

**brain in hand**

**How Brain in Hand  
improves wellbeing and  
productivity for Autistic  
and ADHD employees**

February 2025





### Written by

Helen Guyatt

Head of Research, Evaluation and Insight

Guyatt, H., Brain in Hand Ltd, (2025 February)  
How Brain in Hand improves wellbeing and  
productivity for Autistic and ADHD employees

## Key takeaways



45% of employed BiH users report fewer days off work, better work performance, or feel more likely to stay in their role.



Employers could save an average of £6,804 annually per employee using BiH, with 56% of this attributed to increased productivity.



If BiH is funded via Access to Work, the ROI can increase to 8.9. For every £1 invested, there could be a return of £4.



The broader economic benefits of employee retention through BiH result in average annual savings of £11,299 per person.



BiH drives workplace success by improving employees' mental health, supporting them with anxiety, stress, overwhelm, and burnout.



Support for organisation, problem-solving, and self-care via BiH also contributed to improvements in mental health.



Planning and problem-solving positively impact work outcomes by helping users stay organised with tasks and routines.



Employees report improvements in self-reflection and awareness by using the mood tracking features and personalised solutions in the unplanned section.



BiH supports users in communicating their needs and feelings, facilitating better workplace outcomes and culture.



## Summary

This research paper explores the positive impact of Brain in Hand (BiH) for neurodivergent employees in the workplace. It uses insights from a user survey on work outcomes (absenteeism, presenteeism, and retention) to (1) quantify the return on investment (ROI) and (2) formulate a Theory of Change (ToC) by examining the link between work outcomes and potential driving factors, such as reducing overwhelm, anxiety, and improving organisation.

## Significant ROI and cost savings for employers using Brain in Hand

**£6,804**

**average annual savings to an employer of an employee using BiH**

Overall, 45% of Brain in Hand users in employment were reporting at least one of three positive industry standard work outcomes related to absenteeism (taking time off work), presenteeism (working effectively at work), or retention.

Preliminary findings suggest that employers could achieve average annual cost savings of up to £6,804 per employee using BiH, with over half (56%) of these savings attributed to increased productivity.

**If BiH is purchased through Access to Work, the ROI for employers can be as high as 8.9**

This translates to an ROI of 2.7 in the first year for employers covering the full license cost themselves, increasing to 3.7 in the following years. For every £1 invested, employers see a return of up to £4. If BiH is funded through Access to Work, the financial ROI for employers can increase to 8.9.

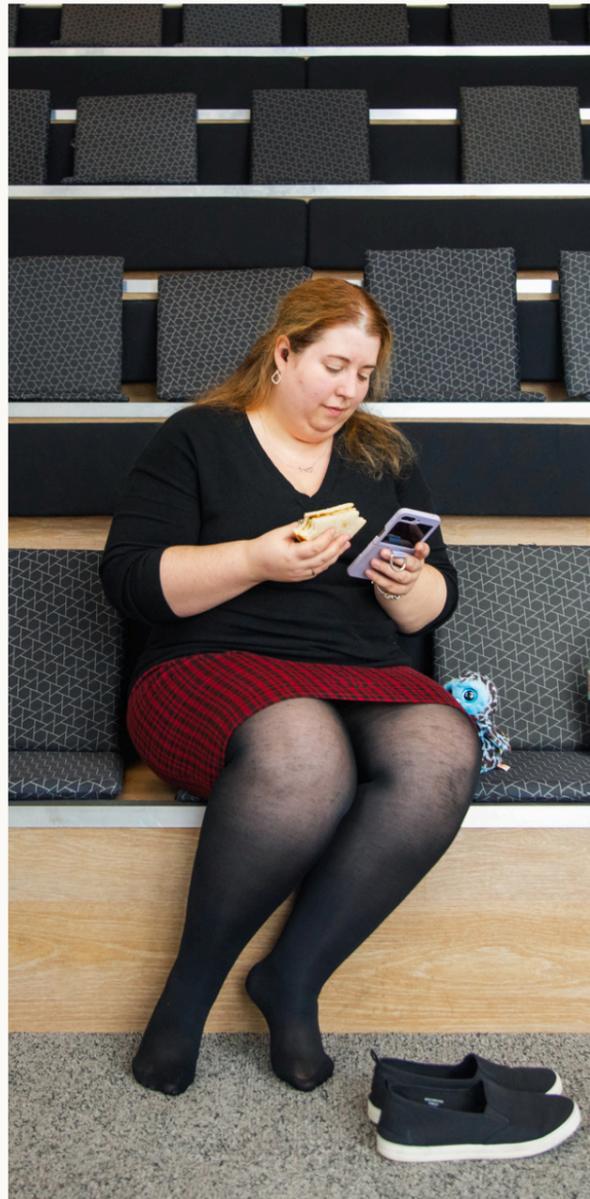
## Ripple effect on the UK economy

The economic benefits of employee retention extend beyond the employer, resulting in average annual economic cost savings of **£11,299 per person using BiH**. For this, we considered the loss of income for the employee and the added cost of benefits and loss of tax income for the government. This translates to an ROI of 7 when renewals are calculated at their full economic cost.

The broader ripple effects, such as improved work culture, better mental health support for colleagues, and reduced reliance on the NHS and other government resources for mental health and emergency services, could potentially **double these savings**.

**£11,299**

average annual economic cost savings per person using BiH



## Improved mental health is the primary driver

The feedback from our users is that they use BiH in a variety of ways, but that the primary driver for BiH success in the workplace is through **improved mental health**.

Reported reductions in 'stress and/or anxiety' and/or 'overwhelm and/or burnout' drove most of the positive changes in absenteeism (97%, 31/32), presenteeism (90%, 64/71) and retention (89%, 57/64)'.

The evidence suggests that improvements in planning and problem-solving/decision-making function mostly through supporting

mental health, but there are also examples of it directly impacting work outcomes.

The benefits that BiH brings to better self-awareness/acceptance is prevalent alongside planning and problem-solving/decision-making, and improved mental health.

There are also indications that there are other human processes being supported by BiH such as motivation, confidence and communication – asking for help or better communicating needs – that seem to operate independently of changes in mental health.

## Formulating a Theory of Change for BiH in the workplace

For the first time, thanks to valuable insights from our users, we have been able to establish a Theory of Change for BiH in the workplace. This model not only clarifies how BiH drives positive change, but also enables us to make preliminary estimates of its ROI.

