


Ministry of Defence Inspiring the Next Generation

Intervention Developer	What Works for Children's Social Care
Delivery Organisations	What Works for Children's Social Care, Ministry of Defence (MoD) Defence Intelligence (DI)
Evaluator	What Works for Children's Social Care
Principal Investigator	Michael Sanders, Kevin Daniels, Dana Unger
Protocol Author(s)	Shibeal O'Flaherty, Chris Mitchell, Emily Walker
Type of Trial	Two-armed randomised controlled trial
Age or Status of Participants	950 MoD Defence Intelligence (MoD-DI) civilian and military employees, aged 18+
Number of Participating Sites	1 Site: Ministry of Defence (MoD) Defence Intelligence (DI) department
Primary Outcome	<ul style="list-style-type: none"> ● Subjective Well-being
Secondary Outcomes	<ul style="list-style-type: none"> ● Sickness Absence ● Organisational Commitment and Perceived Organisational Support ● Sense of Connection to Profession
Exploratory Outcomes	<ul style="list-style-type: none"> ● Turnover ● Turnover Intentions ● Basic Need Satisfaction ● Job Satisfaction
Contextual Factors	<ul style="list-style-type: none"> ● The MoD-DI consulted with WWCS in early 2020 to develop and test a well-being intervention for its staff. ● Participation in the project is limited to MoD-DI civilian and military staff who have started working at the organisation during the past three years. ● MoD-DI staff are typically exposed to potentially harmful material through their work, which can increase the likelihood of work-related trauma amongst staff. ● The MoD-DI department has extensive offerings in terms of well-being supports for employees, as detailed in the 'Background and Problem Statement' section, but employees may be



unaware of these supports, e.g. due to different manager styles in terms of highlighting and encouraging uptake of these services, as well as the reduced incidence of casual social interactions where knowledge-sharing can take place as a result of the move to virtual working.

Summary

- This project involves a series of eight weekly social support messages going to Ministry of Defence Defence Intelligence (MoD-DI) staff who have started at the organisation in the past three years. The project builds on recent research¹ showing that light-touch messages sent to staff which aim to increase social belonging and support can help to reduce burnout and turnover rates.
- The messages will contain content from MoD-DI senior leaders and existing employees, focused around eight different themes, and aiming to build a shared sense of professional identity and social belonging in the workplace.
- The intervention will be tested via an individual-level randomised controlled trial, with half of the participants assigned to the treatment (receiving the MOD-ING intervention) and the other half to the control group (who do not receive the intervention).
- We will collect survey data as well as administrative data pre- and post-intervention in order to analyse any effects of the intervention on our outcomes of interest: Employees' subjective well-being (primary), organisational commitment and perceived organisational support, and their sense of professional identity. We will also run exploratory analyses on turnover intentions, and actual turnover via administrative data.
- The project will be launched in July 2021, and is scheduled to end by October 2023. Reporting on the interim findings from this project will be conducted by late 2021.

¹ Linos, E., Ruffini, K., & Wilcoxon, S. (2019). *Reducing Burnout for 911 Dispatchers and Call Takers: A Field Experiment* (No. 1158). EasyChair. Retrieved from <https://easychair.org/publications/preprint/kGPw>

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Background and Problem Statement

The Happier Healthier Professionals (HHP) research programme aims to address public sector employee well-being, turnover and sickness absence rates through light-touch, low-cost interventions informed by behavioural science. The [first phase of the HHP research programme](#) focused on well-being interventions conducted with UK social workers over 2019-2020, and the second phase of the research programme has extended to include other public-sector employees - including police officers and Ministry of Defence (MoD) Defence Intelligence (DI) staff.

Until recently there have been few rigorous evaluations of such interventions, in particular research that establishes causal mechanisms underlying the link between well-being interventions and employee outcomes. Identifying successful examples of well-being interventions, which can be easily adopted by defence organisations, has the potential to have a meaningful impact on the UK workforce of 4,500 MoD-DI staff if rolled out widely.²

The MoD encompasses a number of organisations including the Royal Navy, Army, Royal Air Force, Joint Forces Command and MOD Civil Service, with their civil servant workforce employing 56,680 employees.³ Defence Intelligence (DI) is an integral part of the Ministry of Defence (MoD).⁴ The department hires a total of between 200-300 new employees each year, including a mixture of military and civilian staff. Military staff will be either returners to the DI, or will have already undergone extensive induction through their single service Regiment or Corps.

Mental health issues are cited as the leading cause of non-industrial MoD Civil Servant sickness absence, at 22%, and the highest cause of long-term sickness absence.⁵ As part of their work, MoD-DI staff deal with wide-ranging issues that are of key importance in protecting the public - including dealing with responses to national disasters, preventing child exploitation, and being involved in diplomatic missions with hostile countries.⁶ As a result, while MoD-DI staff have the ability to make a positive impact in the lives of others and on society as a whole, they also deal with exposure to distressing material and traumatic situations. Thus, staff are likely to have higher rates of work-related trauma as a result of their work, and this is reflected in the key reasons for sickness absence rates amongst staff - mental health issues.

Additionally, the majority of MoD-DI staff have moved to remote work since March 2020 due to the Covid-19 pandemic, which has created even more of a need for interventions that aim to promote social cohesion. This need may be particularly higher for newer staff, who have been unable to undergo usual induction sessions, may not have had ample opportunities to

² Gov.uk. Retrieved from <https://www.gov.uk/government/groups/defence-intelligence>

³ MoD (2017). Defence People Mental Health and Wellbeing Strategy 2017-2022. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/689978/20170713-MHW_Strategy_SCREEN.pdf

⁴ Gov.uk. Defence Intelligence. Retrieved from <https://www.gov.uk/government/groups/defence-intelligence>

⁵ MoD (2017). Defence People Mental Health and Wellbeing Strategy 2017-2022. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/689978/20170713-MHW_Strategy_SCREEN.pdf

⁶ <https://civilservice.blog.gov.uk/2019/10/07/managing-work-related-trauma-in-the-civil-service/>

form in-person social connections with their colleagues, and as such may have not have enjoyed the benefit in knowledge-sharing and social support typically found in an in-person working environment.

The MoD reported an annual loss of 358,030 working days lost due to sickness absence for civilian staff for the year ending 1 April 2020,⁷ with leading causes including mental health/behavioural issues (25%) and musculoskeletal issues (17%). Staff were reported as being absent on average 6.84 days over the year due to sickness absence. They estimated that the value of lost productivity due to staff sickness absence was approximately £38.9 million.

The MoD has been involved in a number of initiatives aimed at improving the overall well-being of their staff, for example a 'Defence People Mental Health and Wellbeing Strategy' launched in 2017,⁸ a large mental health support package for staff in 2018,⁹ and a 'Defence People Health and Wellbeing Guide' launched in 2020 detailing the resources available to support staff during the Covid-19 pandemic.¹⁰ Thus, the MoD is proactive in terms of finding ways to support their staff - additionally offering pioneering programmes such as a bespoke Employee Wellbeing Service for civilian staff to support them with their mental health and well-being.¹¹

There is evidence to suggest that employees in similar frontline roles are at risk of adverse mental health outcomes earlier in their careers.¹² For example, one light-touch intervention that involved a series of social support messaging going to 911 dispatchers that focused on increasing employees' sense of social belonging and support at work subsequently reduced burnout levels amongst employees, as well as decreased the likelihood of them leaving the organisation.¹³

Thus, the current study was aimed at understanding how the well-being of MoD-DI staff can be enhanced via a social support messaging intervention, designed to improve employees' social cohesion, sense of connection to their profession, as well as to emphasise the importance of their work. The intervention is described in full detail below.

Intervention and Theory of Change

Intervention: What will be implemented?

The intervention - 'Ministry of Defence Inspiring the Next Generation' (MOD-ING) - involves a series of eight weekly emails sent to MoD-DI civilian and military employees who have started their roles at the MoD during the past three years or less. The emails contain content

⁷ MoD (2020). Civilian Personnel Sickness Absence Annual Report. Retrieved from <https://www.gov.uk/government/statistics/mod-civilian-sickness-absence-financial-year-2020>

⁸ Gov.uk (2017). Defence people mental health and wellbeing strategy. Retrieved from <https://www.gov.uk/government/publications/defence-people-mental-health-and-wellbeing-strategy>

⁹ CSW (2018). MoD launches biggest ever mental health support package for staff. Retrieved from <https://www.civilserviceworld.com/professions/article/mod-launches-biggest-ever-mental-health-support-package-for-staff>

¹⁰ MoD (2020). Defence People Health and Wellbeing Guide: COVID-19. Retrieved from https://www.nrmc.org.uk/sites/default/files/documents/20200422-Defence_People_HWB_Guide_COVID19%20wo%2016_1.pdf

¹¹ MoD (2019). Voluntary reporting on disability, mental health and wellbeing: workforce report 2019. Retrieved from <https://www.gov.uk/government/publications/disability-mental-health-and-wellbeing-civilian-workforce-report-2019/voluntary-reporting-on-disability-mental-health-and-wellbeing-workforce-report-2019>

¹² Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397-422.

¹³ Linos, E., Ruffini, K., & Wilcoxon, S. (2019). *Reducing Burnout for 911 Dispatchers and Call Takers: A Field Experiment* (No. 1158). EasyChair. Retrieved from <https://easychair.org/publications/preprint/KGPw>

written by current MoD senior leaders and employees, which describe shared experiences, challenges and the rewarding nature of their work, promoting a sense of professional identity. The emails will also include an option to respond to each week's message, in the form of a link to a form where participants can share their thoughts and reflections in response to the weekly message (see Appendix F for form). As such, the intervention emails will require minimal effort on the part of employees (5 minutes in total on average to read each email and respond, if they choose to do so).

We are seeking to establish the impact of the intervention on employees' rates of subjective well-being and associated secondary outcomes including sickness absence, organisational commitment and perceived organisational support, and a sense of feeling connected to one's profession.

Rationale: What is the theory behind the intervention?

Self-determination theory (SDT) posits that there are three basic psychological needs - autonomy, relatedness, and competence, and that the fulfilment of all three needs promotes good well-being at work.¹⁴ There is a substantial body of evidence in the SDT literature demonstrating that the fulfilment of these needs can promote well-being at work, providing insights for how to design interventions that focus on creating conditions that nurture these three needs amongst employees.¹⁵ However, there is a lack of evidence - and in particular causal evidence - demonstrating the effectiveness of such interventions in actual work settings.¹⁶

Evidence suggests that well-being at work is associated with relatedness - one of the fundamental psychological needs identified by SDT, for example the experience of quality connections with colleagues, high-quality interactions with leaders, and perceived levels of social support.¹⁷ Workplace well-being interventions have recently begun to incorporate insights from positive psychology that are focused on cultivating a stronger sense of social support, social connectedness and increasing social ties at work, though a recent study demonstrated that a social connection intervention did not have any causal impact on employee well-being or work-related outcomes.¹⁸

The Job Demands Resources (JD-R) model, a model of well-being in the workplace, also emphasises the importance of providing adequate support and resources (including social support) to employees to foster flourishing in one's job.¹⁹ A longitudinal study with 288 employees demonstrated that increasing job resources was associated with higher

¹⁴ Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.

¹⁵ Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19-43.

¹⁶ Slemp, G. R., Lee, M. A., & Mossman, L. H. (2021). Interventions to support autonomy, competence, and relatedness needs in organizations: A systematic review with recommendations for research and practice. *Journal of Occupational and Organizational Psychology*, 94(2), 427-457.

¹⁷ Fisher, C. D. (2014). Conceptualizing and measuring wellbeing at work. *Wellbeing: A complete reference guide*, 1-25.

¹⁸ Winslow, C. J., Kaplan, S. A., Bradley-Geist, J. C., Lindsey, A. P., Ahmad, A. S., & Hargrove, A. K. (2017). An examination of two positive organizational interventions: For whom do these interventions work?. *Journal of occupational health psychology*, 22(2), 129.

¹⁹ Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD-R approach.

employee well-being.²⁰ Additionally, the JD-R model posits that job resources, for example, social support from colleagues and supervisors, is positively associated with work engagement, and may act as a potential buffer against job strain.²¹ Intervention-based studies formulated using the JD-R model have been found to support the model across different populations of public-sector employees, including police officers and hospital nurses.^{22,23}

Emphasising the importance of one's work through anecdotes and narratives coming from senior-level colleagues (e.g. managers) can have a significant impact on employee performance and the extent to which they feel dedicated to their jobs.²⁴ This finding has been explained by these stories acting as resources that can help to change as well as make sense of employees' daily experiences. Moreover, the experience of thriving and developing at work is thought to be embedded within the social environment, e.g. learning and knowledge-sharing typically takes place through our daily work social interactions.²⁵ For instance, individuals who learn about what their coworkers are doing are likely to learn from the various strategies and approaches used by coworkers.²⁶ This suggests that the ability to thrive and ascribe meaning to one's work is related to the extent to which we gain access to opportunities for learning and advice from coworkers, and is key to well-being at work.

