

Overview of the Data Fellowship

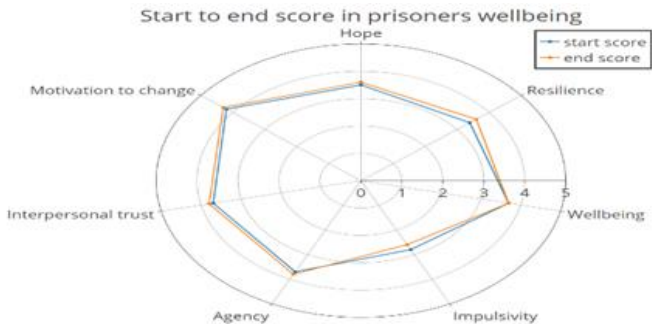
My data fellowship took place in HMPPS Creating future Opportunities. I had the opportunity to explore questionnaire data from phase 1 of the ‘Discovery wing’ at HMP Risley that prepares category C prisoners, for release through resettlement activities like managing finances or employability skills. Focusing on improving key performance indicators like wellbeing, resilience or practical problems like substance abuse or employability. Overall, aimed at creating calmer prison environment with the end goal to prevent reoffending, and improving employment.

Data Analysis and skills I used:

The data was taken from self-complete questionnaires that test key performance indicators from start to end after completing phase 1. The dataset comprises of ordinal variables on a metric scale 1-5 such as resilience, impulsivity and wellbeing.

Data Skills I used:

In excel to prove statistical significance, I utilised a range of tests of probability e.g. ANOVA, T-tailed test and chi-squared tests. Also using pivot tables to test certain trends in data. Formulating a range of infographics and graphs through excel and Canva to present my work e.g. bar charts, radar (Spider) charts and tables that represent my data in lots of interesting ways.



**Findings:** Data is mainly formulated from veterans and/or sex offenders. My assumptions originally, was that due to literature, these participants would more mental health issues detected than counterparts. However, the difference was only 4-6 percent points and was not statistically significant. This implies mental health issues is a general offender trait, and rather than limited to one characteristic. Focusing on this 76% is hugely important.

**Part 1** explored the start mean scores for people with and without mental health issues detected, finding people with mental health issues were falling behind in nearly all categories. **E.g. Hope averages 3.4/5.00. Whereas people without average 3.9. similar with wellbeing, resilience and impulsivity.** Presenting the need to focus on progress for these participants and to implement special considerations to improve those with mental health detections as needing more support. **Part 2 looks at the progress made from start to end for people with mental health issues detected.** My findings demonstrate significant improvement in resilience by +0.3 and a decline in impulsivity by -0.5, both statistically significant. Resilience suggests modules in confidence building, ‘goal setting’ and week 7 focus on ‘resilience and mental health’ can be linked to the positive impacts. Declines in impulsivity can be linked to modules like ‘money management’, ‘goal setting’ and ‘managing on the outside world’ are likely positive improvements. Decreasing impulsivity has implications on improving stability and problem solving and further can be linked to decline in substance abuse. **Part 3 focused on delving into distribution analysis and the effects of the programme on practical problems.** Both ‘resilience’ and ‘impulsivity’ the impact of phase 1 appears to be successful. Both are associated the improvements in substance misuse, behavioural issues and associations with self-harm in ACCT referrals. Also, in improving holding down a job, gaining employment and securing suitable housing. The programme brought significant improvement to participants overall.

**Distribution analysis identified themes:** participants with the most benefit from the programme, had self-reported issues, were provided with more tailored care, improved in wellbeing and hope. External factors like drug referrals needed more future analysis to understand the overlaps with the programme. Allowing me to make key recommendations around improving attrition rates or encouraging more relationships support like holding more family days.

Distribution Analysis: Hope	Start	End	Diff
Lived alone prior to coming into prison	3.4	3.7	0.3
Relationship problems	3.2	3.5	0.4
Wanted help holding down a job	3.1	3.6	0.5

Key skills learnt:

- Development of analytical skills and data manipulation:** using excel, and ranges of probability tests like ANOVA tests, or t-test to identify areas of improvement and declines in the data.
- Critical distribution analysis,** determining recommendations of the gaps in the programme that are transferrable to HMP Risley and other wings around the UK.
- Expanding my professional skills** like collaboration with both statistical research team, and my intern partner Ella. Adaptability to changes in workplace, and data structures. Time management and working to structured schedules and deadlines.
- Ranges of data visualisation techniques and infographics e.g. radar charts.**