Delinquency and Substance Use in Adolescence

David Patton, Ph.D.
Addictions Foundation of Manitoba
&
Donald Sharpe, Ph.D.
University of Regina

Introduction

Wide range of predictors of substance use disorder (SUD)

Many similar to conduct disorders, different substances, gambling

Also co-morbidities,

e.g. substance use – delinquency

gambling – delinquency

use, gambling – mental health etc.

- Often related to difficulties with self-regulation, lack of self-control, impulsivity
- Probably related to disturbances in the brain (e.g., pre-frontal cortex)
  - Impaired decision-making
    - Difficulties regulating emotion
    - Behavioral undercontrol
- neurobehavioral disinhibition (Tartar)

- Jessor –***problem behavior syndrome***
  - Co-occurrence of problem behaviors such as substance use, with delinquency
- Hirschi & Gottfredson ***generality of deviance***
- inability to delay gratification, therefore immediate pleasure is selected over risk of long-term consequences

Furthermore,

Wide range of social, familial, psychological predictors of delinquency and problem behaviors

Individual/personality characteristics are shaped by socialization factors

For example…

Development of problem behaviors is also influenced by...

- parental monitoring
- parental modeling
- family stability
- peer relationships
- gender differences

Now looking at ***RISK ABATEMENT and RESILIENCY ENHANCEMENT***

what protects and what facilitates problems?

Some risk factors will be individual, some will be environmental

Some resiliency factors will be individual some will be environmental

Risk factors

Individual/Family

- having siblings 2 years younger
- being born poor
- living in violent neighbourhood
- parental permissiveness (or excessive parental control)
- death of significant adult before age 11
- experience of physical/sexual abuse

Resilience factors

Individual

- Easy temperament
- empathy
- humour
- social-problem solving skills
- self-esteem/self-efficacy

Resilience factors (cont.)

Social

- parental care
- parental expectations
- positive modeling
- bonding

Resilience

Interactions

- girls more resilient if mom works
- firstborn males more resilient
- boys more affected by parental separation/loss of parent

Mediational model

Still trying to understand the adolescent precursors of adult problem behavior

e.g. do the risk factors that could predict adult problems directly relate or are they mediated through resiliency?

Method - School Survey

- Surveillance survey into patterns of substance use and abuse in Manitoba students
- History of these surveys began in 1993 as an evaluation of the Rural and Northern Youth Intervention Strategy (RYNIS)
- 1997 – Winnipeg schools added
- 2001 – nine more schools (32)

Method (cont.)

- Random selection of schools, and classes within schools
- Grade 7 and 8 classes included
- Private schools included
- Francophone schools included (in French)
- More representative sample, but limited ability to compare with previous data

Method 2004

Schools randomly selected, classes within each relevant grade selected

All children in class asked to complete

Confidential and anonymous

1 School Division required parental consent (low return rate)

6564 students participated, almost 10% of the students in the province

Results

Validity check

Data from 62 students was eliminated (endorsed fictitious drug use or many drugs frequently)

Measures

- Peer Use
- Alcohol Abuse
- Alcohol Use
- Tobacco
- Cannabis Use
- Gambling
- Parental Monitoring
- Parental Support
- Peer Support

Measures (cont.)

- Delinquency

Structural Equation Modeling (SEM)

- Latent variable modeling
- Many advantages
  - Allows for examination of common and unique effect of each construct, while controlling for all other predictors
  - Multiple independent and dependent variables from various domains can be accounted for simultaneously

