



GGD
Amsterdam

Determinants of violent crime

Menno Segeren, Thijs Fassaert, Matty de Wit & Arne Popma





Top600 Approach Amsterdam

- Relatively small group of violent repeat offenders
- 13.000 offenses between 2006-2011
- Many young adults, many *high impact crimes*
- 2011: fatal robbery of jeweler → start Top600 Approach
- Top600 Approach = Person oriented diversion program, three pillars:
 - Tit for tat
 - Care
 - Underaged siblings



Public Health Service and Top600

- Social psychiatric screenings
- Advice partner organisations Top600 (e.g. police, probation office)
- Guidance towards care
- Casemanagement
- And ... research



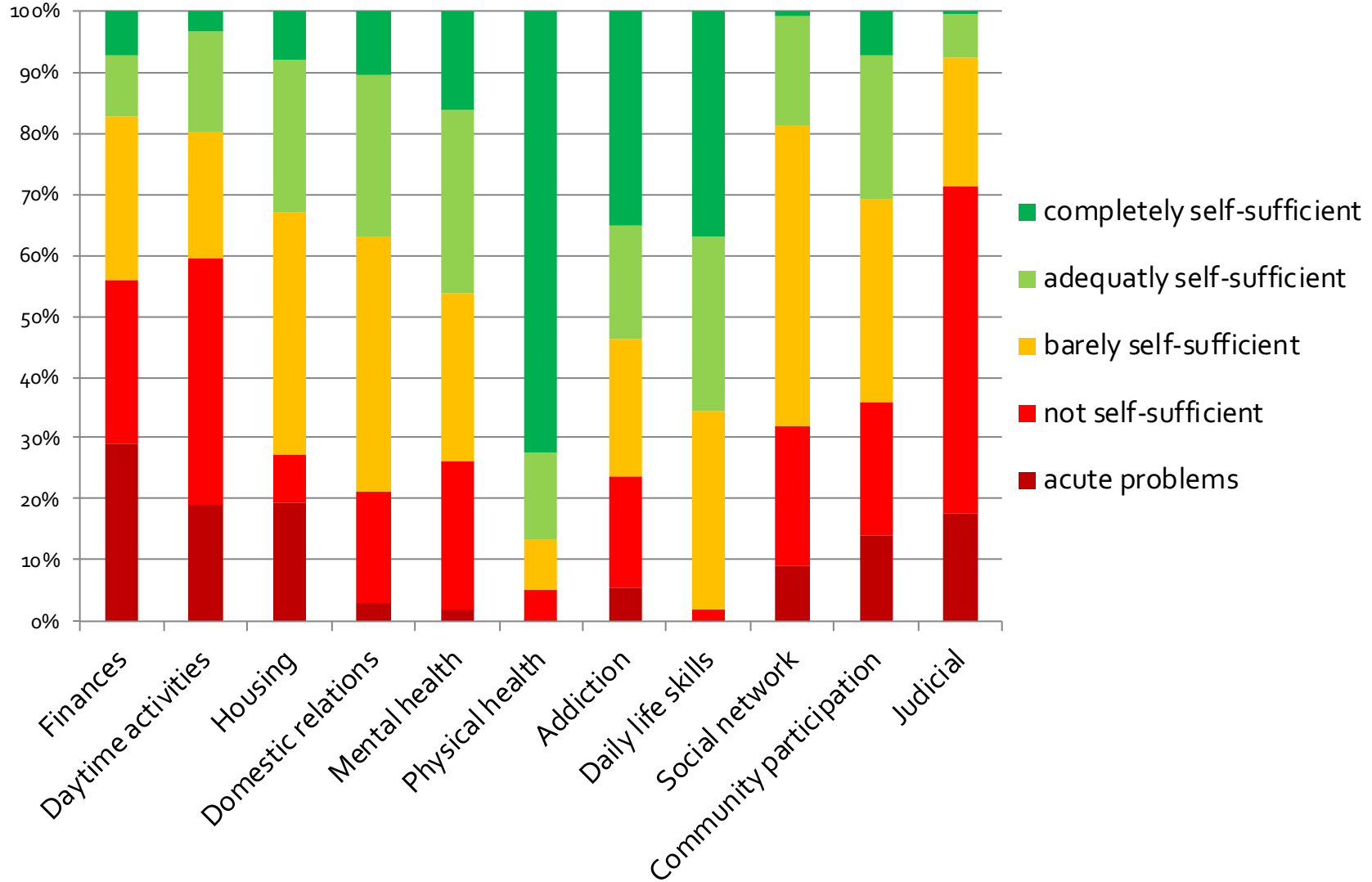
Top600: Who are they?

- Social-psychiatric screenings: N = 577
- Many public mental health needs

- Psychopathology (point prevalence):
 - Psychotic disorder 3.6 – 7.3%
 - Mood and anxiety disorder 6.6 – 21.7%
 - ADHD/Hyperactivity/Impulse control 6.9 – 14.6%
 - Personality disorder 11.3 – 64.3%
 - Current addiction 45.4 – 52.9%
 - (mild) Intellectual disability (IQ 70-85) 14.7 – 50.6%
- Lifetime psychopathology:
 - All DSM-IV-TR axis I and axis II disorders 72.0 – 84.3%



Self-sufficiency (N = 577)





Current study

- Identification of determinants of persistent and escalating (violent) criminal behavior during young adulthood within a high-risk group
- Cohort
 - young adult males (born 1985-1994)
 - history of juvenile probation
 - match with police registry (2007-2012)
 - 733 violent offenders (mostly Top600)
 - 740 non-violent offenders
- Study sample from cohort
 - 146 violent offenders
 - 241 non-violent offenders