The next stage is to test and refine these models with more precise data in varied contexts. By better articulating the impact of BiH, we aim to encourage more organisations to invest in this support for their employees and deepen our understanding of how BiH helps people in order to improve our service offering.



## Background

## Employment rates of neurodivergent people

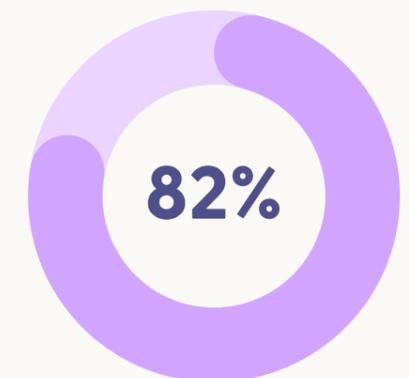
Neurodivergent people face significant barriers to employment with some of the lowest employment rates across the board. The most recent survey by the Office for National Statistics ([ONS, 2022a](#)) suggests that only 29% of people who are autistic are in employment. This compares to 54% of those who are disabled overall.

There is no specific category for people with ADHD, but those defined as having “a mental illness or other nervous disorder” is also low at 30%. In contrast, the employment rate for non-disabled people is 82%, which is 2-3 times higher.



of autistic people are  
in employment

Source: ONS (2022a)



of non-disabled people  
are in employment

Source: ONS (2022a)

## The reality of being a neurodivergent employee

Even when neurodivergent people make it into the workplace, they are further disadvantaged, with many experiencing burnout and overwhelm leading to poorer work performance and time off work.

A recent survey found that neurodivergent employees experienced low levels of wellbeing, high levels of mental health issues, and were more likely to experience burnout than their neurotypical colleagues ([Willis Towers Watson \(WTW\), 2022](#)).

Half (50%) of neurodivergent employees reported feeling burnt out at work compared to 38% of neurotypical employees. Furthermore, only a quarter (25%) of neurodivergent employees felt financially secure and emotionally balanced, while a third (36%) felt they had good physical health.

This suggests that both the physical and mental health of neurodivergent people are suffering in the workplace. Studies have demonstrated an association between poor mental health or burnout and absenteeism and presenteeism.

In 2021, it was estimated that 10% of all sickness absence days in the UK could be attributed to mental health conditions ([ONS, 2022b](#)). According to the recent [2024 neurodiversity index report](#), half of neurodivergent people had been off work during the last year because of challenges commonly faced by neurodivergent people.

Retention is also an issue. Research findings suggest that the longer that a person is off sick with mental health problems, the less likely they are to return to work (Lelliott et al., 2008). Furthermore, a recent study of 1,117 neurodivergent employees found that 43% intended to leave their current employment within the next 12 months.

The poorer their experience at work, the more likely they were to think about leaving (McDowall et al., 2023). The main challenges they faced included looking after their health (78%), concentration (76%), asking for help when they need it (70%), taking care of their physical health (67%) and managing boundaries at work (64%).

## Measuring the impact of Brain in Hand in the workplace



**of neurodivergent employees intended to leave work within the next year**

Source: McDowall et al. (2023)



**of neurodivergent employees feel financially secure and emotionally balanced**

Source: Willis Towers Watson (2022)

We have feedback from our Brain in Hand (BiH) users that our support package can help with these types of challenges. Most of the feedback has been anecdotal, but more recently we have been intentionally capturing impact for our employed users, many of whom received BiH through Access to Work (AtW).

This research paper aims to summarise our evidence to date on how BiH can have a positive impact at work for neurodivergent employees, specifically those identifying as autistic and ADHD or with other anxiety related conditions.

These findings are utilised to develop two new evidence outputs. The first a simple economic model providing estimates of the potential Return on Investment (ROI) of providing BiH to neurodivergent employees; the second, a Theory of Change (ToC) model on how Brain in Hand facilitates these changes.



# Our approach

In February 2024, the research team at BiH introduced a user survey that was sent out to all BiH users every quarter. This captures both quantitative and qualitative data on how BiH supports individuals and the outcome of these positive changes.

A proportion of those replying are in employment and are asked specific questions related to the workplace, such as time off work, performance, and their perceptions on staying in their role. The insights gathered from these user surveys were used to formulate and evidence both an *ROI model* and a *Theory of Change for BiH in the workplace*.

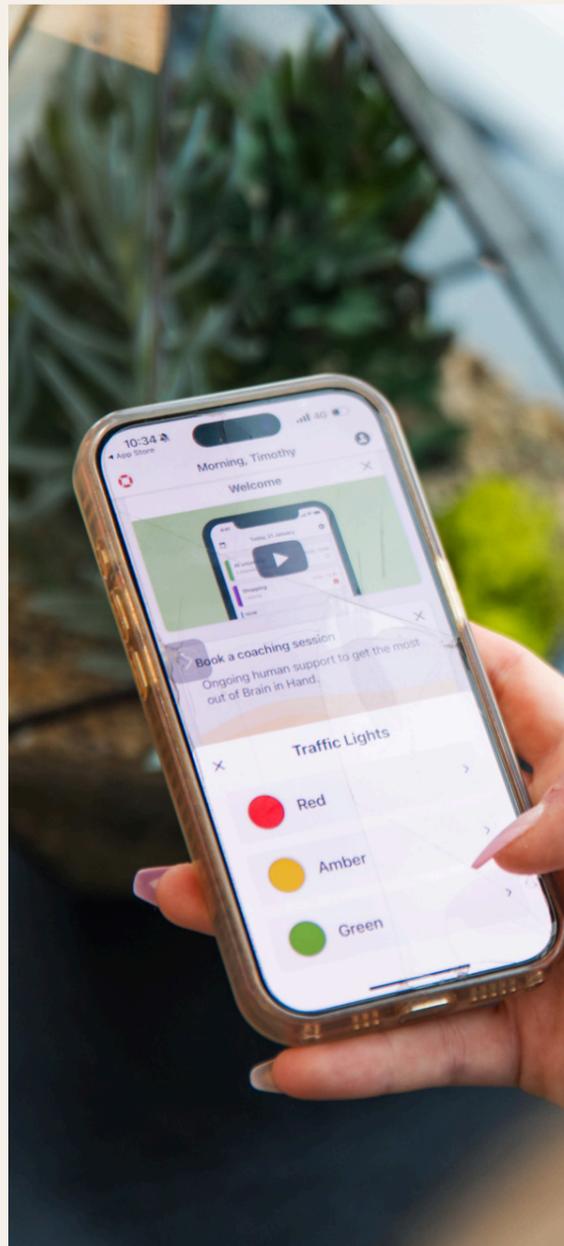
In addition to this primary data, secondary published data related to wages and the average intensity of changes in absenteeism and presenteeism were also used in the ROI model.

