



# Intervention Mapping

# DOSE Intervention Mapping

## Backstory: The Origins of DOSE

**DOSE** is a psychological framework and intervention designed to rebalance the brain's four core neurochemicals: **dopamine, oxytocin, serotonin, and endorphins**. It was created in 2020 during the COVID-19 lockdowns as a behavioural training tool to help people navigate the rising challenges of tech addiction, isolation from nature, digital fatigue, and the mental health consequences of remote, disconnected lifestyles.

When **Tj Power** began lecturing for the first time, delivering a module he developed on the neuroscience of mindfulness, he saw how students were struggling with low energy, poor focus, and a growing dependency on their phones. These weren't isolated cases—they reflected a broader pattern of disconnection, burnout, and imbalance that was accelerating in the digital age.

Over the last five years, DOSE has evolved into a fully gamified, research-backed learning experience. It has been implemented in schools, universities, corporations, and healthcare organisations—including the **University of Oxford, NHS, Amazon, Coca-Cola, Accenture, TikTok, Harrow School**, and many more.

At its core, DOSE is built on the **Evolutionary Mismatch Hypothesis**—the idea that the human brain evolved over hundreds of thousands of years in an environment completely different from the one we live in today. For 99.9% of our species' history, life was effortful, physically active, socially connected, and deeply rooted in the natural world. We ate simple, unprocessed foods, slept in alignment with the sun, and experienced deep connection and movement every day. In contrast, today's world is saturated with hyper-stimulating inputs, instant rewards, artificial light, and social isolation—all of which disrupt our brain chemistry.

DOSE offers a response to this challenge. Through live, story-driven sessions and daily behaviour change challenges, participants learn how their neurochemistry evolved, how it's being dysregulated, and how to take small, sustainable steps to rebalance it. The experience is immersive, interactive, and rooted in habit psychology—designed to help people build routines that support focus, confidence, mood, motivation, and genuine human connection.

In **2025**, DOSE's reach expanded further with the release of **The DOSE Effect**, a Sunday Times bestselling book that brings this science to life for a wider audience. The book presents readers with a clear explanation of how the brain's reward system works—and how to build daily habits that genuinely change it.

Today, DOSE is conducting research with the support of **Southampton University** to better understand its psychological impact and theoretical foundations. What began as a behaviour-first training tool during lockdowns is now becoming a globally recognised intervention—one rooted in science, powered by storytelling, and designed to help people feel better in the world they live in now.

## Step 1: Needs Assessment

The DOSE intervention was created in response to a rapidly growing set of psychological and behavioural challenges facing individuals in the modern world. As technology has become more immersive, lifestyles more sedentary, and social connection more fragmented, people—particularly students, young professionals, and digital-based workers—have reported increasing levels of burnout, distraction, low mood, and reduced motivation.

These symptoms can sometimes be interpreted as personal failings. But a growing body of neuroscience suggests they may in fact be the predictable consequences of living in an environment that disrupts our brain chemistry—especially the regulation of the four key neurotransmitters that form the DOSE model: **dopamine, oxytocin, serotonin, and endorphins**.

The **Evolutionary Mismatch Hypothesis** (Gluckman & Hanson, 2006; Li et al., 2018; Li et al., 2020) provides a compelling explanation. For over 300,000 years, the human brain evolved to thrive in environments that were effortful, deeply social, physically active, and rooted in the natural world (Pontzer et al., 2018). However, the last two centuries have seen rapid, artificial change—through industrialisation, ultra-processed food, digitisation, and social isolation—creating a reality vastly different from what our brains were designed for.

This mismatch particularly affects our **neurochemical systems**, each of which evolved to support different aspects of psychological well-being:

- **Dopamine** drives motivation, goal-seeking, and attention regulation.
- **Oxytocin** supports bonding, trust, and emotional safety.
- **Serotonin** regulates mood stability, sleep, and feelings of calm.
- **Endorphins** reduce stress and buffer pain, promoting resilience.

All four chemicals are essential for feeling balanced, energised, and connected. Yet today, they are chronically disrupted by **excessive screen exposure, social isolation, ultra-processed diets, poor sleep, sedentary behaviour, and overstimulation** (Lissak, 2018; Marques et al., 2021; van Galen et al., 2021). This imbalance contributes to the rising rates

of anxiety, low motivation, burnout, and emotional dysregulation seen in both youth and adults (Lopresti et al., 2013; Dhailappan & Samiappan, 2022).

