

# Explaining the Intergenerational Transmission of Psychopathy and Criminal Offending

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# Aims of this Presentation

- To investigate intergenerational continuity in offending (convictions) and psychopathy between two generations.
- To see to what extent the influence of family risk factors on offending varies by gender.

These questions are addressed in the Cambridge Study in Delinquent Development

- a 40-year follow-up of 411 London males from age 8 to age 48 (generation 2)
- their parents (generation 1)
- their children (generation 3)

# Key Questions Today

1. To what extent is there intergenerational continuity in psychopathy and criminal offending between two generations?
2. To what extent is this transmission mediated by psychosocial risk factors?
3. To what extent are there gender differences in the intergenerational transmission of psychopathy and criminal offending?

# Outline for today

- The CSDD: aims and method.
- What we know about the intergenerational transmission of psychopathy and criminal offending.
- Results from the CSDD:
  - Psychopathy data for fathers and their offspring.
  - Criminal record data for fathers, mothers and their offspring.

# Original Aims of the CSDD

- To describe the development of criminal and antisocial behaviour in urban males
- To explain why offending begins, why it continues, and why it ends
- To establish the relative importance of different predictors of offending and antisocial behaviour
- To study correlates of offending at different ages
- To investigate the effects of life events on the course of development of offending

# Characteristics of the Original Sample

- 411 South London males
- Attending 6 schools in a working class area
- Aged 8-9 in 1961-62
- Mostly born in 1953
- 357 White, British origin (87%)
- 14 Irish, 12 Black, 12 from Cyprus, 16 other White
- 94% working class
- 6% no father, 1% no mother
- Traditional British White urban working class sample

# Data Collected at Different Ages

- Males were interviewed at ages 8, 10, 14, 16, 18, 21, 25, 32, and 48
- Whole sample interviewed at all ages except 21 and 25, when subsamples were interviewed
- Parents interviewed when boy aged 8-15
- Peer ratings at ages 8 and 10
- Teacher ratings at ages 8, 10, 12 and 14
- Criminal records up to age 56
- Multiple constructs and multiple data sources

# G2 Male Social Interview

- Age 18: 389 out of 410 alive (95%)
- Age 32: 378 out of 403 alive (94%)
- Age 48: 365 out of 394 alive (93%)
- At age 48, out of 411 men:
  - 17 had died (13 convicted)
  - 5 not traced
  - 24 refused



# The G3 Child Study

- 550 G3 Offspring Interviews (84% of all those eligible).
- They were matched with their fathers' data:
  - Father and son dyads
  - Father and daughter dyads
- Some could not be matched:
  - Some fathers refused to be interviewed
  - Some fathers had died before interview
  - Some G3 offspring had lived abroad since early childhood and could not be searched for a criminal record

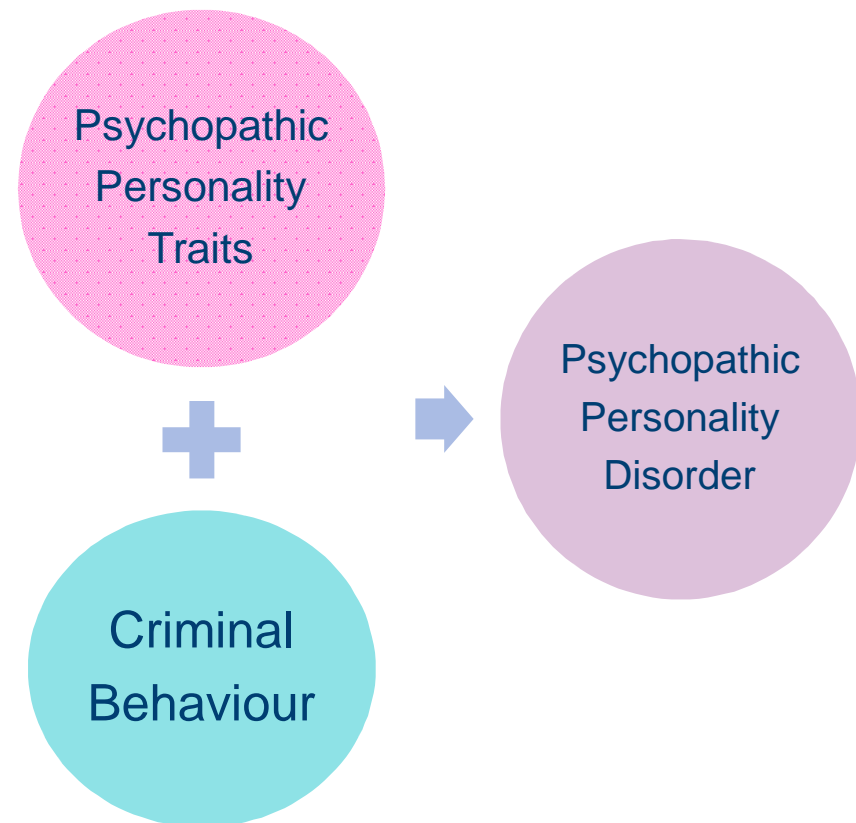
# Characteristics of the G3 Sample

- Average age was 25 years, 8 months when interviewed
- 35% were living with parent(s) (42% of males, 27% of females)
- 13% were married (9% of males, 17% of females)
- 29% were cohabiting (23% of males, 36% of females)
- 29% had a skilled, non-manual occupation (24% of males, 35% of females)
- 8% were unemployed (11% of males, 5% of females)
- 20% had an undergraduate degree, or were currently studying for one (20% of males, 20% of females)

# Intergenerational Transmission of **Psychopathy** – What We Know So Far...

# Intergenerational Transmission of Psychopathy and Antisocial Behaviour

- Familial Nature of criminal behaviour in well known
- But what about psychopathic personality traits?



