Shared Risk and Protective Factors

Impacting

Adolescent Behavior and Positive Development

Becky Judd, MAT
Strength-Based Strategies

Updated: June 2020

A Summary of the Research conducted by:

- Research Committee for Adolescent Health Plan (1995)
- Prevention Research Committee for Behavioral Health (2006)
- Behavioral Health Epidemiological Outcomes Workgroup (2007)
- SPF/SIG Epidemiological Influences Workgroup (2010)
  (Strategic Prevention Framework / Behavioral Health State Incentive Grant)
- Shared Risk and Protective Factors Workgroup (2018)
  Contributions from, Alaska Statewide Violence and Injury Prevention Partnership (2018)
- Strength-Based Strategies (2013-2020)

Audience:

Upstream Prevention, Health Promotion, Wellness and Youth Development Stakeholders, Advocates and Leaders

Contents

This document updates earlier publications:

- *Shared Risk and Protective Factors Impacting Adolescent Behavior and Positive Development,* Becky Judd (February 2019)
- *Shared Protective Factors impacting Adolescent Related Leading Health Indicators for Health Alaskans 2030,* Becky Judd (January 2020)
- *Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior*), Alaska Division of Behavioral Health (2012).132

Becky Judd, MAT provided staff support for the literature reviews for the Adolescent Health Plan (1995), Behavioral Health Prevention Research (2006), Behavioral Health "Influences" Epidemiological Workgroups (2007, 2010), and contributed to the Shared Risk and Protective Factors Workgroup (2018-2020). She served as the Alaska's Adolescent Health Coordinator (Division of Public Health) and Resiliency /Youth Development Specialist (Division of Behavioral Health). Additionally, she worked with the Association of Alaska School Boards in its *Developmental Assets / Community Engagement Initiative* and with the Rural Community Action Program's *Resource Basket/ Native Youth Success, Initiative*. Since 2013, she has consulted through her business, **Strength-Based Strategies**.

Please forward questions or comments about this document to: bjudd.sbs@smallstones.net

Overview: What are *Shared* Risk and Protective Factors?

This paper summarizes the research on the shared influences that impact unhealthy, harmful behaviors among adolescents, which include:

- Depression & Suicidal behavior - suicide thoughts, attempts and completions
- Substance use – tobacco, alcohol, marijuana and other drugs
- Violence – bullying, fighting, assaults, sexual violence and dating violence (offender or victim)
- Unsafe sexual activity - multiple partners, lack of protection and birth control

Extensive research demonstrates a strong association between community conditions, relationships, personal characteristics and experiences with harmful behaviors in adolescents (ages 10-19). The research literature refers to these shared influences as *Risk and Protective Factors*. Many harmful adolescent behaviors share the same risk and protective factors; pages 4-5 provide detail of this overlap.

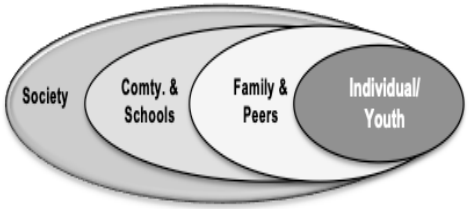
Risk factors are characteristics within the individual or conditions in the family, school, community and society that *increase the likelihood someone will engage in unhealthy, problematic behavior*. The *more* risk factors present in a child's life, *the greater the likelihood* problems will emerge in adolescence.

Protective factors are characteristics within the individual or conditions in the family, school, community and society that are instrumental in healthy development; they build supportive relationships, social competence and resiliency. Resiliency is the process of successfully adapting and recovering from stressful events or crises. When adolescents can effectively negotiate problems and manage their risk factors, they are *less likely to engage in unhealthy, problematic behavior.*

The term, **protective factor,** is sometimes used interchangeably with the terms: **Developmental Assets TM or positive youth development strategies**. Each of these terms refers to strengths-based approaches of working with youth, families, schools, communities and the larger society.

Risk and protective factors are categorized according to the socio-ecological model, below.

While the individual is at the heart of this model, the factors at other levels greatly influence the attitudes and behaviors of youth. Public Health and prevention-science research suggest the most effective way to prevent harmful behaviors among adolescents and increase positive development is through focusing on the shared influences (factors) related to adolescent behavior, at <u>each</u> level of the social ecology.



Some factors (e.g. laws, norms, policies) reside at both the societal and community level; they set the background and climate for either healthy, respectful behavior among residents or unhealthy, harmful, intolerant behavior. While it may take time, community coalitions and partnerships with local and state policy makers can change these factors. Throughout this document, these societal and community factors are identified with a *.

Some factors may be risk or protective depending on its definition, such as:

- Healthy community norms vs. Unhealthy, intolerant community norms
- Delayed onset of alcohol use vs. Early onset of alcohol use
- Low grades vs. Higher grades

NOTE: Protective factors are the result of *intentional actions*;
the absence of a risk factor <u>does not</u> automatically convey protection.

A shared risk and protective factor approach involves prioritizing the factors linked to unhealthy youth behavior in prevention planning, partnership and programmatic efforts, as an alternative to focusing on a single behavior. This approach allows state and community agencies to streamline prevention approaches and services. Breaking down the traditional health "siloes" and moving toward a shared factor approach can provide for more effective coordination between partners and leveraging of resources.[95]

Overview: Shared Factors Impacting Adolescent Behaviors

Extensive research has identified a set of factors that impact multiple unhealthy youth behaviors (suicidal thoughts, substance use, violence, unsafe sexual activity.) These influences are called risk and protective factors. The more risk factors youth have, the greater the likelihood of future unhealthy behavior. Conversely, youth with more protective factors *are better able to cope* with risk factors, life stresses and challenges; they are less likely to be involved in unhealthy behavior and more likely to do well in school and life.

The factors below are based on national research and meet these criteria: 1) they demonstrate an influence on two or more unhealthy adolescent behaviors and 2) they have been cited in two or more peer reviewed studies, reports or analyses conducted by University of Alaska, State of Alaska or federal agencies.

Risk Factors

Individual characteristics or conditions in the family, school, community or society that increase the likelihood youth will engage in unhealthy behavior.

Community & Society

- **Unhealthy community norms and laws***
- **Easy availability of alcohol, drugs***
- Easy availability of firearms*
- Low neighborhood cohesion and support
- Frequent transitions, turnover and mobility
- High neighborhood poverty and inequity*

Family

- Family conflict, instability & management problems
- Family history of unhealthy behavior
- **Adverse childhood experiences: abuse, neglect, household dysfunction**
- Parental attitudes favorable to unhealthy behavior
- Easy household access to substances or guns
- Chronic poverty
- Homelessness

Peers

- Friends attitudes/involvement in unhealthy behavior

Individual

- **Early onset of the unhealthy behavior**
- **Feeling alone or depressed**
- **Loss of cultural identity and connection**
- Cognitive impairments
- Childhood media exposure to violence & alcohol*
- Early and persistent antisocial behavior
- Failing grades starting in elementary school
- Lack of personal commitment to school
- Personal attitudes favorable toward unhealthy behavior (including low perception of risk or harm)
- Bullying others or being victimized by bullying
- Sexual orientation (LGBTQ)
- Misuse of social media
- Older physical appearance than peers

Protective Factors

Individual characteristics or conditions in the family, school, community or society that help youth cope with life challenges and risk factors. Protective factors increase positive development and decrease the likelihood of unhealthy behavior.

Community & Society

- **Positive connection to *other* adults**
- Safe, supportive, friendly neighborhood/community
- Clinical care and therapeutic support services*
- Public policies, practices and norms supporting health and safety*
- Range of community-based, out-of school time programs and opportunities

School

- **Positive school climate** (safe, supportive and encouraging)
- Student participation in extracurricular activities
- Early intervention and student support services

Family

- **Connected to family**
- Positive, warm parenting style
- Living in a two-parent family
- Higher parent education
- High parental expectations about school

Peers

- Positive friends and peer role models

Individual

- **Engaged in out-of-school-time programs and positive meaningful activities**
- **Social/emotional competence & self regulation**
- **Cultural identity and connection**
- Positive temperament
- Positive self concept
- Feeling valued (mattering to others)
- High grade point average
- Religious or spiritual beliefs

The **bold factors** were selected as priority prevention indicators by SPF/SIG Epidemiological Influences group, 2010.

* Societal factors may be impacted through partnerships with community coalitions and state and local policy makers.

Shared RISK Factors Impacting Adolescent Behaviors

Risk factors are characteristics within the individual or conditions in the family, school or community that increase the likelihood youth will engage in unhealthy behaviors. See criteria below.

The **factors in bold** were selected as priority prevention indicators by SPF/SIG Epidemiological Influences Workgroup in 2010 (see appendix B.)

		Unhealthy Behaviors (see page 2)			
		Depression, Suicidal thoughts & attempts	**Substance Use**	**Violence**	**Unsafe Sexual Activity**
Comty./ Society	*** Unhealthy community laws, norms and beliefs** (re. alcohol/ drug use, firearms & gender roles) 8,11,18, 52, 96,105,112	✔	✔	✔	✔
	*** Easy availability of alcohol and drugs** 8,12,18,112		✔	✔	
	* Easy availability of firearms 8,12,18,103,112	✔		✔	
	Low neighborhood cohesion and support 8,18,65,105,107,112		✔	✔	
	Frequent transitions, turnover and mobility 6,8,18,85,107	✔	✔	✔	✔
	* High neighborhood poverty and inequities 2,8,11,18,61,65,69, 96,103,105,112		✔	✔	✔
Family	Family conflict, instability and management problems 8,18,65,67,69,103,107,112	✔	✔	✔	✔
	Family history of problems (addiction, crime, or mental illness) 2,4,8,11,18,61,65,67,69, 96,103,105,106,112	✔	✔	✔	✔
	Adverse childhood experiences: abuse, neglect, household dysfunction1,6,11,12, 37,61,65-69, 84,85,95,103,105-107,112	✔	✔	✔	✔
	Favorable parental attitudes about unhealthy behavior 8,18,41,65,103		✔	✔	
	Easy access to substances or guns at home 1,11,103,112	✔	✔	✔	
	Chronic Poverty 87,88.89, 96,105,107,112		✔	✔	✔
	Homelessness 83,84,85, 96,105,107	✔	✔	✔	✔
Peers	Friends' attitudes, beliefs, social norms and involvement in unhealthy behaviors 8,18,83,93,94,103-105,112		✔	✔	✔
Indiv.	**Early onset of unhealthy behaviors** 6,8,18, 90-92,103,105,112		✔	✔	✔
	Feeling alone or depressed 1,7,11,61-63,69, 95-101	✔	✔	✔	
	Loss of cultural identity and connection 47,48,49,61,64	✔	✔		
	Cognitive impairments 8,18,51, 61,65,95 96,105,107	✔	✔	✔	
	* Childhood media exposure to violence & alcohol 54-60,103		✔	✔	
	Early and persistent antisocial behavior 8,18, 96,103,105,112	✔	✔	✔	✔
	Failing grades (starting in elementary school) 1,2,8,18,65,121-124	✔	✔	✔	✔
	Lack of personal commitment to school 8,61	✔	✔	✔	✔
	Bullying others or victimized by bullying 112,132,133	✔ -	✔ +	✔ +	
	Personal attitudes favorable toward unhealthy behavior (including low perception of risk or harm) 8,18,52	✔	✔	✔	✔
	Sexual orientation (LGBTQ) 1,108-111	✔	✔	✔	✔
	+ Misuse of social media147-155	+	+	+	
	Older physical appearance (than peers) 1,6,102	✔	✔		✔

✔ Each check represents a correlation between the risk factor and two or more unhealthy behaviors. Each factor was cited in two or more peer-reviewed studies, reports or analyses conducted by University of Alaska, State of Alaska or national government agencies.

