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Metadata

Title

Making Managers through Self-Management Training: Field Experimental Evidence from the UK Civil Service

Description

Despite considerable research on managerial competencies, there remains limited understanding of what motivates individuals to seek managerial responsibilities. Recognising this gap is crucial, given the challenges faced by public administrations to attract and prepare competent candidates for managerial roles. This study assesses whether a targeted training intervention focused on self-management can enhance employees' perceived readiness for management and increase their willingness to assume managerial roles. It contributes to the literature by providing causal, field experimental evidence, exploiting a staggered roll-out of the 'Achieving Your Potential' training in the UK civil service. Participants are randomly assigned to earlier and later start dates of the training, allowing the study to assess the effects of the training on participants' perceived readiness for managerial roles at training completion.

Contributors

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Category

Project

Affiliated institutions

No affiliated institutions

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Subjects

Psychology Social and Behavioral Sciences Leadership Studies

Public Affairs, Public Policy and Public Administration Public Administration

Tags

No tags

Study Information

Hypotheses

Hypotheses

Our hypothesis build on prior observational work on self-management, leadership development, and public administration.

First, past studies suggest that structured training interventions can improve leadership performance in the public sector (e.g. Seidle, Fernandez & Perry, 2016); and leadership capacity among employees, including by enhancing self-management (e.g. Getha Taylor, Morse, & Merritt, 2015; Frayne and Geringer, 2000). We thus hypothesise:

H1: Participation in the self-management training intervention increases participants' perceived preparedness to take on management roles.

Second, extrapolating from Bandura's (1982, 2001) self-efficacy theory suggests that individuals with higher managerial self-efficacy are more confident and more likely to pursue managerial roles. Meta-analytic research confirms that self-efficacy positively predicts confidence and proactive career behaviors (e.g. Stajkovic & Luthans, 1998). We thus hypothesise:

H2: Participation in the self-management training intervention increases participants' confidence that they would be effective managers.

H3: Participation in the self-management training intervention increases participants' willingness to take on management roles.

Design Plan

Study type

Experiment - A researcher randomly assigns treatments to study subjects, this includes field or lab experiments. This is also known as an intervention experiment and includes randomized controlled trials.

Blinding

No blinding is involved in this study.

Is there any additional blinding in this study?

N/A

Study design

We employ a wait-listed field experimental design, in which individuals opting to participate in the 'Achieving Your Potential' training are, through simple random assignment, assigned into a treatment and a wait-listed control group. Our sample are UK civil servants voluntarily opting to participate in the 'Achieving Your Potential' (AYP) training. AYP is a 4-month programme for aspiring line managers consisting of four modules delivered over 16 weeks. The training is offered free-of-charge by the UK Cabinet Office to UK civil servants, with a focus on employees in non-managerial ranks. Interested UK civil servants could register for the programme online. As a mandatory pre-requisite for enrolment, civil servants had to complete a baseline survey. This survey included a block of demographic and professional background questions, a block of questions assessing the respondents' understanding of topics covered in the AYP training, a block of questions measuring employee attitudes towards taking on managerial roles, and several blocks related to other management and leadership topics covered in the training.

At the end of the survey, the respondents were asked to insert their email address. Responders were then, through simple random assignment, assigned into treatment and control groups, with a 50:50 weighting. The treatment group started the AYP training in June 2025 and the control group will start training in November 2025. An endline survey will be fielded to all respondents, before the control group has access to the AYP training. Please see attachments below for the full baseline survey and endline survey questionnaires. The questionnaire contains additional measures of interest to the UK Civil Service that are not included in our pre-registration.

- AYP_baseline.doc
- AYP_endline_treatment.doc
- AYP_endline_control.doc

Randomization

As noted above, the respondents to the baseline survey were randomised with a 50:50 weighting into the treatment (June start date) and control (November start date) groups by the researchers.

Sampling Plan

Existing Data

Registration prior to analysis of the data

Explanation of existing data

NB: Baseline survey completed, and treatment commenced. Endline survey not yet in the field.