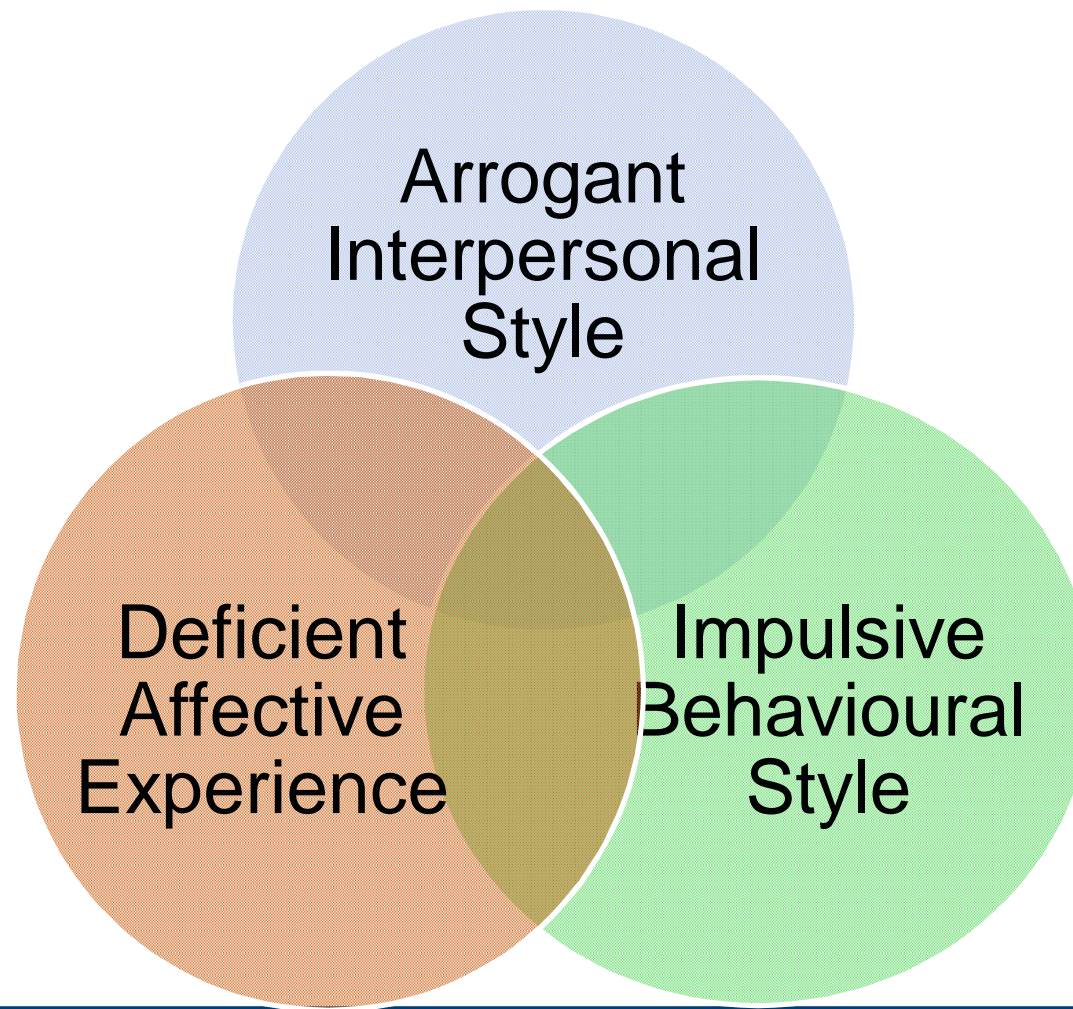
# Previous Research on Psychopathy & Antisocial Behaviour

- Psychopathic traits are moderately heritable (Larsson et al., 2006), of early onset (Viding et al., 2005), and fairly stable from adolescence through to adulthood (Lynam et al., 2007)
- Has biological and neurological origins (Gregory et al., 2012; Lorber, 2004; Raine et al., 2010; Yang et al., 2012).
- Intergenerational transmission may be via an environmentally-mediated processes - parenting etc.,
- Antisocial fathers residing in the family home
  - Increased genetic risk of ASPD
  - An environment unsuitable for child rearing
    - these cumulatively predict poor behavioural outcomes for their children (Jaffee et al., 2003; Blazej et al., 2008).