## Unlocking primary data with user surveys

The user survey is a routine online survey sent via email invitation every three months to BiH users and is completed through SurveyMonkey. We run the survey quarterly, with different user groups receiving it each month, depending on when they first used BiH. The most recent survey quarter was July–September 2024, and the first survey was sent out in February 2024, resulting in eight months of data.

Users are asked general questions related to how BiH has helped across a range of challenges or functions from burnout to organisation. In addition, there are specific workplace metrics related to absenteeism (“I have had fewer days off work”), presenteeism (“I feel I am performing better in my role”), and retention (“I feel more likely to stay in my role”).

The user survey includes open-ended questions to encourage qualitative narratives on their experience. For example, users were asked to share a time or scenario when Brain in Hand helped them, including the features they used and what they were able to achieve as a result.



## Return on Investment

The ROI model is developed to calculate the economic cost savings of three work outcomes: absenteeism, presenteeism, and retention. The primary data comes from the proportion of users in employment who report a positive change in these three work outcomes, as shared in our user survey between February and September 2024.

The economic cost of each outcome is estimated using secondary unit cost data related to the "daily economic cost of work" and the "cost of replacement," along with estimates based on the intensity or quantity of changes for those experiencing reduced absenteeism and improved presenteeism.

These estimates are based on published findings related to mental health and anxiety. The total cost savings are the sum of savings in absenteeism, presenteeism, and retention, with the ROI calculated by subtracting the cost of BiH from the total savings and dividing by the cost of BiH.

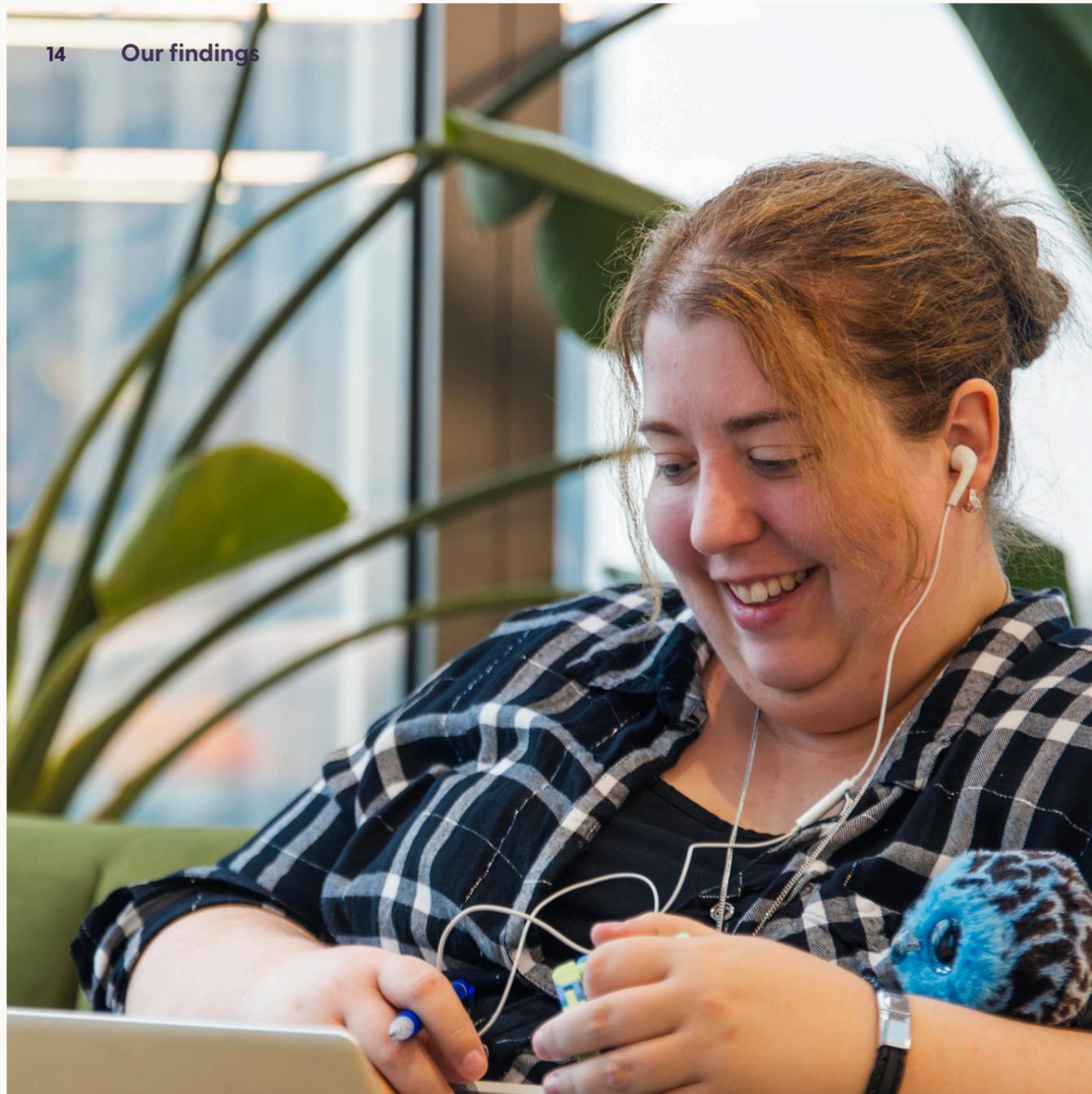
## Theory of Change

This model was developed based on qualitative and quantitative feedback from our users collected via the user survey on how BiH was supporting them. Quantitative metrics, such as “What has Brain in Hand helped you with?”, covered a range of factors from organisation to overwhelm.

These were analysed and mapped regarding the three workplace outcome metrics, absenteeism (“I have had fewer days off work”), presenteeism (“I feel I am performing better in my role”), and retention (“I feel more likely to stay in my role”) to assess potential associations.

User’s narratives on how BiH supported them in work were sorted by theme and reviewed for indications of how BiH helped them to move through challenges.

Collectively, these two approaches were used as supporting evidence to establish potential pathways for how BiH was helping employees to stay in work and perform better.



## Our findings

## ROI model: Employer's perspective

The key parameters for the model and their values are listed in Table 1 alongside the source, any notes, and the nomenclature utilised in the model calculations, which are summarised in Box 1.