Criminogenic risk factors during youth

- Sample: history of juvenile probation → high-risk group in general
- Youth care files available
- Criminogenic risk factors extracted from youth care files
- Instrument: Juvenile Forensic Profile (FPJ, ~70 risk factors)



CHAID analysis

- Decision tree
- Identifies variables most important for prediction of outcome measure
- Sample is iteratively divided into subgroups, based on Chi-square statistic
- Interaction between risk factors

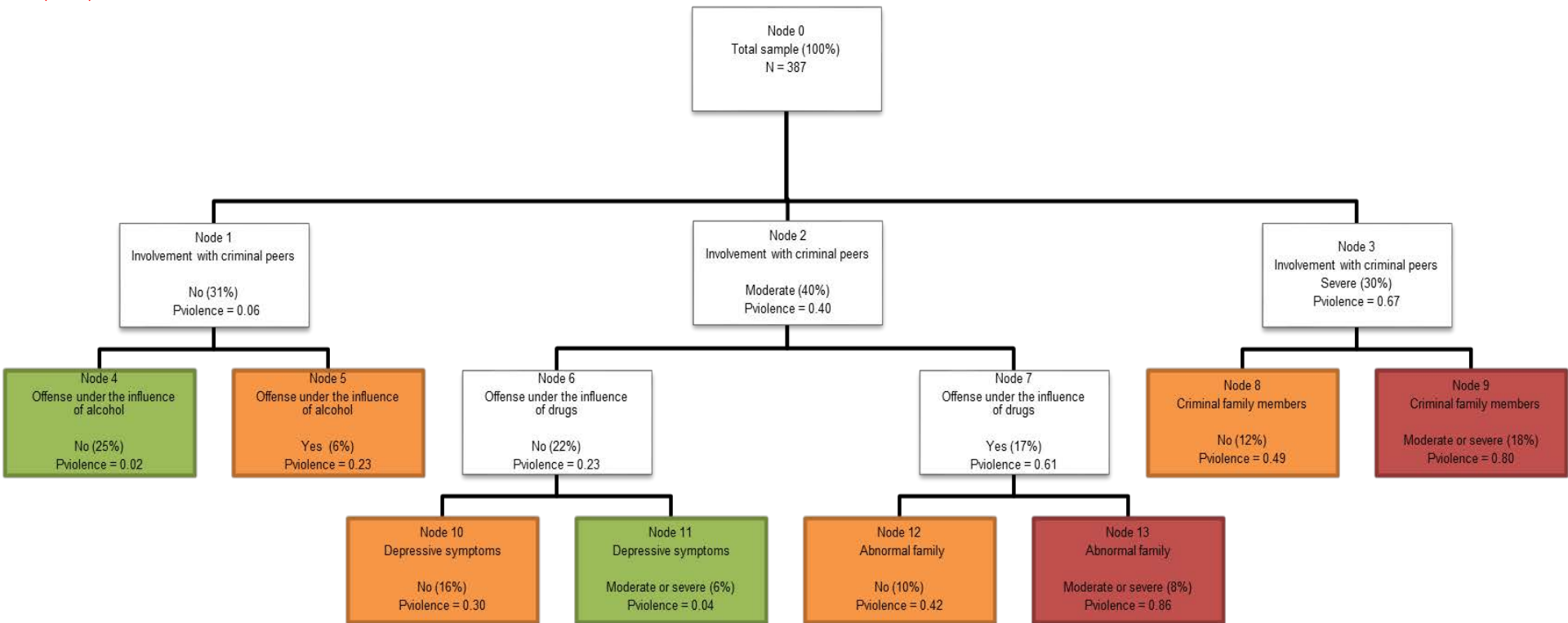
- In our study
- N = 387
- Input variables: 34 criminogenic risk factors (univariate differences)
- Outcome variable: violence (n = 146) vs. no violence (n = 241)



Results

- 8 subgroups (associated Pviolence)
- 6 risk factors most important
 - Involvement with criminal peers
 - Offenses under influence of drugs
 - Offenses under influence of alcohol
 - Criminal family members
 - Depressive symptoms
 - Abnormal family
- Model
 - Sensitivity: 90%
 - Specificity: 55%
 - Risk misclassification: 24%

Results CHAID analysis: Figure





Results CHAID analysis: Table

	Criminogenic risk factor (youth)	Score	N	% of sample	P _{violence}
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of alcohol	No No	96	24.8	.02
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of alcohol	No Yes	22	5.7	.23
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of drugs• Depressive symptoms	Moderate No No	63	16.3	.30
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of drugs• Depressive symptoms	Moderate No Moderate / severe	23	5.9	.04
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of drugs• Abnormal family	Moderate Yes No	38	9.8	.42
	<ul style="list-style-type: none">• Involvement with criminal peers• Offense under the influence of drugs• Abnormal family	Moderate Yes Moderate / severe	29	7.5	.86
	<ul style="list-style-type: none">• Involvement with criminal peers• Criminal family members	Severe No	47	12.1	.49
	<ul style="list-style-type: none">• Involvement with criminal peers• Criminal family members	Severe Moderate / severe	69	17.8	.80



Conclusion

- Prediction model with high sensitivity
- Model based on sample of persistent and escalating young adult offenders with many public mental health needs
- Model is relevant for current / future high risk youth
- Risk factors in model relatively 'easy' to screen for during intake juvenile probation