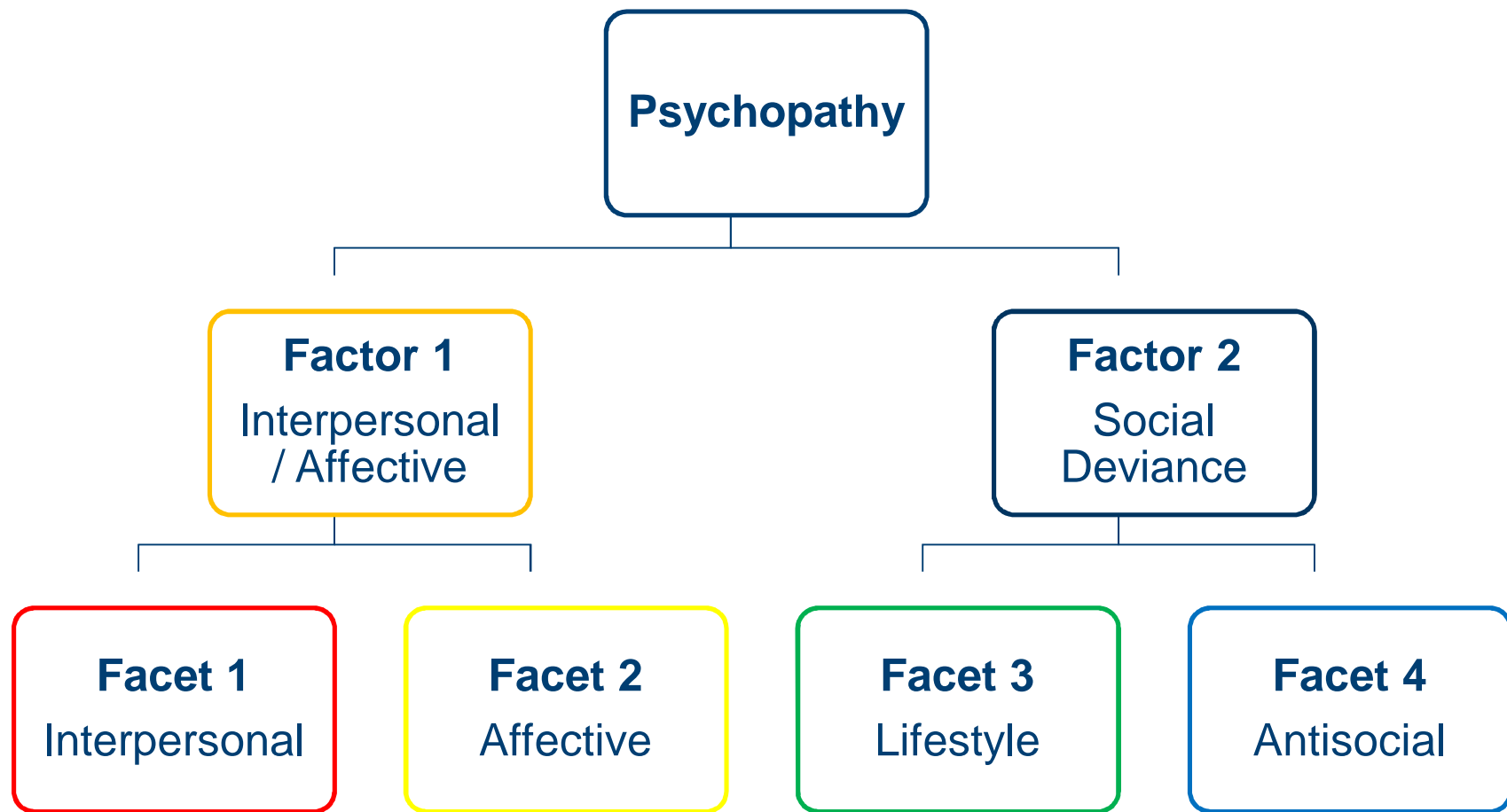
# Psychopathy in Community Samples

- Subclinical psychopathy often accompanied by less serious antisocial behaviour in community samples (Frick et al. 2000).
- Psychopathic traits – continuously distributed within the population (Hare and Neumann, 2008).
- Psychopaths identified by Widom (1977); 74% arrested, 46% psychiatric treatment.
- Forensic samples – limited generalisability.
- Broad spectrum of psychopathy – development and prevention
- Adaptive responses to psychopathic traits – successful psychopaths (Mullins-Sweatt, 2010; Coid et al. 2011).

# Psychopathic Personality Disorder



# Hare Psychopathy Checklist





# Loney, Huntenburg, Counts-Allen et al. (2007) Study

- A cross-sectional study of a non-referred sample of 83 children found a significant association between maternal affective features of psychopathy and the callous unemotional traits of their children (aged 10).
- Their analysis also suggested that dysfunctional parenting was important in explaining the intergenerational transmission.
- Fathers: “forgotten contributors to child development” (Lamb, 1975).
- Phares and Compas (1992) reviewed 577 articles published in eight clinical and developmental journals between 1984 and 1991 and found that 48% of the articles had focused exclusively on mothers, whereas only 1% had included only fathers.

# Intergenerational Transmission of **Criminal Offending** – What We Know So Far...

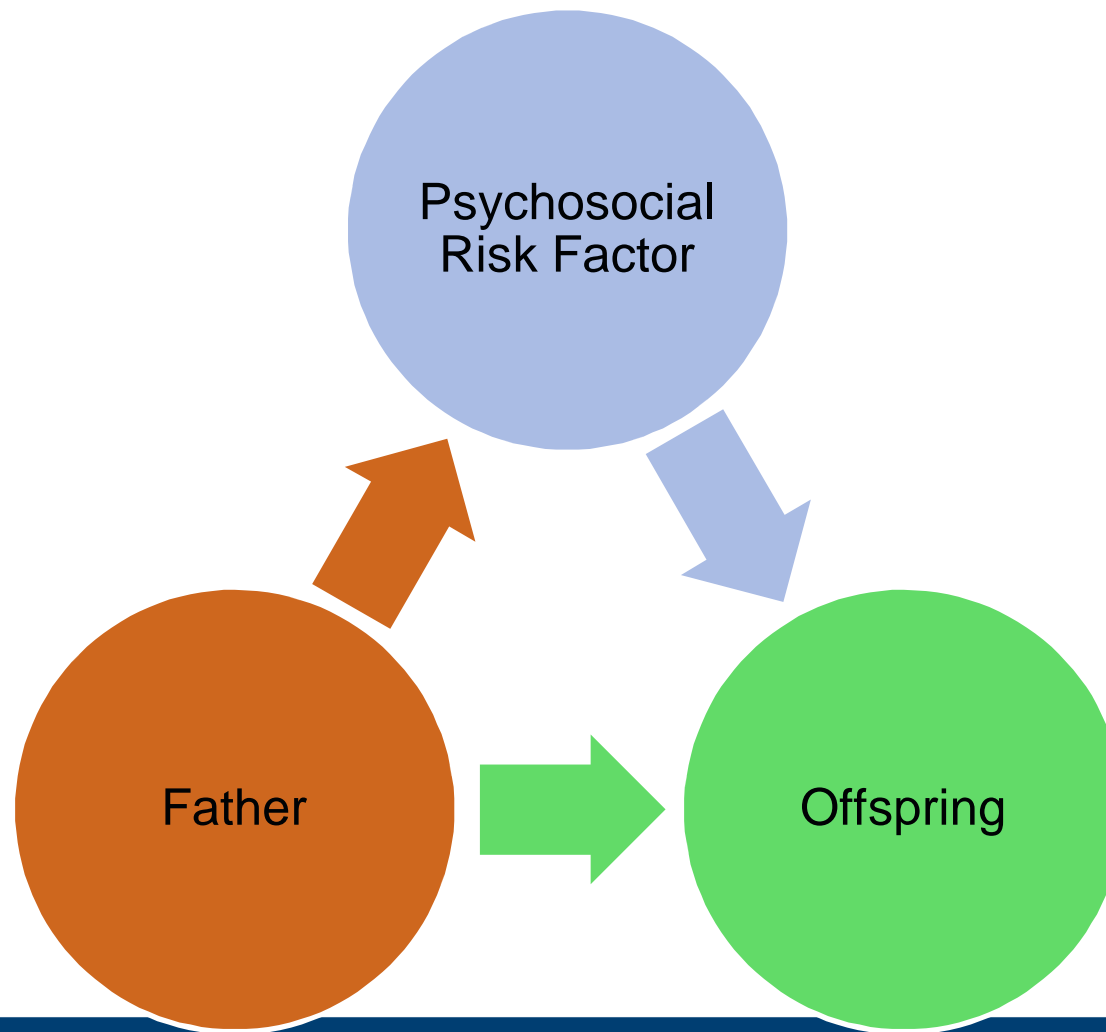
# Previous Cambridge Study Findings

## G1 → G2

- Having a convicted parent before the 10<sup>th</sup> birthday was one of the best explanatory predictors of the boy's juvenile delinquency.
- Having a convicted family member (a father, mother, brother, or sister) predicted the boy's own convictions, and all four relatives were independently important as predictors.
- Convictions were highly concentrated in families; 6% of families of origin accounted for half of all convictions (G1 and G2).
- Correlations were stronger for same-sex siblings (.45 to .50), than for opposite-sex ones (.27).