Measurement model

10 latent variables and 33 measured variables

First step – test fit

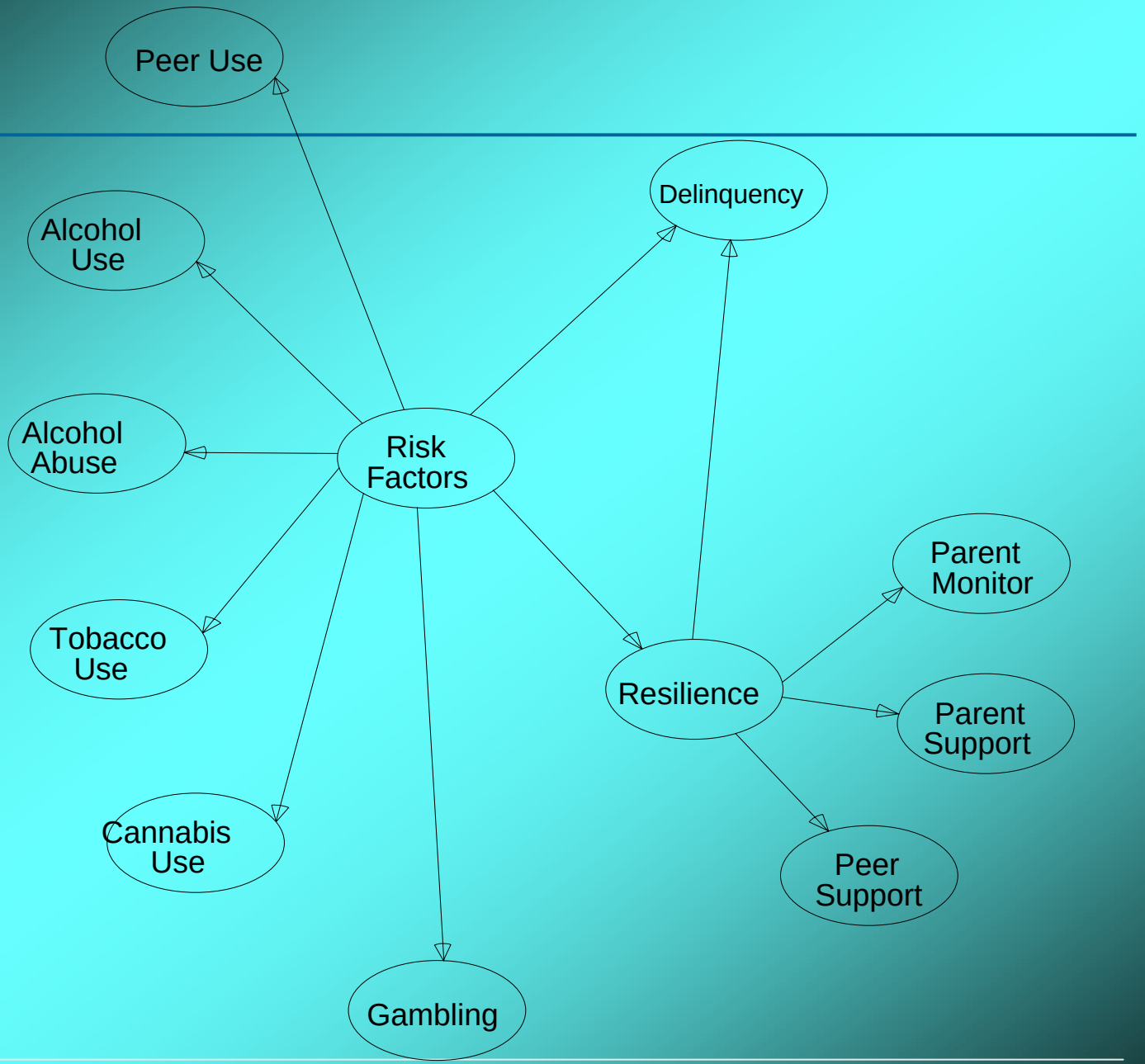