* Societal factors may be impacted through partnerships with community coalitions and state and local policy makers

\+ Level of risk pending age, gender, and individual vulnerabilities, see definition

Shared PROTECTIVE Factors Impacting Adolescent Behaviors

Protective factors are characteristics within the individual or conditions in the family, school or community that decrease the likelihood youth will engage in unhealthy behaviors. Protective factors help youth cope with life challenges and risk factors, and increase positive development. See criteria below.

The **factors in bold** were selected as priority prevention indicators by SPF/SIG Epidemiological Influences Workgroup in 2010 (see appendix B.)

		Unhealthy Behaviors (see page 2)			
		Depression, Suicidal thoughts & attempts	**Substance Use**	**Violence**	**Unsafe Sexual Activity**
Comty. /Society	**Positive connection to *other* positive adults** 1,3,4,5,9-11,13a, 14,33,21,61,65,66,69,95,105,112,127,141,144	✔	✔	✔	✔
	Safe, supportive, friendly neighborhood/community 1,6,9,11,14,21,34,61,95,105,120	✔	✔	✔	✔
	*Clinical care and therapeutic support services for those in need 6,12,14,16,61,112-114	✔	✔	✔	✔
	*Public policies, practices and norms supporting health and safety 6,8,12-14,16,17,33,95,103-105,112,116,119	✔	✔	✔	✔
	A range of community-based out-of-school time programs and opportunities for meaningful youth involvement (see individual factors, below.)				
School	**Positive school climate** (safe, supportive and encouraging) 1-3,6,8,10,15,23,25,34,53,80,105,112,115,116,139,141,144,146	✔	✔	✔	✔
	Student participation in extracurricular activities and governance 6, 8,9,13b,15,28-30,117,139,144		✔		✔
	Early intervention student services 2,6,31,32, 42,43,112,113,125	✔	✔		✔
Family	**Connected to family**1,4,6,7,15,25,46,53,61,68,69,112,113,125	✔	✔	✔	✔
	Positive, warm parenting style1,6,8,11,15,21,53,65,69,112	✔	✔	✔	✔
	Living in a two-parent family 6,21,25,65,69	✔	✔		✔
	Higher parent education 2,4,6,8,11,17,21		✔	✔	✔
	Higher parental expectations about school 1,8,11,18,24	✔	✔	✔	
Peers	Positive friends and peer role models 6,7,9,17,25,46,105,112		✔	✔	✔
Indiv.	**Engaged in out-of-school time programs & positive meaningful activities** 3,4,7,6,8,9,11,25, 38, 39, 40,112,117,127,131,139, 141,143,144,146		✔	✔	✔
	Social/emotional competence & self-regulation skills 3-5,8,9,11,44,45,53,61,71-78,112,118,141,142,146	✔	✔	✔	✔
	Cultural identity and connection 47,48,49,61,126,131,144, 145,147	✔	✔	✔	
	Positive temperament 3,4,5,8,9,15,19,112,131		✔	✔	✔
	Positive self concept 1,6,9,11	✔	✔		✔
	Feeling valued and mattering to others 9,34,79,80,81,82,112, 138,144,145	✔	✔		
	High grade point average 1,6,7,9,112	✔	✔	✔	✔
	Religious or spiritual beliefs 1,6,9,25,61,135-137	✔	✔		✔

✔ Each check represents a correlation between the risk factor and two or more unhealthy behaviors. Each factor was cited in two or more peer-reviewed studies, reports or analyses conducted by University of Alaska, State of Alaska or national government agencies.

* Societal factors may be impacted through partnerships with community coalitions and state and local policy makers

Adolescent Shared Risk Factors: Definitions and Relevance

Risk factors are conditions in the family, school, community/society or individual characteristics that increase the likelihood youth will engage in unhealthy behaviors: suicidal thoughts, substance use, violence and unsafe sexual activity. The more risk factors present, the greater the likelihood that unhealthy behavior will develop during adolescence. A description of each risk factor is given (derived from its research base), followed by a brief account of its relevance.

> Factors marked with ***** are societal factors that may be modified through partnerships with community coalitions and state and local policy makers. Factors marked with a **(P)** are those factors selected as a *priority risk factor* by the Division of Behavioral Health's *Epidemiological Outcomes and Influences* Workgroup. (See appendix B for more information.)

Community & Societal Risk Factors

Unhealthy community laws, norms and beliefs* (P) related to alcohol, drug use, firearms and gender roles State and local laws provide governance and enforcement policies for a community (e.g. tobacco and alcohol taxes, liquor and marijuana licenses, impaired driving laws, selling to minors, or the regulation of firearm sales.) *Informally,* norms, expectations and social practices by parents, schools and the community members may communicate a climate of acceptance, approval or tolerance of harmful behavior. Norms that support strict gender roles for males and females are associated with multiple forms of violence. Also see Peer Risk Factors. 8,11,18, 52, 96,105,112

Availability of alcohol / other drugs* (P) The more available alcohol and other drugs are in a community, the higher is the risk that youth will use them. The density of alcohol-related businesses is related to increased risk for youth violence and crime. Perceived availability is associated with risk; in schools where children think that drugs are more available, a higher rate of drug use occurs. 8,12,18,112

Availability of firearms* - A higher prevalence of firearms in a community predicts a greater likelihood of violent behavior. Unsupervised access to firearms in the home contributes to lethal violence. Legislation, enforcement and community dynamics combine to influence the local accessibility of drugs and weapons. 8,12,18, 103,112

Low neighborhood cohesion and support - Higher rates of drug problems, delinquency and violence occur in areas where neighbors do not support or trust each other. Neighborhood detachment and low surveillance of public places is associated with higher rates of vandalism, violence and substance use. Neighborhood disconnection may be present in high income as well as low-income areas of a community. Lower rates of voter participation and parental involvement in schools also indicate lower community attachment. 8,18,65,105,107,112

Frequent transitions and mobility – Moving and transitions are stressful on children and adolescents. School transitions (elementary school - middle school - high school) can increase problematic behavior in youth, including drug use, school misbehavior and delinquency. Transitions due to the breakdown of the family unit such as parental death, divorce, or remarriage increases stress levels and family conflict. When families experience frequent moves, problem behaviors also increase. Communities with high rates of mobility *(families moving frequently)* are linked to increased drug and crime problems. The more often people move, the greater the risk of both criminal behavior and drug-related problems in families. 6,8,18,85,107

High poverty neighborhoods and inequity* - Children who grow up in extreme economic deprivation, facing racial, social, employment, health and/or educational inequities are more likely to develop problems related to substance use, delinquency, violence, teen pregnancy and school failure. When youth live in deteriorating crime-ridden neighborhoods and exhibit early behavioral and adjustment problems they are more likely to engage in a range of problematic behaviors. 2,8,11,18,61,65,69, 96,103,105,112

Family Risk Factors

Family conflict, instability and management problems - Persistent, serious conflict between family members and children increases the risk for all youth problem behaviors. Poor family management practices include lack of clear expectations for behavior, overly strict or permissive rules, excessively severe or inconsistent punishment, and failure to monitor children's whereabouts and knowing their friends. 8,18,65,67,69 103,107,112

Family history of the unhealthy behavior - Children raised in a family with a history of violence or alcohol/drug addiction are more likely as adolescents to behave aggressively and develop alcohol and other drug problems. If children are raised in a family with a history of criminal activity, the risk of juvenile delinquency increases. Similarly, children who are raised by a teenage mother are more likely to become teen parents, and children of dropouts are more likely to drop out of school themselves. *(These factors are part of adverse childhood experiences.*) 2,4,8,11,18,61,65,67,69, 96,103,105,106,112

Adverse childhood experiences: abuse, neglect or household dysfunction (P) Children who have experienced trauma through abuse, neglect or witnessing family violence are much more likely to use substances, have depression/suicidal thoughts, engage in delinquency and violence, be homeless and become pregnant or drop out of school. Exposure to high levels of family violence also increases the risk for conduct disorders and antisocial behaviors. This factor is one of the most consistent predictors identified through research. A study conducted by Kaiser Permanente identified ten traumatic childhood experiences significantly associated with physical and mental illness in adulthood, some beginning in adolescence. The study found people with four or more adverse childhood experiences (ACEs) were much more likely to have problems in the following areas: alcoholism and alcohol abuse, illicit drug use, depression and suicide attempts, unintended pregnancies and STDs, obesity and diabetes, heart, liver and chronic pulmonary disease, and risk for intimate partner violence. The ACEs study identified experiences very similar to family risk factors described in this section. **Abuse (**emotional, physical, sexual); **Neglect** (emotional, physical); **Household dysfunction** (substance abuse, mental illness, family violence, incarcerated family member, parental separation or divorce.) Some groups consider historical and intergenerational trauma to be an additional adverse experience (see Risk Factor: Loss of Cultural Identity). 1,6,11,12,37,61,65-69, 84,85,95,103,105-107,112

> ***Note:*** *Many schools and youth-serving organizations aim to be trauma-informed and sensitive, to avoid re-triggering further trauma and provide specific support to impacted children and adolescents. The protective factor section of this report can be a helpful resource towards these efforts. Resiliency research points to an emphasis on increasing supportive adults and the development of self-regulation and social/emotional skills*.