# Methodology

# Mediation Model



# Ten Psychosocial Risk Factors

## **From G2 males interview at age 32:**

1. Accommodation problems
2. Cohabitation problems
3. Employment problems
4. Alcohol misuse
5. Drug use
6. Teenage father
7. Large Family

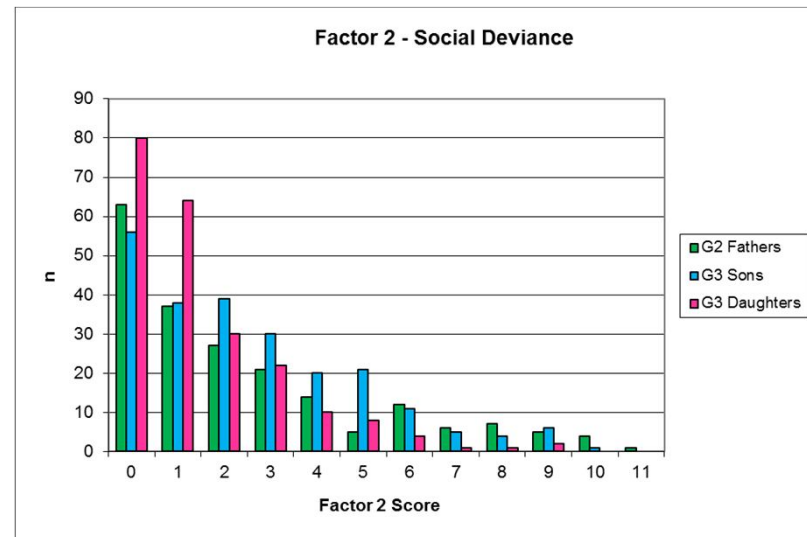
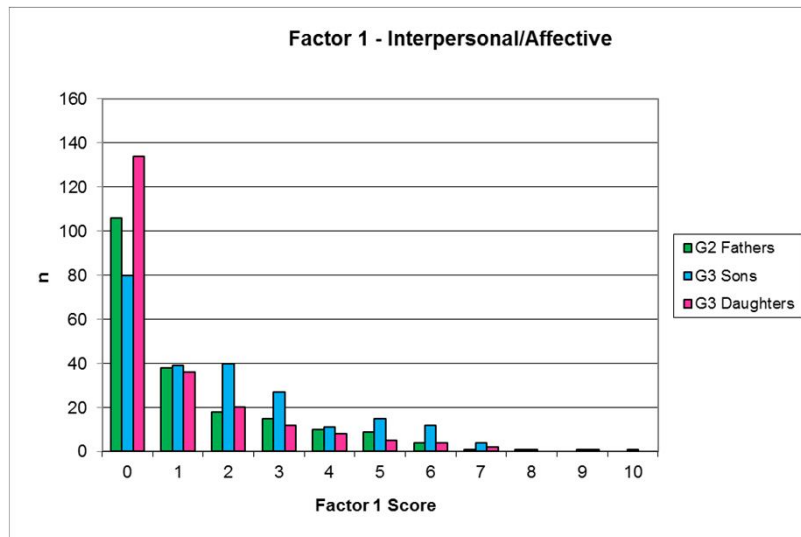
## **From G3 offspring interview at ages 18 – 32:**

8. Disrupted family
9. Poor supervision
10. Harsh discipline

**Important predictors of delinquency, ASPD at age 32 and PCL: SV scores at age 48.**

# Results Intergenerational Transmission of **Psychopathy**

# Prevalence of Psychopathy in a Community Sample





## G2 → G3 PCL: SV scores

G2Males → G3Males	<i>b</i>	<i>SE</i>	<i>P</i> Value
<i>Factor 1 scores</i>	0.41	0.09	< 0.001
<i>Factor 2 scores</i>	0.30	0.06	< 0.001

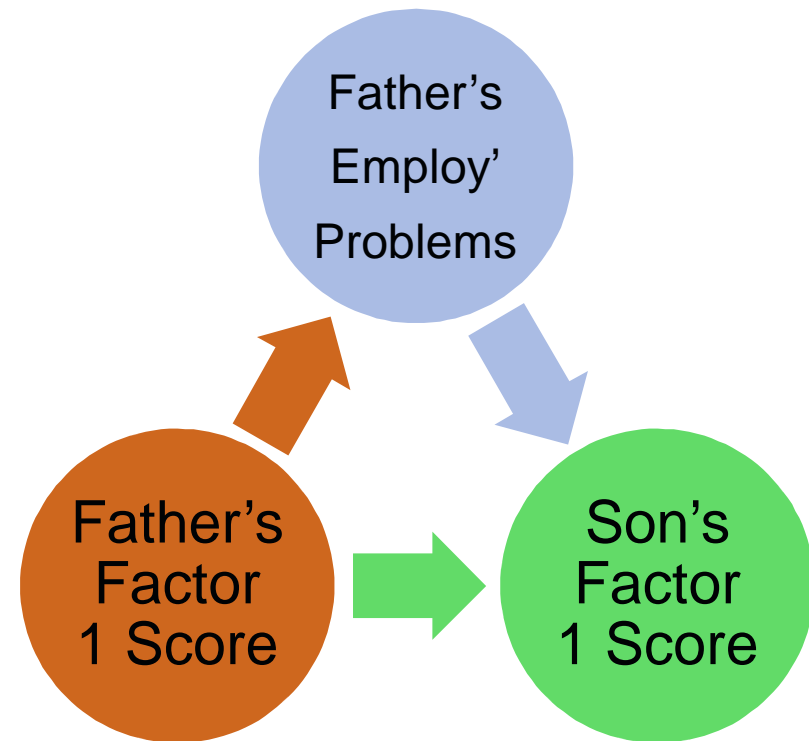
G2Males → G3Females	<i>b</i>	<i>SE</i>	<i>P</i> Value
<i>Factor 1 scores</i>	0.15	0.07	0.02
<i>Factor 2 scores</i>	0.20	0.04	< 0.001