Each system is affected by different aspects of the modern lifestyle:

- **Dopamine** is hijacked by short-form content, notifications, and reward loops (Pani, 2000; Pierce & Kumaresan, 2006; Westbrook et al., 2021).
- **Oxytocin** is suppressed by loneliness and reduced face-to-face interaction (Ahmed et al., 2023).
- **Serotonin** is weakened by poor gut health, lack of sunlight, and disrupted circadian rhythms (O'Mahony et al., 2015; Monti, 2011; Young, 2007).
- **Endorphins** are under-activated due to reduced physical play, movement, and laughter (Øktedalen et al., 2001; Manninen et al., 2017).

Despite this, most wellbeing interventions do not directly target the root causes of these disruptions. Most focus on productivity, top level wellness tips, and reactive mental health support. **DOSE fills this gap**. It was developed to empower people with a clear, science-based framework to understand and regulate their brain chemistry through behaviour—every single day.

Each of the 20 DOSE behaviours is chosen to mimic ancestral conditions known to support brain health. The programme also draws on emerging research showing that even **educating people about evolutionary mismatch** can improve engagement in healthy behaviours (Basile et al., 2021), and that **story-driven, emotionally resonant interventions** are especially effective at motivating behaviour change (Zebregs et al., 2015; Perrier & Martin Ginis, 2018).

**In summary**, DOSE addresses a clearly defined and scientifically supported need:

- To reconnect individuals with the natural rhythms their brains evolved for
- To restore balance across dopamine, oxytocin, serotonin, and endorphins
- To counteract the overstimulation, disconnection, and lifestyle-driven imbalance of the modern world
- And to do so through daily, sustainable, science-backed behaviours—making brain chemistry practical, personal, and empowering

This rationale forms the foundation of the DOSE intervention and is now being evaluated through formal research collaborations to better understand its psychological and neurochemical impact.

## Step 2: Change Objectives

The DOSE intervention is not designed to simply inform people about brain chemistry—it is built to **change behaviour** in a way that is tangible, sustainable, and personally meaningful. The core objective of the programme is to help participants build new habits that rebalance their neurochemistry through small, consistent daily actions.

DOSE achieves this by guiding participants through a **four-week training programme**, where each week focuses on one of the four brain chemicals:

- **Week 1: Dopamine**
- **Week 2: Oxytocin**
- **Week 3: Serotonin**
- **Week 4: Endorphins**

The week starts with a **live teaching session**, where participants learn:

- The evolutionary purpose of that week's chemical
- How the modern world disrupts its balance
- The symptoms of low levels
- And the five key behaviours that boost it

These five behaviours are represented by **visual DOSE cards**, and the following week, participants receive one challenge per day (via our WhatsApp broadcast channel) based on each behaviour. On **Day 6**, they select their favourite challenge and repeat it. On **Day 7**, they reset before beginning the next chemical week.

Here are the **20 DOSE behaviours** covered across the four weeks:

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### Dopamine (Week 1)

- Flow State
- Cold Water
- Discipline
- Phone Fasting

- My Pursuit

### **Oxytocin (Week 2)**

- Gratitude
- Touch
- Social Life
- Achievements
- Contribution

### **Serotonin (Week 3)**

- Gut Health
- Deep Sleep
- Sunlight
- Underthinking
- Nature

### **Endorphins (Week 4)**

- Exercise
- Stretching
- Heat
- Music
- Laughter

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The goal is for participants to **test each behaviour themselves**, reflect on how it made them feel, and begin to embed the most impactful ones into their daily routine.

The change objectives of DOSE map closely to established psychological principles of behaviour change:

- **Knowledge** – Participants gain a clear, visual understanding of what each brain chemical does and how to influence it
- **Self-awareness** – They begin to recognise when one of their chemicals feels “low” and why
- **Intention** – The daily challenges create small but clear commitments to act
- **Self-efficacy** – As participants complete challenges and feel better, their belief in their ability to change grows
- **Social reinforcement** – Knowing others are taking part in the daily challenges builds a sense of collective progress
- **Identity shift** – Over time, participants begin to see themselves as someone who proactively supports their mental health

Unlike many interventions, which often focus primarily on knowledge or isolated activities, DOSE creates a **structured behavioural system**. By the end of the programme, participants have completed 20 brain-boosting actions, reflected on their effectiveness, and chosen which ones to integrate long-term.