Research also demonstrates that assigning positive meaning to particular elements of one's work (particularly work elements that may be typically seen as more negative) can allow individuals to reappraise particular work events as opportunities for growth rather than loss, and can help them to address setbacks and work threats by prompting them to examine what is important to them.²⁷

The MoD-ING intervention is designed to emphasise the shared experiences, challenges and rewarding nature of work at the MOD, promoting a sense of professional identity, which we hypothesise will positively affect overall employee wellbeing. The intervention draws inspiration mainly from a field experiment conducted with 911 dispatchers across Canada, where employees were sent six weekly emails designed to enhance their shared sense of common positive professional experiences, including a nudge that prompted employees to share their own similar experiences in response to the emails. The study found that employee burnout and turnover (from administrative data) was reduced 6 months later.

The MoD-ING intervention aims to demonstrate whether such positive social support messaging may also have similar effects for DI staff, and the messaging is designed

²⁰ Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of occupational health psychology, 18*(2), 230.

²¹ Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of managerial psychology, 16*(5), 537-549.

²² Van den Heuvel, M., Demerouti, E., & Peeters, M. C. (2015). The job crafting intervention: Effects on job resources, self-efficacy, and affective well-being. *Journal of Occupational and Organizational Psychology, 88*(3), 511-532.

²³ Rickard, G., Lenthall, S., Dollard, M., Opie, T., Knight, S., Dunn, S., ... & Brewster-Webb, D. (2012). Organisational intervention to reduce occupational stress and turnover in hospital nurses in the Northern Territory, Australia. *Collegian, 19*(4), 211-221.

²⁴ Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of applied psychology, 93*(1), 108.

²⁵ Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization science, 16*(5), 537-549.

²⁶ Bandura, A. 1977. *Social Learning Theory*. Prentice-Hall Inc., Englewood Cliffs, NJ.

²⁷ Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization science, 16*(5), 537-549.

specifically to enhance employees' workplace identity, social support and belonging, congruent with the JD-R model of providing resources to employees to improve well-being.

Recipients: Who is taking part?

Participants will include approximately 951 staff members at the MoD-DI, limited to 1) civilian and military staff within the DI department, and 2) staff members who have started work at the DI department during the past three years at the time of the launch of the intervention (i.e. end of July, 2021).

Procedures: How will it be implemented?

Developing the messaging content: The eight weekly themes were co-developed in collaboration with the MoD, who reached out to relevant MoD senior leaders and experienced colleagues to request messages. Three members of the research team independently reviewed the messages gathered by the MoD project partner from MoD senior leaders/staff, and rated them in terms of the impact they were perceived to have on our outcomes of interest for the trial, as well as the alignment of the message with our set eight themes. With contributors' permission, minor edits to the messages were made by WWCS researches, which were then embedded within each of the eight weekly emails. The full messages can be found in Appendix E, and the eight themes are listed below:

- Week 1: Welcome from the Chief of Defence Intelligence (CDI)
- Week 2: Making a Positive Difference/Impact of DI
- Week 3: Power of Collaboration
- Week 4: Well-being in DI
- Week 5: The Importance of Diversity and Inclusion in DI
- Week 6: Overcoming Challenges / Courage to Challenge
- Week 7: Learning, Development and the Growth Mindset
- Week 8: Flexible Working Opportunities

Delivering the intervention: The eight weekly messages will be sent via email to participants in the treatment group by the MoD project coordinators. They will send the emails via an internal MoD email address.

Location: Where will it be implemented?

Participants will receive messages via email to their work email addresses. Therefore the intervention may be received by participants in the office, during travel to or from a work commitment, or in a remote working environment.

Dosage: When, how often and for how long will it be implemented?

The intervention period will last for 8 weeks, with one message per week (8 messages total) being delivered to MoD-DI staff in the treatment group.

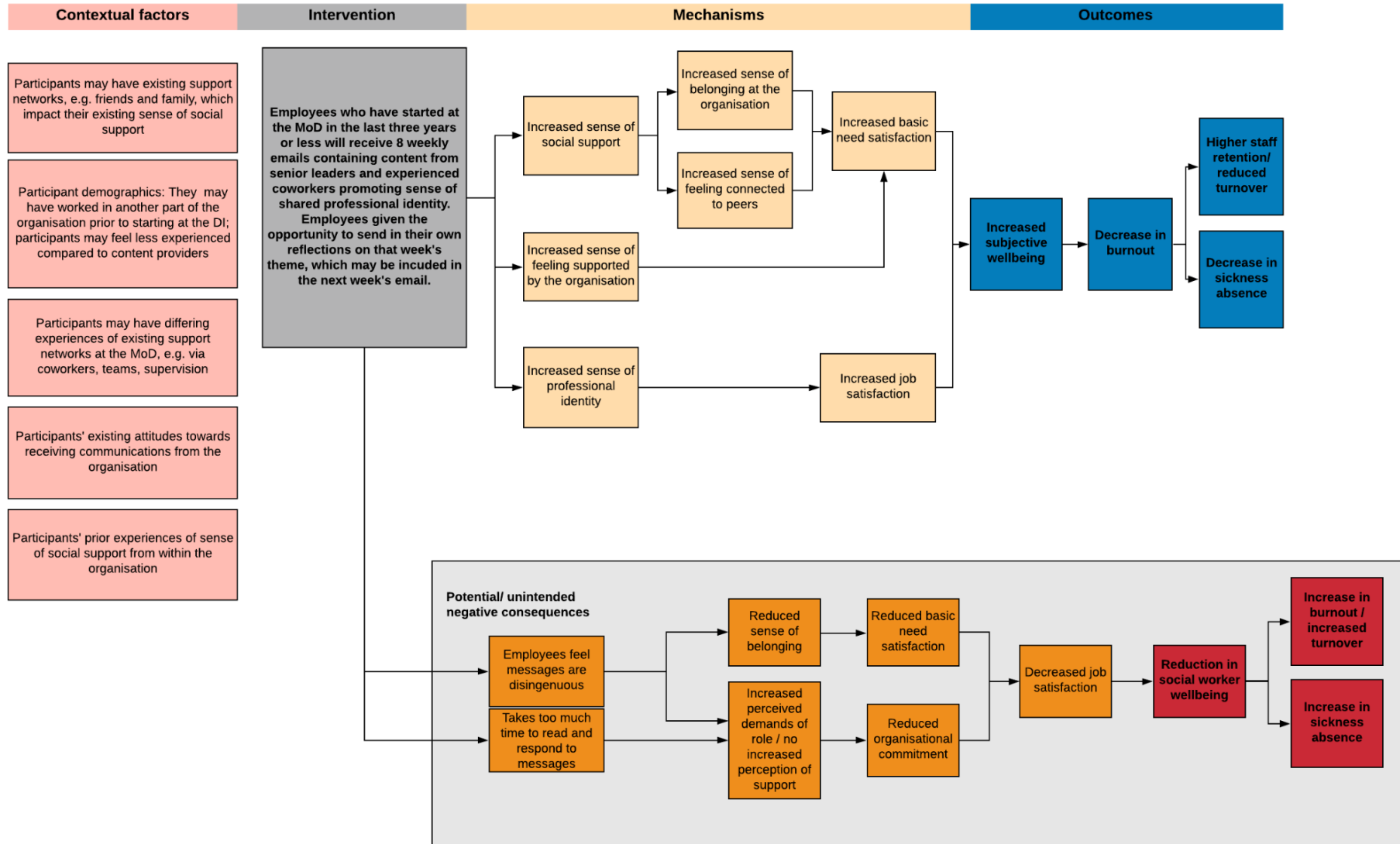
Participants will be recruited on a rolling basis in order to reach a total sample size of 950 staff members in order for the trial to be well-powered to detect an effect on our outcomes of interest. The MoD-DI recruits on average 200-300 new starters each year, which is approximately $n = 25$ new starters per month. Therefore, in order to recruit the pre-registered

sample size of $N = 950$ staff to the study, we will recruit participants on a rolling basis, in the following stages (or until we reach the $N = 950$ sample size):

- **June, 2021:** The first cohort of participants will include $n = 276$ MoD-DI civilian and military staff who have started at the organisation since 1st December, 2019, not including anyone who has left the organisation at the time of the MoD project partner sending the baseline administrative dataset.
- **December, 2021:** The second cohort of participants will include any new starters at the MoD-DI in the 6 months since June 2021, estimated to be $n = 150$.
- **June, 2022:** The third cohort of participants will include any new starters at the MoD-DI in the 6 months since December 2021, estimated to be $n = 150$.
- **December, 2022:** The fourth cohort of participants will include any new starters at the MoD-DI in the 6 months since June 2022, estimated to be $n = 150$.
- **June, 2023:** The fifth cohort of participants will include any new starters at the MoD-DI in the 6 months since December 2023, estimated to be $n = 150$.
- **September, 2023:** The sixth cohort of participants will include any new starters at the MoD-DI in the 3 months since June 2023, estimated to be $n = 74$.

Logic Model

Ministry of Defence Inspiring the Next Generation



Impact Evaluation

Research Questions

The primary research questions (RQs) are:

Primary

- RQ1: What impact does the MOD-ING intervention have on the subjective well-being of eligible MOD-ID staff?

Secondary

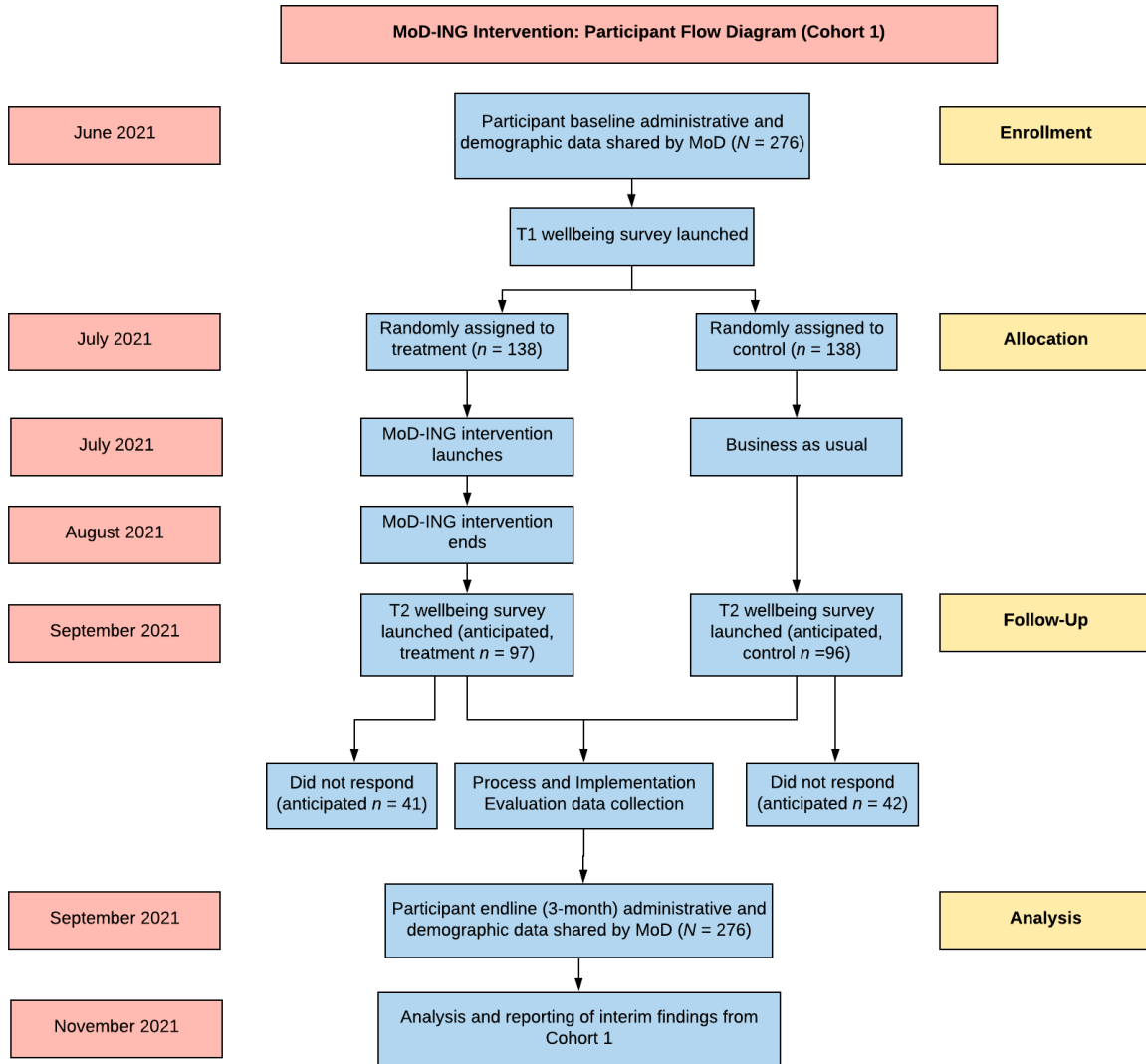
- RQ2: What impact does the MOD-ING intervention have on the sickness absence of eligible MOD-ID staff?
- RQ3: What impact does the MOD-ING intervention have on the organisational commitment and perceived organisational support of eligible MOD-ID staff?
- RQ4: What impact does the MOD-ING intervention have on the sense of connection to the profession of eligible MOD-ID staff?
- RQ5: What is the fiscal cost-effectiveness ratio of the intervention (i.e. the return on investment of implementing this intervention at the MOD in terms of well-being benefits)?