# Mediation Analysis – Final Models



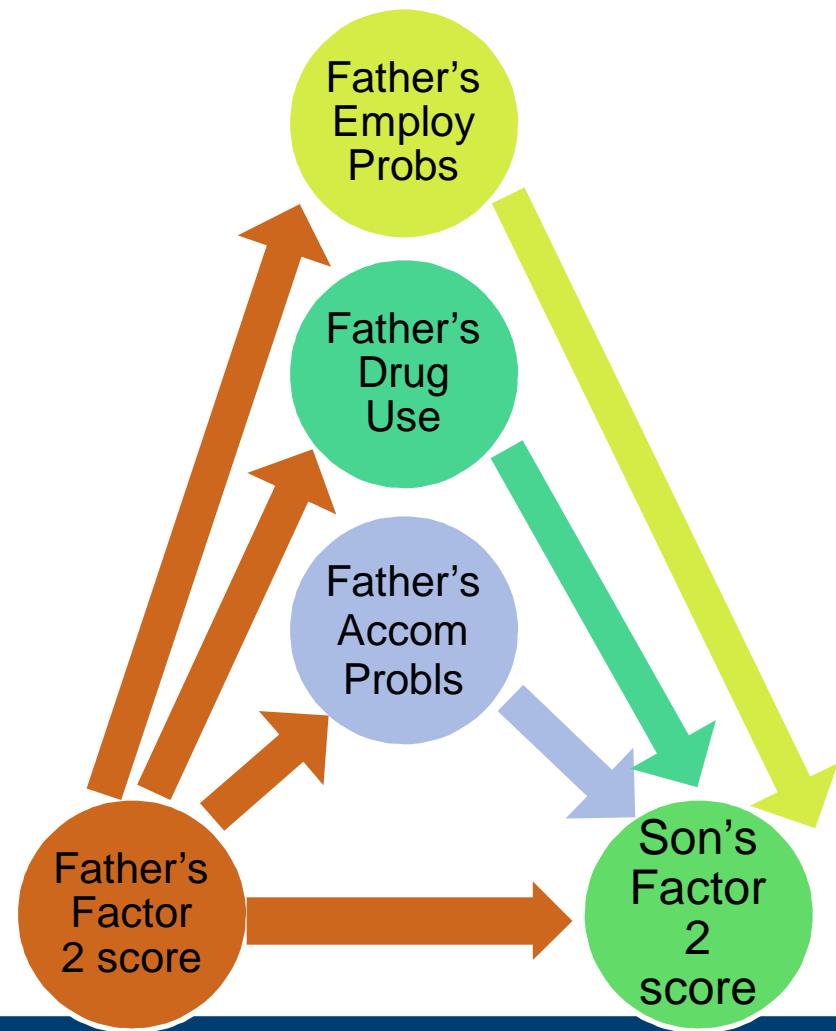
# Transmission of Factor 1 scores from Fathers to Sons

- Mediated through father's employment problems.
- Both direct and indirect effects are significant.
- Mediated effect is quite small (1/3 of the size of the direct effect).
- Proportion of effect that is mediated is 0.26



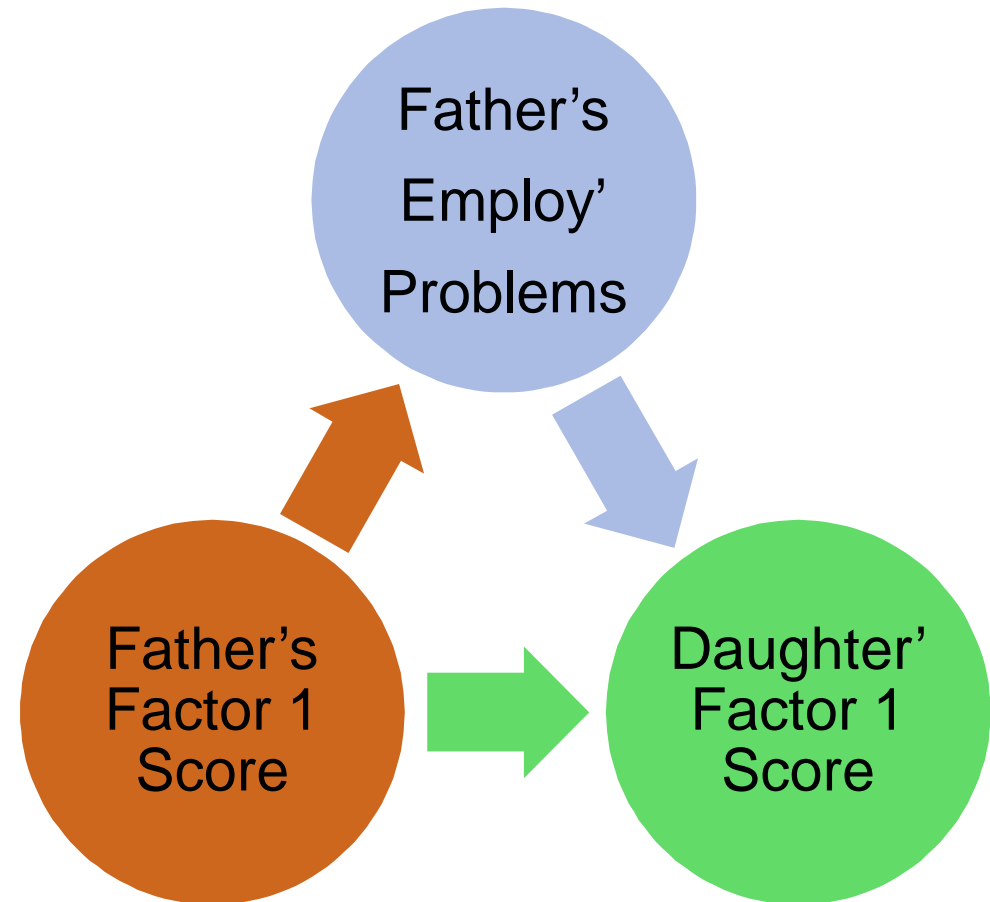
# Transmission of Factor 2 scores from Fathers to Sons

- Mediated through father's employment problems, accommodation problems and drug use
- The direct and three indirect effects are all significant.
- Mediated effect through accommodation problems is quite small.
- Mediated effect through drug use is somewhat larger.