Data collection procedures

Our sample are UK civil servants voluntarily opting to participate in the 'Achieving Your Potential' (AYP) training. The training is offered free-of-charge by the UK Cabinet Office to UK civil servants, with a focus on employees in non-managerial ranks. Civil servants were advised in centrally distributed newsletters and blogs as well as through cross departmental talent leads about the training. Interested UK civil servants could register for the programme online. As a mandatory pre-requisite for enrolment, civil servants had to complete a baseline survey in June 2025. We exclude any participants who did not complete the full survey or did not give their consent for us to store their responses or have their responses retained in pseudo-anonymised form for research purposes. 1,134 civil servants completed the survey, gave us consent and provided a valid email address at the end of the survey. Responders were then, through simple random assignment, assigned into treatment and control groups, with a 50:50 weighting. The treatment group started the AYP training in June 2025 and the control group will start training in November 2025. An endline survey will be

fielded to all respondents, before the control group have access to the AYP training. We focus our analysis on the subset of respondents – 1,058 in total – who are not yet in managerial roles.

No files selected

Sample size

1,143 civil servants completed the baseline and were assigned to treatment or control group. As noted, 1,058 of those respondents are not yet in managerial roles. Our final sample size is the subset of baseline survey participants in non-managerial roles who also complete the endline survey and indicate the same email address in the endline survey, thus allowing us to link baseline and endline survey results.

Sample size rationale

The maximum sample size consists of the maximum number of training places available in the 'Achieving Your Potential' training. While there is little evidence on the expected effect sizes of self-management trainings, meta-analyses on management and leadership training interventions in general (e.g., Lacerenza et al., 2017, Journal of Applied Psychology) report effect sizes with Cohen's d = 0.20 to 0.35 on behavioral and perceptual outcomes. Using conservative assumptions - Cohen's d of 0.2, equal group sizes, power of 0.9, alpha of 0.05 and without baseline covariates - requires a total N of 526. Our analysis is thus well-powered to detect even small training effects.

Stopping rule

Endline survey data collection will stop prior to the first training session of the control group, to ensure the control group remains untreated. The control group will not be able to access the training until November 2025, and the endline survey will be fielded prior to that.

Variables

Manipulated variables

The treatment in our case is assignment to the AYP training programme at the time of endline survey. This will be defined as a binary variable:

Treatment = 1: Individual was assigned to complete the AYP training before the endline survey
Treatment = 0: Individual was assigned to complete the AYP training after the endline survey

As explained previously, the random allocation to treatment groups following completion of the endline survey is what decides allocation to the treatment or control group. In addition to estimating the average treatment effect (ATE) of assignment to the AYP training, we will also estimate the complier average causal effect (CACE), using random assignment as an instrument for actual training completion. This will allow us to identify the causal effect of the training among those who complied with their assignment.

No files selected

Measured variables

H1: Managerial competence
I feel prepared to take on a line management role in the Civil Service (measured on an 1-5 agreement scale, from strongly disagree to strongly agree)

H2: Managerial confidence

I am confident I would be an effective line manager in the Civil Service (measured on an 1-5 agreement scale, from strongly disagree to strongly agree)

H3: Willingness to take on managerial role
I want to take up a line management role in the Civil Service within the next two years (measured on an 1-5 agreement scale, from strongly disagree to strongly agree)

No files selected

Indices

We outline the details of our approach to creating indices in the "Construct Definition and Item Selection" section of the Analysis Plan.

No files selected

Analysis Plan

Statistical models

HYPOTHESIS TESTING

To estimate the causal effect of the AYP training programme on managerial readiness of employees, we will use an ANCOVA model.

The dependent variables will consist of single-item measures capturing perceived managerial competence, confidence and willingness to take on management roles, as well as knowledge gains and training engagement (manipulation checks). The key independent variable is a binary indicator of whether the participant was randomly assigned to receive the training prior to completing the endline survey.

For each hypothesis, we will estimate the following model:

$Yi1 = \alpha + \beta * Treatmenti + \gamma * Yi0 + \varepsilon i$

Where: Yi1 is the endline score on the managerial readiness measure, Treatmenti is a binary variable indicating treatment assignment, Yi0 is the corresponding baseline score, εi is the error term.