Three of the data points relate to our user survey findings for 218 users in employment and for which we gathered unique data (a single response for a given user, with the most recent response taken).

Overall, **45% of BiH users** in employment were reporting at least one of three positive work outcomes, while individually these were **15% for absenteeism, 33% for presenteeism and 29% for retention.**

### Box 1. ROI Model equations

The ROI Model calculations are as follows noting the nomenclature and parameter descriptions and values in Table 1.

Absenteeism cost savings (CA) =  $pA NA W wA$

Presenteeism cost savings (CP) =  $pP FP W Nw wP$

Retention cost savings (CR) =  $pR W Nw FR$

Total cost savings (CT) =  $CA + CP + CR$

ROI =  $(CT - CB) / CB$

**Table 1. Key parameters in the ROI model (employer perspective)**

Data Type	Parameter	Value	Source	Notes
Frequency	Probability of fewer days off (pA)	0.15	BiH user survey (Feb-Sept 2024)	32 out of 218 employed BiH users reported that BiH had helped in work with “fewer days off”
	Probability of improved performance (pP)	0.33	BiH user survey (Feb-Sept 2024)	71 out of 218 employed BiH users reported that BiH had helped in work “I feel I am performing better in my role”
	Probability of staying in role (pR)	0.29	BiH user survey (Feb-Sept 2024)	64 out of 218 employed BiH users reported that BiH had helped in work “I feel more likely to stay in my role”
Quantity	Number of absenteeism days (NA)	19.6	<u>Health and Safety Executive (HSE)</u> analysis of the Labour Force Survey (LLF) by the ONS (2022/23)	Average self-reported days off work taken for stress, depression or anxiety
	Fraction of day lost to reduced productivity (FP)	0.325	Cebr (2023)	Based on 2.6 hours per day lost for workers experiencing a fall in productivity due to financial distress and an 8 hour day
	Number of working days per year (Nw)	180		
Costs	Daily economic cost of a workday (W)	129	ONS (2024)	Average weekly earnings (AWE) estimated at £647 for regular earnings by ONS in July 2024
	Cost of replacement as proportion of salary (FR)	0.33	<u>Work Institute</u> (2022)	The minimum cost as estimated by the Work Institute for “hard costs”
	Yearly cost of BiH	1860	BiH	Access to Work (AtW) price for first year, noting this reduces in subsequent years to £1440
Mean wage multiplier	For absenteeism (wA)	1.97	Stromberg et al (2017)	Average across labour market from a survey of 758 managers
	For chronic presenteeism (wP)	1.54	Stromberg et al (2017)	Average across labour market from a survey of 758 managers, noting acute presenteeism had a higher value of 1.70

Utilising the model in Box 1 and the parameter values in Table 1, the total annual cost savings are estimated to be £6,804 with wage multipliers (Scenario 1) and £5,092 without (Scenario 2).

The cost savings are mainly attributed to increased productivity (56% in Scenario 1 and 49% in Scenario 2) and staff retention (33% in Scenario 1 and 44% in Scenario 2), with absenteeism representing only 11% in Scenario 1 and 7% in Scenario 2.

When comparing these savings to the cost of the BiH licence in terms of ROI, the values range from 1.7 to 3.7, depending on the scenario and licence year. A model that uses wage multipliers for those in their renewal licence under Access to Work (AtW) suggests that for every £1 invested, employers could see a return of nearly £4.

If only the financial costs to the employer through AtW are considered, rather than the broader economic costs, the ROI could increase to 8-9 for employers with 50-259 employees. This is based on paying the first £500, followed by 20% up to £10,000, for example, £772 in the first year and £688 for renewals.

## Expanding ROI: Economic savings of retention

Broadening the scope of economic cost savings related to retention can significantly increase the ROI. The ROI calculation on the previous page focuses on the employer's perspective, highlighting potential savings in terms of productivity and retention.

However, the benefits extend far beyond the employer. Retention can lead to savings for the government through reduced benefit payments and increased tax income, and for the individual by preventing income loss. Protecting GDP and consumer spending ultimately benefits society. Additionally, there are many less tangible outcomes related to social problems and sense of worth.

If we include just two additional cost saving items into our retention equation (a) cost to the Government and Exchequer for one person being unemployed for benefits and lost tax revenue and (b) loss of income (see Box 2) the ROI for BiH can rise to 7 depending on the licence year and the inclusion of wage modifiers.

**Employers could see a return of up to £4 for every £1 invested**

**Employers could save an average of £6,804 annually per employee using BiH**



### Box 2. Widening the lens

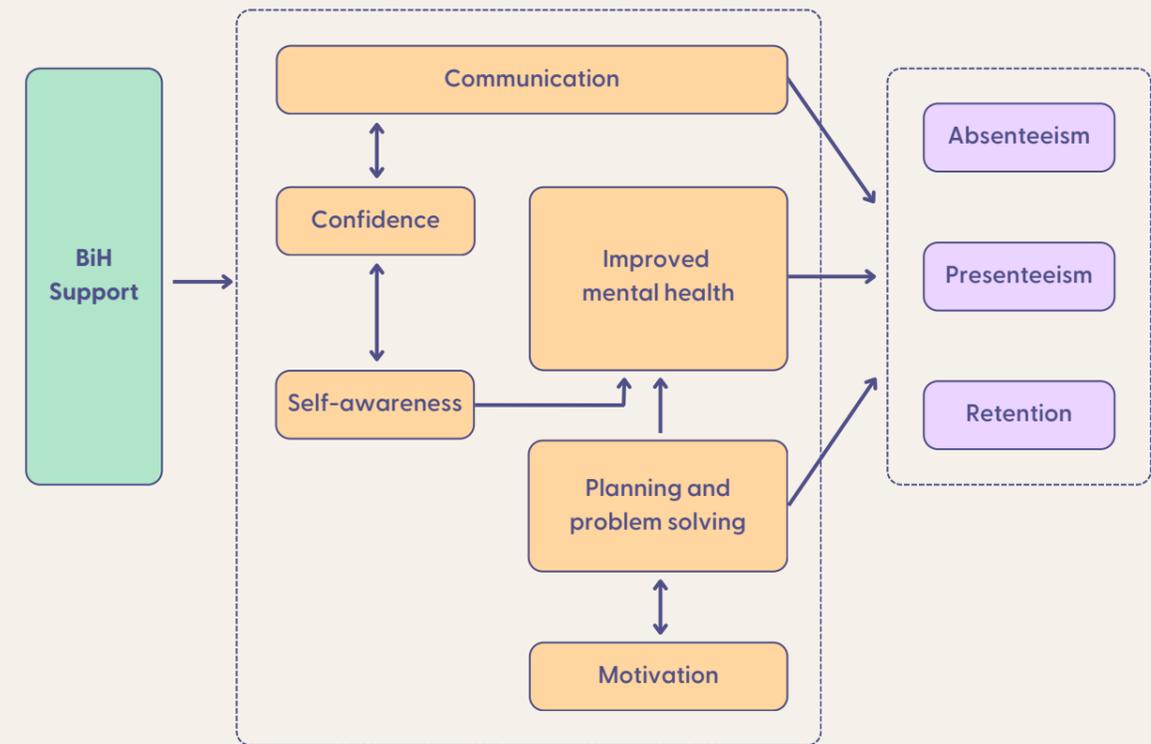
We can modify our cost savings from employee retention to include two additional items, (1) cost to the Exchequer or the Government for one person being unemployed for benefits and lost tax revenue (CG) and (2) loss of income for the individual (CLE) so that it reads:

$$\text{Retention cost savings (CR)} = pR (W Nw FR + CG + CLE)$$

There are a number of published monetary values associated with these two cost items. For example, Mallender et al. (2017) estimated the financial cost of a person returning to work of £12,000 (CG) to the Exchequer and £3,500 (CLE) to the individual. A more recent analysis by Pro Bono Economics suggests economic benefits to an autistic person being in employment of around £9,000 (CLE) in terms of increased earnings over and above government payments (Gomez and Sheikh, 2023). And recent headlines note the costs of young people (under 24 years) being unemployed to the current government £6,243 (CG) a year in benefits and lost tax revenue (Independent), acknowledging that costs for older people will be higher.

Taking as an illustration the conservative costs from Mallender et al. (2017), the cost savings each year for someone using BiH nearly doubles to £11,299 in scenario 1 and £9,587 in scenario 2 with a ROI of 4-7.

### Box 3. Draft Theory of Change for workplace



## Theory of Change model

Our user survey asks a series of questions on “What has Brain in Hand helped you with?” and the responses are summarised below in Table 2 for all those responding as an employee and by their response to the three metrics related to absenteeism, presenteeism and retention.

The prevalence with which users reported that BiH had been helpful, across categories, was higher for those that also reported a positive workplace outcome metric. In some cases, this difference was particularly marked.

The associations between these variables are further assessed in terms of individual responses for each work outcome below. For ease of reading when referring to the different areas of help during the text

“stress and/or anxiety” is referred to as “stress/anxiety”; “overwhelm and/or burnout” as “overwhelm/burnout” and both as “mental health”. Similarly, “self-awareness and self- acceptance” as “self-awareness/ acceptance/acceptance” and “problem-solving/decision-making or decision-making” as “problem-solving/decision-making/decision-making”.

Box 3 outlines the potential Theory of Change for the impact of BiH on workplace outcomes. The following sections describe these pathways and the evidence supporting them, and Box 4 provides an example of a user's story - explaining how BiH helped them stop resigning from their role. This represents a tangible improvement in retention due to BiH.

**Table 2. The proportion of users responding that BiH has helped with a positive work outcome.**

	For those responding to...			Overall (n=218)
	“I have had fewer days off work” (n=32)	“I feel I am performing better in my role” (n=71)	“I feel more likely to stay in my role” (n=64)	
Stress/anxiety	91% (29)	77% (55)	80% (51)	53% (116)
Overwhelm/burnout	78% (25)	69% (49)	72% (46)	47% (102)
Self-care	50% (16)	48% (34)	55% (35)	32% (69)
Self-awareness/acceptance	41% (13)	54% (38)	48% (31)	32% (70)
Confidence	34% (11)	37% (26)	34% (22)	19% (41)
Motivation	31% (10)	34% (24)	34% (22)	21% (46)
Problem solving or decision making	50% (16)	49% (35)	50% (32)	32% (70)
Organisation	53% (17)	61% (43)	50% (32)	38% (82)
Independence	31% (10)	25% (18)	25% (16)	15% (33)

**Box 4. How BiH worked to stop someone resigning from their role.**

In this example, we hear how BiH helped stop one of our users from resigning from their role in a moment of overwhelm, where they also felt unfairly criticised, by enabling them to stop, reflect on how they were feeling, rethink the situation, calm down think more clearly and then feedback how they felt to their manager which had knock-on positive benefits for their working relationship going forward.

“ I experienced criticism in work. At the time, I was also under a lot of workload pressures. I felt overwhelmed and unfairly criticised. I considered resigning. I used the app to "update how I feel" and selected Amber, added tags and described what was going on, and how I felt. I followed the solution pack suggestions. I returned later and re-read what I wrote, considered what I did and how I responded vs how I was feeling. This helped me to rethink the situation, the pressures and the criticism. I was able to realise that some things were not my problem so I cannot take responsibility for them, some things were constructive feedback and also, that I was able to feel proud of myself for not "reacting" badly but instead, could become calm and think more clearly. In turn, this meant I could go back to my manager and explain the issues I was facing, how this impacted on what she was asking of me and how I had initially responded to the events. We were able to get a good outcome and also, we both learned a little more about me, how I can react to certain situations and what can be useful to support me.

— Autistic person with ADHD and a specific learning difficulty, mental health condition, and anxiety; receives BiH through AtW and reports BiH allows them to stay in their role and perform better, and helps with stress/anxiety, overwhelm/burnout, self-care, self-awareness/acceptance, confidence, motivation, and problem-solving/decision-making.

## Improved mental health as a main pathway

Improved mental health emerges as the primary driver for BiH success in the workplace. Most of those who report a positive change in our three work outcomes noted BiH helped them with “stress/anxiety” and/or “overwhelm/burnout”: absenteeism (97%, 31/32), presenteeism (90%, 64/71), or retention (89%, 57/64).

The narratives on how BiH supported people also focused on mental health, including themes like managing meltdowns, emotions, overwhelm, panic, panic attacks, brain freeze, brain fog, anxiety, and burnout. These concerns were often caused by too much work, challenging situations, feeling stuck, and changing situations. To simplify the text, in the following quotes and narrative, “mental health” is used to describe those participants who choose both “stress and/or anxiety” and “overwhelm and/or burnout”.

