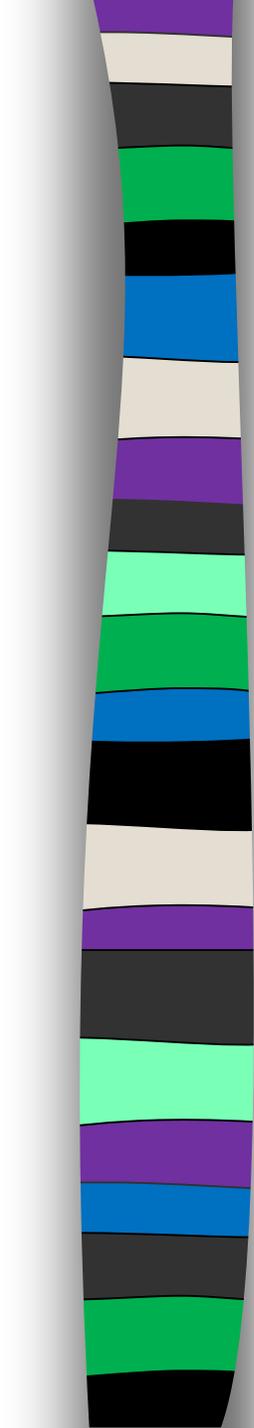


The practical application of Bayesian approaches to advance understanding of the risk and protective factors associated with youth offending in England and Wales

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PhD: Aims and Objectives

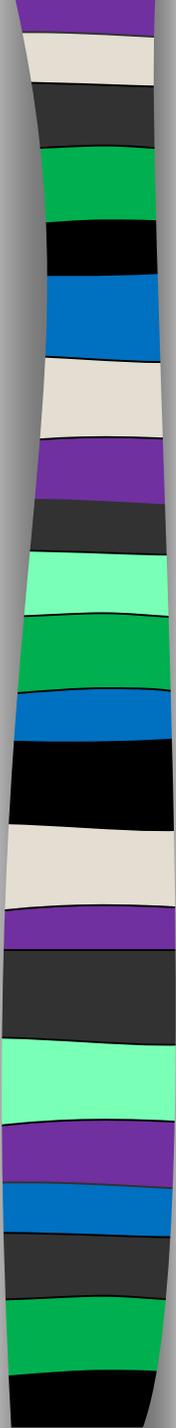
- Overarching Aim
 - To explore the potential for using Bayesian approaches to model risk factors and youth offending relationships
- Objectives
 1. To extend the range of risk factors beyond the psychosocial to also consider structural factors (social, policy and organisational)
 2. To explore the relationship between risk factors and more sensitive measures of reoffending eg offence types, different types of criminal career

Motivation

The level of scrutiny that those who come into contact with the youth offending service are subject to means that there is a rich source of data which can be interrogated ... its perhaps just not in the most accessible format.

If we can identify the root causes of the problem then we can start to work more constructively with young people

The beauty of the techniques that I am utilising is that they continue to 'learn' as more information is provided....



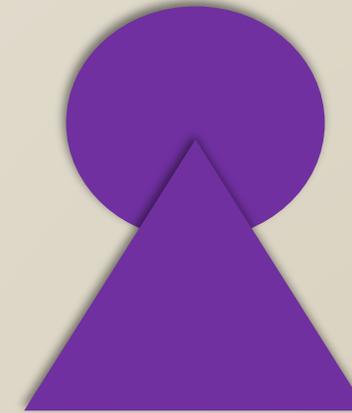
ASSET: Risk Assessment Process

Static Factors

Offending History +
Nature of Offence

Repeated assessments for the
duration of their sentence
(545 observations, max/person = 19)

