Risk and Protective Factors

for Adolescent Substance Use

(and other Problem Behavior)

A Review and Summary of the Research conducted by

- **Prevention Research Committee for Behavioral Health (2006)**
- **Behavioral Health Epidemiological Outcomes Workgroup (2007)**
- **SPF/SIG Epidemiological Influences Workgroup* (2010)**

Contents:

**** Additional citations added as new research is published.***

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What are Risk and Protective Factors?

Extensive national research, spanning over fifty years, has demonstrated a strong association between specific social conditions, personal characteristics, experiences and the involvement in unhealthy behavior. This research has identified these influences as *Risk and Protective Factors*. This paper provides an overview of the cross disciplinary research behind each of the factors.

Risk factors are characteristics within the individual or conditions in the family, school or community that *increase the likelihood* someone will engage in unhealthy behavior such as: the use of alcohol, tobacco and other drugs, violence, suicide, or early sexual activity. The *more* risk factors present in a child's life, *the greater the likelihood* problems will develop in adolescence.

Protective factors are characteristics within the individual or conditions in the family, school or community that help someone cope successfully with life challenges. When people can successfully negotiate their problems and deal with pre-existing risk factors, they are less likely to engage in unhealthy behavior. Protective factors are instrumental in healthy development; they build resiliency, skills and connections.

> *The term,* **Protective Factor,** *is sometimes used interchangeably with the terms:* ***Resiliency, Developmental Assets™, or positive youth development****. Each of these terms refer to a* ***strengths-based approach*** *of working with children, youth and the community.*

Most communities track substance use prevention efforts by monitoring prevalence or consumption data (e.g. 30 day use, binge use, ever use) or the consequences of use (e.g. drinking driving crashes, hospital visits, school suspensions.) Prevention science addresses and monitors the *influences on behavior* (risk and protective factors) as well, to prevent unhealthy behavior and nurture development.

The more *protective factors are increased* and *risk factors reduced* the more likely unhealthy behavior and its associated problems can be prevented.

Risk and Protective Factors for FASD *Secondary Disabilities*

If a child is born with a fetal alcohol spectrum disorder (FASD) he/she is at risk for developing secondary disabilities in childhood and adolescence. Dr. Ann Streissguth through research with the Universtiy of Washington identified key risk and protective factors for FASD secondary disabilities.[51] They are as follows:

Protective Factors

- Living in a stable and nurturing home
- Having basic life needs met
- Being diagnosed before the age of six year
- Never having experienced violence against oneself
- Staying in each living situation for an average of more than 2.8 years
- Experiencing a good quality home from ages 8-12
- Being eligible for Developmental Disability

Risk Factors

- Having an alcohol related birth defect other than FAS
- Having an IQ above 70

Risk and Protective Factors for Adolescent Problem Behaviors

Extensive research has identified factors that impact youth problem behaviors such as substance use, violence, suicide ideation, and early sexual activity. Studies have found, the more risk factors an adolescent has, the greater the likelihood of problem behavior. Conversely, youth with more protective factors and a resilient personality *are better able to cope* with risk factors and life challenges; they are less likely to be involved in problem behaviors and more likely to do well in school and in life.

PROTECTIVE FACTORS

Characteristics within the individual or conditions in the family, school or community that help youth cope successfully with life challenges and existing risk factors.

FAMILY

- **Family connectedness** (attachment & bonding)*
- Positive parenting style
- Living in a two parent family
- Higher parent education
- High parental expectations about school

SCHOOL

- **Connected to school***
- Caring school climate
- Student participation in extracurricular activities

COMMUNITY

- **Positive connection to *other* adults***
- Safe, supportive, connected neighborhood
- Strong community infrastructure (services for those in need)
- Local, state policies and practices that support healthy norms and child-youth programs
- Range of opportunities *in the community* for meaningful youth engagement

INDIVIDUAL - PEERS

- **Engagement in meaningful activities**
- **Life skills and social competence*** *(Social Emotional/Employability Skills*)
- **Cultural identity and connection***
- Positive personal qualities
- Positive self concept
- Positive peer role models
- Religious identity
- High grade point average

RISK FACTORS

Characteristics within the individual or conditions in the family, school or community that increase the likelihood youth will engage in problem behavior.