This specification allows us to estimate the treatment effect while adjusting for baseline levels of the outcome. Including baseline scores improves statistical precision and helps account for individual-level variation in pre-treatment attitudes. We will estimate this model separately for each pre-registered outcome.

Should items load, we will also use a factor-analytic approach to construct a latent variable for managerial readiness, as a latent construct of perceived competence, confidence and willingness to take on managerial roles. We will then assess the ATE of the training on managerial readiness.

In addition to estimating the average treatment effect (ATE) of assignment to the AYP training, we will also estimate the complier average causal effect (CACE), using random assignment as an instrument for actual training completion. This will allow us to identify the causal effect of the training among those who complied with their assignment.

Although participants were randomly assigned to training timing, imbalances may arise by chance, especially in smaller samples. If baseline balance tests reveal substantial differences between groups

on managerial competence, confidence and willingness to take on managerial roles, or key covariates at baseline, we will complement the ANCOVA with a Difference-in-Differences (DiD) analysis as a robustness check.

We will estimate the following model: Managerial_readiness_it = α + β1 * Treatment_i + β2 * Post_t + β3 * (Treatment_i * Post_t) + ε_it

Where: Post_t is an indicator for post-training measurement (endline), Treatment_i * Post_t is the interaction capturing the change in managerial readiness among treated participants relative to controls, β3 is the treatment effect of interest.

This model compares within-individual changes over time between the treatment and control groups and will help assess the robustness of the primary results.

CONSTRUCT DEFINITION AND ITEM SELECTION

Our core hypothesis is that the training intervention enhances participants' managerial readiness. To assess this, we developed questions in which employees self-assess their preparedness, confidence and willingness to take on a management role.

We thus conceptualise managerial readiness as a developmental, forward-looking attitudinal construct reflecting an individual's motivation and perceived preparedness for management responsibilities. Drawing on self-management literature and developmental theories of leadership, particularly Mintzberg's view that leadership qualities can emerge in non-managerial roles, we propose that enhancing self-management capacities contributes to individuals' overall readiness and interest in managerial positions.

Measurement Approach

We distinguish between two measurement strategies:

Additive Indices: for measures where items reflect unidimensional knowledge (e.g., post-training knowledge checks, training engagement), we will construct additive indices by computing the standardised mean across items.

Latent Constructs (Factor Scores): for the managerial readiness construct, we will estimate factor scores using confirmatory factor analysis (CFA). CFA will be based on the pre-specified measurement model reflecting the theoretical subdimensions listed above.

Decision Rule for Item Retention and Factor Structure

To ensure consistency and transparency, we will apply the following decision rule for evaluating item performance: a loading threshold of ≥ 0.40, in line with standard practice. The managerial readiness factor will be retained if all three items load cleanly (meeting the relevant loading threshold) on it.

If fewer than three items meet this criterion, we will construct a standardized additive index of the original items and interpret results with appropriate caution. All deviations from the planned measurement structure (e.g., item exclusion, model modifications) will be reported transparently in an appendix to the main analysis.

MANIPULATION CHECKS

1. Knowledge gain from training, with knowledge scores measured as simple additive index of correct responses to knowledge questions:
• Which of the following are part of resilience?
• Is the following statement true or false? “If we do not experience any pressure at work, our wellbeing can suffer.”
• Which of the following are key components of empathy? Please tick all correct option(s). Multiple options possible.
• Is the following statement true or false? “A true optimist needs a lot of positivity.”
• Is the following statement true or false? “Individuals need to experience adversity to build resilience.”

2. Learner engagement with the training, measured as a simple additive index of engagement with different training components:
• How many of the four webinars did you attend? (Either live or by watching a recording)
0-4 or Don’t know / prefer not to respond
• How many problem-solving sessions did you attend?
0-4 or Don’t know / prefer not to respond
• Did you read the content on FutureLearn for the module before each webinar?
- Yes, for every module
- Yes, but only for some of the modules
- No, I did not read the FutureLearn content before any of the webinars
- Don’t know / prefer not to respond
• Did you read the complete the workbook tasks for each module?
- Yes, for every module
- Yes, but only for some of the modules
- No, I did not complete any workbook tasks
- Don’t know / prefer not to respond
• Did you complete the Learning Journal for each module?
- Yes, for every module
- Yes, but only for some of the modules
- No, I did not complete any Learning Journals
- Don’t know / prefer not to respond / did not attend any sessions