## How employees use BiH for improved mental health

Users benefitted from various BiH features to manage their mental health, including the traffic lights, mood tags, and the unplanned section, which stores personalised checklists and solutions they developed with their coaches. They found it useful to discuss solution ideas with their coaches and reflect on what worked well in the past. The response service also allowed them to speak with people who understand and can guide them towards planned self-care/regulation activities.

These aspects of BiH have helped employees to calm down, organise their thoughts, take breaks when needed, think more clearly, regain control, and avoid impulsive behaviour. It has also encouraged them to remember and implement their coping strategies or tips, allowing them to get their day back on track, resolve issues, and return to work. Users were able to work better and avoid taking a day off.

“

*Brain in Hand helps me manage emotional dysregulation and meltdowns at work. I work in a hospital, which I like, but it can be chaotic and overwhelming. When it gets too much, I can use my traffic lights and the response service. This helps me calm down, avoid impulsive behaviour or communication at work, and to go back into work to continue my day. I don't think I would be working full time without Brain in Hand and especially the response service.*

— 23-year-old woman receiving BiH through AtW.

“

*Multiple meetings and heavy workload, hence brain fog, Brain in Hand solution packs and unplanned section helped to remember tips to manage my anxiety. I applied the useful tips and prevented burnout.*

— Woman with mental health difficulty, reports fewer days off, improved mental health, and problem-solving/decision-making.

“

*I had a training session I was delivering coming up in a new place, with people I didn't know, and I was very anxious. I used Brain in Hand to think through the problems and solutions and this helped me to feel able to go and **not get too overwhelmed.***

— Transman with ADHD reports BiH helps with stress, motivation, and organisation; receives BiH through AtW.

“

*Overwhelmed at work and not being able to think straight, make decisions, or focus. I used the unplanned events feature to see ways I can help myself and by actioning those, I was able to reduce overwhelm, get myself back on track, and complete my work. It helps me to be **more productive, manage my energy levels and be more supportive of myself.***

— Woman diagnosed autistic one year ago

## Planning and problem-solving: an indirect pathway to workplace outcomes

Planning and problem-solving, sometimes referred to as Executive Function, involves the skills that help individuals organise, make decisions, and recognise when to take action. It also includes the ability to monitor what is happening around them and adjust their thoughts and actions in response. Organisation, problem-solving/decision-making, and self-care are three of the metrics we tracked that could be considered under this pathway.

Most of those who reported a positive change in our three work outcomes and noted support for their mental health also highlighted that BiH helped them with organisation, problem-solving/decision-making, and self-care: absenteeism (87%, 27/31), presenteeism (90%, 58/64) or retention (82%, 47/57). The narratives also indicated how organisation, problem-solving/decision-making, and self-care could potentially be important drivers of improvements in mental health.

The examples provided by users illustrate how having a diary entry for a morning routine or breaks for relaxation enables self-care, helping people feel less overwhelmed and better prepared to cope with the workday. Similarly, diary planning and personalised solutions to think through tasks and the day ahead also enable problem-solving in stressful or difficult situations. Finally, breaking down tasks and organising them according to how long they take helps create a plan so they do not become overwhelmed.

“

*It is a dynamic work environment with many incoming tasks and changing demands. By breaking down all my tasks and organising them according to how long they are estimated to take. **It helps me stop being paralysed by overwhelm and create a plan that I can follow to get through the day.** I am also able to schedule in relaxation time as otherwise this ends up neglected.*

— Female student with mental health difficulty, receives BiH through ‘university support’, is employed and volunteers; reports BiH helps with motivation, organisation, independence, and mental health.

“

*I didn’t have a meaningful morning routine, I would often not take care of myself. With the BiH app the routine function has helped me **remember everything that needs doing so I don't feel overwhelmed.***

— Woman with mental health difficulty, who is both a student and employed, reports BiH helped with organisation, self-care, and mental health.

“

*I have a diary entry for a morning routine - this has meant that I have been **more consistent with things like dental hygiene and taking medication** before leaving home for work.*

— 55-year-old non-binary autistic person, funds BiH through organisation licence, reported fewer days off, and help with self-care, self-awareness/acceptance, organisation, and stress and/or anxiety.

## Planning and problem-solving: a direct pathway to workplace outcomes

There was also evidence that “planning and problem-solving” could contribute directly to positive work outcomes, not just through better mental health, but by helping people be more organised, keep on top of tasks, and maintain a routine.

There was even a narrative that explained precisely how better organisation was helping a BiH user to be more time efficient. Two people also specifically linked self-care and motivation, suggesting these may be connected and potentially acting as positive feedback mechanisms (see Box 3)

“

*I couldn't work out what to do at work. Brain in Hand helped me to start figuring that out. I clicked on my regular problems, found the activity I needed to do, and under the solutions to the problem I had it remind me to write things down to figure it out. **That saved me probably 10-15 minutes of thinking time.** If you were to add up all the times that happens in a day that is a lot of time saved.*

— Autistic non-binary person with ADHD, receives BiH through AtW, and reports BiH helps with self-awareness/acceptance, confidence, motivation, organisation, and mental health.

“

*It has helped **remind me to do tasks at work**, e.g, to do fridge stock check at end of month, I used the diary feature and got a notification to remind me.*

— Woman with mental health difficulty, ADHD, and anxiety, reports BiH helped with problem-solving and organisation. BiH through AtW.

“

*It helps **motivate** me to do 400 steps per hour which is needed for my health.*

— Autistic individual with mental health difficulty, reports BiH helps with self-care and motivation.

“

*Prior to using Brain in Hand, I struggled with organisation and sticking to tasks in a functional way. After using it for two years my **routines are much more ingrained** in my day to day life and work.*

— 44-year-old pansexual man with ADHD, receives BiH through AtW and reports BiH helps with self-care, self-awareness/acceptance, confidence, motivation, organisation, and overwhelm/burnout.

## Planning and problem-solving: links to self-awareness and acceptance

Of the 59 people reporting “self-awareness/acceptance” alongside at least one of the three positive work outcomes, 85% (50 people) mentioned it alongside problem-solving/decision-making or organisation, highlighting the interconnected nature of these pathways.

The traffic lights and mood tracking have become important features to help with self-reflection and self-awareness, especially when combined with unplanned solutions and strategies to help people change their behaviour and reactions to situations.

The data reveals a possible interplay between self-awareness/acceptance and confidence, with 25 respondents (42%) mentioning both. Notably, this includes 5 out of the 9 individuals who cited self-awareness without executive function metrics. This finding points to a possible feedback loop.

