






*Violence risk in
adolescents*


Charlotte Rennie

Project funded by the National Forensic
Programme Research and Development

Bolton, Salford and Trafford 
Mental Health NHS Trust


forensic mental health


MANCHESTER
1824

 *Plan*

- ◆ *Risk Assessments*
- ◆ *Structured Professional Judgement*
- ◆ *Structured Assessment of Violence Risk in Youth (SAVRY)*
- ◆ *Psychopathy Checklist: Youth Version*
- ◆ *Results*
- ◆ *Conclusions*
- ◆ *Implications*



What is a Risk?

- ◆ *Risk can be defined as the likelihood of a hazard occurring*



What is Risk Assessment?

- ◆ *Process of understanding a hazard to limit its potential negative impact*
 - ◆ *Hazard identification (which events occur?)*
 - ◆ *Hazard accounting (how frequently?)*
 - ◆ *Scenarios of exposure (under which conditions?)*
 - ◆ *Risk characterization (conditions present?)*
 - ◆ *Risk management (which interventions?)*



Risk Assessments

- ◆ ***Unstructured clinical judgements***
 - ◆ *No constraints on information*
 - ◆ *Flexible and emphasise violence prevention*
 - ◆ *Low reliability/validity*
 - ◆ *Failure to specify the decision-making process*

- ◆ ***Actuarial risk assessments***
 - ◆ *Decisions based on rules*
 - ◆ *Small number of risk factors*
 - ◆ *Increase predictive ability*
 - ◆ *Ignores individual variation*
 - ◆ *Over focus on relatively static variables*



Structured Professional Judgement

- ◆ *Combines static and dynamic variables*
- ◆ *Evidence based guidelines that promotes consistency*
- ◆ *Flexible enough to account for*
 - ◆ *Case-specific influences*
 - ◆ *The contexts in which assessments are conducted*
- ◆ *Moves from prediction to risk management*
- ◆ *Recognises risk assessment is a dynamic and continuous process which is mediated by changing conditions*
- ◆ *Sensitive to change as a result of "maturation" treatment and management*



SPJ Risk Assessment Tools

◆ *Adult assessments*

- ◆ *Violence Risk Scale (Wong & Gordon, 2000)*
- ◆ *Historical Clinical Risk 20: Version 2 (Webster et al., 1997)*

◆ *Adolescent assessments*

- ◆ *Structured Assessment of Violence Risk in Youth (Borum et al., 2003)*
- ◆ *Early Assessment of Risk for Boys (Augimeri et al., 2001)*



Youth Violence

- ◆ *18% of assaults and 40% of robberies*
 - ◆ *2,360 adolescents in Young Offender Institutions (YOIs),*
 - ◆ *256 in Secure Training Centres (STCs)*
 - ◆ *225 in Local Authority Secure Children's Homes (LASCHs)*
 - ◆ *55% were for violent offences*
 - ◆ *Number of 15 to 17 year olds in custody has doubled in the last 10 years*
- ◆ *Half of all adolescent violent offenders are likely to re-offend within the first 12 months of release*



SAVRY: Item Content Borum et al 2003

- ◆ **Historical Risk Factors**
 - ◆ History of Violence
 - ◆ History of Non-Violent Offending
 - ◆ Early Initiation of violence
 - ◆ Past Supervision/Intervention Failures
 - ◆ History of Self-Harm or Suicide Attempts
 - ◆ Exposure to Violence in the Home
 - ◆ Childhood History of Maltreatment
 - ◆ Parental/Caregiver Criminality
 - ◆ Early Caregiver Disruption
 - ◆ Poor School Achievement
- ◆ **Social/Contextual Risk Factors**
 - ◆ Peer Delinquency
 - ◆ Peer Rejection
 - ◆ Stress and Poor Coping
 - ◆ Poor Parental Management
 - ◆ Lack of Personal/Social Support
 - ◆ Community Disorganisation
- ◆ **Individual/Clinical Risk Factors**
 - ◆ Negative Attitudes
 - ◆ Risk Taking/Impulsivity
 - ◆ Substance Use Difficulties
 - ◆ Anger Management Problems
 - ◆ Callous/Lacking Empathy
 - ◆ Attention Deficit/Hyperactivity Difficulties
 - ◆ Poor Compliance
 - ◆ Low Interest/Commitment to School
- ◆ **Protective Factors**
 - ◆ Prosocial Involvement
 - ◆ Strong Social Support
 - ◆ Strong Attachment and Bonds
 - ◆ Positive Attitude Towards Intervention and Authority
 - ◆ Strong Commitment to School
 - ◆ Resilient Personality Traits

Predictive Accuracy – e.g. Receiver Operating Characteristics (ROC)

- ◆ Not dependent on base rates
- ◆ Data has a continuous predictor variable and a dichotomous dependent measure.
- ◆ Plots hit-rate (rate of true positives [sensitivity]) against false-alarm rate (the rate of false positives[1-specificity]) for all observed predictor values (i.e. all cut-offs)
- ◆ Areas can range from 0 (perfect negative prediction), to .50 (chance prediction), to 1.0 (perfect positive prediction).