FAMILY

- **Death by suicide of a friend or family member***
- Family history of the problem behavior
- Family management problems
- Family conflict
- Favorable parental attitudes and involvement in problem behaviors
- Household access to substances or guns

SCHOOL

- Academic failure
- Lack of personal commitment to school

COMMUNITY

- **Availability of alcohol/other drugs***
- **Community norms and laws***
- Availability of firearms
- Transitions and mobility (*moving a lot*)
- Low neighborhood attachment & community disorganization
- Poverty

INDIVIDUAL - PEERS

- **Experienced child abuse (physical, sexual) or other family violence***
- **Early initiation of the problem behavior***
- **Loss of cultural identity and connection***
- Constitutional factors (see definition)
- Childhood media exposure to violence and alcohol
- Early and persistent antisocial behavior
- Friends who engage in the problem behavior
- Favorable attitudes toward the problem behavior (low perceived-risk of harm)
- Gang involvement
- Older physical appearance than peers
- Paid work more than 20 hrs/week
- Perceived risk of untimely death

PROTECTIVE Factors
for Adolescent Problem Behaviors

DOMAINS	This list is based upon ongoing research demonstrating the impact protective factors have in preventing problem behavior. *Items in bold are the priority factors identified by the Behavioral Health Epidemiological workgroup and the Division of Behavioral Health.*	Suicide, thoughts and attempts	Substance Use	Violence	Early Sexual Activity and Teen Pregnancy
FAMILY	**Connected to Family** (attachment/bonding) [1,4,6,7,15,25, 46,53,61]	✔	✔	✔	✔
	Positive parenting style [6,8,11,15,21,53]		✔	✔	✔
	Living in a two parent family [6,21,25]		✔		✔
	Higher parent education [2,4,6,8,11,17, 21]		✔	✔	✔
	Higher parental expectations about school [1,8,11,18,24]	✔	✔	✔	
SCHOOL	**Connected to school** (attachment/bonding) [1,6,8,9,10,15, 34, 53]	✔	✔	✔	✔
	Caring school climate [2,3,8,9,15, 23, 25,53]	✔	✔	✔	✔
	Student participation in extracurricular activities [6, 8,9,13b, 15, 28, 29,30]		✔		✔
	Early intervention services [2, 6, 31, 32, 42,43]	✔	✔		✔
COMMUNITY Society-Environment	**Connected to *other* positive adults** (bonded/attached) [1,3,4,5,9,10,11,13a, 21,33,61]	✔	✔	✔	✔
	Safe, supportive, connected neighborhood [1, 6,9,11,14,21,34,61]	✔		✔	✔
	Strong community infrastructure (services for those in need) [6,12,14,16,61]	✔	✔		✔
	Local, state policies and practices that support healthy norms and child-youth programs [8,12,13,14,16,17,33]	✔	✔	✔	
	Range of opportunities *in the community* for meaningful youth engagement (see below)				
INDIVIDUAL-PEERS	**Engagement in positive meaningful activities** [3,4,6,8,9,11,25, 38,39,40]		✔	✔	✔
	Cultural identity and connection [47,48,49,61]	✔	✔		
	Positive personal qualities [3,4,5,8,9,19]		✔		✔
	Positive self concept [1,6,9,11]	✔	✔		✔
	Positive peer role models [6,7,9,17,25,46]		✔		✔
	Religious or spiritual beliefs [1,6,9,25, 61]	✔	✔		✔
	High grade point average [1,6,7,9]	✔	✔	✔	✔
	Life skills and social competencies *(Social Emotional/* Employability *Skills)* [3,4,5,8,9,11,44,45,53,61] *While life skills are identified as protective for youth problem behaviors in numerous studies, the research did not identity associations with <u>specific</u> problem behaviors.*				

<u>Note:</u> To be include in this list, the factor must be cited in two or more studies, published in peer- reviewed journals. Additionally the factor had to be cited having an influence on two or more of the four adolescent problem behaviors.

Definitions for Adolescent Protective Factors

Protective factors are characteristics within the individual or conditions within the family, school or community that help young people successfully cope with life challenges. When youth can successfully negotiate their problems and deal with pre-existing risk factors, they are less likely to engage in problem behavior such as: substance abuse, violence, suicide, or early sexuality activity. Protective factors are instrumental in healthy development; they build resiliency, skills and connections. The definition of each factor is derived from its research base.