No files selected

Transformations

Additive Indices: Where indicated (e.g., knowledge checks), responses will be scored as binary correct/incorrect and summed to form a total score. These additive indices will not be standardised unless required for modelling purposes.
Categorical Engagement Variables: Responses capturing participant engagement with programme components (e.g., number of webinars attended, whether workbooks were completed) will be treated as ordinal or categorical variables as appropriate to their response type (i.e. agreement scale = ordinal). These may be dummy-coded or collapsed for subgroup analysis depending on distribution and analytic needs (e.g., 0 = no exposure; 1 = partial exposure; 2 = full exposure).
Centering: Where relevant (e.g., in models including interaction terms), continuous variables will be mean-centred to aid interpretability and reduce multicollinearity.
Handling of “Don’t Know / Prefer Not to Respond”: Responses marked as “Don’t know / prefer not to respond” will be treated as missing for the purposes of analysis. All transformations and coding decisions will be implemented consistently across treatment and control groups and documented in a reproducible script to ensure transparency.

Inference criteria

We will use a conventional null hypothesis significance testing framework to draw inferences about the effect of the training intervention on participants' perceived managerial readiness. All primary analyses will use two-tailed tests with a standard $\alpha = 0.05$ threshold for statistical significance. For each outcome, we will report p-values, 95% confidence intervals, and standardised effect sizes (e.g., Cohen's d) to aid interpretation. In addition to p-values, we will assess model fit and robustness by checking for balance on covariates, estimating alternative specifications (e.g., Difference-in-Differences model in case of treatment/control imbalance), and conducting sensitivity analyses. All model assumptions (e.g., homoskedasticity, normality of residuals) will be examined to ensure the validity of inference.

Data exclusion

We will exclude observations with missing data on key variables required for analysis (e.g., treatment assignment, outcome measures, or baseline covariates). Participants who did not complete both the baseline and endline surveys will be excluded from ANCOVA analyses. Outliers on outcome variables will be inspected, and we may conduct robustness checks using winsorized variables if extreme values appear to influence results. We will include an additional form of manipulation check in the endline survey. Specifically, we will collect self-reported data on participants' engagement with the training (e.g., number of sessions attended, proportion of online content completed). This will allow us to construct measures of treatment intensity, such as a binary compliance indicator or a continuous index. These will be used in exploratory analyses to explore heterogeneous impacts by level of engagement.

Missing data

We will begin by assessing the extent and patterns of missing data for all key variables, including treatment status, managerial readiness outcomes, and relevant covariates. If item nonresponse is low and appears to be missing completely at random (MCAR), we will proceed with complete case analysis. If there is evidence of systematic missingness, we will consider using multiple imputation to recover information, particularly for baseline covariates and outcome measures. For key outcome variables, we will report the rate of missingness and assess robustness by comparing results across complete case and imputed samples, where applicable.

Exploratory analysis

In addition to the pre-registered confirmatory analyses, we may conduct exploratory analyses to better understand heterogeneity in treatment effects and potential mechanisms.

In terms of heterogeneity, this could include examining whether treatment effects vary by baseline characteristics, such as managerial readiness at baseline. We may also explore relationships between outcomes and engagement with different components of the training programme (e.g. attendance, online content completion), using our training intensity measures.

In terms of mechanisms, we will assess how the training enhances perceived managerial readiness, by assessing ATEs on measures related to self-management practices and attitudes, such as "I can manage my stress levels effectively," "I feel confident that I can manage to solve difficult problems at work if I try hard enough," and "I am optimistic about my future at work."

Any such analyses will be clearly marked as exploratory in any reporting and interpreted with appropriate caution. We will also complement the survey data analysis with a set of interviews and participant observations of the training.

Other

Other

ADDITIONAL INFORMATION

This study forms part of a broader evaluation of line management training programmes in the UK Civil Service. Additional information about the evaluation methodology and programme context is available at: https://www.gov.uk/government/publications/evaluating-line-management-capability-training.

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