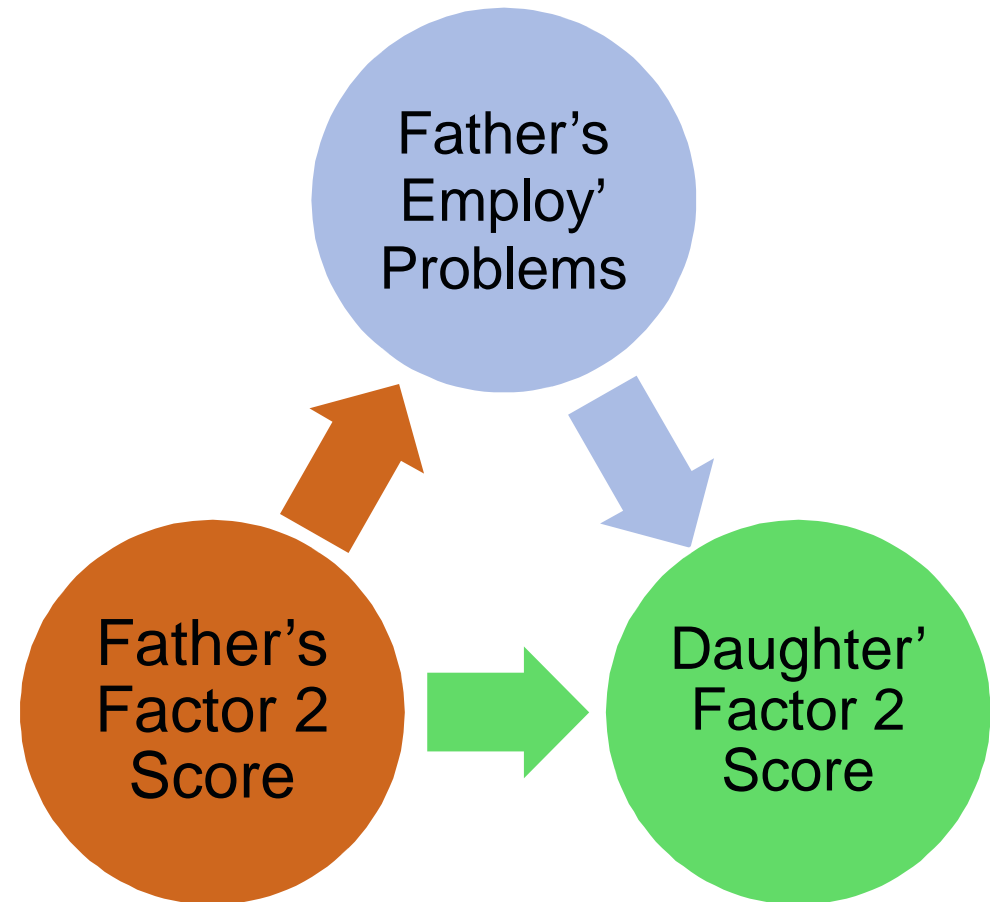
# Transmission of Factor 1 scores from Fathers to Daughters

- Mediated through father's employment problems.
- Only the indirect effect is significant.
- Mediated effect is slightly smaller than the size of the direct effect).
- Proportion of effect that is mediated is 0.33



# Transmission of Factor 2 scores from Fathers to Daughters

- Mediated through father's employment problems.
- The direct and indirect effects are both significant.
- Mediated effect is quite small (1/4 the size of the direct effect).
- Mediated effect though drug use is somewhat larger.
- Proportion of effect that is mediated is 0.17



# Results

## Intergenerational Transmission of **Criminal Offending**

# Prevalence of Criminal Convictions

- The sample contained:
  - 105 convicted G2 fathers (43%) (33%)
  - 21 convicted G2 mothers (9%) (9%)
  - 83 convicted G3 offspring (17%)
    - 65 sons (23%) (26%)
    - 19 daughters (8%) (5%)
- Of the 242 families in the analysis, 125 (52%) had at least one convicted family member (a G2 mother or father or G3 offspring).



# Convictions within Families

- 10.0% of families were responsible for 53.0% of convictions.
- 25.8% were responsible for 84.5% of convictions.
- The percentage of offspring who were convicted generally increased with the number of other family members convicted;
  - 8.1 per cent were convicted if no other family member was convicted
  - 21.7 per cent convicted if one other family member convicted
  - 32.1 per cent convicted if two other family members convicted
  - 38.1 per cent convicted if three or more other family members convicted
- Relatively few convicted G2 fathers had a convicted female partner (24%), but, strikingly, 88 per cent of convicted G2 mothers had a convicted male partner (same as G1).