Family Protective Factors

Connected to Family (Priority Protective Factor) –Family connectedness has several components. Connectedness refers to the feelings of warmth, love and caring children get from their parents. Children who feel support and connection report a high degree of closeness, feelings of being understood, loved, and wanted. A parental presence is related to connection; it refers to a parent being present during key times: before school, after school, dinner, bedtime and doing activities together. The National Longitudinal Study of Adolescent Health found this to be one of the strongest protective factors against all risk behaviors. [1, 4,6,7,15,25, 46, 53, 61]

Positive parenting style – A "*positive parenting style"* involves high expectations, clear family rules, fair and consistent discipline practices and age-appropriate supervision and monitoring of behavior, friends and whereabouts. [6 8,11,15,21, 53]

Two parent families – National research has found that children who grow up in a family with two parents are less likely to engage in adolescent problem behaviors. [6,21,25]

Higher Parent education - Children whose parents have graduated from high school and have received higher education training are less likely to engage in risk behaviors. [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 engage in risk behaviors. [8,11,18,24]

School Protective Factors

Connected to School (Priority Protective Factor) – Students feel "connected" (attached/bonded) to their school based on their feelings about the people at school, both staff and other students. School connectedness is closely related to caring school climate. 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. School connectedness protects youth against many health risks, including smoking, alcohol, drug use, and early sexual initiation. Strong connectedness with school has also been shown to contribute positively to academic achievement . [1,6,8,9,10,15, 34,53]

Caring school climate - This protective factor refers specifically to whether or not youth feel that their schools provide a caring, supportive, and encouraging environment. A caring school climate (positive school atmosphere) has an impact on rates of absenteeism, delinquency, substance use, teen pregnancy, and emotional disturbances. Characteristics that contribute to a positive school climate include: 1) High expectations for student academics, behavior and responsibility; 2) Use of proactive classroom management strategies, interactive teaching and cooperative learning and maintain a positive atmosphere; 3) Consistent acknowledgement all students, and recognition for good work; 4) Student voice in school activities and classroom management. [2,3,8,9,15,23,25,53]

Student participation in extracurricular activities - Student participation and contribution includes activities such as tutoring, peer programs, school clubs, and service learning. Peer programs involve youth in the planning, implementation and/or evaluation of programs directed toward students of the same age or younger. These programs aim to enhance the positive impact of peer groups and minimize their potential negative impact. [6, 8,9, 13b, 15,28, 29, 30]

Peer programs have been broken down into five categories:

- Peer teaching
- Peer helping
- Positive peer influence
- Peer participation in decision making.
- Service or service learning programs

  Service-based programs engage young people in improving the living conditions and quality of life for those in their community. Teens are provided with valuable pre-employment skills as they volunteer for worthy causes through local organizations and community projects.

Early intervention services - Student assistance programs, counseling support groups, and school linked health centers provide the learning supports that are often critical to helping students stay in school. Student assistance programs provide prevention and intervention services to those students whose lives have been impacted by alcohol and drug abuse, violence, divorce, death, child abuse, stress or depression. This may include support or education in problem solving, self-esteem, social skills, and conflict resolution. [2,6,31,32,42,43, 61]

Community Protective Factors

Positive connection to *other* adults (Priority Protective Factor) – This refers to the support and caring youth receive in relationships with adults, other than family members (i.e. neighbors, coaches, teachers, mentors or ministers). As children grow, they become involved in an expanded network of significant relationships. This broad network includes many adults who can provide regular contact, mentoring, support, and guidance. [1,3,4,5,9,10,11,13a,14, 21, 33, 61]

Safe supportive connected neighborhood - While relationships with caring adults on an individual basis are very important, the collective feeling of safety and support coming from the community or neighborhood as a whole adds a synergistic component of protection against risk behaviors. This protective factor has three features: connection, positive social norms, and monitoring. Connection refers to young people's perception of feeling safe, valued, attached, and "belonging to" their neighborhood, community, or in some cases, youth programs. Positive social norms are maintained when community members have high expectations for children and monitoring and accountability refers to the degree to which neighbors watch out for each other and monitor the whereabouts and behaviors of their children, as well as hold them accountable for their behaviors. [1, 6,9,21,34, 61]