SAVRY Predictive Validity

- ◆ *McEachran (2001) AUC .70 for violent offending*
- ◆ *Gretton & Abramowitz (2002) AUC .66 SAVRY risk scale; SAVRY total .68 general re-offending, AUC .74 SAVRY risk rating; SAVRY total .67 for violent re-offending*
- ◆ *Catchpole & Gretton (2003) AUC .74 for general recidivism .73 for violent recidivism*
- ◆ *Lodewijks, Doreleijers, de Ruiter, & Borum (2005) AUC .80 SAVRY total, AUC .86 SAVRY risk rating for violence*
- ◆ *North American & Netherlands*



Psychopathy as a predictor of violence

- ◆ *Adult literature, psychopathy has time and again been linked with violence and antisocial behaviour.*

(Grann et al, 1999; Harris et al, 1993; Hemphill et al, 1998; Rice & Harris, 1995; Salekin et al, 1996)

- ◆ *Work in the UK indicates that North American measures of psychopathy demonstrate similar predictive accuracy for institutional and community violence for violent adults to those found in the US development sites*

(Dolan & Khawaja, 2002; Doyle, Dolan, & McGovern, 2002)



PCL-YV: Item Content

Forth et al, 2003

◆ *Interpersonal*

- ◆ *Impression management*
- ◆ *Grandiose sense of self-worth*
- ◆ *Pathological lying*
- ◆ *Manipulation for personal gain*

◆ *Behavioral*

- ◆ *Stimulation seeking*
- ◆ *Parasitic orientation*
- ◆ *Lacks goals*
- ◆ *Impulsivity*
- ◆ *Irresponsibility*

◆ *Affective*

- ◆ *Lack of remorse*
- ◆ *Shallow affect*
- ◆ *Callous/lack of empathy*
- ◆ *Failure to accept responsibility*

◆ *Antisocial*

- ◆ *Poor anger control*
- ◆ *Early behavior problems*
- ◆ *Serious criminal behavior*
- ◆ *Serious violations of conditional release*
- ◆ *Criminal versatility*



PCL: YV Predictive Validity

- ◆ *Catchpole & Gretton (2003)* AUC .78 General recidivism
AUC .73 violent recidivism
- ◆ *Skeem & Cauffman (2003)* AUC Disciplinary action .67
AUC .65 Violence .65
- ◆ *Corrado et al., (2004)* AUC .68 Any recidivism; AUC .63
Non-violent recidivism; AUC .65 Violent recidivism
- ◆ *Gretton et al., (2004)* Violent recidivism .32*** Time to first
violent offence .40*** Time to first non-violent offence .22*
- ◆ *Marshall et al., (2006)* AUC .73 Violent incidents; AUC .73
Convictions; AUC .75 Assaults



Violence

- ◆ *'an act of battery or physical violence that is sufficiently severe to cause injury to another person or persons (i.e. cuts, bruises, broken bones, death, etc.), any forcible act of sexual assault; or threat made with a weapon in hand'.*

(Borum et al., 2003; Webster et al., 1997a)



SAVRY & PCL: YV Research

- ◆ 135 adolescent male from Young Offender Institutions/Secure Care
 - ◆ Mean age 16.14 (SD 0.93)
- ◆ Index offence
 - ◆ 82 violent
 - ◆ 30 acquisitive offence
 - ◆ 8 arson
 - ◆ 6 driving offences
 - ◆ 4 breached on order
 - ◆ 2 drugs offences
 - ◆ 3 no index offence
- ◆ Previous offence history
 - ◆ 1 never been involved in any violence
 - ◆ 29 some evidence of violence in their past
 - ◆ 56 one or two convictions for minor assaults
 - ◆ 37 three or more convictions for violence
 - ◆ 12 committed one or more severely violent offence which had seriously endangered life



Results: Institutional Violence & rule breaking

- ◆ 6 month follow-up
- ◆ Institutional violence: actual assaults on others rather than property damage or threats of violence
- ◆ Rule breaking: security breaches, substance misuse, property damage, attempted escapes
- ◆ Of the 135, 75 were still in custody at the follow-up