“

*When procrastinating, I had a notification prompting me to use the traffic light feature. I stopped what I was doing, did this and wrote a reflection upon my current state. I looked at my unplanned and then found a solution and changed my behaviour to help support me.*

***I feel less reliant on other people for my support and can reflect on things myself. Also the emergency call line helps in situations where I feel I cannot manage myself.***

— 19-year-old woman with mental health difficulty, is a student and in employment; receives BiH through DSA, and reports BiH helps with self-care, self-awareness/acceptance, motivation, problem-solving/decision-making, and stress/anxiety

## Better communication as a valuable pathway in facilitating a good outcome

As illustrated in Box 4, improved communication can lead to significant positive outcomes, such as preventing resignations. There are other examples of people being able to better communicate to their work colleagues about how they feel and their needs, whether that is directly or through sharing what they put into the BiH app. The outcome being that they are better understood and better supported in their roles.

Although the survey doesn't explicitly ask about “better communication with colleagues in articulating feelings and needs”, there may be some aspect of improved confidence, as well as building skills that could be facilitating this.

“

*Finding **effective ways to communicate with my employer** how to help me best. Due to the 3 year backlog of formal ASD assessments, this has been keeping me going where no other help is available.*

— Autistic student who is in employment and has a mental health condition, and reports BiH helps in all areas mentioned.



## Next steps

## Enhancing the ROI model

The user survey feedback on work outcomes has allowed some initial estimates of ROI, but we need more precise data to build confidence in our economic model and want to explore economic cost savings from a broader perspective.

**We aim to increase our confidence in the reported changes regarding absenteeism, presenteeism, and retention.**

While the demographics of our user survey respondents appear to be representative of our user base, the low response rate of 3-5% raises concerns. This low participation might be attributed to the current method of survey delivery.

To help validate the data from the user survey, we want to explore alternative data collection methods directly through the BiH app.

**We want to collect our own primary data on the quantities involved in terms of productivity and sick days rather than relying on secondary data.**

We're trialling new questions in the user survey to measure the impact of Brain in Hand on absenteeism and presenteeism. Instead of simply asking if there's been a change, we're trying to gauge the degree of that change – "by how much" have things improved.

Insights from in-depth interviews suggest that the duration may be much higher than the 19.6 days suggested here, with reports of more than 6 months ([link to new ROI case studies](#)).

**We want to collect our own primary data on the wages and potential wage multipliers.** Our current estimates utilise a fixed economic value of a lost workday of £129 (based on average regular earnings published by ONS in July 2024).

Other researchers have utilised higher daily rates, such as £237 (Cebr, 2023), though it is not clear if these include wage multiplier effects. Wage multipliers are used to adjust wages to estimate productivity losses associated with jobs characterized by time-sensitive output, a high degree of teamwork, and difficulty in finding substitutes.

We utilised wage-multipliers for absenteeism (1.97) and presenteeism (1.54) as recommended by Stromberg et al. (2017), but others have suggested lower values, for example 1.28 for an absence (Nicholson et al., 2006). We would like to collect empirical data on actual wages and better explore the need for possible wage multipliers for our BiH users.

**We aim to deepen our collaboration with people with lived experience, co-designing research methods—especially how we ask questions and elicit responses.** We have explored this recently in some other research projects and believe in the value of this approach, especially when trying to better understand impact and value.

**BiH has been shown to result in annual reductions in NHS mental health and emergency service costs of between £4,670 and £25,716**

Low estimate for a user that previously utilised the NHS extensively for their mental health

**We want to better understand the literature related to retention.** Our current model had a cost of replacement as a proportion of salary of 0.33 as estimated by the Work Institute for minimum “hard costs”.

Other articles suggest that the actual costs could be much higher, for example, 50-60% of a person's salary. Given that 29% of people using BiH report that they are more likely to stay in their role as a result, the ROI will be highly sensitive to the unit cost of replacement in this context. This becomes even more relevant when we broaden the perspective of the analysis given that retention has far-reaching consequences.

**We want to explore a broader economic perspective.** The first iteration of our model only considered the employer's perspective. The rationale for this was that potential employers looking to invest in BiH for their employees are explicitly interested in understanding the ROI for them as part of their decision-making process. At this most minimum level, the ROI varies between 2 and 4. Broadening the perspective will increase cost savings and increase the ROI. This was evident when we considered the implications to the individual and the government/exchequer of someone moving out of employment, where the ROI increased to 4-7.

As we work with our users to better understand their experience with BiH, we are gaining insights into new and different ways that BiH is having an impact that could be valued in terms of an economic cost. These include the more obvious examples outside of work impacting public services, such as reduced need to access mental health emergency services. There's also more subtle “ripple effects” within work, such as a more open work culture and support for other neurodivergent people. For example, BiH has been shown to result in annual reductions in NHS mental health and emergency service costs of between £4,670 and £25,716 (low estimate for a user that previously utilised the NHS extensively for their mental health). A significant

proportion (28%, 62/218) of those surveyed were also students, and using BiH for improving their study outcomes.

It was interesting to note that of the 55% surveyed that did not note change in one of the three work outcomes, between a quarter to a third still mentioned a positive impact on mental health or organisation and problem-solving.

It would be of interest to understand better whether these positive changes were really not impacting on presenteeism or absenteeism (as people may be under-reporting improvements) or there are other outcomes such as job satisfaction or work culture that are occurring instead.

As we get more precise data and broaden our perspective, we would also like to start projecting future costs and benefits with appropriate discount rates, and consider the impacts in different demographics and user employment profiles.

## Testing and developing our Theory of Change

**We want to build up our understanding of the assumptions and pathways through more qualitative data.** Similar to our approach to date, it will be about gaining insights into the how, working out logic model behind BiH from the employee perspective, and testing some key claims such as 'Using BiH contributes to an increase in productivity via reduced anxiety'. The role of “motivation” and “confidence” as drivers for change and the possibility of having positive feedback loops for these will be of particular interest.

**Better communication and understanding of needs and feelings amongst work colleagues is something we would like to capture quantitatively**

**The role of “motivation” and “confidence” as drivers for change and the possibility of having positive feedback loops for these will be of particular interest**

**We want to refine and broaden the questions related to how BiH works.** Our current understanding of how BiH helps people is based on a somewhat limited list that combines some items that might be quite different, such as self-awareness and self-acceptance.