Strong community infrastructure - Infrastructure refers to the effective and accessible clinical services for physical and reproductive health, mental health, and substance abuse disorders. [6,12,14,16, 61]

Local and state policies (sometimes called *environmental approaches*) - Local and state policies that support healthy norms and child youth programs can reduce risk behaviors on several levels. Examples include: restrictions or bans on alcohol sales, higher taxes on tobacco or alcohol, restrictions on liquor licenses, safe storage of firearms and ammunition, etc. [8,12,13,14, 16, 33]

Individual/Peer Protective Factors

Engagement in Meaningful Activities (Priority Protective Factor) – This refers to activities involving volunteering and helping others in community or peer-based programs, or service-learning projects. This protective factor is associated with the reduction of several risk-taking behaviors (alcohol, tobacco or drug use, delinquency, anti-social behaviors, teen pregnancy, school suspensions or school dropout. Programs increase skills and positive development when youth are involved in all phases: planning, organizing, implementation and evaluation. [3,4,7,6,8,9,11,25, 38, 39, 40]

Cultural Identity and Connection (Priority Protective Factor) *also see Risk Factor Loss of Cultural Identity* Culture is the sum total of ways of living, this includes: values, beliefs, traditions, protocols, rituals, language, 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 their identified culture. [47,48,49, 61]

Life Skills and Social Competencies (Priority Protective Factor) - This refers to the abilities that equip young people to make positive choices, maintain healthy relationships, and succeed in life.[3,4,5,8,9,11,53, 61]

1. Communication Skills: the ability to communicate appropriately with people of different ages, backgrounds and status it includes listening skills.
2. Cultural Competence: the knowledge of and comfort shown with people of different cultural / racial / ethnic backgrounds.
3. Conflict Resolution Skills: the ability to manage and resolve conflicts in constructive non-violent ways.
4. Empathy Skills: the ability to be sensitive to the feelings and experiences of others and to act in a caring way towards others.
5. Resistance Skills: the ability to resist negative peer pressures and thereby avoid possible dangerous situations.
6. Life Skills: the skills of problem solving, decision making, stress management and critical thinking.

Social, Emotional/Employability Skills are used by many school districts, they *over lap* with life skills above. The skills include:

- Self-Awareness**:** Knowing what one is feeling in the moment: having a realistic assessment of our own abilities and a well-grounded sense of self-confidence.
- Self-Management**:** Handling one's emotions so they facilitate rather than interfere with the task at hand; being conscientious and delaying gratification to pursue goals; persevering in the face of setbacks and frustrations.
- Social Awareness: Understanding what others are feeling; being able to take their perspective; appreciating and interacting positively with diverse groups.
- Social Management: Handling emotions in relationships effectively; establishing and maintaining healthy and rewarding relationships based on cooperation, resistance to inappropriate social pressure, negotiating solutions to conflict, and seeking help when needed.

Positive personal qualities - Personal qualities associated with the likelihood of engaging in fewer risk behaviors include: an easy-going temperament, a sense of purpose and positive future, a feeling of control over one's environment, and internal motivation. [3,4,5,8,9,19]

Positive self concept - This protective factor refers to the perceptions and judgments youth have, and make about themselves. A youth with a positive self concept believes that he or she is "a person of worth", likes himself/herself, feels loved and wanted, and has "positive characteristics." [1,6,9,11]

Positive peer role models - This protective factor relates to youth who have friends with the following qualities: a positive attitude about health, good grades, no involvement in risk behaviors, and close relationships with parents. [6,7,9,17,25, 46]

High grade-point average - 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 risk behaviors. [1,6,7,9]

Religious or spiritual beliefs - The personal importance placed on religion, prayer or spiritual beliefs is associated with decreased use of cigarette smoking, drinking, marijuana use and suicide (and correlated with delayed sexual activity.) A religious identity is defined by the degree to which a young person affiliates with a religion and, if so, frequency of prayer and perception as religious. [1,6,9,25,61]