# Results: Intergenerational Transmission of Convictions

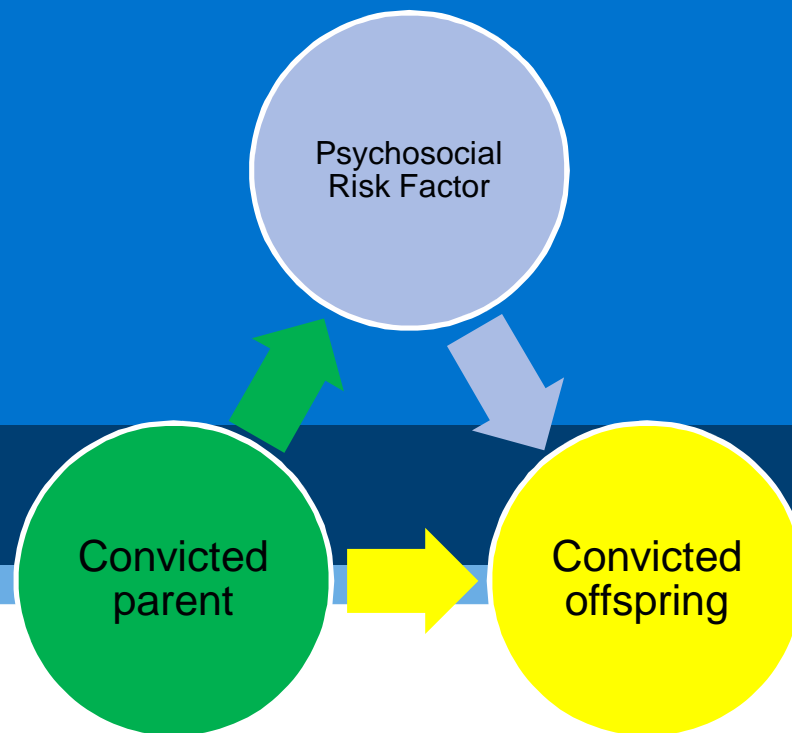
## Male Offspring

	Odds Ratio	P Value
Convicted Father	3.02	<0.01
Convicted Mother	2.98	<0.05

## Female Offspring

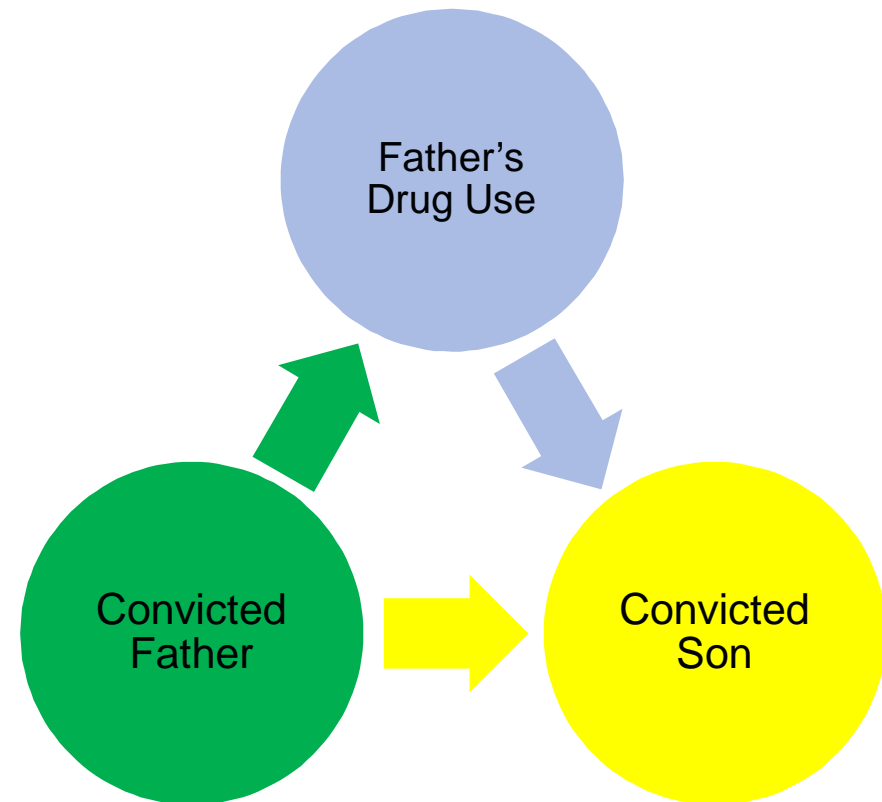
	Odds Ratio	P Value
Convicted Father	3.48	ns
Convicted Mother	5.16	<0.05

# Mediation Analysis – Final Models



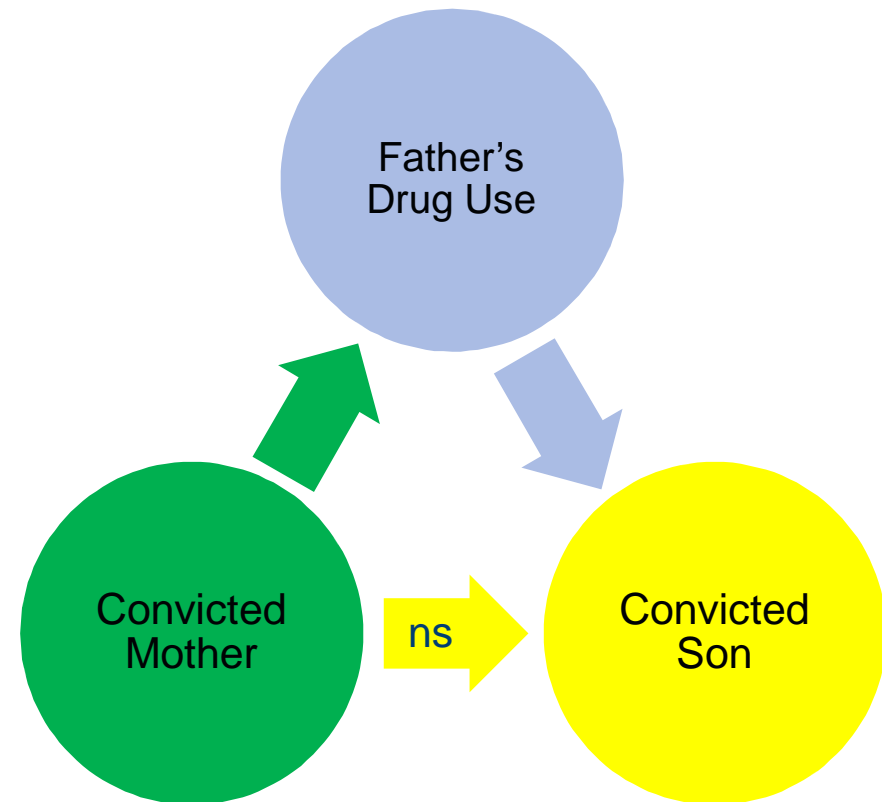
# Transmission of Convictions from Fathers to Male Offspring

- Mediated through Father's Drug Use.
- Both direct and indirect effects are significant.
- Mediated effect is quite small (1/4 of the size of the direct effect).
- Proportion of effect that is mediated is 0.21



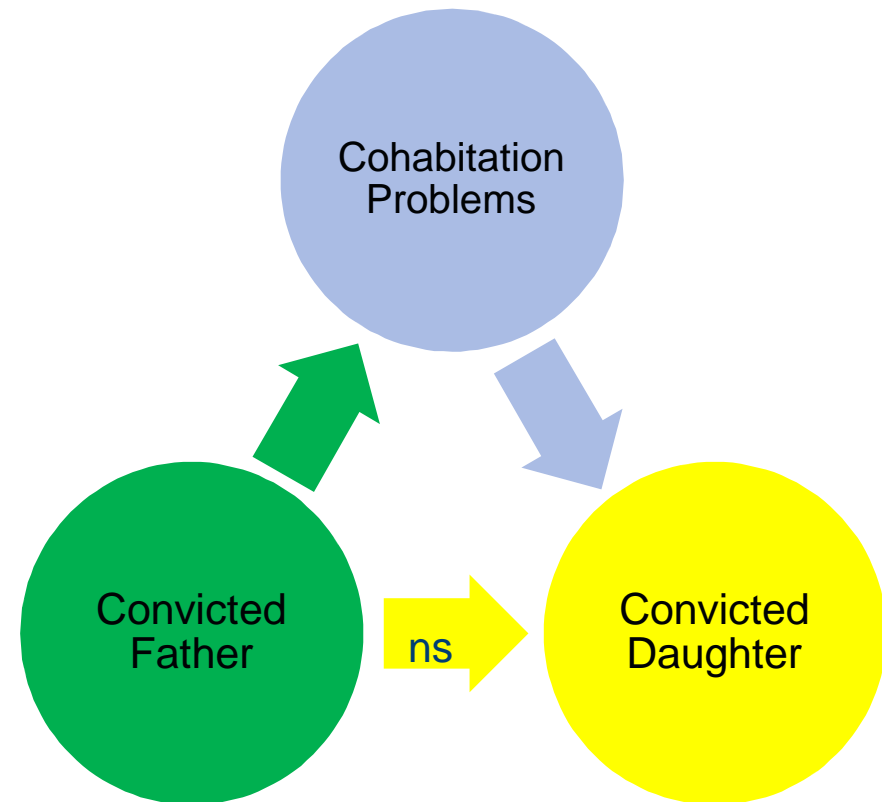
# Transmission of Convictions from Mothers to Male Offspring