It may be useful to revisit these in terms of the better insights we now have around the needs and problem areas for autistic people and those with ADHD in the workplace. For example, there is evidence for time-management and concentration challenges for this group and for autistic people, specifically coping with more than one task and social and communication difficulties; and for people with ADHD difficulties with teamwork and attention and self-regulating activities (Doyle, 2020).

**As mental health seems to be a main driver, a better understanding of how this affects employees from a detailed literature review could also support in developing better outcome metrics and pathways.** Reviewing the questions in tools such as the Return to Work (RTW) self-efficacy (SE) that were developed around mental health (Lagerfield et al., 2010) including “coping with set-backs”, “coping with potential problems”, “cope with work pressure” and “concentrate on work” could

support in developing new metrics in our surveys. Our qualitative observations that BiH facilitates better communication and understanding of needs and feelings amongst work colleagues is something we would like to capture quantitatively.

**We want to explore other possible work outcomes beyond absenteeism, presenteeism and retention.** A fraction of those surveyed (15%) noted that BiH helped that in a different way at work (“Other”), and some narratives do imply that there may be more work-related outcomes that would be of value to employers and employees. Examples could include a better workplace culture for the employer and career attainment and job satisfaction for employees.

**We want to explore associations between how BiH helps and the subsequent work outcome through more sophisticated analysis such as regression.** Our current approach has been to assess the possible contributions of different pathways and outcomes through the frequency and the commonality of the various variables. With a larger sample size, it may be possible to conduct a more robust analysis of the relative contributions also in relation to user profiles and demographics.

## Concluding remarks

This preliminary analysis suggests that BiH reduces time off work, improves performance, and retains staff through **improved mental health** which serves as the major pathway. At the most basic employer perspective, there is a Return on Investment of 4 (economic input costs) or 8-9 (financial input costs only).

This is comparable to those for mental health interventions (average ROI of £5.30) identified by Deloitte (2022) which also found that most of the costs were due to presenteeism (46%), followed by staff turnover (42%), with only 12% due to absenteeism. These percentages are similar to those calculated for cost savings due to BiH, which gives us confidence in our model and analysis.

The economic savings through an employer perspective on those three work outcomes is just one part of the equation, and broadening this to consider the employees perspective of being able to stay in work, and the costs to the Exchequer of someone moving out of employment can double the ROI, and extending this further into savings related to reduced mental health service access and reduced emergency service access would increase the returns even more.

There is still more to do to map out all these ripple effects for both employee and employer. A significant proportion of the 55% in our surveys did not specifically mention one of those 3 work outcomes, but did note ways that BiH was positively impacting on their life and work.

While our analysis highlights key benefits like reduced absenteeism and improved performance, many survey respondents reported additional positive impacts of BiH on their work and well-being. Further research will explore these wider ripple effects for both employees and employers.

One interesting aspect is the cost savings from potential discrimination tribunals, which can be extremely costly to employers. Another avenue is considering the increasing body of evidence that neurodivergent employees are more productive (see Box 5), so that ensuring they are in work and not going to leave, have additional gains over and above keeping a neurotypical person in work. The next iteration of our analysis will aim to include these considerations, as well as more refined metrics.

### Box 5. The evidence that neurodivergent employees are more productive

- Hewlett Packard Enterprise (HPE) placed more than 30 participants in software-testing roles at Australia's Department of Human Services (DHS) and preliminary results suggest that the organization's neurodiverse testing teams are 30% more productive than the others ([Austin and Pisano, 2017](#)).
- JP Morgan Chase's neurodiversity program showed that autistic employees were 48 per cent faster and 92 per cent more productive than non-autistic employees.
- Research has shown that autistic people are up to 40 percent faster at problem-solving than non-autistic people (Soulières et al, 2009)
- A technical issue that a neurodivergent employee helped resolve resulted in \$40 million in savings in a single project at SAP (software company). ([Austin and Pisano, 2017](#)).

## References

- Austin RD and Pisano GP (2017). Neurodiversity as a competitive advantage. <https://hbr.org/2017/05/neurodiversity-as-a-competitive-advantage>
- Cebr (2023). Financial wellbeing & productivity in the workplace.
- Deloitte (2022). Mental health and employers. The case for investment – pandemic and beyond. <https://www.deloitte.com/content/dam/assets-zone2/uk/en/docs/industries/energy-resources-industrials/2023/deloitte-uk-mental-health-report-2022.pdf>
- Doyle N. Neurodiversity at work: a biopsychosocial model and the impact on working adults. *Br Med Bull.* 2020 Oct 14;135(1):108-125. doi: 10.1093/bmb/ldaa021. PMID: 32996572; PMCID: PMC7732033.
- Gomez R and Sheikh S (2023). Opening opportunities: improving employment prospects for autistic people. Pro Bono Economics.
- Lagerveld SE, Blonk RW, Brenninkmeijer V and Schaufeli WB. (2010). Return to work among employees with mental health problems: development and validation of a self-efficacy questionnaire. *Work & Stress*, 24(4), 359-375.
- Lelliott P, Tulloch S, Boardman J, Harvey S, and Henderson H. (2008). Mental health and work. [Accessed on 1st November](#)
- Mallender et al (2017). Movement into Employment: return on Investment Tool. Public Health England.
- McDowall A, Doyle N and Kiseleva M. (2023) Neurodiversity at work: demand, supply and a gap analysis. Birkbeck, University of London, London, UK. <https://eprints.bbk.ac.uk/id/eprint/50834/22/50834c.pdf>
- Nicholson S, Pauly MV, Polsky D., Sharda, C., Szrek, H., & Berger, M. L. (2006). Measuring the effects of work loss on productivity with team production. *Health economics*, 15(2), 111-123.
- Office for National Statistics (ONS) (2022a). Outcomes for disabled people in the UK: 2021. [Accessed on 1st November](#)
- Office for National Statistics (ONS) (2022b). Sickness absence in the UK labour market: 2021. [Accessed on 1st November](#)
- ONS (2024) <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/september2024>
- Strömberg, C., Aboagye, E., Hagberg, J., Bergström, G., & Lohela-Karlsson, M. (2017). Estimating the effect and economic impact of absenteeism, presenteeism, and work environment–related problems on reductions in productivity from a managerial perspective. *Value in Health*, 20(8), 1058-1064.
- Soulières I et al. (2009) Enhanced visual processing contributes to matrix reasoning in autism. *Human Brain Mapping* 30, 4082-4107 . [Accessed on 1st November](#)
- Willis Towers Watson (WTW) (2022). Almost three quarters of neurodiverse employees suffering with mental health issues. Press Release. [Accessed on 1st November](#)