RISK Factors
for Adolescent Problem Behaviors

DOMAINS	Risk factors are characteristics within the individual or conditions in the family , school or community that increase the likelihood youth will engage in problem behaviors. NOTE: Items in bold are the priority factors identified by the state Behavioral Health Epidemiological workgroup and the Division of Behavioral Health.	Suicide, thoughts and attempts	Substance Abuse	Violence	Early Sexual Activity Teen Pregnancy
FAMILY	Family history of the problem behavior [2,4,8,11,18, 61]	✔	✔	✔	✔
	Family management problems [8,18]	✔	✔	✔	✔
	Family conflict [8,18]	✔	✔	✔	✔
	Favorable parental attitudes and involvement in problem behaviors [8,18]		✔	✔	
	Household access to substances or guns[1,11]	✔	✔	✔	
	Death by suicide of a friend or family member, or suicide attempts[1,7, 11, 61	✔		✔	
SCHOOL	Academic failure [1, 2, 8,18]	✔	✔	✔	✔
	Lack of personal commitment to school [1, 8,9,11, 18, 61]	✔	✔	✔	✔
COMMUNITY Society - Environment	**Availability of alcohol/other drugs** [8,12,18]		✔	✔	
	Availability of firearms [8,12,18]	✔		✔	
	Community laws and norms favorable to drug use, firearms, and crime [8,11,18, 52]		✔	✔	
	Transitions and mobility *(moving a lot)* [8,18]	✔	✔		
	Low neighborhood attachment and community disorganization [8,18]		✔	✔	
	Poverty [2,8,11,18, 61]		✔	✔	✔
INDIVIDUAL - PEERS	**Experienced child abuse (physical, sexual) or other family violence)** [1,6,11,12,37,61]	✔		✔	✔
	Early initiation of the problem behavior [8,18]		✔	✔	✔
	Loss of cultural identity [47,48,49,61]	✔	✔		
	Constitutional factors (see definition) [8,18, 61]	✔	✔	✔	
	Childhood exposure to media		✔	✔	
	Early and persistent antisocial behavior [8,18]	✔	✔	✔	✔
	Friends who engage in the problem behavior [8,18]		✔	✔	✔
	Favorable attitudes toward the problem behavior (including low perceived-risk of harm) [8,18,52]		✔		✔
	Gang involvement [8,18]		✔	✔	
	Older physical appearance (than peers) [1,6]	✔	✔		✔
	Paid work more than 20 hrs/week [1,6]	✔	✔	✔	✔
	Perceived risk of untimely death[1,6]	✔	✔	✔	

Definitions for Adolescent Risk Factors

Risk factors are characteristics within the individual or conditions in the family, school or community that increase the likelihood youth will engage in problem behavior such as: the use of alcohol, tobacco and other drugs, violence, suicide, and teen pregnancy. The more risk factors present, the greater likelihood youth will develop problems in adolescence. The risk factors identified below are derived from David Hawkins and Richard Catalano's literature search and the National Substance Abuse Prevention Specialist Training curriculum. Additional risk factors, cited by research are included. The definition of each factor is derived from its research base.

Family Risk Factors

Death by suicide of a friend or family member (or suicide attempts) [1] *Priority Risk Factor* - Youth who have a suicide among any family member or friend in the past 12 months are at greater risk for attempting suicide. [1,7,11,61]

Family history of the problem behavior - If children are raised in a family with a history of alcohol/ drug addiction, it increases the likelihood that children will also have 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. [2,4,8,11,18,61]

Family management problems - Poor family management practices include lack of clear expectations for behavior, failure of parents to monitor their children – knowing where they are and whom they are with, and excessively severe or inconsistent punishment. [8,18]

Family conflict - Persistent, serious conflict between primary caregivers or between caregivers and children appears to increase children's risk for all of the problem behaviors. Whether the family consists of two biological parents, a single parent, or some other primary caregiver appears to matter less than whether the children experience much conflict in their families. For example, domestic violence in a family increases the likelihood that young people will engage in delinquent behaviors and substance abuse, as well as become pregnant or drop out of school. [8,18]

Favorable parental attitudes and involvement in problem behaviors - Parental attitudes and behaviors toward drugs, crime, and violence influence the attitudes and behaviors of their children. Parental approval of young people's moderate drinking, even under parental supervision, increases the risk that the young person will use marijuana. Similarly, children of parents who excuse them for breaking the law are more likely to develop problems with juvenile delinquency. In families where parents display violent behavior, children are at greater risk of becoming violent. [8,18]