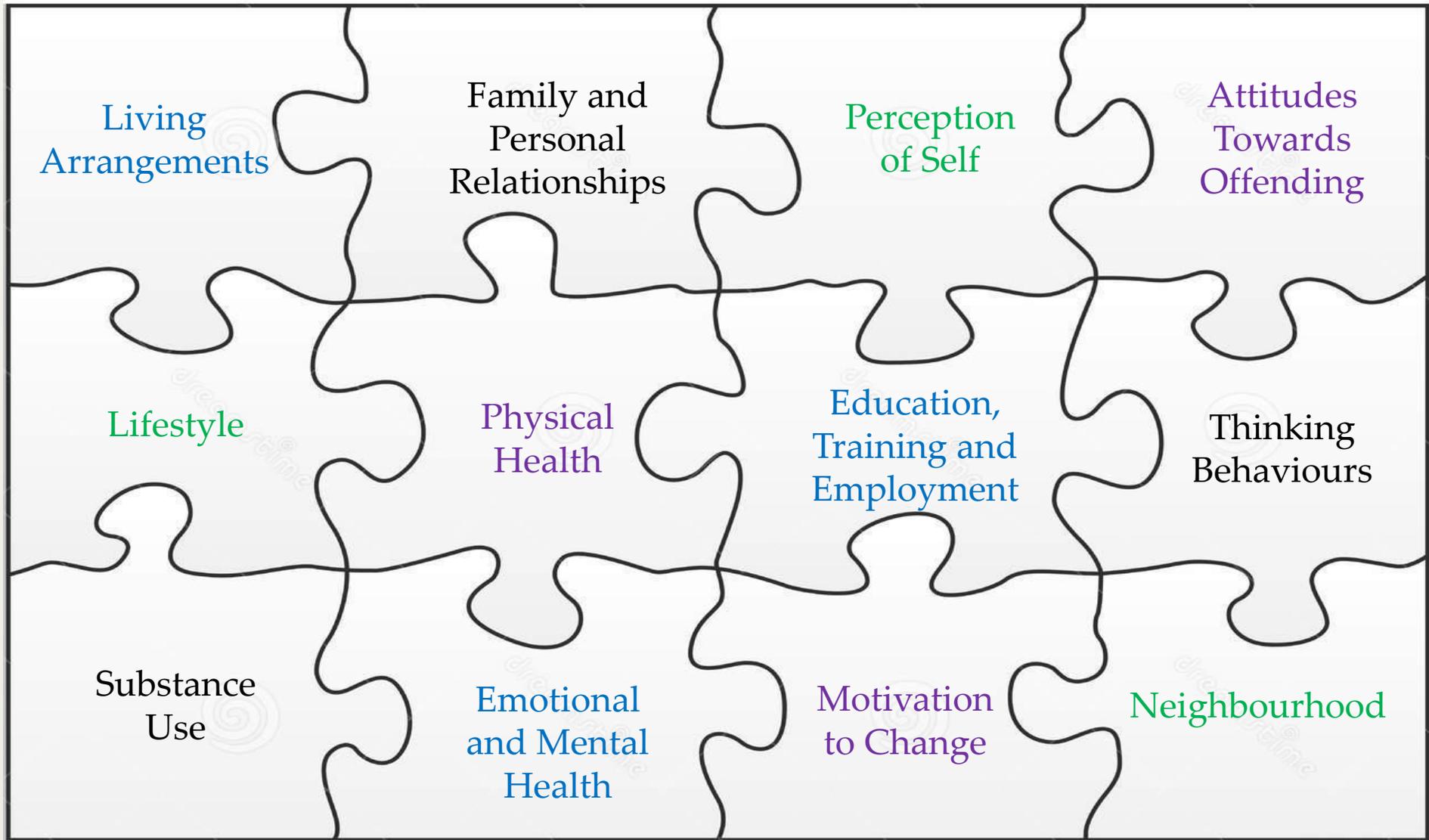
Dynamic Factors:
12 'Risk'
Domains

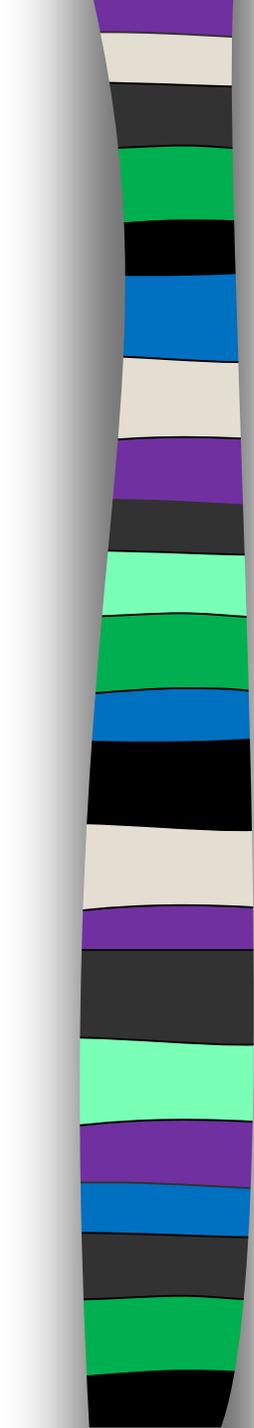


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Individuals

- Male / Female
- White / Non-White
- Looked After Child?