Marginal

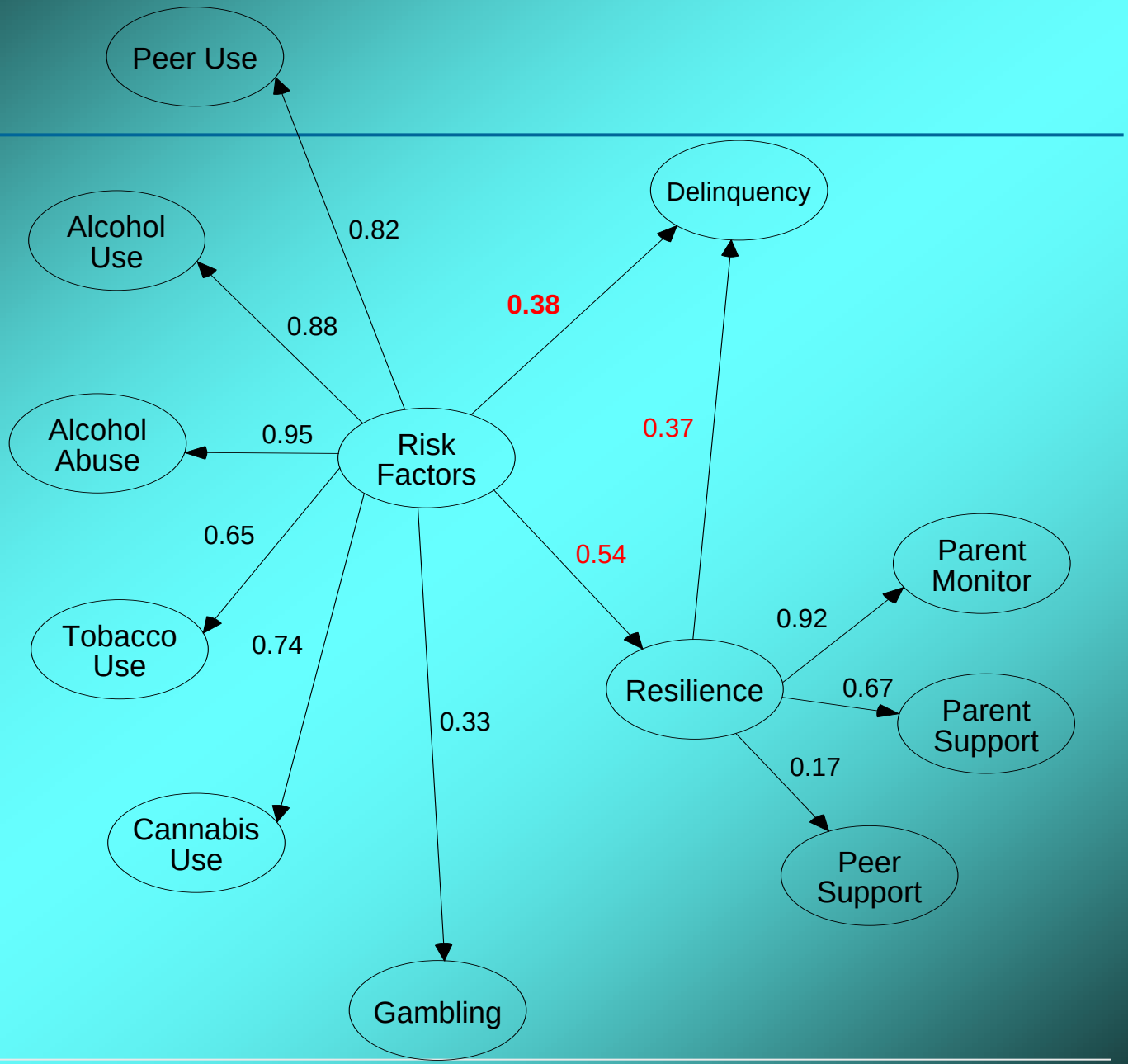
χ^2	χ^2/df	NFI	CFI	RMSEA
15912.5	35.36.	.896	.898	.072