Household access to harmful substances or guns - When youth have access to firearms, alcohol, tobacco or other drugs they are more likely to use them in harmful ways. [1,11]

School Risk Factors

Academic failure beginning in elementary school - Academic failure that begins 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 problem behaviors. [1,2,8,18]

Lack of commitment to school - Low commitment to school means the young person has ceased to see the role of student as a valuable one. Those 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 has been found to correlate with increased risk. [1,8,9,11,18,61]

Community Risk Factors

Availability of alcohol / other drugs (Priority Risk Factor) - The more available drugs are in a community, the higher the risk that young people will abuse drugs. Perceived availability of drugs is also associated with risk. In schools where children think that drugs are more available, a higher rate of drug use occurs. [8,12,18]

Availability of firearms - The prevalence of firearms in a community predicts a greater likelihood of violent behavior. Legislation, enforcement, and community dynamics combine to influence the local accessibility of drugs and weapons. [8,12,18]

Community norms and laws favorable toward drug use, firearms, and crime (**Priority Risk Factor)** Community norms (attitudes) and policies surrounding alcohol/drug use and crime—are communicated in many ways. Formally, they are communicated through laws and written policies and enforcement (examples: alcohol taxes, liquor licenses, drunk driving laws, infractions for selling to minors, laws regulating the sale of firearms). *Informally,* norms, expectations and social practices by parents and the community may communicate a climate of acceptance, approval or tolerance of problem behaviors. [8,11,12,18, 52]

Transitions and mobility - Even normal school transitions predict increases in problem behaviors. When children move from elementary school to middle school or from middle school to high school, significant increases in the rate of drug use, school misbehavior, and delinquency result. When communities are characterized by frequent nonscheduled transitions, problem behaviors increase. Communities with high rates of mobility *(families moving frequently from home to home)* appear to be linked to an increased risk of drug and crime problems. The more often people in community move, the greater the risk of both criminal behavior and drug-related problems in families. [8,18]

Low neighborhood attachment and community disorganization - Higher rates of drug problems, juvenile delinquency, and violence occur in communities or neighborhoods where people have little attachment to the community, where the rates of vandalism are high, and where there is low surveillance of public places. These conditions are not limited to low-income neighborhoods; they can also be found in wealthier neighborhoods. Lower rates of voter participation and parental involvement in schools also indicate lower community attachment. [8,18]

Poverty (extreme economic deprivation) - Children who live in deteriorating and crime-ridden neighborhoods characterized by extreme poverty are more likely to develop problems with delinquency, teen pregnancy, school dropout, and violence. Children who live in these areas — and have behavior and adjustment problems early on — are also more likely to have problems with drugs later in life. [2, 8,11,18,61]

Individual/Peer Risk Factors

Experienced child abuse (physical, sexual) or other family violence (Priority Risk Factor) - Research suggests that children or youth who have been physically abused or neglected are more likely than others to commit violent crimes and/or become pregnant. Exposure to high levels of marital and family discord or conflict also appears to increase risk, as does antisocial or delinquent behavior by siblings and peers. [1, 6, 11, 37,61]

Early initiation of problem behavior (Priority Risk Factor) - The earlier young people begin using drugs, committing crimes, engaging in violent activity, dropping out of school and becoming sexually active, the greater the likelihood that they will continue these behaviors later in life. For example, research shows that young people who initiate drug use before the age of 15 are at twice the risk of having drug problems as those who wait until after the age of 19. [6,8,18]

Loss of Cultural Identity (Priority Risk Factor) – Alaska Native and American Indian people may face Alaska Native and American Indian (ANAI) persons or groups may experience higher levels of psychological and social stress due in part to historical trauma, oppression and imposed cultural change. These adverse experiences or risk factors are associated with suicide and high rates of alcohol and other drug use. *Other groups defined by ethnicity, age, religious affiliation, or sexual orientation, may experience similar risk factors.* [47,48,49, 61]