12 Domains of Dynamic Risk (ASSET Core Profile)





Other Considerations

- Offending Career – “Static Factors”
 - First time entrant ie have no previous reprimands, warnings or cautions
 - Age of first reprimand, warning or caution
 - Age of first conviction
- Organisational (Fixed)
 - Having experience of Care (is or has been a looked after child)
- Organisational (Time-Varying)
 - Non-Compliance (“Breaches”)
 - Court Appearances eg bail hearings, sentencing
 - Periods in custody / on remand

Gender

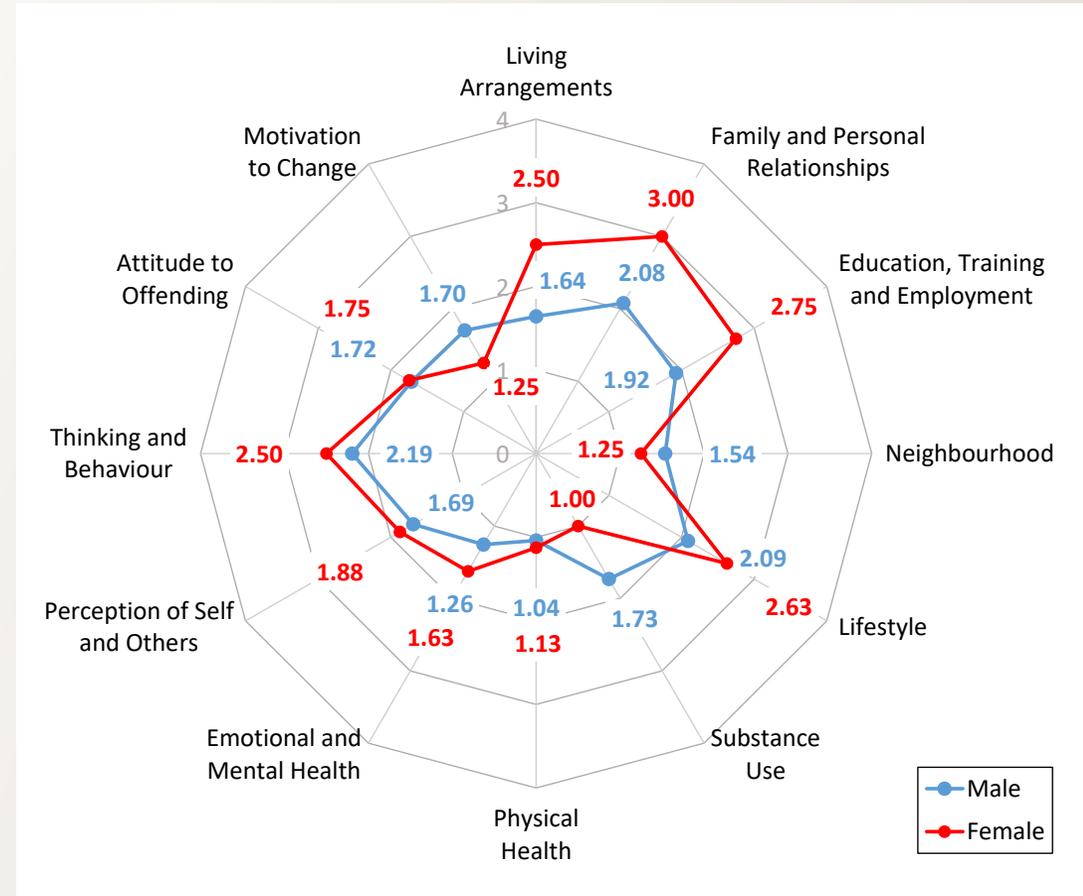
At Time 0 (time of initial assessment), there are significant differences in the average domain scores for:

- Living arrangements
- Family and personal relationships

No statistical difference in the scores for:

- Neighbourhood
- Substance use
- Physical health
- Attitudes to offending
- Motivation to change

Only 6 young people identifying as non-White therefore a lot of uncertainty around the estimates. Not possible to look at the interaction between gender and ethnicity as no non-White females.