Design

Trial type and number of arms		Randomised controlled trial, two arms
Unit of randomisation		Individual (MoD-DI employee)
Stratification variables (if applicable)		N/A
Primary outcome	Variable	Staff subjective well-being (combining evaluative and affective components)
	Measure (instrument, scale)	<ul style="list-style-type: none"> ● Total score is the combination of the below two scales: <ul style="list-style-type: none"> ○ Satisfaction with Life scale (survey data, 1 item on a scale from 0 to 10; total score ranging from 0-10) ○ Schedule for Positive and Negative Affect (survey data, 6 items on a scale from 1 to 6; total score ranging from 6-36)
Secondary outcomes	Variable(s)	Staff sickness absence
	Measure(s)	<ul style="list-style-type: none"> ● Maximum number of working days over the course of the trial minus the number of days

	(instrument, scale)	on sick-leave and any days after the individual leaves the organisation added together, measured at 3 months post-intervention launch (administrative data)
	Variable(s)	Mechanism 1: Organisational Commitment and Perceived Organisational Support
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Total score is the combination of the below two scales: <ul style="list-style-type: none"> ○ Organisational Commitment Scale (survey data, 3 items on a scale from 1 to 5; total score ranging from 3-15) ○ Perceived Organisational Support Scale (survey data, 8 items on a scale from 1 to 5; item 3 and 8 reverse coded; total score ranging from 8-40)
	Variable(s)	Mechanism 2: Sense of feeling connected to one's profession
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Professional Identification Scale (survey data, 4 items on a scale from 1 to 7; total score ranging from 4-28)
Exploratory outcomes	Variable(s)	Turnover
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Whether or not a participant has left the organisation, measured at 3 months post-intervention launch (administrative data; a binary variable coded as 1 if the participant has left the organisation, otherwise 0)
	Variable(s)	Turnover Intentions
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Turnover Intentions Scale (survey data, 2 items on a scale from 1 to 7; total score ranging from 2-14)
	Variable(s)	Basic Need Satisfaction
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Basic Need Satisfaction Scale (survey data, 10 items on a scale from 1 to 7; total score ranging from 10 to 70)
	Variable(s)	Job Satisfaction
	Measure(s) (instrument, scale)	<ul style="list-style-type: none"> ● Job Satisfaction Scale (survey data, 1 item on a scale from 1 to 7; total score ranging from 1-7)

Participant Flow Diagram:



Randomisation

Randomisation will be conducted at the individual-level, using baseline administrative data provided by the MoD before the baseline well-being survey is sent. This process will be repeated for each cohort. As we are undertaking rolling recruitment using up to six separate cohorts of employees (or until we reach N = 950), randomisation will be conducted in stages. We do not stratify within these randomisations, but the staged randomisation means that we are, in effect, stratifying by the six cohorts listed above. Randomisation code is included in Appendix I.

We will ensure to keep records of which participants are assigned to which arm (pseudonymised, meaning they are stored by unique IDs with no variables that would allow instant identification). We, but not the MoD project partner, will be blind to the group allocation.

An individually-randomised design was chosen to maximise statistical power to detect effects on our outcome measures. This does, however, increase the possibility of spillover effects between participants. We discuss plans to mitigate this in the 'Risks' section.

Participants

The MoD-DI department is the sole organisational partner for this study. The MoD project partner will manage recruitment of all participants. The participants are recruited via the MoD-DI. The project partner will initially track and send WWCS the baseline administrative data for any MoD-DI staff who fit the inclusion criteria (see below) prior to randomisation.

In terms of inclusion criteria, in order for each participant to be eligible to participate in the study, they must be:

- A full-time employee (civilian or military) within the MoD-DI
- Aged 18 or over
- A new starter at the MoD-DI; defined as having started at the MoD-DI in the past three years or less prior at the time of randomisation

The MoD-DI expressed interest in participating in the HHP research programme in December 2020. Between January 2020 and May 2021, WWCS worked with two primary contacts at the MoD-DI to identify and design a well-being intervention that was suitable and feasible for implement with the MoD-DI workforce: 1) the Head of Wellbeing, Diversity and Inclusion, and 2) the People, Wellbeing, Diversity & Inclusion Data Manager.

Sample Size / Minimum Detectable Effect Size Calculations

MDES (displayed in the table below) was calculated with Stata Statistical Software using the 'power' package. Code is provided in Appendix D.

	Subjective well-being
MDES (Proportion of a Standard Deviation)	0.22
Mean Baseline Measure of Well-being	6.3
Standard Deviation of Baseline	1.8
Alpha	0.05
Power	0.8
One-Sided or Two-Sided?	Two-sided
Level of Intervention Clustering	Individual-level
Total Sample	950

Assumed Attrition		30%
Sample Size	Intervention	333
	Control	332
	Total	665

We are powered to detect an effect size of 0.22, or an effect size 0.39 on the scale. We now explain the assumptions that led to these numbers.

Sample size and cluster size

The sample size was derived from 1) the first cohort who have started with the MoD-DI in the past three years or less at the time of the return of the first baseline administrative data, and 2) the number of employees the MoD-DI anticipates hiring in the coming years, in order to reach a total sample size of $N = 950$. This total sample size was calculated in order to be sufficiently powered to detect an effect size of below 0.22, in line with prior research demonstrating the impact of behavioural interventions on subjective well-being.²⁸

Baseline rates

A baseline rate of subjective well-being of 6.3 and standard deviation of 1.8 was obtained from the pre-intervention survey data completed by employees (i.e. social workers) who participated in the first phase of the Happier, Healthier Professionals research programme in 2019,²⁹ specifically including control participants only from the goal-setting and symbolic awards trials ($n = 69$). It is important to note that these figures were derived from well-being data collected from social workers, and the experiences of employees at the MoD-DI may differ significantly from social workers, though these estimates provide our best estimate of baseline-endline correlations for subjective well-being scores when implementing well-being interventions with employees.

Baseline endline correlations were 0.4 for those who had completed both T1 and T2 surveys. However, due to the high level of missingness in T1 well-being from those who complete T2, the association between baseline and endline for the analytical sample was quite low ($R^2 = 0.1$). Therefore, we do not include this correlation in our calculations, and subsequently our MDES is likely conservative. In the event that a higher proportion of our participants in the current study provide well-being scores at both T1 and T2 (since we are including participants in our sample who may have completed T2 but not T1 surveys), if other assumptions hold, the MDES will be lower.

We also collect relatively few control variables (listed in the ‘Analysis Plan’ section) and do not anticipate them to add much explanatory power to the models. We have therefore excluded them from our MDES calculations.

²⁸ Aknin, L. B., Dunn, E. W., Proulx, J., Lok, I., & Norton, M. I. (2020). Does spending money on others promote happiness?: A registered replication report. *Journal of Personality and Social Psychology*.

²⁹ What Works for Children’s Social Care (2021). HAPPIER, HEALTHIER PROFESSIONALS: SMALL SCALE INTERVENTIONS TO IMPROVE SOCIAL WORKER WELL-BEING. Retrieved from <https://whatworks-csc.org.uk/research-report/happier-healthier-professionals-small-scale-interventions-to-improve-social-worker-well-being/>

Survey Response Rates

Since our primary outcome (subjective well-being) is recorded via opt-in surveys, we anticipate substantial attrition in our outcome data. The first round of HHP trials, which averaged around a 30% response rate, provides us with some information from which to estimate responses for this trial. However, the experience of MoD project partners of surveying staff suggests that they employees be more engaged with the organisation and therefore more likely to respond to communications sent by their organisational leaders. The MoD-DI team have also indicated that they will work with us to implement strategies - highlighted in the 'Risks' section below - including charity incentives and reminder emails. Therefore, our anticipated survey completion rate is 70%.

It is also possible that our intervention, if it has an effect, might influence the likelihood of participants completing the survey, which may add another possible source of bias into the analysis. As we are reliant on participants' self-selection into surveys there is little we can do to mitigate this, though it should be noted as a limitation of our findings. We will however conduct and report balance checks to assess whether there is a difference in attrition between treatment conditions.

Outcome Measures

Primary Outcome: Subjective Well-Being (SWB)

To measure participants' SWB (via survey data), we use two measures on evaluative and affective aspects of wellbeing, standardise them using z-scores, then sum the results to produce one composite measure. These scales, validated by Whillans and Dunn,³⁰ are the 'satisfaction with life' scale (evaluative) and the 'Positive Affect and Negative Affect' scale (affective). SWB is defined as referring to the various types of subjective evaluations of one's life, and recent guidance states that measures of SWB should include both judgment-focused measures like life satisfaction and more affective measures - both which are included above.³¹ Providing the correlations between both above scales are above 0.50, we will standardise and combine these measures to create an overall SWB composite score. Otherwise, we will do separate regressions on each component. The two components are described below:

- **Evaluative component:** First, respondents will report their overall life satisfaction by answering the following question: *"Taking all things together, how happy would you say you are?"* on a scale from 0 = Not at all to 10 = Extremely.
- **Affective component:** To capture the affective component of SWB, we will ask participants to rate their positive and negative affect in the last four weeks using the Schedule for Positive and Negative Affect: *"Please think about what you have been doing and experiencing DURING THE PAST FOUR WEEKS. Then report how much you experienced each of the following feelings, using the scale below."* Participants

³⁰ Whillans, A.V., & Dunn, E.W. (2018). Valuing Time Over Money Predicts Happiness After a Major Life Transition: A Pre-Registered Longitudinal Study of Graduating Students. Harvard Business School Working Paper 19-048. Retrieved from https://www.hbs.edu/faculty/Publication%20Files/19-048_a3814174-e598-46af-ae70-0c81cdfdb9e.pdf

³¹ Diener, E., Lucas, R. E., & Oishi, S. (2018). Advances and open questions in the science of subjective well-being. *Collabra. Psychology*, 4(1).

are then asked to rate the following items on a 5-point scale (1 = Very rarely/never to 5 = Very often/always): Positive, Bad, Negative, Unpleasant, Good, Pleasant.

Secondary Outcomes

Secondary Outcome 1: Staff Sickness Absence

Participants' sickness absence is measured via administrative data from the organisational partner at three separate time points:

- Once at baseline, the total number of days of sickness absence the employee had in the previous 12 months.
- Once at midline (3-months post intervention launch), the total number of days of sickness absence the employee had in the previous 3 months since the launch of the intervention.

Secondary Outcome 2: Organisational Commitment/Perceived Organisational Support

To measure one's sense of organisational commitment and perceived organisational support (via survey data), we included two measures from the Workplace Employment Relations Survey of Employees Questionnaire.³²

The first scale on Organisational Commitment contains the following three items, asking participants to rate them on a 5-point scale (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree):

1. I share many of the values of my organisation.
2. I feel loyal to my organisation.
3. I am proud to tell people who I work for.

The second scale on Perceived Organisational Support contains the following eight items, asking participants to rate them on a 5-point scale (1 = Never/almost never, 2 = Seldom, 3 = Sometimes, 4 = Often, 5 = Always):

1. My organisation really cares about my well-being.
2. My organisation strongly considers my values and goals.
3. My organisation shows little concern for me. (Reverse coded)
4. My organisation cares about my opinions.
5. My organisation is willing to help me if I need a special favor.
6. Help is available from my organisation when I have a problem.
7. My organisation would forgive a mistake on my part.
8. If given the opportunity, my organisation would take advantage of me. (Reverse coded)

³² *Workplace Employment Relations Survey of Employees Questionnaire* (2011). Department of Business, Energy and Industrial Strategy. Retrieved from <https://www.gov.uk/government/publications/the-2011-workplace-employment-relations-study-wers>

Secondary Outcome 3: Sense of Connection to Profession

To measure one's sense of connection to their profession, we included a Professional Identification sub-scale from Lammers et al. (2013).³³ The scale measures four items on a 7-point scale (1 = Strongly disagree to 7 = Strongly agree):

1. I feel I have a lot in common with others in my profession or occupation
2. I find it easy to identify with my profession/occupation
3. I view the problems of my profession as my problems
4. My values and the values of my profession are very similar

Participants' responses to all four items will be averaged to provide an overall score for each participant.