We’re not focused on perfection—we focus instead on progress, clarity, and the empowering idea that every person can learn to influence how they feel by understanding and supporting their brain chemistry.

### Step 3: Theory-Based Methods & Practical Strategies

The DOSE intervention is grounded in a clear theoretical foundation. While it is designed to feel simple and engaging, every element of its structure—from the storytelling, to the visuals, to the challenges—is rooted in leading psychological theories of behaviour change and human motivation.

Here are the primary theories and methods that underpin DOSE:

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#### 1. Self-Determination Theory (SDT)

SDT posits that people are most likely to sustain behaviour change when they feel **autonomous** (in control), **competent** (capable), and **connected** (part of a group). DOSE supports all three:

- **Autonomy:** Participants choose which DOSE card they want to repeat each week and engage with challenges in a way that fits their life.
  - **Competence:** Each challenge is designed to be very achievable, and participants build confidence as they complete them and feel the results.
  - **Relatedness:** The shared WhatsApp experience and live sessions foster a sense of collective movement and momentum.
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## 2. Theory of Planned Behaviour (TPB)

TPB suggests that behaviour is shaped by three main factors: **attitudes**, **subjective norms**, and **perceived behavioural control**.

- **Attitudes:** Each behaviour is framed in a positive, science-backed light, helping participants believe that the action will make a difference.
- **Subjective norms:** Knowing others are taking part, seeing DOSE is delivered in schools and global companies, and hearing stories during sessions reinforces the idea that “people like me do this.”
- **Perceived control:** Every challenge is broken down into a small, actionable step, helping participants feel in control and capable of doing it.

DOSE is also collecting pre and post-programme data using TPB-based items, further strengthening its link to the theory.

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## 3. Social Cognitive Theory

Social learning plays a key role in DOSE. Participants observe others completing the challenges, hear about wins in the live sessions, and see the behaviour modelled through visuals and stories. This **vicarious learning** boosts belief that they, too, can test these DOSE actions and succeed.

Self-efficacy—one of the cornerstones of this theory—is also central to DOSE. As people complete challenges and feel a change, they start to believe, *“I can influence how I feel.”*

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#### 4. Narrative Psychology

One of the most powerful elements of DOSE is its **storytelling**. Each session frames the science through an evolutionary lens:

- Why did this brain chemical evolve?
- How is it being disrupted today?
- What can we do to restore it?

This narrative approach transforms abstract science into something deeply relatable. It's not "you should meditate" or "you should go outside"—it's "this is what your brain evolved to need, and here's how to give it that again."

This storytelling approach makes the content memorable, emotionally resonant, and behaviourally motivating.

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#### 5. Habit Formation Science

DOSE is structured intentionally around the **habit loop**:

- **Cue**: The WhatsApp message each morning
- **Action**: A clear, simple challenge
- **Reward**: The feeling it creates, plus internal tracking or group reflection
- **Repetition**: Five consecutive days, then reinforcement through the Day 6 repeat

The behaviours are low-barrier, high-impact, and tied to neurochemical feedback. Over time, they form lasting circuits of effort and reward that reinforce themselves.

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#### 6. Gamification and Positive Reinforcement

Challenges are presented visually. Weekly winners of prizes and competitions adds playful pressure. The brain's own dopamine system is engaged through a sense of **challenge, reward, progress, and recognition**—all key drivers of motivation.

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DOSE doesn't rely on one model. It draws strength from a **convergence of theory**—using motivation science, behavioural psychology, habit formation, and evolutionary storytelling to create a learning experience that is enjoyable in the short term and transformative in the long term.

Participants don't just understand why change is needed—they begin to feel it, believe it, and live it.

## Step 4: Program Design

The DOSE intervention is designed to be **as immersive as it is practical**. It's not a one-off wellbeing workshop or a passive training — it's a four-week, high-impact experience that teaches people the science of brain chemistry and helps them live it through structured, daily action.

The programme is built around the **four core brain chemicals**, with each week dedicated to one:

- **Week 1: Dopamine**
  - **Week 2: Oxytocin**
  - **Week 3: Serotonin**
  - **Week 4: Endorphins**
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### Live Sessions

Each week begins with a **live, in-person or virtual session** delivered by Tj Power or, in time, by a trained DOSE facilitator. These sessions are highly visual, fast-paced, and story-driven. They include:

- A breakdown of the chemical's **evolutionary purpose**
- The **symptoms** of low levels
- The **modern lifestyle factors** that are disrupting it
- The **five DOSE behaviours** that restore it
- Visual **DOSE cards** that explain each behaviour in simple, engaging language

- Interactive elements using **Mentimeter** to spark discussion, reflection, and live voting

These sessions feel more like a live show or experience than a lesson. Participants are captivated by the storytelling, surprised by the science, and empowered by how accessible the solutions feel.