Constitutional factors - Constitutional factors may have a biological or physiological basis. These factors are often seen in young people who engage in sensation-seeking and low harm-avoidance behavior and those who demonstrate a lack of impulse control. Examples include fetal alcohol and drug exposure, environmental poisoning, brain injuries, chronic conditions and, in some cases, ADHD (Attention Deficit Hyperactivity Disorder.) These factors appear to increase the risk that young people will use drugs, engage in delinquent behavior and commit violent acts. [8,1, 61,]

Childhood media exposure to violence and alcohol
Numerous studies have explored the impact of media exposure on children and adolescent several risk taking behaviors Longitudinal studies consistently suggest that exposure to media communications on alcohol (advertising and promotion) alters adolescent's attitudes, perceptions and expectations about alcohol. Multiple studies have shown an increase in the likelihood that adolescents will start to use alcohol, and drink more if they are already using alcohol. Additionally, increased television and music video viewing are risk factors for the onset of alcohol use in adolescents. Childhood exposure to media violence has a causal effect on aggressive behavior for some males and females. The effects are shown to be measureable, long lasting and can lead to emotional desensitization toward violence in real life. [54-60]

Early and persistent antisocial behavior - Boys who are aggressive in grades K - 3 are at higher risk of substance abuse and juvenile delinquency. 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 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. [8,18]

Friends who engage in the problem behavior - Young people who associate with peers who engage in problem behaviors — delinquency, substance abuse, violent activity, sexual activity, or school dropout— are more likely to engage in the same problem behavior. This is one of the most consistent predictors that research has identified. Even when young people come from well-managed families and do not experience other risk factors, just hanging out with friends who engage in the problem behavior greatly increases the child's risk of that behavior. [8,18]

Favorable attitudes toward the problem behavior - During the elementary school years, children usually express anti-drug, anticrime, and pro-social attitudes. They have difficulty imagining why people use drugs, commit crimes, and drop out of school. By middle school, as peers participate in such activities, attitudes often shift toward greater acceptance of these behaviors. Youth attitudes (perception of minimal harm or risk) are a strong predictor of substance use involvement. [8, 18, 52]

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 as well as engage in sexual activity before the age of 15. [1,6]

Paid work more than 20 hrs/week - Students who work 20 or more hours per week for pay during the school year were associated with higher levels of emotional distress, substance use, and earlier age of sexual debut. [1,6]

Perceived risk of an untimely death - Students who perceived their chances of dying before age 35 were more likely to experience emotional distress, be involved in violent acts, use alcohol, tobacco and other drugs as well as engage in early sexual experiences. [1,6]

Priority Risk & Protective Factors and their Indicators for *Adolescent Substance Use in Alaska*

The Alaska (Behavioral Health) Epidemiological Outcomes Workgroup (SEOW) was formed in 2007 to collect, analyze, and report substance use incidence, prevalence and other related data. An "influences subcommittee" was assigned to: 1) identify and prioritize the factors that influence substance use and abuse, and 2) identify existing and recommend new indicators to monitor over time.

Most states track substance use by monitoring data on consumption (e.g. 30 day use, binge use, ever use) or the consequences of use (e.g. drinking driving crashes, hospital visits, school suspensions.) Instead of tracking *consumption* and *consequence* data exclusively, the workgroup recommended that Alaska monitor the research-based *influences that impact* substance use, as well. Indicators for each of the priority factors are identified or recommended for development. (Some indicators are well established, others are in the developmental stages, as noted below.)

The indicators are **state and population-based**, the data may not be available for individual communities.
Indictors may be modified for local prevention programs and services, as performance measures.