Exploratory Analysis

Turnover

We will collect individual-data from the MoD on whether employees included in the original administrative database have left the organisation at three- and six-month follow-up points (three/six months after the launch of the intervention). This will be recorded as a binary variable, with 1 for having left the local authority and 0 otherwise.

Turnover Intentions

To measure levels of turnover intentions, we included a Turnover Intentions scale.³⁴ The scale measures the following two items on a 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree):

1. I frequently think of quitting this job.
2. I am seriously considering leaving my organisation within the next 6 months.

Participants' responses to both items will be averaged to provide an overall score for each participant.

Basic Need Satisfaction

To measure levels of basic need satisfaction, we included a Basic Needs Satisfaction measuring the three components of SDT - autonomy, competence, and relatedness.³⁵ The scale measures the following ten items on a 7-point scale (1 = Do not agree at all, 2 = Very slightly agree, 3 = Slightly agree, 4 = Moderately agree, 5 = Mostly agree, 6 = Strongly agree, 7 = Very strongly agree):

1. I feel like I can be myself at my job.
2. The tasks I have to do at work are in line with what I really want to do.

³³ Lammers, J. C., Atouba, Y. L., & Carlson, E. J. (2013). Which identities matter? A mixed-method study of group, organizational, and professional identities and their relationship to burnout. *Management Communication Quarterly*, 27(4), 503-536. Adapted from: Hoff, T. J. (2000). Professional commitment among US physician executives in managed care. *Social Science & Medicine*, 50(10), 1433-1444.

³⁴ Staufenbiel, T., & König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology*, 83(1), 101-117.

³⁵ Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, 83(4), 981-1002.

3. I feel free to do my job the way I think it could best be done.
4. I really master my tasks at my job.
5. I feel competent at my job.
6. I am good at the things I do in my job.
7. I have the feeling that I can even accomplish the most difficult tasks at work.
8. At work, I feel part of a group.
9. At work, I can talk with people about things that really matter to me.
10. Some people I work with are close friends of mine.

Participants' responses to the following items will be averaged to provide a sub-score for each of the three components:

- Autonomy: Items 1, 2, 3
- Competence: Items 4, 5, 6, 7
- Relatedness: Items 8, 9, 10

Job Satisfaction

To measure levels of job satisfaction, we included the Job Satisfaction scale,³⁶ measuring one item on a 7-point Likert scale (1 = Not at all to 7 = Very much): “Overall, how satisfied are you with your job?”.

Analysis Plan

Primary Analysis

Primary Outcome: Subjective Well-Being (SWB)

For this outcome, we will use a linear regression model, with the following model specification for individual i :

$$Y_{it2} = \alpha + \beta_1 T_i + \beta_{2-6} X_i + \beta_4 Y_{it1} + \beta_5 Indicator_{it1} + \beta' c_l + \epsilon_{ik}$$

where

- Y_{it2} is the subjective well-being of employee i at T2 (endline)
- α is the regression constant
- β_1 is the coefficient of interest
- T_i is the treatment assignment of employee i (coded as a binary variable - 1 if in the treatment group, 0 if in the control group)
- X_i is a vector of participant-level characteristics (see ‘Individual characteristics’ below)
- Y_{it1} is the baseline subjective well-being score of employee i at T1 (set to 0 if missing - as per the null imputation method described below)

³⁶ Adapted from Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there?. *Personnel psychology*, 36(3), 577-600; see also Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75(1), 77-86.

- $Indicator_{it1}$ is a binary variable indicating ‘missingness’ of T1 well-being scores (set to 1 if T1 well-being score is missing and 0 if otherwise),
- c_l is a categorical indicator of which cohort the participant is in (e.g. Cohort 1, Cohort 2), which should take into account any time differences
- ϵ_{ik} are cluster-robust standard errors for employee i

Individual Characteristics:

The individual-level covariates, represented by the vector X_i in the equation above, are as follows:

- Gender dummy variables (male, female, and other)
- Role dummy variables (civilian, military)
- Contract (a binary variable indicating whether the employee is a full-time or part-time worker)
- Length of employment, i.e. dummy variables indicating the length of employment at the organisation measured in months at T1 (0-3 months; 4-12 months; 13-24 months, 25+ months)
- Age (a continuous variable indicating the age of each employee i)

Secondary Analysis

Secondary Outcome 1: Staff Sickness Absence

For this outcome, we will use the same regression specification as for the subjective well-being analysis, except using the number of days of sickness absence in the past three months at T2 as our Outcome (Y_i) and baseline sickness absence (for Y_i), recorded as the number of sickness absence days taken in the past three months at T1, instead of baseline wellbeing.

$$Y_{it2} = \alpha + \beta_1 T_i + \beta_{2-6} Y_{it1} + \beta_3 Q_i + \beta_4 G_i + \beta_5 I_i + \beta_6 S_i + \epsilon_i$$

- Y_{it2} is the number of days of sickness absence for participant i at T2 (endline)
- α is the regression constant
- β_1 is the coefficient of interest
- T_i is the treatment assignment of participant i (coded as a binary variable - coded as 1 if in the treatment group, 0 if in the control group)
- Y_{it1} is the number of days of sickness absence for participant i at T1 (baseline) (set to 0 if missing)
- Q_i is a binary indicator of whether the participant is a military or civilian employee
- β_G is a vector of dummy gender variables (if all participants are only male or female, then this will be a single binary variable)

- β_j is a vector of missingness dummies for all covariates, where, for each, they are coded to 1 if the covariate was missing, and 0 otherwise. This is known as null imputation or the missing indicator method
- S_i is a categorical indicator of when the participant receives the intervention, which should take into account any time differences (when also combined with organisation fixed effects)
- ϵ_i are robust standard errors for participant i .

Secondary Outcomes 2 and 3: Organisational Commitment/Perceived Organisational Support and Sense of Connection to Profession

We will use the same regression specifications as for the subjective well-being analysis, except that we will control for the baseline level of these two mechanisms.

Intention-to-treat

For both primary and secondary outcome measures, we will employ an intention-to-treat (ITT) approach. This means that we analyse the effect of being randomised into a group (treatment or control), rather than actually complying with or receiving the intervention. This approach gives the truest account of the effect of the intervention when delivered in real world conditions, without the need for more onerous assumptions.

Missing Data

Missing Primary Outcome Data:

Well-being outcome data is likely to be missing for a large proportion of participants (anticipated 30%) due to non-response to the endline (T2) survey and participants leaving their role at the organisation over the course of the trial period. This data is unlikely to be missing completely at random - those who leave the organisation or those who stay but do not take the survey may have lower wellbeing and perhaps be differentially responsive to the treatment. To check this, we will conduct and report balance checks between respondents and non-respondents on treatment. Any observations with missing outcome data will be excluded for the analysis with that outcome. We will conduct and report balance checks for missingness on each outcome, by treatment group. For any missing covariates (including baselines), we will conduct null imputation where, for any missing covariate, their values as 0, and create a new binary variable taking a value of 1 if that observation was missing T1 values for that variable, and 0 otherwise.

Multiple comparisons testing:

As we have three secondary outcomes (not including the fiscal cost-effectiveness analysis), we will not correct for multiple hypothesis testing.

Participants who leave the organisation over the course of the trial:

Well-being outcome data is likely to be missing for a large proportion of participants (anticipated 50%) due to non-response to the endline (T2) survey. This is likely due to non-completion of the surveys by employees who are in the trial, as well as for a minority who leave the organisation. This data is unlikely to be missing completely at random - those

who leave or those who stay but do not take the survey may have lower well-being and perhaps be differentially responsive to the treatment. To check the latter, we will conduct and report balance checks between respondents and non-respondents on treatment.

We will not be able to send surveys to participants who leave the organisation, resulting in missing outcome data. In the event that, as hypothesised, the treatment would positively affect wellbeing and wellbeing is associated with attrition from this cause, we would underestimate the treatment effect. This has implications for the validity of our findings as our sample is effectively restricted to those individuals who were sufficiently satisfied with their roles to continue with them, and this is likely to be related to one's overall well-being, and this is thus a limitation of our research.

We will continue to include data for participants who leave the organisation in our analyses of sickness absence data, as we will be able to retrieve administrative data for this outcome from the MoD-DI.

Staff who join the local authority after the submission of baseline administrative data will not be included in the trial.

Analysis of Harms

Exploratory Analysis

Turnover

We will use the same regression specification as for the sickness absence analysis, except that we will control for the baseline level of the mechanism outcome.

Turnover Intentions, Basic Need Satisfaction, Job Satisfaction

We will use the same regression specification as for the subjective well-being analysis, except that we will control for the baseline level of the mechanism outcomes.

Contextual Factors Analysis

- MoD-DI staff typically undergo an extensive induction process; however, since March 2020, this process has been disrupted due to the Covid-19 pandemic, with new employees having to participate in virtual as opposed to in-person induction training, which may impact on the quality of induction provided, as well as the opportunity to form social connections with other new employees. Moreover, the Covid-19 pandemic has resulted in the whole workforce moving to virtual work, which may reduce the opportunity for forming social connections including weak and social ties with others in the workplace, and thus reducing social connectedness and social belonging. Thus, for cohorts who are mainly working from home, the intervention may have more pronounced effects. Thus, we will conduct exploratory analyses examining the difference in outcomes measures for cohorts who have mainly worked in a virtual setting compared to cohorts who have moved back to in-person office working (assuming this occurs with later cohorts of participants).
- Military staff starting at the MoD-DI have often come from other departments/roles at the MoD, and are typically very experienced, while civilian staff usually consists of

new starters starting entry-level type roles. Thus, there may be differential impacts on these groups, and the civilian staff in particular may experience more benefits from the intervention. We will conduct exploratory analysis examining differences in outcomes based on the employee classification (civilian vs. military) in order to understand the extent to which the intervention may have differential impacts on outcomes for these groups.

Implementation and Process Evaluation

Aims

The purpose of the implementation and process evaluation (IPE) is to assess delivery of the intervention across the MoD-DI. The aim of this is to help understand and explain any identified intervention effects (or lack thereof) in the randomised controlled trial, to identify elements of successful delivery, and to improve the understanding of the theory of change.

The research questions and methods for this IPE are set out below. Findings will be published in a final report as part of the Happier, Healthier Professionals phase two research programme.

Research Questions

The IPE seeks to answer the following research questions:

1. **Fidelity and adaptation:**
 - a. Was the intervention implemented as intended (i.e. as set out in the logic model) and in what way does implementation vary (if at all)?
 - b. What are the contextual barriers and facilitators for delivery of the intervention, and are these accurately captured in the logic model?
2. **Programme differentiation:**
 - a. What does the existing service structure and practice look like in the organisation prior to the introduction of the intervention?
3. **Reach and acceptability:**
 - a. What is the experience of employees who have been involved with the intervention?
 - b. Is the intervention acceptable to key stakeholders including managers and employees?
4. **Mechanisms:**
 - a. Is there evidence to support the intervention theory of change as set out in the logic model, including the mechanisms by which change is achieved and the facilitators and barriers to change
 - b. Does implementing the intervention lead to perceived changes in the outcomes identified in the logic model?
 - c. Are there any perceived unintended or negative consequences as a result of introducing the intervention?

Design

Planned indicators to answer each research question are presented in the table below. Indicators and thresholds have been developed based on the logic model and previous evaluation findings.