Parental attitudes tolerant or favorable toward problem behaviors - Parental attitudes and behaviors toward drugs, crime, and violence influence the attitudes and behaviors of their children. Parental approval of their teen's drinking, even under parental supervision, increases adolescent alcohol use and, in some instances, heavy episodic drinking and other alcohol-related problems. Similarly, children of parents who excuse them for breaking the law are more likely to engage in delinquent behavior. In families where parents display violent behavior, children are at greater risk of becoming violent. 8,18,41,65,103

Easy access to harmful substances or guns at home - When youth have easy access to alcohol, tobacco or other drugs they are more likely to use them in harmful ways. Unsupervised access to a firearm in the home is a contributing factor to lethal youth violence.1,11,103,112

Chronic poverty - Chronic poverty impacts a range of health conditions and developmental and educational outcomes from birth through early adulthood. Impoverished families are more likely to be headed by single mothers than by married couples. Poverty tends to increase family stress and decrease a parent's ability to be optimally involved with a child, and threatens access to basic needs (food, shelter, clothing and health care.) Children growing up with persistent poverty are more likely to experience chronic physical health problems, psychiatric disorders, learning disabilities, academic failure and unintended pregnancy, and will more likely engage in delinquent behavior. (*See also Community Risk Factor,* High poverty neighborhoods and Inequity.) 87,88.89, 96,105,107,112

Homelessness - Leaving home is not a choice for many youth, some are forced out by their parents; some are abandoned or subjected to ongoing neglect or maltreatment. Homeless youth report several issues that cause conflict with their parents/guardians, including parental substance use, religious beliefs, sexual

orientation, school performance, and personal style such as dress, hair color, or piercings. Teen homelessness may also be the result of family economics or a youth's seeking a more favorable or adventuresome social situation. Most research confirms that running away is often a last resort for adolescents dealing with unbearable situations. Regardless of the reasons, homeless or runaway youth are at elevated risk for victimization, substance use, violence, suicidal ideation and attempts, school failure and dropping out. (Also see Community Risk Factor, High poverty neighborhoods and inequity.) 83,84,85,96,105,107

Peer Risk Factors

Friends' attitudes and involvement in unhealthy behavior - Adolescent behavior is greatly influenced by the attitudes, perceptions, social norms (e.g. "its cool" or "not wrong") and behaviors of their friends. When close friends engage in problem behavior (e.g. delinquency, substance abuse, sexual activity, or academic failure) youth are more likely to engage in the same behaviors. This factor is one of the most consistent predictors identified through research. Even when young people come from well-managed families and do not experience other risk factors, hanging out with friends who engage in the problem behavior greatly increases the youths' risk of that behavior. 8,18,83,93,94,112

Attitudes related to gender roles and sexual orientation. Adolescent males who adhere to stereotypic hyper-masculinity (act tough, be aggressive, and suppress emotions other than anger) are more likely to experience stress and conflict, reduced health, poor coping and relationship quality, violence and suicide. Themes of the hyper-masculine gender role include anti-femininity and homophobia. Hate crimes against lesbian, gay, bisexual, and transgendered persons are thought to take place to demonstrate heterosexual masculinity to male peer group members. 103,105,112

Individual Risk Factors

Early onset of unhealthy behavior (P) – The earlier children show aggression, initiate sexual intercourse, or begin using tobacco, alcohol, drugs, the greater the likelihood that they will develop problems in the future. Early onset of aggression significantly increases the risk of later antisocial behaviors, and first arrest before age 11 is associated with long term adult offending. Early onset (under 13 years) of alcohol or other drug use is one of the strongest predictors of escalating and frequent use in later adolescence and of young adult misuse, problems and dependence. Youth who begin drinking before age 15 are four times more likely to develop alcohol dependence at some time in their lives compared with those who have their first drink at age 20 or older. Additionally, teens who initiate drug use before the age of 15 are twice as likely to have drug problems as those who wait until after the age of 19. 6,8,18, 90-,92,103,105,112

Feeling alone or depressed (P) – Emerging studies demonstrate an association between loneliness and social isolation with adolescent depression, suicide ideation and attempts, alcohol and drug use and diminished mental and physical health in later life. Youth who suffer from depression are at increased risk for substance use and dependency, high-risk sexual behaviors, problems at school, problems with peer and family relationships, and suicide attempts. Depressive symptoms include feelings of prolonged sadness, hopelessness, suicidal thoughts or attempts. Youth who had a friend or family member commit suicide in the past 12 months are at greater risk for attempting suicide. 1,7,11,61-63,69, 95-101

Loss of cultural identity and connection *(*P) – Alaska Native and American Indian people may experience higher levels of psychological and social stress due in part to historical / intergenerational trauma, oppression and/or imposed cultural change. These adverse experiences (risk factors) are associated with suicide and high rates of substance use. Other groups defined by ethnicity, age, ability, religious affiliation, or sexual orientation, may experience similar risk factors. 47-49, 61,64

Cognitive impairments – Cognitive impairments have a neurological basis; they are characterized by deficiency in cognitive and/or emotion-based executive functions. Youth with such impairments may have experienced fetal alcohol/drug exposure, a traumatic brain injury, environmental poisoning or have a mental health disorder. Depending on the source or type of impairment, these adolescents are more likely to have learning disabilities, attachment and conduct disorders, attention problems, and trouble with abstract and cause-and-effect reasoning. The cognitive challenges can impact decision making, organization of thoughts, ability to plan ahead, setting priorities, impulse control, short term memory, and ability to read social cues—all of which may lead to higher risk taking and increase the likelihood of drug use, unhealthy relationships and delinquent behavior. 8,18,51,61,65,95,96,105,107

Childhood media exposure to violence and alcohol – Decades of research has documented the impact of media exposure on children and subsequent adolescent behavior. Longitudinal research consistently demonstrates exposure to "media communications" on alcohol advertising and promotion alters adolescents' attitudes, perceptions and expectations about alcohol. Multiple studies have shown that this type of media exposure increases the likelihood that youth will either start using alcohol at an earlier age or increase the amount of alcohol consumed (if they are already drinking). Childhood exposure to media violence increases susceptibility to aggressive behavior across genders and cultures, regardless of socio-economic status. The effects are shown to be measurable, long lasting and can lead to emotional desensitization toward violence in real life. 54-60,103

Early and persistent antisocial behavior - Boys who are aggressive in grades K - 3 are at higher risk of substance abuse and juvenile delinquency and violence. This increased risk also applies to aggressive behavior combined with hyperactivity or attention deficit disorder. This factor includes persistent antisocial behavior in early adolescence, like misbehaving in school, skipping school, and getting into fights with other children. Young people who feel they are not part of society, not bound by rules, and who don't believe in trying to be successful or responsible, or who take an active rebellious stance toward society are at higher risk of drug abuse, delinquency, and school dropout. (Also see early onset risk factor) 8,18,96,103,105,112

Student - related Risk Factors

Extensive research has demonstrated a link between academics and health. School failure can compromise one's health significantly. High school students with lower grades are more likely to report harmful behavior (e.g. violence, substance use, emotional distress, and unsafe sexual activity.) 1, 124

Academic failure beginning in elementary school - Academic failure beginning in the late elementary grades (grades 4-6), increases the risk of teen pregnancy, school dropout, as well as drug abuse, delinquency, and violence throughout life. This is also true for a student who has repeated one or more grades. Children fail for many reasons, social as well as academic. The experience of failure—not necessarily lack of ability-- appears to increase the risk of harmful behaviors in adolescence.1,2,8,18,65,121-124

Lack of commitment to school - Low commitment to school is reflected in low motivation, skipping classes and generally lower grades. It means the young person has stopped seeing the value of education. Youth who do not have commitment to school are at higher risk for substance abuse, delinquency, teen pregnancy, and school dropout. Leaving school before age 15 puts a youth at especially high risk.1,8,9,11,18,61

Individual Risk Factors continued, (not school related)

Bullying other or being victimized by bullying – Bullying is unwanted, aggressive behavior that involves a real or perceived power imbalance. It includes actions such as making threats, spreading rumors, attacking someone physically, verbally or electronically. The bullying behavior is repeated or has the potential to be repeated over time. Youth who are bullied or who bully others may have serious, lasting problems. Victims of bullying are more likely to experience anxiety, depression, sadness, loneliness, less school engagement and lower grades. There is a strong association between being bullied and suicide-related behaviors, but this relationship but this relationship is often influenced by the presence of depression and delinquency. Students who bully others are more likely to perpetrate other forms of antisocial behavior in adolescence, including delinquency, aggression, violence and binge drinking that may continue into adulthood. 112,132,133

Personal attitudes favorable toward unhealthy behavior - During the early grades, children often express anti-drug, anticrime and pro-social attitudes. In middle school, peers begin to participate in alcohol, drugs, minor delinquency and sexual activity; personal attitudes start to shift toward greater acceptance of these behaviors. Youth attitudes (perceptions of harm or risk) are strong predictors of subsequent involvement in problem behavior. 8,18,52

Sexual orientation (LGBTQ) – Youth who identify as either gay, lesbian, bisexual, transgender or questioning are at much greater risk for depression, suicide, substance use, pregnancy, sexually transmitted infections, dropping out of school and becoming victims of bullying and violence, compared to their heterosexual peers. 1,108-111

Misuse of social media - Misuse of social media *can* have both positive and negative consequences on the health and well-being of adolescents. Social media refers to the multiple internet networks and platforms people use to interact with each other. It provides benefits and consequences depending on the frequency, patterns of use (e.g. nighttime use, constant checking), media sites visited, motivations for use, age, gender, "social-ability" and social norms of the user. Positive benefits include a place for adolescents to express their thoughts, feelings, connect with friends, receive social support and obtain accurate health information. Several studies have correlated heavy social media use (3 or more hours, daily) especially in young adolescence to increased mental health problems (e.g. anxiety, depression, self-harm, poor self-body image), cyberbullying and among older adolescents, substance use. One study found younger adolescent girls, who spend more time on electronic communications (e.g. social media, the internet, texting, gaming) and less time on "non-screen" activities (e.g. in-person social interaction, sports/exercise, homework, attending religious services) had greater depression, suicidal behavior and lower self-esteem, happiness and life satisfaction. Most authors agree the association between social media and adolescent health is complex, multifactorial and requires additional research to identify youth most vulnerable to its negative consequences. [147-155]

Older physical appearance - Youth who appear older than most of their same-age peers are more likely to experience emotional distress, become involved in alcohol, tobacco and other drugs, and engage in sexual activity before the age of 15.[1,6,102]

Adolescent Shared Protective Factors: Definitions and Relevance

Protective factors are characteristics within the individual or conditions in the family, school, community or society that help youth cope successfully with life crisis and challenges. When youth can successfully negotiate their problems and manage their risk factors, they are less likely to engage in unhealthy, problematic behavior. Protective factors are instrumental in healthy development; they build supportive relationships, social competence and resiliency. A description of each protective factor is given (derived from its research base), followed by a brief account of its relevance.

> Factors marked with ***** are societal factors that may be modified through partnerships with community coalitions and state and local policy makers. Factors marked with a **(P)** are those factors selected as a *priority protective factor* by the Division of Behavioral Health's *Epidemiological Outcomes and Influences* Workgroup. (See appendix B for more information.)