Protective Factors	**Protective Indicators / Data source**
Connection to Family	• Percentage of parents who are connected and involved in their children's lives[1.] • Percentage of students talk with their parents, at least weekly about school [2.]
Connection to School	• Percentage of students who attend a school they feel is respectful and fair.[3.] • Percentage of students who believe their teachers really care about them and give them a lot of encouragement. [2.]
Positive Connection to *Other* Adults	• Percentage of youth who have a positive connection with two or more adults outside of their home. [2.]
Engagement in Meaningful Activities	• Percentage of students that participate in one or more organized activities outside of school. Includes: clubs, lessons, volunteering, or helping activities one or more times per week. [2.] • Percentage of students who play on one or more sports teams in the past year. [2.]
Social, Emotional/ Employability Skills	• Percentage of students who feel they have "social, emotional & employability skills"[3.]
Cultural Identity	*Developmental Indicator Stage I* *(Loss of cultural identity can be a risk factor, see below)*
Risk Factors	**Risk Indicators / Data Source**
Experienced child abuse (neglect, physical, sexual abuse)	• Percentage of mothers who report their child has (ever experienced), seen violence or physical abuse, in person. CUBS 2008 • Substantiated rate of Alaska children (ages 0-17) abused or neglected per 1,000 children OCS
Early initiation of substances	• Percentage of students that have used either tobacco, alcohol or marijuana before the age of 13. [2.]
Death by suicide of a friend or family member	• Rate of completed suicides among Alaskan's ages 15-24 per 100,000 [5.] *Death rate of family members by suicide: Developmental Stage II*
Availability of alcohol and other drugs	• Percentage of youth who got their alcohol from social sources (gave someone money to buy it or someone gave it to them). [2.] • Percentage of youth reporting it is easy (very or fairly) to get marijuana.[4.]
Community norms and laws related to alcohol, drug use	*Developmental Indicator Stage II*
Loss of Cultural Identity	*Developmental Indicator Stage I*
Developmental stage I: *Indicator needs to be defined and measurement system put into place* ***Developmental stage II:*** *Potential indicator in place, existing data system needs further support and refinement*	

Data Sources: 1) NSCH AK; 2)YRBS; 3) SCCS; 4) NSDUH

Priority Risk & Protective Factors for Adolescent Substance Abuse in Alaska

Process of Identifying Statewide Priority Influences/Factors:

The "influences subcommittee" of the State (Behavioral Health) Epidemiological Outcomes Workgroup (SEOW) began with the adolescent population, while recognizing the significant need to look at younger and older populations as well. The risk and protective factor national research for adolescent substance use (and other risk behaviors) provided the working foundation. Additional factors were considered that had a strong research base of support. The priority factors were selected based on:

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

To assure a comprehensive review, we examined factors across the social domains (family, community, school, and individual.) The availability of the data did not exclude a factor, if it was considered to be of major significance to the Alaska population. For example, poverty is highly correlated with substance abuse, but not easily amenable to change. Through this process, five protective factors and five risk factors were prioritized. In addition, cultural identity or loss of culture was selected as factor having tremendous influence on one's sense of self and subsequent behavior.

Next, the group turned to identifying **population-based indicators** for each of the selected factors. This process was divided into:

- Factors with existing indicators and data;
- Factors with *some* indicators, but not reliable data at this point;
- Factors that remain of high significance without indicators or data, at this time.

Three factors (family violence, availability of alcohol, community norms and laws) have indicators needing further refinement and/or support for data collection. Two factors (connection to family, cultural identity) do not have indicators at this time. The subcommittee urges the state to partner with interested organizations to further define indicators and develop accurate measurement tools for both of these factors.

Although the indicators are population-based Alaska measures, they are not meant to take precedent over community or program-based measures. This is important to note so that community planning efforts to deliver programs and services continue to be community-driven. The identified indicators reflect the need for a consistent source of population-based data that can be monitored over time across Alaska. Other community and program-based indicators continue to be developed and provide further support for advancing our efforts for data collection and evaluation in Alaska.

While the identified factors are based on research associated with adolescent problem behaviors, many of the factors have implications for adult and older populations as well. A review of the literature was not conducted specifically for adults and may need additional scrutiny and peer review to determine both the availability and reliability of the research. Research on loss of culture and cultural identity was more thoroughly reviewed to apply across the lifespan, to children, youth and adults, and is cited here. Unfortunately, indicators in this area are difficult to locate, although promising as new measures are being developed.

In closing, two studies found the presence of both protective factors: family support and school support in adolescents who have been physically abused will reduce the likelihood of a suicide attempts more than the mere removal of the risk factor of substance use (e.g. alcohol, drugs) regardless of gender.[7,46] While communities must 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, they have no control over.

The report, *Influences on Substance Abuse in Alaska,* was further reviewed by the data analyst for the Division of Behavioral Health, as well as the full State Epidemiological Outcomes Workgroup. The full report and the state data supporting each indicator may be downloaded at *http://hss.state.ak.us/dbh/prevention/publications*

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