IPE Design Table	
Indicators	Method and Time Point
1. Fidelity and adaptation:	
a. Was the intervention implemented as intended (i.e. as set out in the logic model) and in what way does implementation vary (if at all)?	
- Project partner coordinator's self-reported experience of implementing the intervention, including any deviations from the original plan for implementation	Interviews at baseline (3m follow-up)
b. What are the contextual barriers and facilitators for delivery of the intervention, and are these accurately captured in the logic model?	
- Employees' perceptions of the barriers and/or facilitators for reading and responding to the messages	Interviews at baseline (3m follow-up)
2. Programme differentiation:	
a. What does the existing service structure and practice look like in the organisation prior to the introduction of the intervention?	
- Self-reported experiences of employees of similar practices at the organisation (e.g. existing mechanisms for building social support and belonging at work)	Interviews at baseline (3m follow-up)
3. Reach and acceptability:	
a. What is the number of employees reached by the intervention?	
- Number and characteristics (i.e. demographics) of employees reached by the intervention	Administrative data at baseline (1m prior to intervention launch) and endline (3m follow-up) Response data collected during the intervention
b. What is the experience of employees who have been involved with the intervention?	
- Self-reported experience of employees receiving the messages from the MoD-DI partner - E.g. experience of time of week/day receiving the messages	Interviews at baseline (3m follow-up)

<ul style="list-style-type: none"> - Self-reported experience of employees of reading the weekly messages - Self-reported experience of employees of responding to the weekly messages via the participant form link 	Survey data at endline (2m follow-up)
c. Is the intervention acceptable to key stakeholders including employees?	
<ul style="list-style-type: none"> - Self-reported experience of employees' perceptions of the email communications (weekly email format) - Self-reported experience of employees of the impact of the intervention on their colleagues/the broader organisation, for example: <ul style="list-style-type: none"> - How the intervention fits with current MoD-DI working environment - Whether or not they think the intervention could address the well-being needs of MoD-DI employees 	Interviews at endline (3m follow-up)
4. Mechanism:	
a. Is there evidence to support the intervention theory of change as set out in the logic model, including the mechanisms by which change is achieved and the facilitators and barriers to change	
<p>To what extent the intervention is perceived to affect:</p> <ul style="list-style-type: none"> - Employees' sense of well-being - Employees' sense of professional identity and organisational commitment/organisational support - Employees' sense of relatedness 	<p>Interviews at endline (3m follow-up)</p> <p>Survey data at endline (2m follow-up)</p>
b. Does implementing the intervention lead to perceived changes in the outcomes identified in the logic model?	
<p>To what extent the intervention is perceived to affect:</p> <ul style="list-style-type: none"> - Duration of employee sickness absences - Likelihood of employees leaving the organisation 	Admin data at endline (3m follow-up)
c. Are there any perceived unintended or negative consequences as a result of introducing the intervention?	
<ul style="list-style-type: none"> - Employee self-reported negative consequences, for example: <ul style="list-style-type: none"> - Employees feel the messages they receive are disingenuous - Employees feel the messages are too time-consuming to read and/or respond to 	Interviews at endline (3m follow-up)

Methods

Sample and Recruitment

Participants (6) will be recruited and identified via our project coordinator at the MoD-DI. The MoD-DI project coordinator will be asked to only invite employees who were in the treatment

group for an interview, and to select a diverse group of participants with respect to age, gender, and tenure. The MoD-DI project coordinator will be asked not to invite participants who have left the organisation since the start of the intervention for an interview. We will also invite one of the MoD-DI project coordinators for an interview.

Each participant asked to take part will be informed that their participation is completely voluntary, and will be asked to read and sign an information sheet/consent form (see appendix H) prior to participation in interviews. Each participant will be informed that they will receive a £20 Love2Shop voucher as a token of gratitude for their time.

Data Collection

Data will be collected via three primary methods for the IPE:

Method	Sample size	Time point
Semi-structured interviews (conducted by WWCS with participants)	7 in total: <ul style="list-style-type: none"> 6 MoD-DI staff who received the intervention 1 MoD-DI project coordinator 	T2: September 2021
Administrative data (sent by MoD-DI)	Cohort 1: $N = 276$	T1: June 2021 T2: October 2021
Survey data (collected from participants)	Cohort 1: $N = 271$	T1: July 2021 T2: September 2021

Analysis

Administrative data/Survey data:

Quantitative analysis of the administrative data metrics and survey data listed in the section above will be conducted by the HHP research team using Stata Statistical Software. One individual research associate will be responsible for leading on this analysis, which will then be quality assured by a WWCS senior researcher. This analysis will be quality assured in tandem with the primary and secondary outcome analyses for the trial.

Interview data:

Interview recordings will then be transcribed by members of the research team, or an external transcription service hired by WWCS (with a suitable data processing agreement in place). One individual research associate will be responsible for leading on this analysis, which will then be quality assured by a WWCS senior researcher. We will conduct thematic analysis via NVivo. As we have focused research questions, we will use a deductive approach to thematic analysis, though we will also attempt to identify and understand any unanticipated mechanisms or outcomes as a result of the intervention which emerge from interviews. In order to increase our confidence that the qualitative analysis is an accurate reflection of participants' experiences, we will present examples of participant responses using quotes, and test the revised logic model with interviewees.

Cost Evaluation

Measuring costs

The main costs for this intervention are staff time spent on implementation, and participants' time spent as part of the intervention. The intervention materials are either low-cost or free.

To account for staff and participant time, we will use figures provided by the project partner on gross hourly wage (i.e. amount they are paid per hour before tax and other deductions) to calculate the breakdown of costs (i.e. total cost of staff time will be 15 hours x gross hourly wage for staff; total cost of participants' time will be 5/60 x the gross hourly wage for social workers).

According to guidance issued by What Works Wellbeing (p.13), 'costs related to developing the intervention should not be included unless these costs will be replicated were the intervention implemented more widely (for instance, if the intervention needs adapting to local context).' Thus, we will not include WWCS staff time or project partner time spent on developing the intervention in the cost-benefit analysis, since this would not be replicated if the intervention were to be implemented by others. Costs are listed below:

Item	Details
Staff time (i.e. Coordinator)	<ul style="list-style-type: none">• Time spent on administering emails over the 2-month intervention at 2 hours per week for 8 weeks (16 hours total)
Participants' time	<ul style="list-style-type: none">• Time spent by participants reading (and potentially responding to) weekly messages, at 5 minutes per week for 8 weeks (40 minutes total)

Measuring productivity benefits

Productivity can be measured through a variety of indicators, including sickness absence, which is being collected as part of the intervention via administrative data. To account for this in the analysis, we will measure the total number of sickness days recorded, calculate the average hourly wage of participants (using data from the MoD-DI on average salary rates of staff), and follow these steps:

1. We will use the treatment effect derived from the coefficient on the treatment dummy on the regression of days present on treatment and covariates described in the exploratory analysis. This will give the average number of additional days that the police officers attend due to the treatment.
2. We will then multiply the coefficient by the number of participants to calculate the reduced number of days the MoD-DI has to employ temporary staff to replace employees who are on sickness absence leave.
3. We will then multiply this figure by the temporary worker day rate.

To note, we will only monetise this figure and include in the analysis if the impact of the treatment on sickness absence is found to be significant.

Determining overall cost-effectiveness / Sign of success

We will calculate a Cost-Benefit Analysis taking into account the following costs and benefits:

Benefits	Costs
<ul style="list-style-type: none"> Benefit of having to recruit fewer new staff members to replace staff who have left the MoD-DI. 	<ul style="list-style-type: none"> Staff time taken to deliver the intervention. Participant (i.e. managers) time taking to partake in the intervention. Cost of paying temporary worker to replace police officer on sickness absence leave. Costs of recruiting a new staff member to replace staff who have left the MPS.

Risks

Risk	Mitigation
Wellbeing survey is not filled out, reducing our power and risking biasing our results	Incentives provided to motivate survey completion. A charitable donation will be made for completed survey responses (i.e. £1 per response to a charity relevant to a charity for civil servants, chosen to increase the likelihood that recipients would want to complete the survey). We will conduct and report balance checks on completion by the treatment group and acknowledge this limitation in our findings in reporting.
Participants in the control rather than treatment group receive intervention causing us to underestimate the treatment effect	The project partner will be given clear information in order to assign individuals to the treatment and control groups, with guidance and instructions on how to match these individuals to administrative and well-being data throughout the intervention period. We will not collect data required to send a message to those in the control group (e.g. mobile numbers or email addresses). There is however a risk participants may forward on the message to those in the control group. To mitigate against this risk we will be asking participants to refrain from forwarding messages on to other colleagues.
Data is not returned in time by partner organisations	We will follow up with partner organisations via email and phone calls to ensure that they return the data by the assigned deadline.
Participants who have recently left the organisation may be assigned to receive a message, and there may	At the exact time of sending the messages, we will ask the organisation to confirm that each person in the treatment group is still currently in full-time

be a risk of someone receiving a message after having left the organisation (which could result in a negative emotional response).

employment in order to mitigate the risk that someone would receive a message after having left the organisation.

Ethics & Participation

The study has received ethical approval from the University of East Anglia ethics committee and the MoD research ethics committee (MOD-REC); see Appendix G for approval letters.

Administrative data:

Participation in the research is on the basis of the project partner signing up to the research. Participants' administrative data is collected on an opt-out basis, and participants are informed of their right to refuse to participate, as well as of their right to withdraw from the research for whatever reason they wish, via a [privacy notice](#) issued to them prior to the launch of the intervention. They are also informed of the point at which their data cannot be excluded via the [privacy notice](#).

Survey data:

Participation in the two well-being surveys is completely voluntary, and on an opt-in basis. Participants are informed of their right to withdraw their data from the research for whatever reason they wish, via a [privacy notice](#) issued to them prior to the launch of the intervention. They are also informed of the point at which their data cannot be excluded via the [privacy notice](#).

Interview data:

Participation in the interviews is on a voluntary basis, and informed consent is gathered from all participants who take part in surveys/interviews as part of the project (see Appendix H for interview consent form).

The MoD-ING intervention is designed to be light-touch, requiring only approximately 5 minutes of participants' time each week for eight weeks to open/read each email, and to write a response message (which will not be time intensive, consisting of around 2-3 lines and is completely optional). Participants can opt out of the research at any time, and are provided with opt-out information via the two survey emails, as well as in the weekly emails. The intervention does not require the introduction of new processes within the organisation, and therefore there is very little likelihood of any disruption of services. There is also very little potential for the content of the intervention to distress participants, since the messages are designed to cultivate social support and a sense of professional identity. Further ethical considerations are provided in the 'Risks' section above.

Registration

To safeguard against spurious findings, the study protocol has been pre-registered with the Open Science Framework (OSF) prior to any outcome data being obtained. The pre-registration can be found here: osf.io/wb2m7

Data Protection

WWCSC has conducted a Data Protection Impact Assessment (DPIA) and published a privacy notice (see link [here](#)), in line with the Data Protection Act (2018), for this project. We also have relevant agreements (i.e. Data Sharing Agreements outlining data sharing terms) in place with the project partner. All data subjects will be notified of the data processing via the first survey they receive for the project, which will contain a link to the [privacy notice](#) published on our website.

The following types of data will be collected from participants at the MoD-DI:

- Administrative data
- Survey data
- Interview data

The anonymity and confidentiality of all participants will be preserved in accordance with WWCSC data protection guidelines, and all research activity will be overseen by the WWCSC Data Protection Officer (DPO). Data is stored in a secure manner and only authorised individuals will be granted access.

All individual-level data will be stored by WWCSC for 24 months post-publication of the findings in a research report, after which WWCSC will delete all individual-level data. The agreed final date for WWCSC's deletion of all personal data used in the evaluation and research shall be 30 December 2024.

WWCSC shall retain the results data ("aggregate-level data") in an anonymous form by deleting the randomised pseudonymous ID provided by the MoD. The aggregate-level data will continue to be stored after this point in external reports.

WWCSC shall become sole controller of the anonymised data which shall be held indefinitely within the National Statistics Secure Research Service ("ONS SRS") database for further research to be conducted for the benefit of society as a whole. All data held on the ONS SRS is subject to rigorous quality assurance, de-identification and access certification processes in accordance with the requirements of the Digital Economy Act 2017.

Process for collecting data from the project partner:

The data will be processed as follows:

Quantitative data:

1. Administrative data:
 - a. Administrative data will be sent from the MoD-DI to WWCSC twice - once at pre-intervention (T1), and once at post-intervention (T2). This will be provided by the MoD-DI, sent to WWCSC via secure email transfer (Egress) stripped of any personal identifiers (and provided with pseudo-anonymous identifiers for future linkage), and stored securely with the appropriate access controls in place.
 - b. Data will be sent from WWCSC to the MoD-DI once at pre-intervention, after randomisation. This will be following a random assignment by WWCSC of participants' pseudo-anonymous identifiers to either the intervention or control

group. WWCS will return the pseudo-anonymised dataset indicating these allocations to the MoD-DI, so that the MoD-DI can set up the emails to be sent to participants in the intervention group only.

2. Survey data:

- a. Survey data will be collected twice - once at pre-intervention (T1), and once at post-intervention (T2). Collection of this data is on the basis of participants signing up to participate in the two well-being surveys, which is completely voluntary.

Qualitative data:

Interview data will be collected once - three months post launching the intervention (T2). We will conduct 6 interviews in total with participants in the treatment group.

After final data collection, we will then analyse both the quantitative and qualitative data to test the effectiveness of the intervention.

Whilst administrative data can be considered special category health data, no direct identifiers (e.g. names, officer numbers or contact information) will be contained in the quantitative data. The Met Police will be given clear instructions as to completing the administrative dataset and the importance of including no personally identifiable information.

The project partner will be given instructions on how to populate a data spreadsheet that contains administrative data for all individuals included in the trial. The data will be pseudonymised, with the MoD creating a meaningless identifier for each individual in the trial, which will facilitate linkage between administrative data-sets collected at two time points. This will include data on the following:

- Unique Staff ID
- Team ID
- Age
- Gender
- Job role
- Personnel type (e.g. Civilian)
- Length of employment at MoD (in days)
- Contract type (e.g. full-time vs. part-time)
- Illness Related Absences (over the past 12 months at T1, over the past 3 months at T2)
- Turnover (at T2 only)

The data spreadsheet provided by the project partner will form the basis of our initial sample size, and will be used by the WWCS research team to conduct the correct randomisation and appropriate tests (e.g. balance checks) needed in order to launch and implement the trial. Administrative data will only be shared outside of WWCS on an aggregated (i.e. non-individual, summary-level) basis.