Community / Societal Protective Factors

Connection to *other* positive adults (P)
This protective factor refers to the support and care youth receive through relationships with adults, other than family members (i.e. teachers, neighbors, coaches, youth group advisors, mentors or ministers). As children grow, they become involved in an expanded network of people. This broad network includes many adults who can provide regular contact, mentoring, support, and guidance. Research repeatedly identifies other adult supports as the most powerful protective factor for children who have experienced trauma and is associated with less substance misuse, depression, suicide ideation, violent behavior and teen pregnancy. *This protective factor has a synergistic effect with other protective factors.* 1,3,4,5,9-11,13a,14,21,33,61,65,66,69,95,105, 112,127,141,144

Safe, supportive, friendly neighborhood / community – While individual relationships with caring adults are important, a young person's collective feeling of safety, trust and support from the community/ neighborhood adds a synergistic component of protection against multiple forms of youth violence, substance use and unhealthy sexual behavior. This protective factor has three features: connection (cohesion), positive social norms, and monitoring. Neighborhood connection refers to young people's perception of feeling safe, valued, attached, and "belonging to" their neighborhood or community. The related notion of cohesion refers to neighbors knowing and trusting each other, having a sense of community pride and actions taken based on communal best interests. Positive norms are maintained when the community "expects the best" from its children/youth and remains warm and friendly during everyday encounters. Monitoring and accountability refers to the degree to which neighbors watch out for each other, monitor the whereabouts and behaviors of their children, and hold them accountable for their activities. 1,6,9,11,14,21,34,61,95,105,120

Clinical care and therapeutic support services for those in need * – Effective clinical and support services provide for physical, mental, reproductive health, and substance abuse disorders. Accessible, appropriate and respectful clinical care is a consistent recommendation from national centers to prevent suicide, violence and address substance use disorders. Support services can address emotional and behavioral issues, reduce conflict, improve communication, and enhance parents' management and supervision skills. Therapeutic treatment can help mitigate the consequences of risk factors (e.g. experiencing family violence and other adverse childhood experiences), prevent the escalation of harmful future behavior, as well as foster resiliency and strengthen family protective factors. Counseling support can help youth process traumatic experiences, manage trauma-related distress and develop effective coping strategies and skills. 6,12,14,16, 61,103,112-114

Public policies, practices and norms supporting health and safety *- Local and state policies, and practices that support healthy norms, behavior and safe public spaces can reduce problems related to youth substance use, delinquency, violence and suicide. Sample health/safety related policies include: restrictions on tobacco, alcohol and marijuana outlets and licenses; higher taxes on tobacco or alcohol; firearm prohibitions for high risk groups (domestic violence offenders, persons convicted of violent misdemeanor crimes, and *some* individuals with mental illness.) Examples of local practices include: adherence to media standards when reporting a suicide; safe storage of firearms and ammunition; enhancing and maintaining the physical environments of the community. Some studies have shown that the upkeep of schools, parks,

business and public areas can increase visibility, control access, promote positive social interactions, strengthen community connectedness and serve as barriers to violence. Examples of protective social norms include: acceptance of not drinking while pregnant, always wearing a helmet, using birth control or protection, and acceptance of non-traditional gender roles. Social norm campaigns are tools to influence youth's perception of peer behavior or adult's perceptions about youth. 6,8,12-14,16,17,33,95,103-105,112,116,119

Range of *community-based* opportunities for afterschool / out-of-school programs and activities
It is the community's responsibility to provide a range of opportunities for children and youth to be involved in safe, enriching out-of-school time programs. Almost 40 percent of adolescents' waking hours are discretionary. This timeframe may be used for either positive developmental activities or unhealthy problematic behaviors. (See Individual Protective Factors, below.)

School–Related Protective Factors

Positive school climate (safe, supportive and encouraging) P
This protective factor reflects a student's connection and feelings about their school, that it is a caring, supportive and encouraging environment. A positive school climate is characterized by:

1) Focused efforts to build culturally responsive, supportive relationships with students and families;
2) high expectations for student academics, behavior and responsibility;
3) use of proactive classroom management strategies to maintain a positive atmosphere;
4) physical and emotional safety, fair and respectful treatment of all students;
5) consistent acknowledgement of all students and recognition for good work;
6) interactive teaching and cooperative learning strategies;
7) student voice in school activities and classroom management;
8) consistent professional learning for staff to build school climate and trauma-engaged whole-school practices.

Students feel "connected" (bonded) to their school based on their feelings about the people at school, both staff and other students. Connectedness is described as being treated fairly by teachers, feeling close to people at school, being safe and feeling like a part of the school. Positive school climates are linked to lower rates of absenteeism, delinquency, substance misuse, early sexual initiation and emotional disturbances as well as higher grades, test scores, graduation rates and social emotional competence. *A positive school setting is not only a protective factor in itself, but an environment that can nurture other protective factors as well.* 1-3,6,8-10,15,23,25,34,53,80,105,112,115,116,139,141,144,146

Student participation in extra-curricular activities and governance
The school setting provides ample opportunities for student voice and leadership to help solve problems, provide new ideas and input to decisions that impact the student body. Examples of extra-curricular activities involve performing arts, debate, computer, service or 4-H clubs, student councils, tutoring, peer programs or service-learning projects. *Peer programs* include, peer teaching, peer helping, positive peer influence campaigns, and peer advisory councils. *Service-learning* projects typically focus on helping people or improving conditions in the community. 6, 8,9, 13b,15,28, 29,30,117,139,144

Also see: ndividual Protective Factors – Out-of-school time programs

Early intervention student services - Student assistance programs, counseling support groups and school-linked health centers provide the learning supports critical to helping students stay in school. Student assistance programs provide prevention and intervention services to those students whose lives are impacted by stress trauma (alcohol and drug abuse, violence, suicide, divorce, abuse, neglect, depression). Services may include support or education in problem solving, self-esteem, social skills, and conflict resolution. Several studies have demonstrated that school-based health centers can play an important role in improving educational success through their impact on school attendance and retention. Students with access to comprehensive health services via school-based health centers report greater exposure to reproductive health education and counseling and greater use of hormonal contraception. 2,6,31,32,42,43, 61,112,113,125

Family Protective Factors

Connected to family (P) – Family connectedness has several components. Children who feel close to, supported by and connected to their parents report a high degree of closeness, feelings of being understood, loved, and wanted. A parental presence refers to being present during key times: before and after school, during dinner, at bedtime and doing activities together. The National Longitudinal Study of Adolescent

Health found this to be one of the strongest protective factors buffering all the problem behaviors. 1,4,6,7,15,25, 46, 53, 61,68,69,112,113,125

Positive, warm parenting style – A *positive, warm parenting style* is characterized by parents' high expectations for their children's education and wellbeing, clear family rules, fair and consistent discipline practices, age-appropriate supervision, monitoring of teens' behavior, friends and whereabouts, and being present at key times in the day. Positive parenting practices are associated with less emotional distress, suicide attempts, tobacco, alcohol, marijuana use, early sexual activity, suicidal behaviors and violence among youth.1.6 8,11,15,21,53,65,69,112

Two-parent families – Children who grow up in a family with two parents are less likely to engage in problem behaviors related to sexual activity, substance use, delinquency, or to experience mental health problems. This factor is linked to greater stress on the single caregiver (due to work and childcare schedules, less time for caregiving and monitoring as well as less resources for basic needs) 6,21,25,65,69

Higher parent education - Children whose parents have graduated from high school and have received higher education training are less likely to engage in adolescent substance use, violence and unsafe sexual activity. 2,4,6,8,11,17,21

High parental school expectations - Children who have parents with higher expectations for school success, high school and college completion, and personal achievement are less likely to use substances, be involved in violent behavior or consider suicide. 1,8,11,18,24

Peer Protective Factors

Positive friends/peer role models - Youth with a positive friendship circle—characterized by a positive attitude about health and the future, doing well in school, having a close relationship with at least one parent and not involved in unhealthy behaviors—are less likely to be involved in substance use, violent behaviors and unsafe sexual activity. 6,7,9,17,25, 46,105,112

Individual Protective Factors

Engaged in quality afterschool programs and activities (P) - Youth want to be involved in activities that match their interests and talents (e.g. arts, media, cultural activities, helping others, environmental advocacy, social justice or addressing local issues.) This factor refers to structured activities or programs (before, after school, on weekends or summer-based) that are supervised by a responsible, trained adult who provides age-appropriate guidance and autonomy. Quality programs have supportive staff; a friendly and respectful climate; intentional skill instruction, youth-centered practices, continuous improvement and focused efforts to recruit and retain staff and students. In a meta-analysis of afterschool programs, four factors distinguished effective from ineffective programs, they include:

1. Sequenced approaches (skill instruction through connected and coordinated activities)
2. Active learning (emphasis on practicing of new skills)
3. Focused (specific time and attention dedicated to skill development)
4. Explicit (clear definition of skills)

Programs can increase social competence, self-efficacy and sense of mattering when youth are involved in all phases of planning, organizing, implementation and evaluation. Quality afterschool programs are associated with the reduction of alcohol, tobacco, drug use, delinquency, anti-social behaviors, teen pregnancy, school suspensions and school dropout. (Also see student participation in extra-curricular activities and school clubs, under School-Related Factors*) The afterschool setting is not only a protective factor in itself, but an environment that can nurture other protective factors as well.* 3,4,7,6,8,9,11,25, 38, 39, 40,112,117,127,131,139, 141,143,144,146

Social-emotional competence and self-regulation skills (P)
Social/emotional competence is the process of learning how to recognize and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. **Self-Regulation** is the ability to manage one's thoughts (e.g. goal setting or problem solving), feelings (e.g. self-awareness and calming) and behavior (e.g. impulse control, conflict resolution and coping strategies.) Youth who have experienced chronic trauma or poverty are less likely to

have self-regulating skills; and poor self-regulation is associated with problems such as violence, substance use, mental health difficulties, and excessive weight gain. Self-regulation skills are highly protective and buffering from the negative impact of trauma in childhood.

The National Collaborative for Social and Emotional Learning defines the social emotional learning (SEL) as:

Self-Awareness: The ability to accurately recognize one's own emotions, thoughts, and values and how they influence behavior. The ability to accurately assess one's strengths and limitations, with a well-grounded sense of confidence, optimism, and a "growth mindset."

Self-Management: The ability to successfully regulate one's emotions, thoughts, and behaviors in different situations — effectively managing stress, controlling impulses, and motivating oneself. (*See self-regulation*.)

Social Awareness: The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

Social Management: The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed.

Responsible Decision Making: The ability to make constructive choices about personal behavior and social interactions based on ethical standards, safety concerns, and social norms. The realistic evaluation of consequences of various actions, and a consideration of the well-being of oneself and others.