AUC's Institutional Violence

	Area	Std. Error(a)	Asymptotic 95% Confidence Interval	
			Lower Bound	Upper Bound
PCL:YV Interpersonal	.69**	.065	.56	.82
PCL:YV Affective	.58	.071	.44	.72
PCL:YV Behavioral	.68**	.063	.55	.80
PCL:YV Antisocial	.69**	.068	.55	.82
PCL:YV Total	.72**	.065	.60	.85
SAVRY Historical	.70**	.065	.57	.83
SAVRY Social	.63	.067	.50	.76
SAVRY Individual	.61	.071	.47	.79
SAVRY Total	.69**	.067	.56	.82
SAVRY Summary risk	.57	.069	.43	.70
SAVRY Protective	.62	.066	.49	.75

***p<0.001; **p<0.01; *p<0.05



AUC's Rule Breaking

	Area	Std. Error(a)	Asymptotic 95% Confidence Interval	
			Lower Bound	Upper Bound
PCL:YV Interpersonal	.60	.070	.46	.74
PCL:YV Affective	.50	.074	.35	.65
PCL:YV Behavioral	.64	.071	.50	.78
PCL:YV Antisocial	.53	.074	.38	.68
PCL:YV Total	.57	.075	.42	.72
SAVRY Historical	.57	.071	.43	.71
SAVRY Social	.58	.068	.45	.71
SAVRY Individual	.61	.076	.46	.76
SAVRY Total	.61	.072	.47	.75
SAVRY Summary risk	.49	.071	.35	.64
SAVRY Protective	.56	.070	.41	.70

***p<0.001; **p<0.01; *p<0.05

- ### Results: Recidivism
- ◆ 12 month follow-up
 - ◆ Home Office Police National Computer (HOPNC). This comprises of impending prosecutions, cautions, reprimands, final warnings and convictions
 - ◆ Offences were classified as violent or non-violent; robberies, assaults, murder, sexual assaults kidnapping and all weapons charges were included as violent offences. Drug offences, burglary/theft, negligence, frauds, escapes, arson, obstructions of justice, and minor offences were classed as non-violent
 - ◆ Of the 135, 99 currently followed-up



AUC's Violent Recidivism

	Area	Std. Error(a)	Asymptotic 95% Confidence Interval	
			Lower Bound	Upper bound
PCL:YV Interpersonal	.47	.05	.36	.59
PCL:YV Affective	.56	.05	.44	.67
PCL:YV Behavioral	.53	.05	.41	.64
PCL:YV Antisocial	.56	.05	.44	.67
PCL:YV Total	.54	.05	.42	.65
SAVRY Historical	.66**	.05	.54	.77
SAVRY Social	.59	.05	.48	.70
SAVRY Individual	.59	.05	.48	.70
SAVRY Total	.63*	.05	.53	.74
SAVRY Summary risk	.63*	.05	.52	.74
SAVRY Protective	.57	.05	.46	.68

***p<0.001; **p<0.01; *p<0.05

AUC's Any Recidivism

	Area	Std. Error(a)	Asymptotic 95% Confidence Interval	
			Lower Bound	Upper Bound
PCL:YV Interpersonal	.49	.06	.37	.62
PCL:YV Affective	.62*	.06	.50	.74
PCL:YV Behavioral	.66**	.06	.53	.80
PCL:YV Antisocial	.61	.06	.49	.73
PCL:YV Total	.60	.06	.48	.73
SAVRY Historical	.69**	.05	.57	.80
SAVRY Social	.63*	.07	.49	.78
SAVRY Individual	.67**	.06	.55	.79
SAVRY Total	.69**	.06	.56	.81
SAVRY Summary risk	.69**	.06	.56	.81
SAVRY Protective	.73***	.05	.63	.84

***p<0.001; **p<0.01; *p<0.05



Conclusions & Implications

- ◆ *SAVRY and PCL: YV good predictors of institutional violence*
- ◆ *SAVRY (actuarial and SPJ) good predictor of recidivism*
- ◆ *PCL: YV not so good (may reflect methodological issues, but may not)*
- ◆ *SAVRY has incremental validity over the PCL: YV for recidivism.*
- ◆ *SAVRY shows similar results across settings and countries pointing to its potential international viability as a risk assessment tool*



Conclusions & Implications

- ◆ *Use as an "aide memoir" in clinical assessment and treatment planning*
- ◆ *Help categorise those who are likely to require more intensive monitoring and targeted interventions*
- ◆ *It remains to be seen whether it will be adopted into routine clinical practice to the same degree as other SPJ approaches have been in the adult violence risk assessment field in the UK*



Conclusions & Implications

- ◆ *Clinical implications*
 - ◆ *Labelling*
 - ◆ *Development*
 - ◆ *Is an AUC of .75 enough?*
 - ◆ *Who's interests are being served?*



Further information

- ◆ charlotte.rennie@bstmht.nhs.uk
- ◆ Tel: 0161 772 3855