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### Daily Challenges

Following each live session, participants complete a daily DOSE challenge, delivered via **WhatsApp broadcast**. Over five consecutive days, they receive one challenge per day, each mapped to one of the five behaviours from that week's chemical. On **Day 6**, they repeat their favourite. On **Day 7**, they reset before the next week.

Each challenge:

- Is designed to take **under 10 minutes**
- Requires no special equipment or technology
- Is achievable regardless of context (home, work, school)
- Comes with a **simple reflection prompt** or follow-up question to increase impact

Challenges are designed to **slot into people's real lives** — they're not extra work; they are part of the reset.

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### Gamification & Engagement

The programme uses simple **gamification mechanics** to increase engagement:

- A **weekly leaderboard** shared during the session
- Prizes or recognition for participation
- **Visual tracking** through cards, WhatsApp check-ins, or community prompts
- Friendly competition between participants, teams, or year groups
- DOSE points system offering 20 points per challenge completed

These elements **activate the dopamine system** in a healthy way, building positive reinforcement and progress momentum.

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## Design Principles Behind DOSE

- **Simplicity:** There is no app to download, no logins, no complex tracking. Everything happens through platforms people already use (WhatsApp, Zoom).
- **Visual learning:** The use of colourful DOSE cards, icons, metaphors, and story sequences makes the science engaging and easy to recall.
- **Time efficiency:** Live sessions last 45 to 60 mins per week. The entire programme is optimised for minimum input, maximum return.
- **Scalability:** DOSE can be delivered to 10 people or 10,000. It works in schools, businesses, and universities.

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By the end of four weeks, participants will have:

- Attended four chemical-focused training sessions
- Completed 20 brain-boosting challenges
- Chosen four favourites to keep repeating
- Built a new level of understanding, confidence, and control over their brain and behaviour

The programme is not just a series of ideas—it is a **complete, replicable system** that teaches people how to take care of their brain in the modern world.

## Step 5: Adoption & Implementation

One of the strengths of the DOSE intervention is how easy it is to adopt, implement, and scale across different environments — from large corporate organisations to schools, universities, and healthcare settings. The delivery model has been carefully designed to be **low-lift for organisations, high-impact for participants, and instantly accessible**, even for those with little or no prior knowledge of neuroscience or behavioural psychology.

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## **Implementation Across Settings**

### **In Schools and Universities**

- Sessions are delivered in assemblies, enrichment blocks, or within PSHE/wellbeing curricula
- Teachers or staff members are briefed and supported with simple onboarding documents
- Students follow the programme via school resources and visual DOSE cards
- The language of DOSE becomes embedded in the culture (e.g., “That’s a serotonin moment” or “Let’s do a dopamine reset”)

### **In Corporate Organisations**

- Delivered as part of wellbeing weeks, performance training, or leadership development
- Aligns with goals like boosting energy, motivation, attention spans, and resilience
- Managers often join alongside their teams, and organisations frequently extend access to wider departments after a successful pilot

### **In Healthcare and Community Programmes**

- Used in resilience building, stress reduction, and preventative mental health
- Fits easily into existing structures such as recovery support, youth outreach, and digital wellbeing education

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## **The Role of the DOSE Team**

All elements of implementation are managed by the DOSE team, including:

- Facilitating all live sessions
- Sending out the daily challenges via WhatsApp
- Handling all gamification elements and leaderboards
- Answering any technical or participant queries
- Providing optional post-programme extensions and data summaries

Organisations don't need to train staff, create new systems, or run logistics internally — everything is run end-to-end.

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### **After the 4 Weeks: DOSE Membership**

Once the core training is complete, participants have the option to continue their progress through the **DOSE Membership** — a platform that supports long-term integration of the 20 DOSE behaviours.