Extensive research has demonstrated links between social/emotional competence (SEL) and academic achievement and reduced unhealthy behaviors. Social emotional competence and self-regulation skills can be taught at home and reinforced in schools and afterschool programs. 3-5,8,9,11,44,45,53,61,71-78,112,118,141,142,146

Cultural identity and connection (P) Multiple studies point to the value of cultural practices and cultural identity in addressing risk factors, increasing resiliency and achieving optional wellbeing. Culture is everything about our way of living; it includes values, beliefs, traditions, protocols, rituals, language, personal identification, behavioral norms, "ways of knowing" and styles of communication. One's cultural identity is the extent to which someone connects to and practices the values, beliefs and traditions of one's *identified culture*. A qualitative study of Inupiat youth found patterns of resilience when they were culturally grounded. The cultural practices used by these youth to get through adversity included: maintaining relationships, reciprocity, subsistence living, taking responsibility for self and others and giving back to others. Having a positive cultural identity is linked to reduced depression, suicide ideation and substance use. 47,48,49, 50, 61, 62,126-131,144,145,147

Positive temperament - The positive qualities associated with less involvement in substance use, violence and unsafe sexual practices include, having an easy-going temperament, being optimistic and resilient, having a sense of purpose, being intrinsically motivated (an internal locus of control), and feeling a sense of control over one's environment. A qualitative study of Inupiat youth identified five components that contribute to youth resilience: 1) developing and maintaining relationships with others, 2) taking responsibility for themselves and others, 3) creating systems of reciprocity (and availably) to share both the burdens and gains, 4) practicing subsistence living and 5) giving back to their families and communities. 3,4,5,8,9,19,112,131

Positive self-concept - This protective factor refers to the perceptions and judgments youth make about themselves. A youth with a positive self-concept believes that she/he is "a person of worth"; has self-confidence and self-efficacy; likes her/himself; and feels loved and valued. These positive attributes are associated with less emotional distress and substance use. 1,6,9,11,65

Feeling valued and mattering to others - The perception of being respected, trusted, valued and significant to others. This concept is tied to a young person's belief that they are able to help others or make a difference in their school or community. Youth can develop a sense of self-efficacy and mattering across settings (e.g. schools, after-school programs, faith-based groups, cultural programs etc.) Strategies to increase mattering emphasize youth development principles and processes (opportunities for youth voice, choice of roles, decision-making, leadership and contribution, facilitated by respectful, supportive adults.) Additional strategies include service-learning programs, youth participatory action research, youth-adult partnership on community action initiatives, and membership on boards and commissions, or youth advisory councils. Multiple studies demonstrate perceptions of significance and mattering to others is related to lower depression, anxiety, hostility, suicide and greater overall psychosocial wellbeing and adjustment in both adolescents and young adults. Youth who feel

valued, connected to and useful in the community *(proxies for mattering)* are more likely to show multiple positive outcomes e.g. better mental health, higher self-efficacy, sense of optimism and less risk behaviors. *The perception of mattering to others is synergetic and often the result of other protective factors (supportive adults, social emotional competence, cultural identity and connection, quality after-school programs meaningful activities.)* [9,34,79,80,81,82,112,138,144,145]

High grade point average (GPA) - Students with higher grades (As and Bs) in English, Math, History/Social Studies, and Science are more likely to be connected to school, and less likely to be involved in problematic behaviors (substance use, violence, emotional distress or unsafe sexual activity.) [1,6,7,9,112]

Religious or spiritual beliefs - Decades of research have established a generally positive relationship between religious beliefs and health in adolescents (decreased use of tobacco, alcohol, marijuana use, and suicide attempts and a correlation with delayed sexual activity). More recent studies have also identified spirituality as a resource for positive development. The measurement of these complex multidimensional ideas (e.g. religious / spiritual attitudes, behaviors, values/beliefs, meaning, purpose and transcendence) is problematic, among teens because the questions were developed for adults. Most studies assess religiosity or spirituality by using a single question such as frequency of prayer, religious service attendance, or self-perceptions of being religious or spiritual. [1,6,9,25,61,135-137]

Reducing risk ◆ Increasing protection

Two studies found the presence of protective factors: family support and school support among adolescents who have been physically abused will reduce the likelihood of suicide attempts more than the removal of the risk factor of substance use (e.g. alcohol, drugs) regardless of gender. [7,46] While communities will continue to reduce the factors that put children at risk, these studies point to the powerful impact protective factors can play in helping children cope with life experiences over which they have little or no control.

Appendices

A. *Sample,* Population-based Adolescent Indicators

B. Process Overview: Identifying Priority Risk and Protective Factors for Adolescent Substance Use and Other Behaviors in Alaska (2007-2010)

- Recent Shared Factor Efforts (2018-2020)

C. Risk and Protective Factors for FASD - Secondary Disabilities

D. Shared Factors Citations

Appendix A.

Sample Population-based Adolescent Indicators

Risk Factor	Risk Indicators / Data Source
Experienced child abuse or neglect (physical, emotional or sexual)	• Rate of unique, substantiated maltreatment cases per 1,000 children between ages 0 -17. Office of Children's Services
Victimization	• Percent of HS students who report victimization (ever forced intercourse or forced sexual acts, dating violence - physical or sexual in the past 12 months). YRBS proxy, 3 questions • Percent of HS students ever been bullied on school property in the past 12 months. YRBS • Percent of HS students ever been electronically bullied, in the past 12 months. YRBS
Homelessness	• Percent of HS students who usually sleep away from their home during the past 30 days. YRBS
Early initiation of substances	• Percent of HS students who used either tobacco, alcohol or marijuana before the age of 13. YRBS (3 questions)
Parental attitudes about unhealthy behavior	• Percent of HS students whose parents have a favorable attitude about their student's substance use. (Perception of parent's belief that it would not be wrong if, *I smoked cigarettes, or drank alcohol daily, or used marijuana.*) YRBS, proxy 3 questions.
Friends' attitudes & involvement in unhealthy behavior	• Percent of HS students whose friends have a favorable attitude about substance use. (Perception of friend's beliefs "*it would not be wrong if, I smoked cigarettes, drank alcohol daily, or used marijuana.*")YRBS 3 questions • Percent of students who believe, most of their peers drink alcohol. SCCS 2 questions
Personal attitudes & beliefs about unhealthy behavior	• Percent of HS students with a low perception of harm to tobacco, alcohol or marijuana or pain meds. YRBS • Percent of HS students who believe their parents would not disapprove of their tobacco, alcohol or marijuana use. YRBS
Easy availability of alcohol and other drugs	• Percent of HS students who got their alcohol from social sources (gave someone money to buy it or someone gave it to them). YRBS • Percent of HS students reporting it is easy (very or fairly) to get marijuana. NSDUH
Feeling depressed and alone	• Percent of HS students who feel sad or hopeless almost every day for 2 weeks. YRBS • Percent of HS students who feel alone in life. YRBS
Suicide ideation or attempts	• Percent of HS students who have attempted suicide or made a plan to commit suicide in the past 12 months. YRBS
Protective Factors	**Protective Indicators / Data source**
Connection to family	• Percent of HS students who talk with their parents, at least weekly about school. YRBS- Proxy
Positive School Climate	• Percent of HS students who believe their teachers really care about them and give them a lot of encouragement. YRBS • Percent of students who feel connected to their school. SCCS - Survey has multiple related indicators)
Positive connection to *other* positive adults	• Percent of HS students who have a positive connection with three or more adults, outside of their home. YRBS • Percent of students who can name at least 5 adults who really care about me. SCCS • Percent of students who have at least one adult they can talk to (outside of home and school.) SCCS • Percent of students who receive encouragement from at least one adult (outside of home and school.) SCCS
Engagement in meaningful activities	• Percent of HS students who participate in organized activities outside of school, at least weekly. YRBS • Percent of students who help other people without getting paid, at least weekly. SCCS • Percent of students that participate in organized activities outside of school at least weekly. SCCS
Social/emotional competence	• Percent of HS students with self-regulation skills (able to control emotions and remain calm under stress) YRBS (2 questions) • Percent of students who have social, emotional learning skills SCCS (17 question index)
Cultural identity and connection	• Percent of students who report having a strong sense of belonging to my culture. SCCS • Percent of students who report in general my culture is an important part of my self-image. SCCS
Feeling valued and mattering to others	• Percent of HS students who feel like they matter to people in their community. YRBS
Youth Surveys: YRBS – Youth Risk Behavior Survey (grades 9-12) **SCCS** – School Climate and Connectedness Survey (grades 6-12) Note: these indicators can be modified for measuring community-based efforts.	

Appendix B.

Adolescent Priority Factors and Indicators

2007-2010 Priority Factors Selection Process (for adolescent substance use and other behaviors)

In 2007 the State Epidemiological (Behavioral Health) Outcomes Workgroup was established to collect, analyze, and report substance use, abuse and dependency in Alaska. As part of that effort, an "influences subcommittee" was created to: 1) identify and prioritize the factors that impact substance use and abuse; 2) identify existing "influence indicators"; 3) recommend new indicators to monitor over time.

The influences committee began with the adolescent population, recognizing the significant need to examine younger and older populations as well. Four areas of concern were reviewed: suicide and depression, substance use, violent behaviors and unhealthy sexual behavior. The risk and protective factor national research for adolescent substance use and other problem behaviors provided the working foundation. Additional factors were considered if they had a strong research base of support. The ten priority factors were selected based on:

- Strength of the research base (a minimum of two studies in peer reviewed journals)
- Relevance to Alaska communities
- Ability to change the factor through community and state partnerships
- Readiness of Alaska communities to address the factor

To assure a comprehensive review, the factors were examined across the social-ecology domains of community, schools, family, peers and individuals. The lack of existing Alaska data did not exclude a factor if it was significant to the Alaska population. Through this process, five protective factors and five risk factors were prioritized (page 3, factors in bold.) In addition, cultural identity and connection or loss of culture identity was selected as a factor having tremendous influence on one's sense of self and subsequent behavior.

Next, the group turned to identifying state-level, population-based indicators for each of the selected factors. This process identified: 1) factors with existing indicators and data; 2) factors with *some* indicators or proxy indicators, but which may not be as reliable; 3) factors that remained of high significance without indicators or data. The later provided the opportunity to advance a data agenda, and over time, develop new indicators to measure the shared factors considered significant to disease prevention, health promotion and youth development.

Recent Efforts to Advance a Shared Risk and Protective Factor Approach

Since 2010, numerous health agencies, school districts and community coalitions have developed new indicators to measure the shared factors described in this paper. Alaska's most widely used youth surveys (**Youth Risk Behavior Survey**/YRBS http://dhss.alaska.gov/dph/chronic/pages/yrbs/yrbs.aspx and the **School Climate Connectedness Survey**/SCCS https://ice.aasb.org/school-climate/ reflect the growing interest in measuring the shared factors that impact adolescent behavior, not just unhealthy behavior's incidence or prevalence. A sample of these state level indicators may be found in Appendix A.

Recently, several matrices have been generated focusing on shared risk and protective factors across age groups (e.g. **Alaska Statewide Violence and Injury Prevention Plan**, 2018.) In 2018-2020, the ***Shared Factors Workgroup*** began an *ongoing process* to compile common factors into a research-based, data-driven matrix to support the alignment of best practices, public and behavioral health initiatives and leverage future prevention resources. Topics include substance misuse, violence and injury prevention, high school graduation, child maltreatment, domestic violence and sexual assault, and transportation issues. https://tinyurl.com/sharedfactorsrpt2019. Several factors *may* emerge that span age groups and content areas (e.g. having supportive relationships, self-regulation and social emotional skills, positive identity and self-efficacy.) **Healthy Alaskans 2030** used the *shared factors appro*ach to set goals, determine priority indicators and identify best practices to improve the health and wellness of all Alaskans. Twelve of the 25 leading indicators are directly influenced by adolescent shared factors. https://tinyurl.com/HA2030Indicators.

Community-Based Efforts: While many of the shared factor indicators are population-based or state-level measures, they can easily be modified to measure community and school-based efforts. An index of evaluation measures for any one of the factors is beyond the scope of this paper yet may be available in the future through state and coalition partnerships.