The odds of females further offending are **1.6 times (60% higher)** than for males [0.45, 3.03]

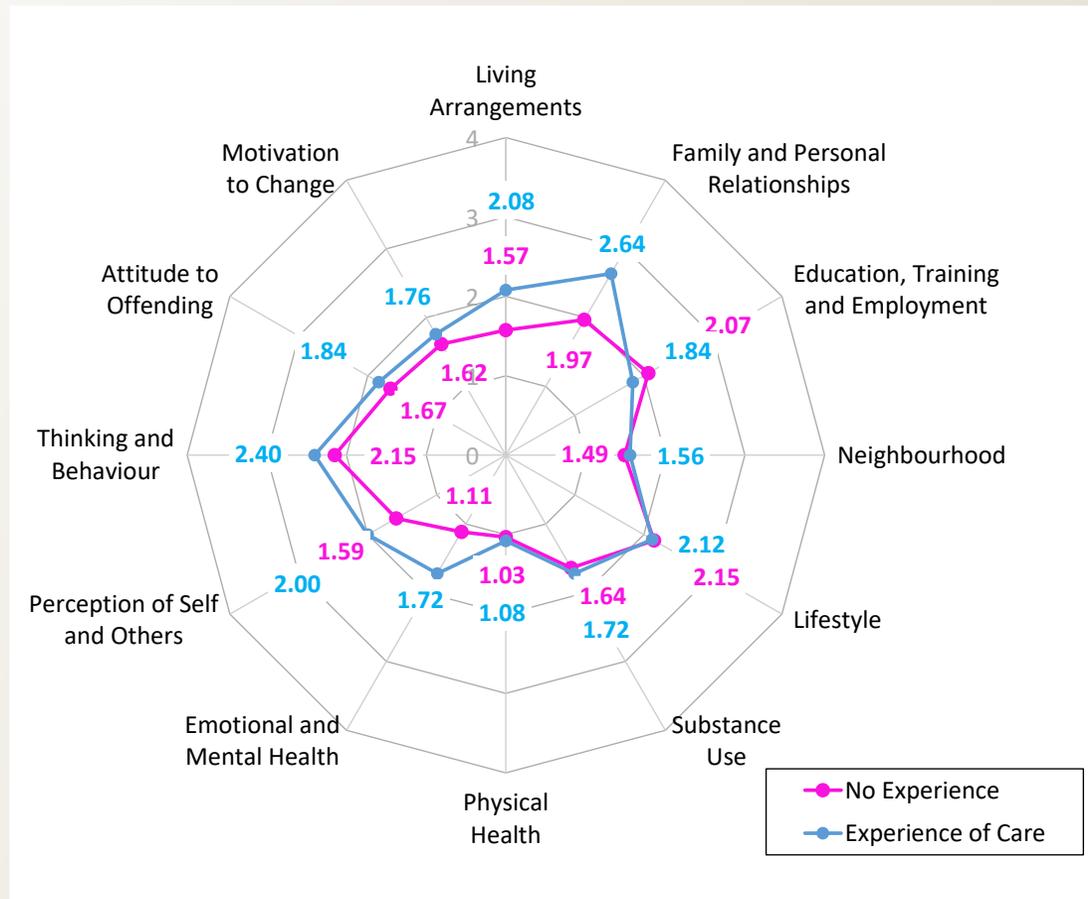
Experience of Care

At Time 0, there are significant differences in the average domain scores for:

- Family and personal relationships
- Emotional and mental health

No statistical difference in the scores for:

- Neighbourhood
- Lifestyle
- Substance use
- Physical health



The odds of further offending amongst those with experience of care are **1.7 times (70% higher)** than for their peers [1.02, 3.03]