The administrative data has already been collected in the course of day-to-day operations of the MoD. The processing and presentation of evidence is unlikely to have distressing effects because we protect against identification of the individual and also against statistical disclosure (following the ONS standard rules outlined in the Approved Researcher training). The research is not being carried out for the purposes of measures or decisions with respect

to a particular data subject but looks at the effect of the intervention on the cohort of participating MoD-DI staff as a whole.

The data will be pseudo-anonymised, i.e. it can no longer be attributed to a specific data subject without the use of additional information. We are not requesting any 'instant identifiers' (e.g. name or address) or 'meaningful identifiers' (identifiers that allow linking to other datasets). We have no reason to believe that the research will cause damage or distress (and certainly not substantial damage or distress) to participating employees of the MoD-DI. This analysis requires minimal participant time, and interventions are designed to improve the wellbeing of MoD-DI staff. The processing and presentation of evidence is unlikely to have distressing effects because we protect against identification of the individual and also against statistical disclosure in reporting our findings (following the ONS standard rules outlined in the Approved Researcher training).

Process for collecting interview data:

Interviews will be conducted by WWCSO staff with participants. This will include data that will be stripped of any instant identifiers (e.g. names) but may be identifiable due to content contained within interview responses of participants. Steps will be taken to ensure that the individuals are not individually identifiable outside of WWCSO (e.g. in later reporting). WWCSO will not be conducting matching of interview data to administrative data.

Accountability and governance:

The Executive Director of the What Works Centre and Principal Investigator for this research (Dr. Michael Sanders) will be ultimately responsible for the conduct of the research.

WWCSO has a DPO and a Data Protection Working Group which has the responsibility for the management of Data Protection on behalf of the Organisation. The Data Protection Working Group includes the Director of Operations, ensuring compliance with GDPR at the highest level of management. The Centre takes and documents the appropriate technical and organisational measures in place to comply with GDPR. The approach of WWCSO to information security is outlined in its IT Usage Policy.

The WWCSO DPO can be contacted at: dpo@whatworks-csc.org.uk.

Checks on staff:

The data will only be accessed by project team members. Research staff at WWCSO have undergone data protection training and have substantial experience in handling data. The research team continues to review the training needs of the team to ensure the Centre's approach remains up-to-date.

Personnel

The evaluation is funded by the Economic and Social Research Council and will be undertaken by What Works for Children's Social Care (WWCSO). The Principal Investigator is Michael Sanders (Executive Director, WWCSO). Overall project management for the HHP research programme is co-led by Shibeal O' Flaherty (Research Associate, WWCSO) and Chris Mitchell (Research Associate, WWCSO).

Impact Evaluation Personnel

Data collection, quantitative analysis and reporting will be led by Shibeal O' Flaherty (Research Associate, WWCS), and quality assured by Eva Schoenwald (Senior Researcher, WWCS). The work will be carried out in consultation with Kevin Daniels (Professor of Organisational Behaviour, University of East Anglia) and Dana Unger (Associate Professor in Organisational Behaviour, University of East Anglia).

Implementation and Process Evaluation (IPE) Personnel

IPE data collection, analysis and reporting will be led by Shibeal O' Flaherty (Research Associate, WWCS) and Emily Walker (Research Assistant, WWCS), and overseen by Abby Hennessey (Qualitative Research Associate, WWCS).

Timeline

The table below provides key dates for the evaluation for the first cohort of MoD-DI employees. The timeframe will be the same but occurring later with cohorts 2-6.

Dates	Activity	Staff Responsible/ Leading
June 2021	Baseline (T1) participant administrative and demographic data shared by MoD	Shibeal O' Flaherty Emily Walker
June 2021	Trial Protocol published	Shibeal O' Flaherty Chris Mitchell
July 2021	Randomisation	Shibeal O' Flaherty
July 2021	T1 survey data collection	Shibeal O' Flaherty Emily Walker
July 2021	MoD-ING intervention launches	Shibeal O' Flaherty Emily Walker
September 2021	MoD-ING intervention ends	Shibeal O' Flaherty Emily Walker
September 2021	T2 survey data collection	Shibeal O' Flaherty Emily Walker
September 2021	IPE data collection	Shibeal O' Flaherty Emily Walker
October 2021	Endline (T2) participant administrative and demographic data shared by MoD	Shibeal O' Flaherty Emily Walker
October 2021	Data analysis	Shibeal O' Flaherty Emily Walker
November 2021	Final reporting of interim (cohort 1) results	Shibeal O' Flaherty Chris Mitchell Emily Walker

Appendices

Appendix A: T1 Well-being Survey

T1 survey:

Q1. Overall life happiness³⁷

Taking all things together, how happy would you say you are?

(10-point scale: 0 = Not at all to 10 = Extremely)

Q2. Schedule for Positive and Negative Affect³⁸

Please think about what you have been doing and experiencing at work DURING THE PAST FOUR WEEKS. Then report how much you experienced each of the following feelings, using the scale below.

- Positive

³⁷ Jowell, R. (2007). European Social Survey 2006/2007. Round 3: Technical Report. City University, Centre for Comparative Social Surveys, London.

³⁸ Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2009). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143-156.

- Bad
- Negative
- Unpleasant
- Good
- Pleasant

(5-point scale: 1 = Very rarely/never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very often/always)

Q3. Self-Reported Job Satisfaction³⁹

Overall, how satisfied are you with your job?

(7-point scale: 1 = Not at all to 7 = Very much)

Q4. Turnover Intentions⁴⁰

Thinking about your experiences at work DURING THE PAST FOUR WEEKS, indicate to what extent you agree with the following statements. Use the following scale to record your answers.

1. I frequently think of quitting this job.
2. I am seriously considering leaving my organisation within the next 6 months.

(7-point scale: 1 = Strongly disagree to 7 = Strongly agree)

Q5. Organisational Commitment⁴¹

Please indicate your agreement with each of the following statements, using the scale below.

1. I share many of the values of my organisation.
2. I feel loyal to my organisation.
3. I am proud to tell people who I work for.

(5-point scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly agree)

Q6. Perceived Organisational Support⁴²

4. My organisation really cares about my well-being.

³⁹ Adapted from Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there?. *Personnel psychology*, 36(3), 577-600; see also Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of occupational and organizational psychology*, 75(1), 77-86.

⁴⁰ Staufenbiel, T., & König, C. J. (2010). A model for the effects of job insecurity on performance, turnover intention, and absenteeism. *Journal of Occupational and Organizational Psychology*, 83(1), 101-117.

⁴¹ *Workplace Employment Relations Survey Survey of Employees Questionnaire* (2011). Department of Business, Energy and Industrial Strategy.

⁴² *Workplace Employment Relations Survey Survey of Employees Questionnaire* (2011). Department of Business, Energy and Industrial Strategy.

5. My organisation strongly considers my values and goals.
6. My organisation shows little concern for me. (Reverse coded)
7. My organisation cares about my opinions.
8. My organisation is willing to help me if I need a special favor.
9. Help is available from my organisation when I have a problem.
10. My organisation would forgive a mistake on my part.
11. If given the opportunity, my organisation would take advantage of me. (Reverse coded)

(5-point scale: 1 = Never/almost never, 2 = Seldom, 3= Sometimes, 4 = Often, 5 = Always)

Q7. Professional Identification⁴³

1. I feel I have a lot in common with others in my profession or occupation
2. I find it easy to identify with my profession/occupation
3. I view the problems of my profession as my problems
4. My values and the values of my profession are very similar

(7-point scale: 1 = Strongly disagree to 7 = Strongly agree)

Q8. Work-Related Basic Need Satisfaction Scale⁴⁴ (9-item)

The following statements concern your experiences at work DURING THE PAST FOUR WEEKS. Please indicate to what extent you agree with these statements.

1. I feel like I can be myself at my job.
2. The tasks I have to do at work are in line with what I really want to do.
3. I feel free to do my job the way I think it could best be done.
4. I really master my tasks at my job.
5. I feel competent at my job.
6. I am good at the things I do in my job.
7. I have the feeling that I can even accomplish the most difficult tasks at work.
8. At work, I feel part of a group.
9. At work, I can talk with people about things that really matter to me.
10. Some people I work with are close friends of mine.

(7-point scale: 1 = Do not agree at all, 2 = Very slightly agree, 3 = Slightly agree, 4 = Moderately agree, 5 = Mostly agree, 6 = Strongly agree, 7 = Very strongly agree)

Dimensions:

- Autonomy : items 1, 2, 3
- Competence : items 4, 5, 6, 7
- Relatedness : items 8, 9, 10

⁴³ Lammers, J. C., Atouba, Y. L., & Carlson, E. J. (2013). Which identities matter? A mixed-method study of group, organizational, and professional identities and their relationship to burnout. *Management Communication Quarterly*, 27(4), 503-536. Adapted from: Hoff, T. J. (2000). Professional commitment among US physician executives in managed care. *Social Science & Medicine*, 50(10), 1433-1444.

⁴⁴ Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, 83(4), 981-1002.

Finally, just a few questions about you.

Q9. Age

What is your age?

Q10. Education

What is the highest level of education you have completed?

- Primary school
- Secondary school up to 16 years
- Higher or secondary or further education (A-levels, BTEC, etc.)
- College of university
- Post-graduate degree
- Prefer not to answer

Q11. Marital Status

What is your marital status?

- Single (never married)
- Married, in a civil partnership, or in a domestic partnership
- Widowed
- Divorced
- Separated
- Prefer not to answer

Q12. Children

How many children do you have who live at home with you?

- 0
- 1
- 2
- 3
- 4 or more
- Prefer not to say

Q13. Additional Comments

Appendix B: Consent Form for T1 Well-being Survey

Thank you in advance for taking part in this survey! This contributes to exciting research led by What Works for Children's Social Care (WWCSC) in collaboration

with the Ministry of Defence (MoD) Defence Intelligence (DI) to help improve well-being amongst MoD DI staff.

The purpose of this survey is to understand more about your unique experience as an employee at the MoD. The survey will take approximately 5 minutes in total to complete, and we ask that you please complete all of the questions.

This is the first of two surveys which you will be asked to complete if you decide to participate in this research. You will receive an invitation to the second survey in approximately 3 months.

We are only requesting data that is necessary for the purposes of this research. We will not capture any information that lets us easily identify you. Your questionnaire will be matched via a unique code so that we can link your response to the follow-up survey and administrative data held by the organisation - we use a unique code to enable us to preserve your anonymity.

WWCSC will not take any steps to identify you from your answers. Your answers will be analysed by the research team at the WWCSC, and all data will be deleted 24 months after final reporting is complete. The privacy notice for this study can be found [here](#).

If you have any questions during or after you have completed the survey, and/or later decide that you do not want to participate in this research, and/or you would like your responses to be deleted or rectified, please contact the WWCSC research team by emailing Shibeal O' Flaherty: Shibeal.OFlaherty@whatworks-csc.org.uk.

Ethical approval for this study has been granted by University of East Anglia (project code: R201659), and from the Ministry of Defence's Research Ethics Committee (MOD-REC; project code: 2001/MODREC/20).

The WWCSC can be contacted at:

What Works for Children's Social Care
The Evidence Quarter
Albany House
Westminster, London, SW1H 9EA
Email: research@whatworks-csc.org.uk

To participate, please click "Agree" next to the below statements to proceed to the survey:

- I confirm that I have read the above information.
- I voluntarily agree to participate in the research.

- I expressly acknowledge that, at the outset of the Project, any personal data which you might collect in connection with the Project during the Project Length may be transferred to the WWCSO secure data archive. This archive is hosted and stored by the Office of National Statistics (“ONS”) ‘Secure Research Service’ on WWCSO’s behalf. WWCSO is the data controller and access to any data stored within the archive is therefore controlled by the ONS and WWCSO only.

Appendix C: Well-being Survey Emails to Participants

First Wellbeing Survey: Email Templates

Email 1: Initial Survey Email to Participants (Send on Monday June 7th)

- Day 1: To be sent on morning of survey launch
- From: Martin Short
- Subject: Action Required: 3-minute survey for our research into Ministry of Defence staff wellbeing - £500 donation to The Charity for Civil Servants.

Dear all,

The Ministry of Defence is participating in some exciting research into staff wellbeing with What Works Centre for Children’s Social Care (WWCSO). In the coming months, we’ll be testing a new wellbeing intervention with our staff. As part of this project, we’re asking you to complete **two 3-minute surveys** - one now, and one in a couple of months time. This is the first of those surveys.

The survey (link below) will take around **3 minutes to fill out**, and for each survey response completed, WWCSO will donate £1 to [The Charity for Civil Servants](#). The Charity supports all civil servants, past and present, when times are tough, listening without judgement and offering practical, financial and emotional support. **If we reach a 70% response rate, WWCSO will donate £500 to The Charity for Civil Servants on behalf of our team.**

Just to note that your survey responses cannot and will not be individually traced back to you - your responses will be stored anonymously by WWCSO.