Appendix C. **Risk and Protective Factors for FASD *Secondary Disabilities***

If a child is born with a fetal alcohol spectrum disorder (FASD), she/he is at-risk for developing secondary disabilities in childhood, adolescence and adulthood. According to the National Center on Birth Defects and Developmental Disabilities, people with FASD have increased risks for developing mental health problems, disrupted school experience, trouble with the law, inappropriate sexual behavior and alcohol and drug problems.

Specifically examples include:

- Cognitive disorders
- Psychiatric illnesses
- Psychological dysfunction
- Attention-deficit/hyperactivity disorder (ADHD)
- Conduct disorders
- Alcohol and drug dependence
- Depression
- Psychotic episodes
- Anxiety disorders
- Eating disorders
- Post-traumatic stress disorder

FASD's secondary disabilities have specific risk and protective factors (Streissguth 1996). [51]

Protective Factors

- Living in a stable and nurturing home
- Living with caregivers who understand FASD and are modifying their child rearing approach according to best practices
- Having basic life needs met
- Consuming a healthy diet with special attention to nutrients that improve brain development
- Diagnoses before the age of six
- Involvement in special education and social services geared towards their specific needs and learning styles.
- Absence of violence experienced individually or environmental exposure
- Staying in each living situation for an average of more than 2.8 years
- Being eligible for developmental disability services

Risk Factors

- FASD is mostly a **hidden disability**. Other than those with FAS recognizable facial features, FASD characteristics are not easily identified without diagnoses.
- Lack of diagnoses
- Having an IQ above 70 – DD services are limited to lower cognitive scores
- Poor nutrition
- Misdiagnoses
- Impulsivity
- Conduct problems
- Anger and frustration
- Alcohol & other substance misuse exposure
- Deviant peers

See Individual Risk Factors - Cognitive impairments, for additional information

Page updated by
Hope Finkelstein, FASD Program Manager (2019)
Office of Substance Misuse & Addiction Prevention

Appendix D.

Shared Protective Factor Citations

1. **Resnick, M.D.**, et al. (1997). Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association,* 278 (10), 823-832; National Longitudinal Study of Adolescent Health (1995-2003) Series of Monographs.
2. **Dryfoos, J.** (1990). *Adolescents at Risk*, Prevalence and Prevention. Oxford University Press, New York.
3. **Rutter, M.** (1985). Resilience in the face of adversity. *British Journal of Psychiatry,* 147, 598-611;
4. **Werner, E. E.,** & **Smith, R. S.** (1992). *Overcoming the Odds: High Risk Children from Birth to Adulthood*. Ithaca, NY: Cornell University Press.
5. **Garmazy, N.** (1985). Stress–resistant children: the search for protective factors in J. E. Stevenson (Ed.), Recent research in developmental psychopathology. *Journal of Child Psychology and Psychiatry book supplement no.4* (pp. 213-233). Oxford, England: Pergamon Press
6. **Kirby, D.** (2001). *Emerging Answers. Research Findings on Programs to Prevent Teen Pregnancy*. National Campaign to Prevent Teen Pregnancy.
7. **Borowsky, I.**, et al. (1999). Suicide Attempts Among American Indian and Alaska Native Youth. *Achieves Pediatrics Adolescent Medicine*, 153(6), 573-580
8. **Hawkins, J.D.**, et al. (1992). Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention. *Psychological Bulletin*, 112(1), 64-105.
9. **Scales, P.C.** & **Leffert, N.** (2004). *Developmental Assets: A Synthesis of the Scientific Research on Adolescent Development*. Second Edition. Minneapolis: Search Institute.
10. **Springer, F.** (2001). EMT. Nat Cross-Site Evaluation of (48) High Risk Youth Programs to Address Substance Abuse (CSAP).
11. **National Youth Violence Prevention Resource Center**. Sponsored by US Department of Health and Human Services. Retrieved from: http://www.safeyouth.org/scripts/facts/risk.asp
12. **Surgeon General's Call to Action to Prevent Suicide** (1999) Department of Health and Human Services. Retrieved from http://www.surgeongeneral.gov/library/calltoaction/calltoaction.htm
13. **Eccles, J. & Goodman, J.**, eds. (2002). *Community Programs to Promote Youth Development*. National Research Council and Institute of Medicine. National Academy Press. https://doi.org/10.17226/10022
    a) Grossman & Tierney (1998) Big Brothers, Big Sisters Evaluation 187-189
    b) Allent, J.P., et al. (1997) Teen Outreach Program 182-183
    c) Catalano, et. al (1999) Positive Youth Development Programs in the US: Research Findings on Evaluations of Positive Youth Development Programs.175-177
14. **Sampson**, et al. (1997). Neighborhood and Violent Crime: A Multilevel Student of Collective Efficacy. *Science.*15 Aug 15; 277(5328): 918-24
15. **Bernard, B.** (2004). *Resiliency What We Have Learned*. WestEd.
16. **US DHSS** (2000). *Reducing Tobacco Use: A Report of the Surgeon General* 61-85.
17. **Institute of Medicine** (1994). *Growing Up Tobacco Free*: Preventing Nicotine Addiction in Children and Youth.
18. **Fisher, G. and Rogent, N.** (2008). *Encyclopedia of Substance Abuse Prevention, Treatment and Recovery*. Sage.
19. **Commerci, G.**, et al. (1990). Prevention of Substance Abuse in Children and Adolescents. *Adolescent Medicine: State of the Art Reviews*. Philadelphia, Henley, and Belfus, Inc.
20. **American Medical Association** (1992). Family Violence: Adolescents as Victims and Perpetrators. Report I of the Council on Scientific Affairs (A-92).
21. **Commission on Children at Risk**. (2003). *Hardwired to Connect: The New Scientific Case for Authoritative Communities*. New York: Institute for American Values.
22. **McNeely, C.**, et al. (2002). Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health,72* (4), 138-146.
23. **Lonczack, H.**, et al. (2002). Effects of the Seattle Social Development Project on Sexual Behavior, Pregnancy and Birth and Sexually Transmitted Disease Outcomes by Age 21 Years. *Archives Pediatrics and Adolescent Medicine*, 156 (5)
24. **Murphy, D.**, et al. (2004). Relationships of Brief Measure of Youth Assets to Health –Promoting and Risk Behaviors. *Journal of Adolescent Health*. 34(3), 184-191.
25. **Oman, R.**, et al. (2004). The Potential Protective Effect of Youth Assets on Adolescent Alcohol and Drug Use. *American Journal of Public Health,* 94(8), 1425-30.
26. **Tobler, N.** (1986). Meta-analysis of 143 Adolescent Drug Prevention Programs: Quantitative Outcome Results of Program Participants Compared to a Control or Comparison Group. *Journal of Drug Issues*, 16(4), 537-567.
27. **Morris, R.** Editor. (1994). *Using What We Know About At-Risk Youth: Lessons From the Field.* Technomic.117-127.
28. **Rickert, V.**, et al. (1991). Effects of Peer-counseled AIDS Education Program on Knowledge, Attitudes, and Satisfaction of Adolescents. *Journal of Adolescent Health.* 12. 38-43.
29. **Slap, G.**, et al. (1991). Human Immunodeficiency Virus Peer Education Program for Adolescent Females. *Journal Adolescent Health*, 12(6), 434-442.
30. **Perry, C.** (1988). Comparing Peer-Led to Teacher-Led Youth Alcohol Education in Four Countries. *Alcohol Health & Research World*, 12(4), 322-326.
31. **Dryfoos, J.** (1994). *Full-service Schools: A Revolution in Health and Social Services for Children, Youth, and Families*. Jossey-Bass. 1994. 123-137.

32. **US DHSS Public Health Service**. (1994). *School Based Clinics That Work.* Health Resources & Services Administration. No. 18.
33. **Alaska Adolescent Health Advisory Committee** (1995). *Adolescents, A Plan for the Future.* Alaska Department of Health and Social Services, Division of Public Health, Section of Maternal, Child and Family Health.
34. **Whitlock J.** (2005). *Places to Be Places to Belong: Youth Connectedness in School and Community.* Cornell University. https://ecommons.cornell.edu/handle/1813/19327
35. **Sabatelli, M.**, et al. (2005). *Assessing Outcomes in Child and Youth Programs: A Practical Handbook.* University of Connecticut. School of Family Studies, Center for Applied Research.
36. **Pransky, J.** (2001). *Prevention: The Critical Need.* Burrell Foundation and Paradigm Press
37. **Boyer, D**. & **Fine, D.** (1992). Sexual Abuse As a Factor Adolescent Pregnancy and Child Maltreatment. *Family Planning Perspectives*, 24(1), 4-11.
38. **Rodine, S.**, et al. (2006). Potential Protective Effect of the Community Involvement Asset on Adolescent Risk Behaviors. *Journal of Youth Development*; Bridging Research & Practice. Vol.1: 1.
39. **Catalano, R. F.**, et. al. (1998). Positive Youth Development in the United States. http://aspe.hhs.gov/hsp/PositiveYouthDev99
40. **Child Trends** (2002). *Building a Better Teenager: A summary of what works in adolescent development*. Washington, D.C. Child Trends
41. **Kaynak, Ö**., et al. (2014). Providing alcohol for underage youth: what messages should we be sending parents? *Journal of Studies on Alcohol and Drug*s, *75*(4), 590-605.
42. **Aseltine, R**., **DeMartion, R.** (2004). An Outcome Evaluation of the SOS Prevention Program. *Am Journal of Public Health*. 94; 3.
43. **SAMHSA** (DHHS, Substance Abuse Mental Health Services Administration). Residential Student Assistance Programs. http://modelprograms.samhsa.gov/template_cf.cfm?page=model&pkProgramID=1
44. **Payton, J.W.,** et al. (2000) Social and Emotional Learning: A Framework for Promoting Mental Health and Reducing Risk Behaviors in Children and Youth. *Journal of School Health. May 2000 70(5).*
45. **University of Chicago, Illinois.** The Collaborative for Academic, Social and Emotional Learning. CASEL http://www.casel.org/projects_products/safeandsound.php.
46. **Coe, M**. Suicide Attempts in Physically Abused Adolescents: Protective and Risk Factors *Prevention Science Seminar* 6.11.*2003*
47. **Segal, B.** (1999) Alaska Natives combating substance abuse and related violence through self healing: a report for the people. *A report to the Alaska Federation of Natives.* The Center for Alcohol and Addiction Studies. The Institute of Circumpolar Health Studies. University of Alaska Anchorage.
48. **Berry, J.W.** (1985) Acculturation and mental health among circumpolar peoples. *Circumpolar Health,* 84.
49. **Wolsko, C** (2007) Stress, coping, and the well being among the Yup'ik of the Yukon-Kuskokwim Delta, the role of enculturation and acculturation. *International Journal of Circumpolar Health*. Vol. 66; 1.
50. **Mohatt, G.,** et al. (2004) Tied Together like a Woven Hat: Protective pathways to Alaska native sobriety. *Harm Reduction Journal.* 1(1): 10. DOI: 10.1186/1477-7517-1-10
51. **Streissguth, A.** (1996). *Understanding the Occurrence of Secondary Disabilities in Clients with Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects* (FAE) Final Report, University of Washington School of Medicine, Department of Psychiatry and Behavioral Sciences. Centers for Disease Control and Prevention. Grant No. R04/CCR008515.
52. **Snyder, L. & Fleming-Milici, F.** (2005) *Disentangling the Influence of Peer and Parental Norms, Attitudes, and Outcome Expectancies on Youth Drinking Behavior: A National Longitudinal Study*. Paper presented at the annual meeting of the International Communication Association, Sheraton City, NY.
53. **Society for Adolescent Medicine** (2010) Positive Youth Development as a Strategy to Promote Adolescent Sexual & Reproductive Health. *Journal Adolescent Health*. 6 (3) Supplement
54. **Strasburger,** V.C., et al. (2010) Health Effects of Media on Children and Adolescents. *Pediatrics.* 125(4**)**
55. **Hatton, E.** et al. (1996). Television's Impact on Certain Teen Behaviors. *Alaska's Adolescents: A Plan for the Future*. Supplement
56. **Anderson P.** et al. (2009) Impact of Alcohol Advertising and Media Exposure on Adolescent Alcohol Use: a Systematic Review of Longitudinal Studies, 4(3), 229-43.
57. **Robinson, T.N.** et al. (1998) Television and music video exposure and risk of adolescent alcohol use. *Pediatrics.* 102 (5)
58. **Huesmann, L.R**., et al. (2003). Longitudinal Relations between Children's Exposure to TV Violence and their Aggressive and Violent Behavior in Young Adulthood: 1977-1992. *Developmental Psychology*, 39(2), 201-221.
59. **Cook, D.E**, et al. (2000) *The impact of Entertainment Violence on Children. A joint statement to the Congressional Public Health Summit*. American Academy of Pediatrics.
60. **Collins, R**., et al. (2004) Watching Sex on Television Predicts Adolescent Initiation of Sexual Behavior, *Pediatrics*, 114 (3).
61. **U.S. Department of Health and Human Services**. (2010) *To Live To See the Great Day That Dawns: Preventing Suicide by American Indian and Alaska Native Youth and Young Adults*. SAMHSA. http://www.sprc.org/library/Suicide_Prevention_Guide.pdf
62. **Waldvogel, J.L.** et al. (2008) Adolescent Suicide: Risk Factors and Prevention Strategies Current Problems. *Pediatric and Adolescent Health Care.* 38:110-125
63. **Bhatia, S. K., & Bhatia, S. C.** (2007). Childhood and adolescent depression. *American Family Physician, 75*, 73-80 and Keenan-Miller, D., et.al. Health outcomes related to early adolescent depression. *Journal of Adolescent Health, 41*, 256-262.as cited in SAMHSA Center for Behavioral Health Statistics and Quality. (April 28, 2011). *The NSDUH Report: Major Depressive Episode and Treatment among Adolescents: 2009.* Rockville, MD.
64. **Whitbeck L.B.,** et al. (2004) Conceptualizing and Measuring Historical Trauma Among American Indian People. *American Journal of Community Psychology. (*33) 3/4.
65. **Compton, M.** Ed. (2010*) Clinical Manual of Prevention in Mental Health.* American Psychiatric Publishing.
66. **Scales, P**., et al. (2006.) The Contribution to Adolescent Well-being made by Non-family Adults. *Journal of Community Psychology*. 34 (4), 401-413. https://doi.org/10.1002/jcop.20106

