (*M*) F = 63.4% M = 36.6%

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		who were deployed between 1962 and 1975) and offspring of Vietnam-era Personnel (VEP) (i.e. Army personnel who served between 1962 not deploy to Vietnam).			marijuana/hashish in the past 12 Current alcohol use:[2] *Low risk*: up to 4 (sons)/ up to 2 (daughters) standard drinks per day; *Risky*: 5 to 6 (sons)/ 3 to 4 (daughters) standard drinks per day; *High risk*: 7 or more (sons)/ 5 or more daughters) standard drinks per day. Been convicted: Binary indicator of whether son/ daughter was ever convicted of criminal offence. indicator of whether the respondent was suspended or expelled from primary or high school.[3]	participated in the original Vietnam Veterans Family Study survey, and who registered their family members. An average of 57.20% of VV offspring and 52.42% of VEP responded to the survey.		
Findings: VV offspring drug use ever (68.4%) *cf.* VEP offspring (55.9%) (p<.001); VV offspring drug use last 12 months (18.4%) *cf.* VEP offspring (17.6%) (ns); VV offspring low risk alcohol use (56.7%) *cf.* VEP offspring (62.1%) (ns); VV offspring risky alcohol use (28.1%) *cf.* VEP offspring (26.4%) (ns); VV offspring high-risk alcohol use (15.1%) *cf.* VEP offspring (11.5%) (ns); VV offspring been convicted (6.7%) *cf.* VEP offspring (4.1%) (ns); VV offspring suspended or expelled (43.1%) *cf.* VEP offspring (33.0%) (p<.01).								

[2] Categories of alcohol risk were derived according to National Health and Medical Research Council guidelines separately for sons and daughters (Forrest, Edwards, & Daraganova, 2014, p.40).

[3] The study also investigated VV and VEP offsprings' school experiences; however, the measures were not explicit enough to strictly indicate school attendance/school drop-out. School absenteeism was measured as part of a "Behavioural problems" indicator, in combination with bullying: "Binary indicator of whether the respondent was absent for more than 10% of days in a school year *or* was bullied at school or institution". School drop out was measured as part of a "Learning problems" indicator, in combination with other learning difficulties items: "Binary indicator of whether the respondent repeated a year (including failing exams); worked with a psychologist, counsellor or specialist teacher to assist with a learning difficulty; was placed in a remedial class; *or dropped out of a course*" (Forrest, Edwards & Daraganova, 2014, p.55). There were significant differences in prevalence rates for VV offspring *cf.* VEP offspring for both Behavioural problems and Learning problems indicators.

Child participants were alleged victims of parent-inflicted child physical abuse, child sexual abuse or witness to parental intimate partner violence	4. Grasso, Saunders, Williams, Hanson, Smith, & Fitzgerald (2013)	Semi-structured interview; class analysis	USA	Children and adolescents from Navy families aged 7–17 years at time of referral to the US Navy's Family Advocacy Program	Lifetime and past-year alcohol and marijuana use, as well as delinquent behaviour, were assessed with yes/no questions. Delinquent behaviour was considered present if youths endorsed having exhibited at least one of seven behaviours in the past year.	Children were from a sample of 530 families referred to the US Navy's Family Advocacy Program in 1998–2001 due to allegations of parent-inflicted abuse. For families with >1 eligible child, the oldest child participated. At least one parent in each family was active as a Navy service member at time of referral. Completed assessments were obtained from 70% of eligible children.	*N* = 195	Age: 12.2 (*M*) F = 64% M = 36%
Findings: Prevalence for the sample was described as: "about half drank alcohol, a sixth used marijuana, and a tenth committed at least one delinquent act" in the past year. Percentages were also reported according to a three-class solution of an exploratory latent class analysis;[4] compared to children in the other classes, children in Class 1 reported the highest prevalence of past-year alcohol use (84.4%), marijuana use (50.0%) and delinquent behaviour (31.3%) (all $p < .001$). Class 1 children were also significantly older and reported the highest number of victimisation incidents across all maltreatment domains.								

[4] Working back from those percentages reported in the three-class solution, the unreported prevalence percentages can be determined as: 47.7% ("about half") drank alcohol in the past year, 16.4% ("a sixth") used marijuana in the past year and 10.8% ("a tenth") committed at least one delinquent act in the past year.