We’re asking for **all responses by Monday 21st June.**

Please find your unique link to the survey here:

[Insert Merge Field]

NB: Please ensure that you complete the survey using your individual link above - do not share this link with colleagues.

Best,

Martin Short

Email 2: First Survey Reminder Send Wednesday 16th June.

- Day 8: To be sent 5 days prior to survey deadline
- Subject: Reminder: Complete 3-minute survey by **21st June** for £500 donation to The Charity for Civil Servants.
- From: Martin Short

Hi all,

Just a reminder to those of you who haven't already to please complete the wellbeing survey you received on **Monday 7th June**. The deadline to complete the survey is this upcoming **[Monday 21st June]**.

It only takes around **3 minutes** to fill out, and for each response, WWCSO will donate **£1 to [The Charity for Civil Servants](#)**. We are currently at a **X% response rate**, and if we reach a **70% response rate, WWCSO will donate £500 to The Charity for Civil Servants on behalf of our team.**

It's impossible to predict what life will throw at us. Illness, bereavement, relationship breakdown, money worries, the strain of caring for loved ones; these are just some of the reasons why people turn to us for help. By completing this survey you're helping to make a lasting difference to colleagues who need our help – thank you.

- The Charity for Civil Servants

Your link to complete the survey can be found in the initial email, which was sent on **[Monday 7th June]. Please use the unique link you received to complete the survey.**

Best,
Martin Short

Email 3: Second Survey Reminder

- Day 13: To be sent 1 day prior to survey deadline (**Friday 18th or early Monday 21st?**)
- Subject: Deadline tomorrow: Complete 3-minute wellbeing survey for donation to The Charity for Civil Servants.
- From: Martin Short

Hi all,

Just a final reminder that the deadline to complete the wellbeing survey you received on **[Monday 7th June]** is tomorrow, **[Monday 21st June]**.

For those of you who haven't already completed the survey, please do so by the **end of the day tomorrow**. We are currently at a **X% response rate**, and if we reach a **70% response rate**, **WWCSC will donate £500 to The Charity for Civil Servants on our behalf**.

By completing this survey you're helping to make a lasting difference to colleagues who need our help – thank you. - The Charity for Civil Servants

Your link to complete the survey can be found in the initial email, which was sent on [Monday 7th June]. Please use the unique link you received to complete the survey.

Best,
Martin Short

Appendix D: Power Calculations Code

```
*****
* HHP2 - MoD - POWER CALCS
*****

*# Filename: HHP2_MoD_PowerCalcs
*# Author: Shibeal O' Flaherty
*# Created Date: October 2020
*# Last Update: 15/07/2021

* MDES calculations with 1 levels of response rate (70%), holding SD and power constant

*****
*WELLBEING
*****

* Initial sample size = 950
* Assuming 70% survey response rate = 665

power twomeans 6.3, n(665) power(0.8) sd(1.8)
* 0.3920

* Cohen's d

power twomeans 6.3, n(665) power(0.8) sd(1)
* 0.2178

*****
```

*SICKNESS ABSENCE

* Original sample = 950

power twomeans 4.16, n(950) power(0.8) sd(11.1)

* 2.0199

* x0.55 = 1.11

Appendix E: Social Support Email Messages

MOD Inspiring the Next Generation: Final Social Support Messages

Week 1: WELCOME FROM THE CHIEF OF DEFENCE INTELLIGENCE (CDI)

Subject: Your weekly message from MOD colleagues - week 1 of 8

Email Content:

Hello,

This is the first of a series of eight weekly messages which you will receive from senior and experienced members of the DI. We highly encourage you to take 10 minutes out of your day to read through and reflect on these messages.

Hi, my name is Jim. I have the enormous privilege of leading Defence Intelligence. I have been an intelligence officer for nearly 35 years, but every day is a 'school day'. I learn new things all the time and I look forward to learning from each of you.

There are three things I would like to share with you. Firstly, I exhort all of you to always have the courage to do the right thing, no matter what the circumstances. Secondly, I encourage you all to be as creative as possible, not just in your intelligence products, but also in how you approach your work. Finally, I expect you all to be candid. Always tell it how it is, and don't be afraid to speak truth to power.

You are part of a remarkable organisation, full of tremendous people. Welcome to the team.

Yours ever

Jim

CDI

Lt Gen Sir Jim Hockenhull KBE,
Chief of Defence Intelligence

If you would like to share reflections or a response to this week's message, please [click here](#).

Note: You've been selected to receive emails like this because the MOD is looking for better ways to support its staff. We'll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we'll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 2: MAKING A POSITIVE DIFFERENCE/IMPACT OF DI

Subject: Your weekly message from MOD colleagues - week 2 of 8

Email Content:

Hi - I'm Hilary and in 2017 when the number of cholera cases in Yemen increased rapidly, exacerbated by the chronic food shortage caused by the Houthis diverting food aid, I provided an assessment for the Department for International Development (DfID) identifying suitable, non-Houthi controlled ports and airports into which medical and food aid could be delivered and associated road distribution routes.

In addition, I was asked to identify two suitable cross-border road routes, from Saudi Arabia, which were capable of supporting HGV aid convoys to deliver aid throughout the country. I provided an assessment to DfID, at a suitable classification that would allow it to be shared with aid workers in country. This enabled them to devise and deliver a suitable aid plan. It's nice to know that some of the things that we produce in DI can, in some way, help those less fortunate than us and I take some satisfaction in thinking that what I did helped save the lives of civilians in Yemen.

Hilary
Infrastructure Analyst

If you would like to share reflections or a response to this week's message, please [click here](#).

Note: You've been selected to receive emails like this because the MOD is looking for better ways to support its staff. We'll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we'll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 3: POWER OF COLLABORATION

Subject: Your weekly message from MOD colleagues - week 3 of 8

Email Content:

Hi, my name is Mark and, as the team leader for the Online Research, Collection and Analysis team, I see the amazing breadth of experience and expertise across Defence Intelligence daily. This strength allows Defence Intelligence to tackle the most challenging of problems by bringing these experts in different areas and intelligence disciplines together focus on a problem in a way that no-one else in the UK can.

This was exemplified during Defence Intelligence's support to the UK Government's Covid-19 response, where medical expertise operated collaboratively with intelligence collection disciplines to dynamically answer the Government's strategic priorities. By combining medical expertise with the intelligence collection disciplines, it was possible to rapidly receive requirements from the highest levels of government and immediately start to collect information to meet them. Once analysed, the resultant intelligence was pushed to those who needed it to provide timely medical intelligence assessments to senior government officials within 24 hours. With those carrying out open source intelligence, medical intelligence and geospatial intelligence working hand in hand, it was possible to tackle problems such as Covid-19 death transparency in specific countries. Scientific models were combined with open source and geospatial intelligence, which made it possible to combine local death statistics with imagery of mass graves, alongside medical intelligence insight, in order to provide realistic estimates of the actual death toll.

Examples like this one, where Defence Intelligence colleagues with different specialisms come together to address such an important challenge, are really common in the MoD and are a big part of the reason why we are able to produce work which improves the lives of so many people.

Mark
Open Source Analyst

If you would like to share reflections or a response to this week's message, please [click here](#).

Note: You've been selected to receive emails like this because the MOD is looking for better ways to support its staff. We'll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we'll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 4: WELLBEING IN DI

Subject: Your weekly message from MOD colleagues - week 4 of 8

Email Content:

Wellbeing is simply 'how we feel we are doing' – as individuals and as communities. Ideally, we all want to feel that we are 'thriving' - and this is most likely to happen when we feel good about ourselves, our relationships, the environments we live and work in, and when we have a clear sense of purpose and meaning in our lives.

But good Wellbeing isn't just about us as individuals – it can have huge benefits for those around us and the organisations we work in too. There is a wealth of evidence to show that thriving staff are more productive and more innovative, they learn more quickly, adapt to change better and go sick less often.

Since 2018 Defence Intelligence has invested heavily in developing an improved Wellbeing offer for all staff – military and civilian. The use of an evidence-based approach has helped us identify our Wellbeing challenges and has led to the launch of many new initiatives –including the largest Mental

Health First Aid Training Programme in Defence, a variety of new Mental Health training courses and resources and a free Mindfulness offer to all staff.

Embedding a Wellbeing-centric approach into the cultural DNA of Defence Intelligence needs commitment at all levels – from the most junior to the most senior. Please do think about how you can play your part – perhaps by exploring what Mindfulness can do for you, perhaps by becoming a Mental Health First Aider, or perhaps simply by taking some time out to have a coffee and listen to a colleague who may be struggling. A little kindness and compassion can make all the difference at a personal level and helps make DI the mutually supportive working environment that we all want it to be - so that DI really does develop a reputation as a great place to work.

Martin

Head of Wellbeing, Diversity and Inclusion

If you would like to share reflections or a response to this week’s message, please [click here](#).

Note: You’ve been selected to receive emails like this because the MOD is looking for better ways to support its staff. We’ll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we’ll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 5: THE IMPORTANCE OF DIVERSITY AND INCLUSION IN DI

Subject: Your weekly message from MOD colleagues - week 5 of 8

Email Content:

Hi. I am Martin, and I lead the DI Wellbeing, Diversity and Inclusion Team. I first joined DI in the mid-nineties as an all-source analyst, following on from nearly a decade serving as an army officer.

One of my favourite quotes on the topic of diversity comes from the CEO of Mastercard, Ajay Banga who said: *‘We’re in an industry where technology and innovation flow around you all the time. If you surround yourself with people who look like you, walk like you, talk like you, went to the same schools as you and had the same experiences, you’ll have the very same blind spots. You’ll miss the same trends, curves in the road and opportunities.’*

I have always thought that Ajay Banga’s quote aligns really well with the requirements of the Defence Intelligence Community. Having a diverse workforce helps DI avoid group-think, it allows the development of different perspectives and ultimately ensures that we provide the best possible service to UK decision makers.

Symone, who recently joined as the D&I Strategy Lead in the DI Wellbeing, Diversity and Inclusion team, said the following:

I am passionate about enabling and facilitating diversity and inclusion to become a normality rather than an add-on to everything we do in the workplace.

All of us process the world from how we experience it, it is how the brain makes things easier for itself. After all, imagine if you were constantly trying to operate from a place of unknown information? You would spend more time trying to understand the information than making any decisions or doing any activity.

Diversity gives us the advantage of having a wider breadth of known experiences from which we can process our operational activity. The wider our diversity, the less "unknowns" we have as an organisation. In DI diversity gives us competitive advantage in an ever-changing world.

Where difference does not mean isolation or exclusion, it becomes an asset and benefit to all.

Martin and Symone
DI Wellbeing, Diversity and Inclusion Team

If you would like to share reflections or a response to this week's message, please [click here](#).

Note: You've been selected to receive emails like this because the MOD is looking for better ways to support its staff. We'll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we'll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 6: OVERCOMING CHALLENGES / COURAGE TO CHALLENGE

Subject: Your weekly message from MOD colleagues - week 6 of 8

Email Content:

Hey, my name is Becky and I am an All-Source Analysts in DI for Sub Saharan Africa (SSA). I was new to the civil service when I joined DI, having no experience in intelligence previously. My role in SSA was in support of an already live operation. With this carried a lot of responsibility and pressure as I joined when key decisions about the operation were being made. Confidence was a huge struggle initially and a lot of my work involved feeling like the bearer of bad news as the security situation in-country continued to deteriorate – which was never what people wanted to hear.

What your brief is important and carries weight, but also accept that although you may not be able to read everything under the sun to feel like an 'expert,' odds are you will know more than most of the people in the room. Take pride in your work, and as cliché as it sounds, back yourself and the impact your work can make.

For me confidence very much came with subject matter expertise, the more time I dedicated to preparation the easier briefing became. Similarly, I looked to my team for advice and to check over the notes I was briefing and what I intended to say. It felt very overwhelming at first that's why having a great team and network of other new-starters around DI really helped – never be afraid to say something is difficult, because someone before you has felt exactly the same way at some stage in their careers and will be willing to help.

Becky
All-Source Analyst

If you would like to share reflections or a response to this week’s message, please [click here](#).

Note: You’ve been selected to receive emails like this because the MOD is looking for better ways to support its staff. We’ll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we’ll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 7: LEARNING, DEVELOPMENT AND THE GROWTH MINDSET

Subject: Your weekly message from MOD colleagues - week 7 of 8

Email Content:

My name is Charlotte and I am Head of the DI People Team. Having recently joined on secondment myself the learning curve of joining a new organisation is familiar to me, but I hope you are receiving brilliant support from your teams and using the opportunity to both learn and share something new. Research suggests that 70% of our learning comes from experience and 20% from working with others – I am sure you have had a busy few weeks learning the organisation already!