67. **Felitti, V. J.,** et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245-258.
68. **Hills S. D.,** et al. (2010) The Protective Effect of Family Strengths in Childhood against Adolescent Pregnancy and Its Long-Term Psychosocial Consequences *The Permanente Journal.* Fall 2010. 14(3).
69. **Koball, H.,** et al. (2011). *Synthesis of Research and Resources to Support At-Risk Youth,* OPRE Report # OPRE 2011-22, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. http://www.acf.hhs.gov/programs/opre/index.html
70. **O'Connell, M.E., et al**. (2009) Preventing Mental, Emotional and Behavioral Disorders Among Young People: Progress and Possibilities. National Research Council and Institute of Medicine. Washington DC, National Academies Press. doi: 10.17226/12480
71. **Hamoudi, A.** et al. (2015). *Self- Regulation and Toxic Stress: A Review of Ecological, Biological, and Developmental Studies of Self-Regulation and Stress.* OPRE Report # 2015-30, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. http://www.acf.hhs.gov/programs/opre/index.html.
72. **Quinn, P.D U & Fromme, K**. (2010*)* Self Regulation as Protective Factor against Risky Drinking and Sexual Behavior. *Psychological Addiction Behavi*or, 24(3), 376-385. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2947344/\
73. **Belfield, C.,** et al. (2015). *The Economic Value of Social and Emotional Learning*. New York, NY: Center for Benefit-Cost Studies in Ed.
74. **Durlak, J.,** et al. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions (PDF). *Child Development, 82*(1), 405-432.
75. **Jones, D.,** et al. (2017). *Improving Social Emotional Skills in Childhood Enhances Long-Term Well-Being and Economic Outcomes.* Edna Bennet Pierce Prevention Research Center, Pennsylvania State University.
76. **Payton, J.,** et al. (2008). *The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-grade Students: Findings from three scientific reviews.* Chicago, IL: Collaborative for Academic, Social, and Emotional Learning.
77. **Payton, J.W.,** et al. (2000) Social and Emotional Learning: A Framework for Promoting Mental Health and Reducing Risk Behaviors in Children and Youth; *Journal of School Health.* May 2000. 70 (5): 177-85.
78. **Taylor, R. D**., et al. (2017). Promoting Positive Youth Development Through School-Based Social and Emotional Learning Interventions: A Meta-Analysis of Follow-Up Effects. *Child Development, 88*(4). 1156-1171.
79. **Dixon, A**. et al. (2009). The Adolescent Mattering Experience: Gender Variations in Perceived Mattering, Anxiety, and Depression. *Journal of Counseling and Development.* Summer, 87: 302-10.
80. **Whitlock, J.** et al. (2014) Connectedness and Suicide Prevention in Adolescents: Pathways and Implications. Suicide and Life-Threatening Behavior. *Journal of American Association of Suicidology,* 44(2). 46–272.
81. **Judd, B.** (2016) *Youth's Perception of Mattering, Being Valued and Connecting to their Community.* Saylor and Associates.
82. **Heath, K., Garcia, G.,** et al. (2015). *Growing up Anchorage: Anchorage Youth and Young Adult Behavioral Health and Wellness Assessment*. University of Alaska, Anchorage, Center for Human Development.
83. **Sieving, R.E**., et al, (2006*) Friends' Influence on Adolescents' First Sexual Intercourse. Perspectives on Sexual and Reproductive Health, 38 (1).13-19* https://www.guttmacher.org/journals/psrh/2006/friends-influence-adolescents-first-sexual-intercourse
84. **US Department of Health and Human Services, ASPE** (2017). *An Examination of Young People Experiencing or at High Risk for Homelessness*, Contract GS-23F-9777H.
85. **Thompson, S.J.,** et al. (2010). Homeless youth: Characteristics, contributing factors, and service options. *Journal of Human Behavior in the Social Environment*, 20 (2), 193–217.
86. **Aratani, Y. & Cooper, J. L.** (2015). The effects of runaway-homeless episodes on high school dropout. *Youth & Society, 47*(2),173-198.
87. **Yoshikawa, H.,** et al. 2012). The Effects of Poverty on the Mental, Emotional, and Behavioral Health of Children and Youth Implications for Prevention. American Psychological Association. 67, 272-84.
88. **Ajay C. & Wimer. C.** (2016). Poverty is Not Just an Indicator: The Relationship Between Income, Poverty, and Child Well-Being. *Academy of Pediatrics,*16 (3), 23–29
89. **Murphey, D**. & Zakia, R. (2014) *Five Ways Poverty Harms Children*. Child Trends. https://www.childtrends.org/child-trends-5/5-ways-poverty-harms-children
90. **Grant, B.F**. (1998). The impact of a family history of alcoholism on the relationship between age at onset of alcohol use and DSM–IV alcohol dependence: Results of the National Longitudinal Alcohol Epidemiologic Survey. *Alcohol Health & Research World* 22:144–147
91. **Dewitt, D.,** et al. (2000). Age at First Alcohol Use: A Risk Factor for the Development of Alcohol Disorders *American Journal of Psychiatry. 157:745–75.0*
92. **Bolland, K.** et al. (2013). Trajectories of Adolescent Alcohol Use by Gender and Early Initiation Status. *Youth & Society.*48(1), 3-32
93. **Mason. M. J.** (20014) Peer attitudes effects on adolescent substance use: the moderating role of race and gender. *Prevention Science.* 15(1), 56-64.
94. **Hohman, Z.P.,** et al. (2014). Attitude ambivalence, friend norms, and adolescent drug use. *Prevention Science. 15*(1), 65-74.
95. **Wilkins, N**., et al. (2018). Connecting the Dots: State Health Department Approaches to Addressing Shared Risk and Protective Factors Across Multiple Forms of Violence. *Journal of Public Health Management and Practice. 24 Suppl.* S32-S41.
96. **Gallagher MP** et al. (2014). Social anxiety symptoms and suicidal ideation in a clinical sample of early adolescents examining loneliness and social support as longitudinal mediators. *Journal of Abnormal Child Psychology*. 42(6), 871-83.
97. **Goosby, B. J.,** et al. (2013). Adolescent Loneliness and Health in Early Adulthood. *Sociological Inquiry. 83*(4), 505-36
98. **Hosseinbor, M.** (2014). Emotional and social loneliness in individuals with and without substance dependence disorder. *International Journal of High-Risk Behaviors & Addiction*, *3*(3), e22688. doi:10.5812/ijhrba.22688
99. **McKay, M.T**. et al. (2017) The direct and indirect effect of loneliness on the development of adolescent alcohol use in the United Kingdom. *Addictive Behavior Reports.* Elsevier, 65-70.
100. **Matthews T,** et al. (2018) Lonely young adults in modern Britain: findings from an epidemiological cohort study. *Psychological Medicine.* 24:1-10.