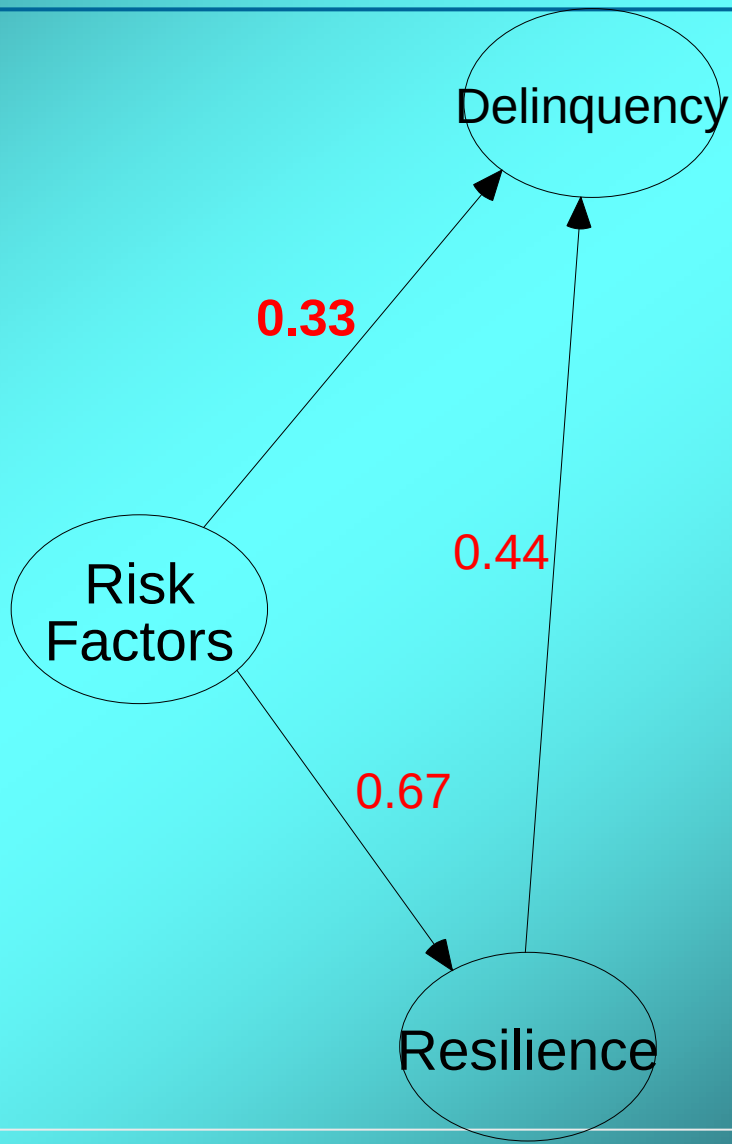
Some modifications made (correlation of 3 residual errors)

Much better fit

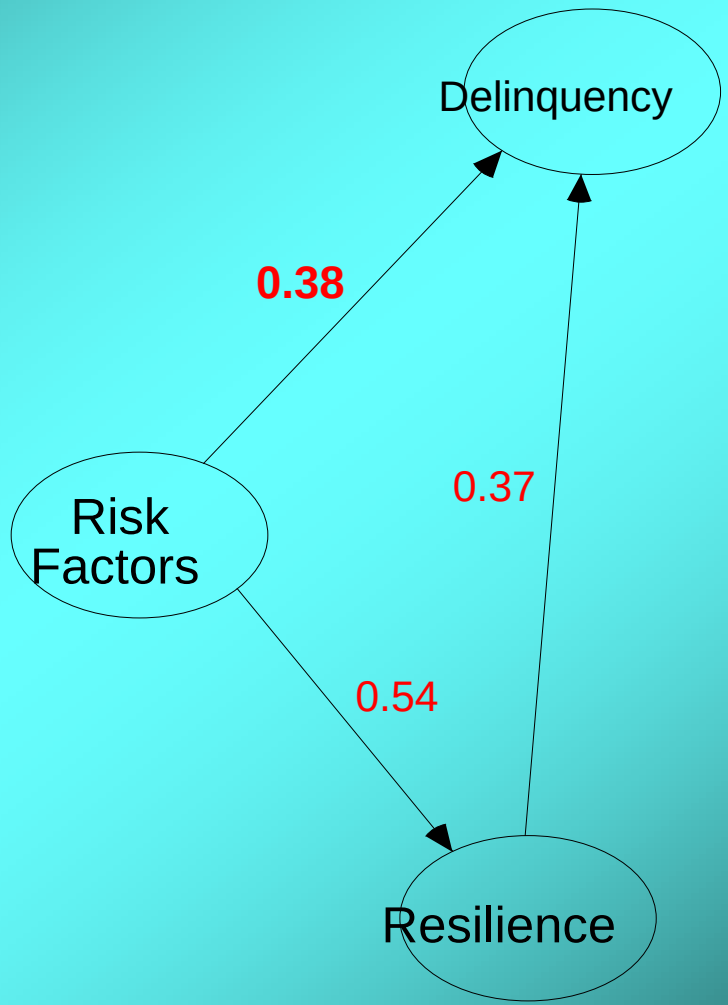
χ^2	χ^2/df	NFI	CFI	RMSEA
11006.9	24.64	.928	.931	.060