Development of our people is vital and we are fortunate to be able to offer a variety of different learning opportunities as you progress through your career, all with the intention of making sure you have the opportunity to develop your skills and awareness, whilst adding value to DI impact. The nature of our work means we constantly have to innovate to retain our competitive edge and at the heart of that are our people.

As you settle into your roles I encourage you to think of development holistically and take advantage of the learning on offer; whether that is exchanging technical learning with colleagues, reading a new book, or completing more formal training such as apprenticeship, leadership development or learning on a niche technical skills. A growth mindset is powerful as an individual and vital for this organisation. In the words of Carol Dweck, *“Love challenges, be intrigued by mistakes, enjoy effort and keep on learning”*.

Charlotte
(Head of DI People Team)

If you would like to share reflections or a response to this week’s message, please [click here](#).

Note: You’ve been selected to receive emails like this because the MOD is looking for better ways to support its staff. We’ll be sending you emails like this once a week for the next eight weeks. At the end of the eight weeks, we’ll ask you about the process and how we can improve it. If you want to unsubscribe from receiving these emails, [click here](#).

Week 8: FLEXIBLE WORKING OPPORTUNITIES

Subject: Your weekly message from MOD colleagues - final week

Email Content:

Hi, my name is Sarah and until a few months ago I was the lead for Diversity and Inclusion in Defence Intelligence. Whilst my career and job role is incredibly important to me, my number one priority in life is my family, including my two children and my elderly parents. In the past I have struggled to find the balance between the two but what really helped me was having an open conversation with my line manager where we looked at solutions that would help me give my best to both. Flexible working has been key to this. I am able to work from home and in the office when needed. This has removed a lot of the stresses that I felt prior to establishing this working pattern, it has also increased my productivity. In addition, my former and current line managers allow/ed me to work flexible hours to accommodate all the activities and events (and unseen events!) that come with having caring responsibilities.

As a new joiner, you may also be in a similar situation to me. I would urge you to have this conversation with your line manager, it really can make all the difference. The MOD supports a range of flexible working options and in the not too distant future every MOD employee should be provided with their own laptop. DI is also a strong advocate of being able to work flexibly and whilst the work that we do may not always accommodate home working, the Covid-19 pandemic has taught us that there are creative ways this can be done and I truly hope it is something that endures in the future.

Sarah

Former D&I Strategy Lead in the DI Wellbeing, Diversity and Inclusion team

This was the last message of the series.

If you would like to share reflections or a response to this week's message, please [click here](#).

Note: This was the last message of the series. You've been selected to receive emails like this because the MOD is looking for better ways to support its staff. Thank you very much for your participation.

Appendix F: Weekly Message Response Form

Ministry of Defence - Inspiring the Next Generation

Thank you for clicking through to this week's response form. The purpose of this form is to gather your insights and thoughts about the email you received this past week (Monday X July), week 1 of 8 of the 'Inspiring the Next Generation' series of emails to staff. As a reminder, this week's message is included below:

Hi, my name is Jim. I have the enormous privilege of leading Defence Intelligence. I have been an intelligence officer for nearly 35 years, but every day is a 'school day'. I learn new things all the time and I look forward to learning from each of you.

There are three things I would like to share with you. Firstly, I exhort all of you to always have the courage to do the right thing, no matter what the circumstances. Secondly, I encourage you all to be as creative as possible, not just in your intelligence products, but also in how you approach your work. Finally, I expect you all to be candid. Always tell it how it is, and don't be afraid to speak truth to power.

You are part of a remarkable organisation, full of tremendous people. Welcome to the team.

Yours ever

Jim

Lt Gen Sir Jim Hockenhull KBE,

Chief of Defence Intelligence

We would love to hear your thoughts and reflections on this week's message.

Please note:

1. Your response is completely anonymous.
2. When completing this survey, please only answer questions at OFFICIAL classification. Avoid using names, units/teams, grades and locations in all free-text fields.
3. Your response may be included in next week's email. If you'd prefer for your response not to be included in next week's email, you can click update your preference below.

Please enter your thoughts and reflections on this week's email here:

Please indicate your preference on including your response in the next weekly email here:

I am happy for my response to be included in next week's email.

I would prefer for my response NOT to be included in next week's email.



Appendix G: Ethics Letters



MODREC Secretariat
Building 5, G02,
Defence Science and Technology Laboratory,
Porton Down, Salisbury, SP4 0JQ

Telephone: 01980 956351
e-mail: MODREC@dstl.gov.uk

Kevin Daniels
Professor of Organisational Behaviour
Norwich Business School
Norwich Research Park
Norwich
NR4 7TJ
University of East Anglia

Our Reference: 2001/MODREC/20

Date: 17th December 2020

Email: Kevin.Daniels@uea.ac.uk

Dear Kevin,

Healthier, Happier Professionals Phase 2: Inspiring the Next Generation

Thank you for submitting your revised application (2001/MODREC/20) with tracked changes and the covering letter with detailed responses to the MODREC letter. I can confirm that the revised protocol has been given favourable opinion ex-Committee.

This favourable opinion is valid for the duration of the research and is conditional upon adherence to the protocol – please inform the Secretariat if any amendment becomes necessary.

Please note that under the terms of JSP 536 you are required to notify the Secretariat of the commencement date of the research, and submit annual and final/termination reports to the Secretariat on completion of the research.

Yours sincerely,

A handwritten signature in black ink, appearing to read "S. Kolstoe".

Dr Simon Kolstoe
MODREC Chair

What Works for Children's Social Care
The Evidence Quarter,
Albany House,
London,
SW1H 9EA

Faculty of Social Sciences
Norwich Business School

University of East Anglia
Norwich Research Park
Norwich NR4 7TJ
United Kingdom

Email: z.bika@uea.ac.uk

Web: www.uea.ac.uk

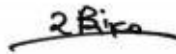
23 June 2020

To Whom It May Concern,

This letter is to confirm that the three interrelated ESRC funded 'What Works Centre for Children's Social Care' projects (RIN: R201659) titled 'Healthier, Happier Professionals: Pro-Time (1); Symbolic Awards (2); and Inspiring the Next Generation (3) were granted ethics approval from the NBS S-REC on 14th May, 2020 after submitting the amended documentation.

Approval by the NBS-REC should not be taken as evidence that your study is compliant with GDPR and the Data Protection Act 2018. If you need guidance on how to make your study GDPR compliant, please contact your institution's Data Protection Officer.

Kind regards,



Zografia Bika PhD
Chair of the NBS Research Ethics Committee

NBS RESEARCH ETHICS INFORMATION at <https://www.uea.ac.uk/norwich-business-school/research-ethics>

Appendix H: Interview Consent Form

Information sheet for interview for 'Happier, Healthier Professionals: Ministry of Defence Inspiring the Next Generation RCT

We are What Works for Children's Social Care (WWCSC), an independent charity seeking better outcomes for children, young people and families by bringing the best available evidence to practitioners and other decision makers across the children's social care sector.

As part of our Happier, Healthier Professionals Programme, we are aiming to support public-sector employees by addressing how to increase employee wellbeing and decrease turnover and sickness absence rates. In this project, we want to find out whether receiving an intervention involving a series of eight weekly supportive email messages could have a positive impact on overall subjective well-being.

We are inviting you to take part in an interview to learn more about your experiences around your involvement in the Ministry of Defence Inspiring the Next Generation (MOD-ING) research project, where you were allocated to receive the intervention from your organisation. If anything is not clear, or you would like more information, please ask us.

Do I have to take part?

Taking part is entirely voluntary. You can stop at any point during the interview. If you change your mind, you can also withdraw after your interview is complete, by contacting shibeal.oflaherty@whatworks-csc.org.uk. Choosing not to take part will not cause a loss of benefits or services to which you might otherwise be entitled. It will not be possible to withdraw after the research has been finalised and shared - we plan to do this on approximately 31st October, 2021.

What will taking part involve?

You are being asked to participate in an interview. This will involve participating in a one to one discussion with a researcher (virtually). You will be asked a series of open questions about your experience in receiving the MOD-ING intervention at your organisation. This interview should take about 45 minutes.

With your permission, we will audio-record the discussion. The recordings will only be reviewed by staff members involved with the research, as well as an external transcription vendor, with whom we have a separate data sharing agreement in place to protect your data. The content of the recordings will be transcribed by the external transcription vendor. Your answers will be analysed by the research team at the WWCSC, and all data will be deleted 24 months after analysis and quality assurance is complete.

Your identity will be treated confidentially. While we may publish the information you have provided in our report, we will not attribute this to you. However, if the researcher believes, based on something revealed in the interview, that you or another individual is in significant danger, they will be obligated to take action - but where possible we will discuss this with you beforehand.

Risks and benefits

Data which identifies you will be collected and processed in this project, some of which may be considered special category data by the General Data Protection Regulation 2018, however appropriate controls have been put in place to protect this data. Taking part is an opportunity for you to contribute to a research programme being led by WWCSA titled 'Happier, Healthier Professionals: Symbolic Awards (Care Leaver Video) RCT'.

What will happen to my data?

We will be using the information you provide through this interview to carry out our research. We will store all data securely. These will be kept for 24 months after the study has finished. You can find out more about how we use and look after your information by reading our [Data Privacy Notice](#). You can also get in touch with us by contacting Shibeal.OFlaherty@whatworks-csc.org.uk.

Research findings will be published in a report on our website towards the end of 2021.

Who has reviewed the study?

The study has been reviewed and approved by the University of East Anglia ethics committee, our primary academic partner for this project.

Consent Form

MOD-ING: Social Support Messages for MoD-DI Staff

Please read the following statements, and sign to confirm you understand and agree to take part in the research. If you have any questions, please ask the researcher.

	Please initial box
I have read the information sheet for the interview.	
I have had the opportunity to ask questions and I understand the answers.	
I understand that participating in the interview is voluntary and I am free to withdraw at any time, without giving any reason.	
I agree that the interview findings can be used in the final report.	
I understand that the information obtained about me will be kept confidential, unless you reveal something that would leave us to believe you or another individual is in significant danger.	
I understand that my identity will not be revealed in any description, publication or research.	

Name of participant

Date

Signature

On behalf of What Works for CSC

Appendix I: Randomisation Code

```
*Set your directory path
clear
global root "G:\Shared drives\HHP data\HHP2"

*****
* CLEANING CODE - PREP FOR RANDOMISATION *
*****

* Import excel data;
* Convert variables to numeric and rename for consistency across datasets;

import excel using "$root\MOD\Original admin dataset\MOD_baseadmin_original.xlsx",
cellrange(A1:H277) firstrow clear
gen org="MODcohort1"

    *Convert string to numeric for appending
    encode UniqueStaffID, gen(StaffID)
    encode TeamID, gen(TeamID2)
    encode Role, gen(Role2)
    encode Gender, gen(Gender2)

drop UniqueStaffID TeamID Role Gender

    *Renaming variables
ren TeamID2 TeamID
ren Role2 Role
ren Gender2 Gender
ren Lengthofcurrentemploymentda EmploymentLength

save "$root\MOD\Randomisation\temp\MoDCohort1_Clean.dta", replace

*****
* RANDOMISATION *
*****

clear
u "$root\MOD\Randomisation\temp\MoDCohort1_Clean.dta"

codebook StaffID // all unique values, none missing

set seed 28042012

*generate random numbers distributed uniformly between 0 and 1
gen double random1 = runiform(0,1)
gen double random2 = runiform(0,1)

*sort random numbers in ascending order
sort random1 random2

*Randomise based on whether there's an even/uneven # of staff
```

```

if mod(_N,2)==0 { // if staff number is even
  *assign top half of list into Control,
  *bottom half into Treatment
  gen assignment = [ceil(2 * _n/_N)]-1
}
else if mod(_N,2)==1 { // if staff number is uneven - randomly assign extra staff to
treatment/control

  * create rank
  egen grouped = group(random1 random2)
  egen rank = rank(grouped)

  * create random tiebreaker that determines whether one extra staff is in treatment or
control group
  scalar tiebreaker=runiform(0,1)
  gen assignment =.

  * assign based on tiebreaker
  if tiebreaker>0.5 {
    replace assignment=1 if rank<=_N/2
    replace assignment=0 if rank>_N/2
  }
  else if tiebreaker<=0.5 {
    replace assignment=1 if rank <=_N/2+1
    replace assignment=0 if rank >_N/2+1
  }
}

*let 0 = Control, 1 = Treatment 1
label define assign 0 "Control" 1 "Treatment"
label value assignment assign

*check the assignment variable
tab assignment

* creating new variable for easy interpretation by LA
gen messages=assignment

tostring messages, replace
replace messages="Receive the messages" if messages=="1"
replace messages="Do not receive the messages" if messages=="0"

keep StaffID assignment messages

* Save a version in excel to show treatment assignment
export excel "$root\MOD\Randomisation\assignments\MoD_1_assignment.xlsx", replace
firstrow(variables)

*****\

```