- Mediated through Father's Drug Use.
- Direct effect is not significant.
- Mediated effect is quite small ( $< 1/2$  of the size of the direct effect).
- Proportion of effect that is mediated is 0.29



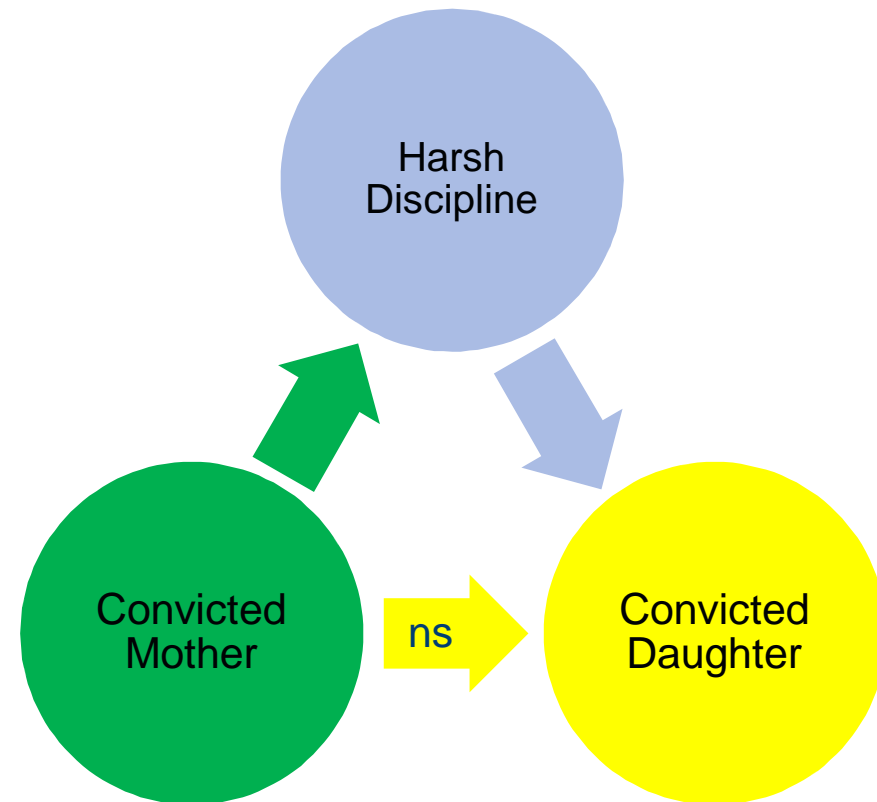
# Transmission of Convictions from Fathers to Female Offspring

- Mediated through Father's Cohabitation Problems.
- Only indirect effect is significant.
- Mediated effect is quite large (nearly twice the size of the direct effect).
- Proportion of effect that is mediated is 0.66



# Transmission of Convictions from Mothers to Female Offspring

- Mediated through Harsh Discipline.
- Direct effect is not significant.
- Mediated effect is quite small ( $< 1/2$  of the size of the direct effect).
- Proportion of effect that is mediated is 0.27



# Conclusions Intergenerational Transmission of **Psychopathy**



# Strengths & Limitations

## Limitations:

- Several criticisms of the PCL: SV
  - Over / under inclusive.
  - Insensitive to change.
- Retrospective reports of parenting.
- Psychopathy construct - applicable to women?
- Fathers and their offspring assessed for psychopathy at different ages.

## Strengths:

- First study of psychopathy in a community sample, using a measure that is known to be reliable and valid.
- sample studied through to adulthood.

# Conclusions (1)

- Psychopathy is transmitted from fathers to both their male and female biological offspring.
- This relationship appears stronger between fathers and their sons.
- Transmission is stronger for Factor 2.
- This relationship is mediated by psychosocial risk factors, particularly the father's employment problems.
- Transmission of psychopathy does not vary according to the amount of time the father spends in the family home.
- Effect of the fathers' psychopathy on offspring psychopathy is more severe for sons.

# Conclusions – Father's Employment Problems as a Mediator of Transmission

- Ullrich, Farrington et al. (2008) looked at whether some psychopathic traits may be related to measures of life success:
- Two factors; 'status and wealth' and 'successful intimate relationships'
- The authors concluded that none of the psychopathic personality traits are an asset in achieving life success, the interpersonal facet in particular had no relationship with either dimension of life success.
- Patrick, Zempolich et al. (1997) found that the father's occupational status was related to emotionally detached prisoners (high F1, low F2), suggesting they came from more financially privileged backgrounds.
- Lynam et al. (2008) family SES interacts with psychopathy in early adolescence to predict psychopathy in adulthood.

# Conclusions Intergenerational Transmission of **Criminal Offending**

# Conclusions

- Convictions are highly concentrated in families
- Convictions are transmitted from G2 parents to G3 offspring
- Largest odds ratios for same-sex intergenerational pairs
- Poor supervision was the best predictor of G3 male convictions, while cohabitation problems was the best predictor of G3 female convictions
- Transmission to male offspring was mediated by the father's drug use
- Transmission to female offspring was mediated by the father's cohabitation problems and harsh discipline
- Mediators appeared to differ according to the gender of the offspring, rather than the parent.

# For further information....

- Auty, K. M., Farrington, D. P., & Coid, J. W. (2015). Intergenerational transmission of psychopathy and mediation via psychosocial risk factors. *The British Journal of Psychiatry*, 206(1), 26-31.
- Auty, K. M., Farrington, D. P., & Coid, J. W. (2015). Authors' reply (Vol. 206). *The British Journal of Psychiatry*, 206(4), 343.
- Auty, K. M., Farrington, D. P., & Coid, J. W. (2015). The validity of self-reported convictions in a community sample: Findings from the Cambridge Study in Delinquent Development. *European Journal of Criminology*, 12(5), 562-580.
- Auty, K. M., Farrington, D. P., & Coid, J. W. (2015). The intergenerational transmission of criminal offending: Exploring gender-specific mechanisms. *British Journal of Criminology*.

# Thank you!

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