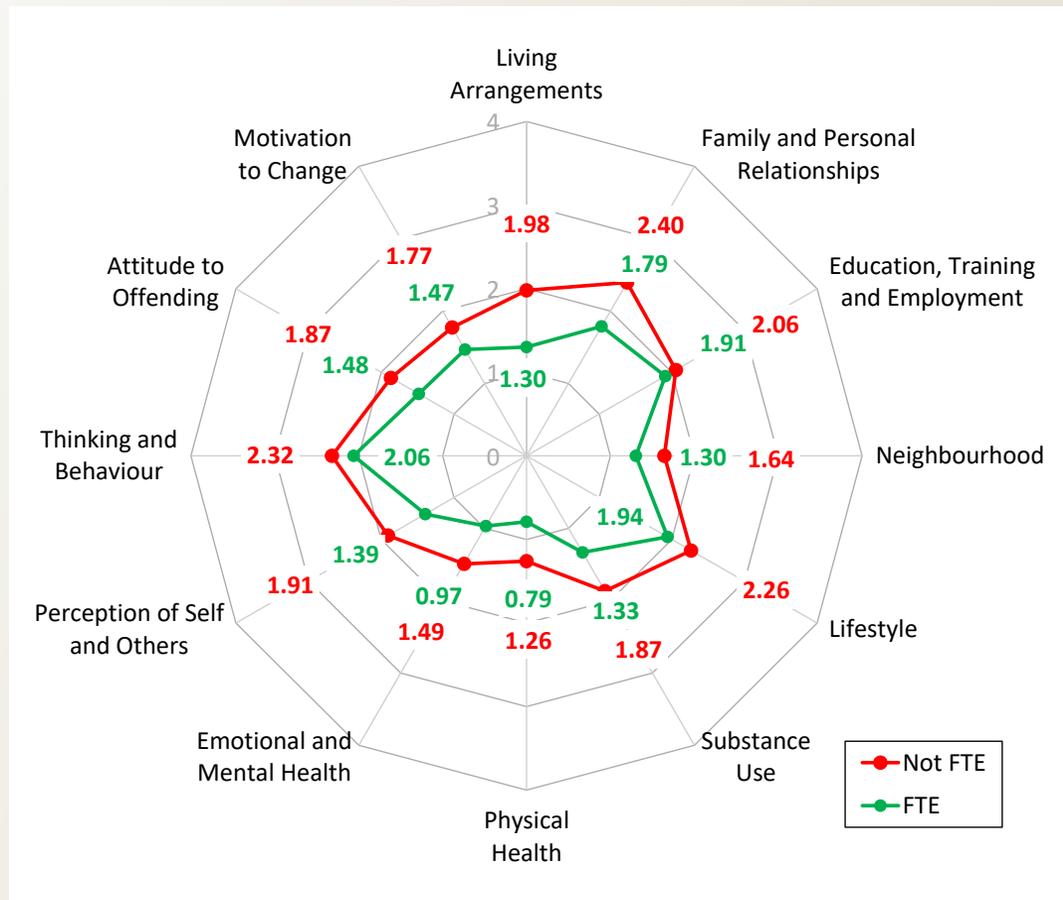
The odds for males without care experience **5.6 times** the odds for their peers [0.056, 0.99]

FTE?

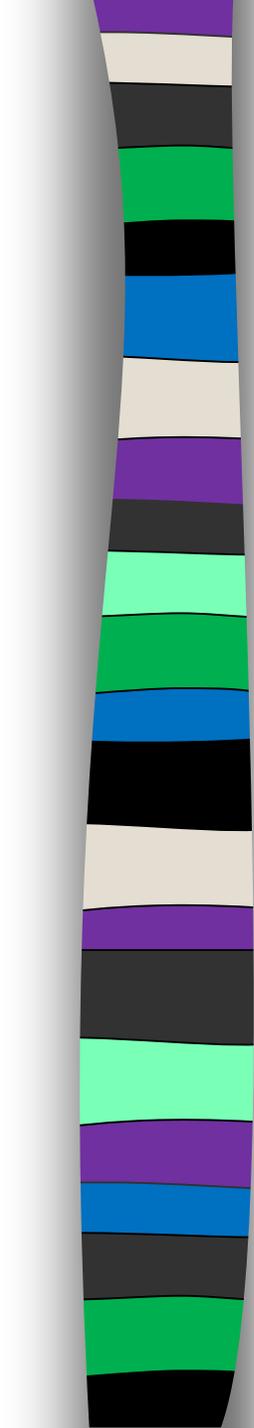
All members of the cohort have been referred as a result of their proven offending. This status reflects whether they were a **first time entrant** into the YJS at the time of their referral.