101. **Matthews, T**., et al. (2016). Social isolation, loneliness and depression in young adulthood: a behavioral genetic analysis. *Social Psychiatry and Psychiatric Epidemiology*, *51*(3), 339-48.
102. **Weir, K.** (2016) The risks of earlier puberty. *Monitor on Psychology.* March 2016. 47 (3) American Psychological Association.
103. **American Psychological Association**. (2013) *Gun Violence: Prediction, Prevention, and Policy.* www.apa.org/pubs/info/reports/gun-violence-prevention.aspx.
104. **Anestis. M.D**. et al. (2015) Association Between State Laws Regulating Handgun Ownership and Statewide Suicide Rates. *American Journal of Public Health*, 105(10), 2059-2067.
105. **Wilkins, N**., et al. (2014). *Connecting the Dots: An Overview of the Links among Multiple Forms of Violence.* Atlanta GA. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention and Prevention Institute, Oakland CA. https://www.cdc.gov/violenceprevention/pdf/connecting_the_dots-a.pdf
106. **Dube, S.R** et al. (2006). Adverse childhood experiences and the association of ever using alcohol and initiating alcohol use in adolescence. *Journal of Adolescent Health.* 38(4), 444.
107. **Dodge, K. A.,** & Pettit, G. S. (2003). A bio-psychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology*, *39*(2), 349-71.
108. **Higa, D.,** et al. (2014). Negative and Positive Factors Associated With the Well-Being of Lesbian, Gay, Bisexual, Transgender, Queer, and Questioning (LGBTQ) *Youth. Youth & Society.* 46(5), 663-68.
109 **Centers for Disease Control and Prevention** (2018) Protective Factors for LGBT Youth: Information for Health and Education Professionals. Division of Adolescent and School Health. https://www.cdc.gov/healthyyouth/disparities/lgbtprotectivefactors.htm
110. **Reisner, S. L.,** et al. (2014). Gender minority social stress in adolescence: disparities in adolescent bullying and substance use by gender identity. *Journal of Sex Research.* 52(3), 243-56.
111. **Almeida, J**. et al. (2009). Emotional distress among LGBT youth: The influence of perceived discrimination based on sexual orientation. *Journal of Youth Adolescence.* 38(7) 1001-1014.
112. **David-Ferdon, C.** et al. (2016). *A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/yv-technicalpackage.pdf
113. **Minguez, M.,** et al. (2015) Reproductive health impact of a school health center. *Journal of Adolescent Health.* 56(3), 338-44.
114. **Ethier, K.A**. (2011) School based health center access, reproductive health care, and contraceptive use among sexually experienced high school students. *Journal of Adolescent Health*. 48 (6):562-65.
115. **Chapman, R. L**., et al. (2011) The impact of school connectedness on violent behavior, transport risk-taking behavior, and associated injuries in adolescence. *Journal of School Psychology*. 49(4), 399-410.
116. **Centers for Disease Control and Prevention**. (2009) School connectedness: Strategies for increasing protective factors among youth. Atlanta, GA: US Department of Health and Human Services. https://www.cdc.gov/healthyyouth/protective/pdf/connectedness.pdf
117. **Komro, KA**, Toomey, TL. (2002). Strategies to Prevent Underage Drinking. *Alcohol Research & Health,* 26(1), 5-14.
118. **Murray, D.W.** et al. (2015). *Self-Regulation and Toxic Stress: Foundations for Understanding Self- Regulation from an Applied Developmental Perspective.* OPRE Report #2015-21, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. https://www.acf.hhs.gov/opre/research/project/toxic-stress-and-self-regulation-reports
    a. *Foundations for Understanding Self- Regulation from an Applied Developmental Perspective.* OPRE Report #2015-21
    b. *A Comprehensive Review of Self-Regulation Interventions from Birth through Young Adulthood*. OPRE Report # 2016-34
119. **Mair J.S and Mair, M**. (2003) Violence Prevention and Control through Environmental Modifications. *Annual Review of Public Health*. 24(1), 209-225.
120. **Fagan, A.,** et al. (2013). The Protective Effects of Neighborhood Collective Efficacy on Adolescent Substance Use and Violence following Exposure to Violence. *Journal of Youth and Adolescence*. *43*(9), 1498-512.
121. **Crosnoe R**. (2006). The Connection Between Academic Failure and Adolescent Drinking in Secondary School. *Sociology of Education*. *79*(1), 44-60.
122. **Bushman, B.** (2016) Youth Violence: What We Know and What We Need to Know. *American Psychologist*. 71(1), 17–39.
123. **Office of the Surgeon General**. (2001) *Youth Violence: A Report of the Surgeon General*. US Surgeon General. https://www.ncbi.nlm.nih.gov/books/NBK44292/
124. **Rasberry C.N**. et al. (2015). Health-related behaviors and academic achievement among high school students—United States, 2015. *MMWR Morbidity and Mortality Weekly Report* 2917; 66:922-927.
125. **Keeton, V.** et al. (2012). School-based Health Centers in an Era of Health Care Reform: Building on History. *Current Problems in Pediatric and Adolescent Health Care*. *42*(6), 132-56, 157-8.
126. **Chandler, M. & Lalonde C**.(2008) Cultural Continuity as a Protective Factor Against Suicide in First Nations Youth, *Horizons.* 10(1) 68-72,101-102.
127. **Zimmerman, MA** et al. (2013). Adolescent Resilience: Promotive Factors That Inform Prevention. *Child Development Perspectives*. 7(4), 10. https://doi.org/10.1111/cdep.12042
128. **Goldstein, S. and Brooks, R**. Eds. (2013). *Handbook of Resilience in Children. 2nd Edition* Springer. 15 -37, 87-102.
129. **Yu, M. and Stiffman, A.** (2007) Culture and environment as predictors of alcohol abuse/dependence symptoms in American Indian Youths. *Addiction Behavior*. 32(10): 2253–2259.
130. **LaFromboise, T.D.** et al. (2006). Family, community, and school influences on resilience among American Indian adolescents in the upper Midwest. *Journal of Community Psychology*. *34*(2), 193-209. B8.
131. **Wexler, L.** (2014) Lived Challenges and Getting Through Them: Alaska Native Youth Narratives as a Way to Understand Resilience. *Health Promotion Practice.* 2014 15(10).

132. **Division of Behavioral Health** (2012) *Risk and Protective Factors for Adolescent Substance Use (and other Problem Behavior*). Prevention and Early Intervention Section, Division of Behavioral Health, Alaska Department of Health and Social Services.
133. **Hertz, M. F.,** et al. (2013). Bullying and Suicide: a Public Health Approach. *The Journal of Adolescent Health: official publication of the Society for Adolescent Medicine*, *53*(1 Suppl), S1-3.
134. **Luk, J. W**., et al. (2010). Bullying Victimization and Substance Use among U.S. adolescents: Mediation by Depression. *Prevention science: the official journal of the Society for Prevention Research*. *11*(4), 355-9.
135. **Cotton, S**., et al. (2010). Measurement of Religiosity / Spirituality in Adolescent Health Outcomes Research: Trends and recommendations. *Journal of Religion and Health*. *49*(4), 414-44.
136. **Cheon, J.W. and Canda** E. (2010) The Meaning and Engagement of Spirituality for Positive Youth Development in Social Work. *Families in Society: The Journal of Contemporary Social Services*. 91(2), 121-126.
137. **King, P.,** et al. (2011). Religion, Spirituality, Positive Youth Development, and Thriving. *Advances in Child Development and Behavior*. 41. 161-95.
138. **Utermohle, C. and Judd, B.** (2019). YRBS 2017 Protective Factor Analysis - unpublished communications. Analysis conducted by Charles J. Utermohle, Thule Research and Becky Judd, Strength-Based Strategies, July 2019.
139. **Trust for America's Health and Wellbeing Trust** (2019) *Addressing a Crisis: Cross Sector Strategies to Prevent Adolescent Substance Use and Suicide (2019*). http://www.paininthenation.org/assets/pdfs/TFAH-2019-Teens-Pain-Report.pdf
140. **Ramey, H., Busseri, M.** et al. (2010) Youth Engagement and Suicide Risk: Testing a Mediated Model in a Canadian Community Sample. *Journal of Youth and Adolescence.* 39: 243–258.
141. **National Academies of Science, Engineering, and Medicine**. (2019) Fostering Healthy Mental, Emotional and Behavioral Development in Children and Youth: A National Agenda. Washington DC: The National Academies Press. https://doi.org/10.17226/25201
142. **Durlak, J. A., Weissberg, R. P**., et al. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45*, 294–309. In, Peterson, Terry (2013) *Expanding minds and opportunities: Leveraging the power of afterschool and summer learning for student success*. Washington DC. Collaborative Groups Communications. https://www.expandinglearning.org/expandingminds
143. **Fredricks, J.A. and Eccles**, **J.S.** (2006) Extracurricular Involvement and Adolescent Adjustment: Impact of Duration, Number of Activities, and Breadth of Participation, A*pplied Developmental Science,* 10:3, 132-146. https://doi.org/10.1207/s1532480xads1003_3 In McDowell Group. (2018) *Protective Factors for Youth Substance Abuse and Delinquency: The Role of Afterschool Programs.*
144. **Henson, M., Sabo, S**., et al. (2017) Identifying Protective Factors to Promote Health in American Indian and Alaska Native Adolescents: A Literature Review. *Journal of Primary Prevention*. 38(1-2):5-26. https://doi.org/10.1007/s10935-016-0455-2
145. **Allen J., Mohatt, G., People Awakening Team**, et al. (2009) Suicide prevention as a community development process: understanding circumpolar youth suicide prevention through community level outcomes. *International Journal Circumpolar Health*. 2009;68 (3): 274–291. doi:10.3402/ijch.v68i3.18328
146. **Thapa, A., Cohen, J**., et al. (2012). School Climate Research Summary: *School Climate Brief*, No. 3. National School Climate Center, New York, NY. https://www.schoolclimate.org/publications/scholarship
147. **Ford, T., Rasmus, S**., et al. (2012). Being useful: achieving indigenous youth involvement in a community-based participatory research project in Alaska. *International Journal of Circumpolar Health*, 71:1, 18413, https://doi.org/10.3402/ijch.v71i0.18413
148. **Keles, B**., et al, (2019) - A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth.* 25(4):1-15 · March 2019 https://doi.org/10.1080/02673843.2019.1590851
149. **Riehm K.E.,** et al. (2019) Associations Between Time Spent Using Social Media and Internalizing and Externalizing Problems Among US Youth. *JAMA Psychiatry*. Published online September 11, 2019. doi:10.1001/jamapsychiatry.2019.
150. **Twenge, J. M.,** et.al. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*. 6, 3-17. https://doi.org/10.1177/2167702617723376151
151. **Tsitska, A.,** et al. (2014) Online Social Networking in Adolescence: Patterns of Use in Six European Countries and Links With Psychosocial Functioning. *Journal of Adolescent Health.* 2014 Jul; 55(1):141-7. DOI: 10.1016/j.jadohealth.2013.11.010
152. **Yalda T.,** et al. (2017) Benefits and Costs of Social Media in Adolescence. *Pediatrics.* November 2017, 140 (Supplement 2) S67-S70; DOI: https://doi.org/10.1542/peds.2016-1758E
153. **Boers, E.,** et al. (2020) A longitudinal study on the relationship between screen time and adolescent alcohol use: The mediating role of social norms. *Preventive Medicine*. VOL 132 March 2020, 105992 https://doi.org/10.1016/j.ypmed.2020.105992
154. **Drubin, J.,** et al. (2018) Social Media and Adolescents: What Are the Health Risks? (Literature Review) Clinical *Advisor* July 6 2018, special issue 21
155. **Hamm, MP.,** et al. (2015) Prevalence and Effect of Cyberbullying on Children and Young People: A Scoping Review of Social Media Studies. JAMA Pediatrics. 2015;169(8):770-777. doi:10.1001/jamapediatrics.2015.0944

Forward questions or comments about this document to
Becky Judd at bjudd.sbs@smallstones.net