Peer Use
Delinquency
Alcohol Use
Alcohol Abuse
Risk Factors
Tobacco Use
Parent Monitor
Resilience
Parent Support
Cannabis Use
Peer Support
Gambling

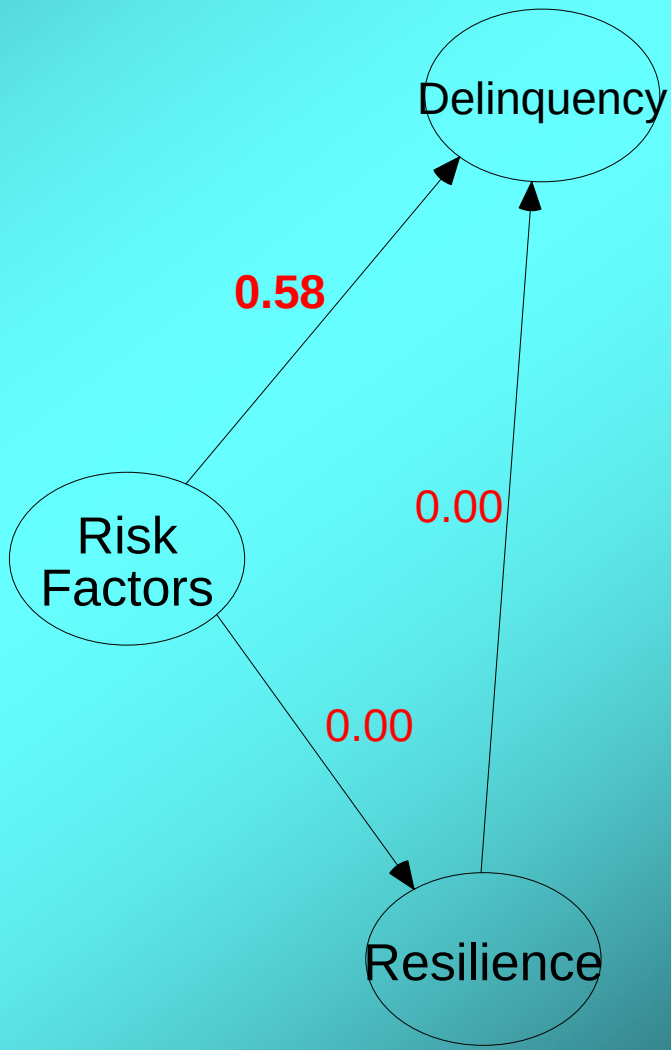

Peer Use
Delinquency
Alcohol Use
0.82
0.88
0.38
Alcohol Abuse
0.95
Risk Factors
0.37
0.65
0.54
Parent Monitor
0.92
Tobacco Use
0.74
Resilience
0.67
Parent Support
0.33
0.17
Cannabis Use
Peer Support
Gambling


Delinquency
0.33
0.44
Risk Factors
0.67
Resilience

Unconstrained structural Model



Constrained structural model



Subgroup fit indices

Model	χ^2	χ^2/df	NFI	CFI	RMSEA
Males 7-9	3479.8	7.25	.891	.904	.064
Girls 7-9	3918.2	8.16	.892	.904	.068
Males 10-12	3490.3	7.27	.901	.913	.062
Girls 10-12	3944.3	8.22	.905	.915	.062

Limitation

- Self report (teacher and parental reports would help bigger picture)
- Not a high-risk group
- Not longitudinal
- No genetic/biological influences evaluated

Questions?

Are antisocial behaviors one-dimensional?

Why gender differences?