At Time 0, there are significant differences in the average domain scores for:

- Family and personal relationships
- Emotional and mental health
- Perception of self and others



The odds of further offending amongst FTEs is **1.09 times (9% higher)** than for those with a history of proven offending [0.69, 1.72]



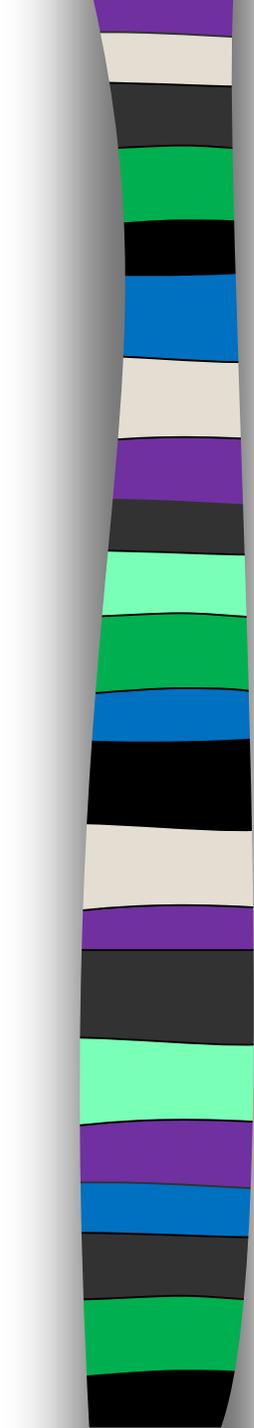
Does being an FTE make a difference?

When no other explanations offered, Gender:

- Having a previous offending history (not FTE) for females increases the odds by factor of **3.5**
- Being an FTE for males increases the odds of further offending by **13%**
- The difference in odds ratios for further offending comparing male vrs females with previous offending history compared to males vrs females who are FTEs is **4.0**

When no other explanations offered, Experience of Care:

- For an FTE, having experience of care increases the odds of further offending by a factor of **2.4**
- For those with previous offending history, being in care increases the odds of further offending by **45%**
- The difference in odds ratios for further offending comparing non-FTEs vrs FTEs with experience of care compared to non-FTEs vrs FTEs without that experience is a factor of **1.6**



Does being an FTE make a difference?

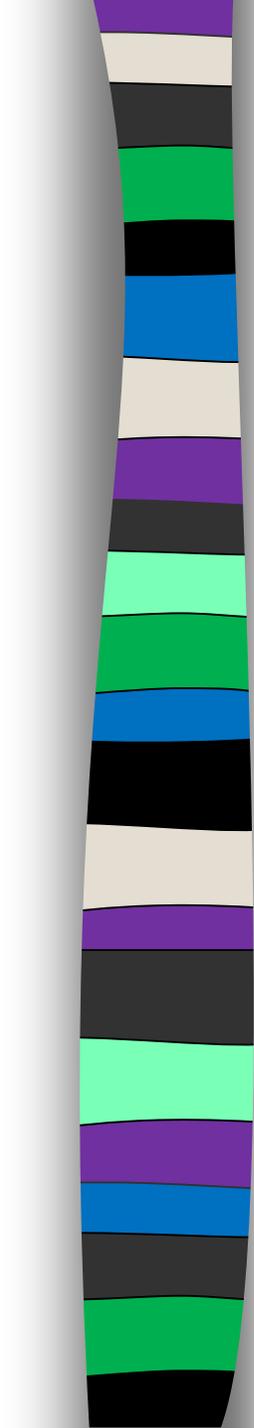
When considered in the context of Gender and experience of care:

Relative to Males with previous offending history and no experience of care:

- Being an FTE increases the odds of further offending by **41%**
- Having experience of care increases the odds by **58%**
- Being an FTE and experience of care increases the odds of further offending by a factor of **2.2**

Relative to female FTEs with experience of care:

- Having a previous offending history increases the odds of further offending by a factor of **2.4**
- Not being in care increases the odds by a factor of **2.4**
- Having a previous offending history (not FTE) and no experience of care increases the odds of further offending by a factor of **8.4**

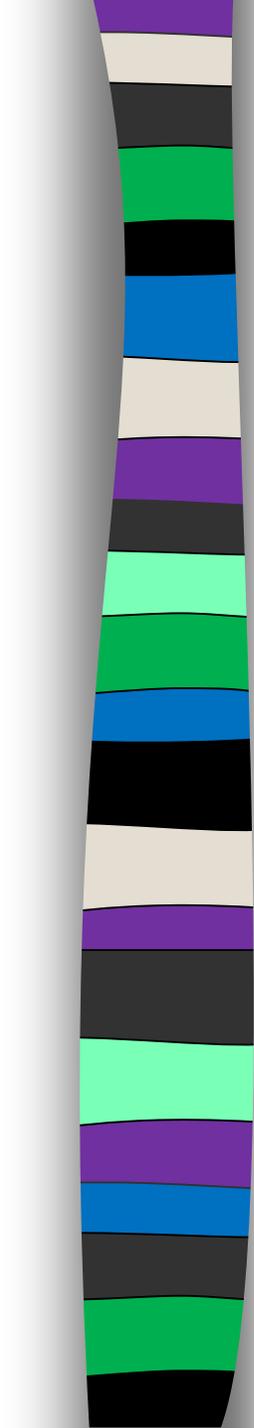


What role does age play?

When no other explanations offered, other than age of first conviction and FTE status:

Relative to a 12 year old FTE

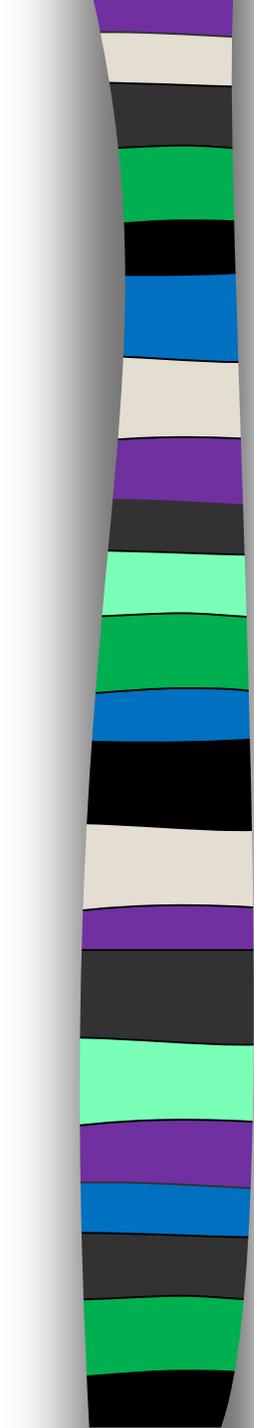
- Having previous offending history at age 12, increases the odds of further offending by 22%
- Being a 17 year old FTE, the odds are reduced by a factor of **0.4**
- If compare a 12 year old and a 17 year old with previous offending history, the odds of the 12 year old committing further offences are **3 times** higher.



What role does age play if have experience of care?

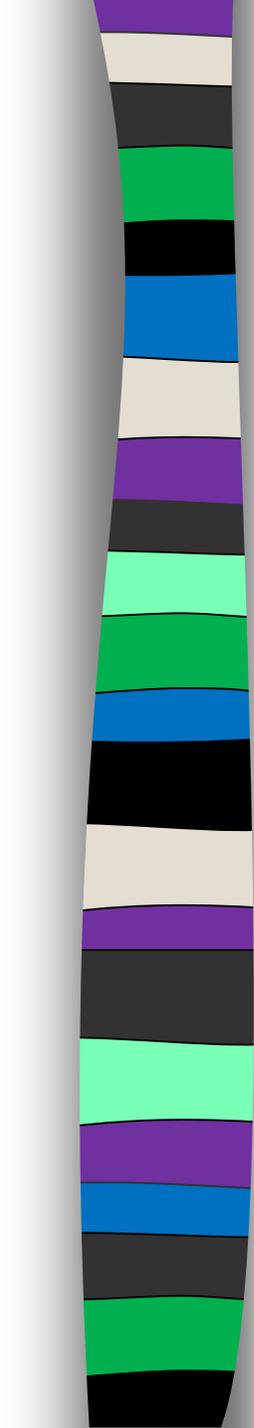
When considered in the context of age of first conviction and experience of care:

- For 12 year old FTEs, the odds of further offending increase by a factor of **6.5**, if they have experience of care
- For 12 year olds with experience of care, the odds of further offending are **3 times** higher if they are an FTE (compared to having previous offending history)
- Compared to an equivalent 17 year old, a 12 year old with experience of care is **5.5 times** more likely to commit further offences if they are an FTE.
- Compared to an equivalent 17 year old, a 12 year old with experience of care is **1.7 times** more likely to commit further offences if they have a history of prior offending
- There is very little difference in the odds for FTEs age 12 without experience of care and the equivalent 17 year old.



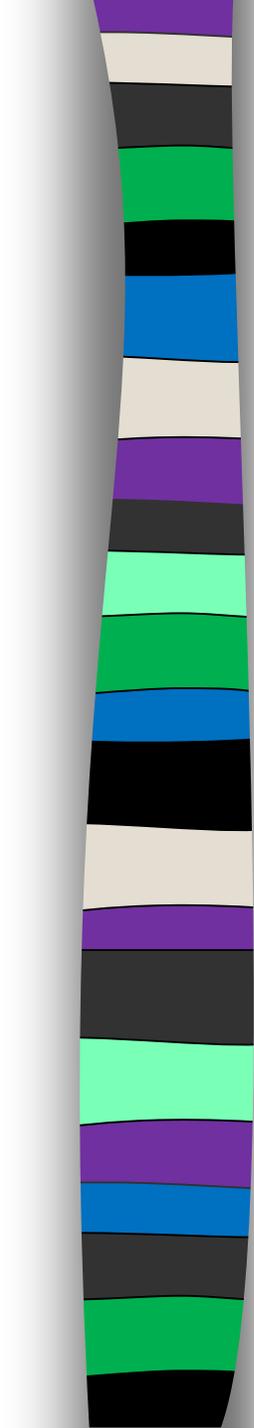
Contact with the YJS

- The odds for further offending increase by 21% following a breach [0.67, 2.16]
- Following a court appearance, the odds increase by a factor of 5.25 [3.34, 8.26]
- The odds for further offending are higher amongst those who have not spent time in custody (inc remand) by a factor of 1.7 compared to those who have [0.88,3.33]



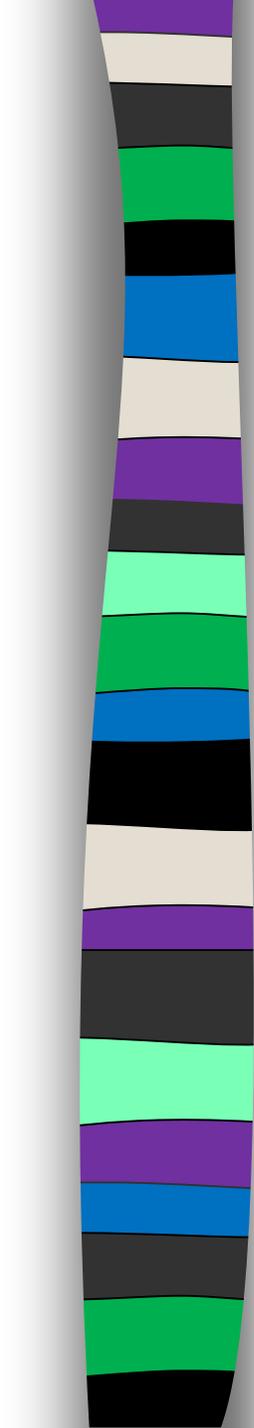
Next Steps

- To look at the model in more detail, to identify if certain groups are more vulnerable in terms of contact with the YJS
- Incorporate different types of offending into the model
 - Seriousness
 - Type of offence
- Create a dynamic version of the ASSET model which will enable 'tipping' points to be identified for different groups



Other work

- Also undertaking a geospatial application looking at the relationship between where young people who come into contact with the YOT (formally or informally) and relative levels of deprivation



Any Questions?

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