The membership includes:

- A **DOSE Habit Tracker** — a gamified tool that allows participants to track their behaviours, earn points, and build streaks
  - Weekly **live Sunday sessions** hosted by Tj Power and the DOSE team
  - Ongoing **on-demand training** on DOSE routines, nutrition, baselines, and progress
  - A private **WhatsApp group** where participants can now reply, share progress, and connect with others
  - Seasonal challenges and rewards to sustain engagement
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### **Why Organisations Adopt DOSE**

DOSE is adopted and repeated across settings because:

- It requires **no heavy infrastructure**
  - It **feels fresh and engaging**, rather than clinical or corporate
  - It is **science-based, not wellness fluff**
  - It creates a **shared language** that shifts cultures, not just individuals
  - It fits the **modern attention span** and working environment
  - It works **across all ages and demographics**
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DOSE is designed to be plug-and-play, but powerful. Organisations can bring it in with zero friction and see clear, structured results in just four weeks — not through vague intentions, but through visible action and real internal change.

## Step 6: Evaluation Plan

While DOSE was originally created in response to real-world challenges during the COVID-19 lockdowns, it has always been underpinned by a commitment to **scientific rigour and measurable impact**. The programme is currently undergoing academic evaluation, alongside internal data collection from corporate and educational partners, to better understand its psychological effects and practical applications.

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### Academic Research Collaboration

DOSE is currently being evaluated through a formal partnership with **Southampton University**, with a focus on:

1. The theoretical rationale underpinning the intervention
  2. Its behavioural design and delivery model
  3. Its measurable impact on psychological, motivational, and attentional outcomes
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A structured pre-post study design is being used, with validated measurement tools including:

- **Motivation** – Behavioural Activation System (BAS)
- **Attention** – ASRS Inattention Subscale
- **Wellbeing** – Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)
- **Self-efficacy** – General Self-Efficacy Scale (NGSES)
- **Screen-time regulation** – Using Theory of Planned Behaviour–based items and the Motivation to Limit Screen Time Questionnaire (MLSQ)
- **Qualitative reflections** – Asking participants which behaviours had the most impact and why

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## Real-World Evaluation: Accenture Case Study

Beyond academic study, DOSE has also been evaluated in real-world corporate settings. At **Accenture**, a large cohort of employees took part in the four-week DOSE programme and were assessed using pre and post programme self-report measures. Participants rated their agreement with statements such as:

- *"I have a healthy relationship with my phone"*
- *"I consistently feel highly motivated throughout the day"*
- *"I have consistently high energy levels"*
- *"I can concentrate for a long time without touching my phone"*

The quantitative result demonstrated great impact:

- **+50%** improvement in healthy phone usage
- **+59%** in daily energy levels
- **+49%** in motivation throughout the day
- **+48%** in attention when working
- **+53%** in quality of sleep
- **+30%** in time spent outdoors
- **+29%** improvement in navigating anxious thoughts
- **+32%** in tolerance to stress
- **+31%** in confidence and self-belief

In addition to the quantitative results, qualitative feedback from Accenture employees captured the emotional and practical benefits of the programme:

- *"Genuinely the most engaging and impactful experience I've had in my 20 years at Accenture."*
- *"Concise and to the point. Easy, relatable examples with simple, everyday actions to improve on."*
- *"Informative and scientific. Best mental health training ever at Accenture, thank you."*

- *“BEST wellbeing course I have ever attended by far. Love the interactive element and the tips we can immediately implement.”*
- *“I can honestly say this is the best experience I’ve attended at Accenture. Thank you so much.”*
- *“Extremely informative, very positive host, very inclusive and knowledgeable.”*

This feedback not only validates the psychological outcomes but highlights DOSE’s capacity to emotionally engage participants, shift daily habits, and bring fresh energy into workplace wellbeing cultures.

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### **Built-in Feedback and Iteration**

In addition to structured research, DOSE includes built-in feedback loops across every delivery format. These include:

- Open-ended participant reflections during and after the programme
- Feedback from teachers, HR leaders, and organisational wellbeing leads
- Ongoing survey responses from those inside the DOSE Membership
- Real-time usage data from the DOSE Habit Tracker platform

This data allows the team to continuously refine language, visuals, delivery formats, and challenge design — ensuring DOSE remains relevant, responsive, and rooted in lived experience.

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### **Defining Success**

The ultimate goal of DOSE is to empower individuals to develop a **lifelong relationship with their brain chemistry**—to understand when they are out of balance, why that’s happening, and what they can do to feel better in a sustainable way.

Success is defined by:

- **Sustained use of DOSE behaviours** beyond the programme
- **Increased self-efficacy** in managing energy, focus, and emotional wellbeing
- **Improved attention and motivation**

- **Reduced dependency on short-term dopamine habits**
- **Increased confidence, connection, and peace**
- **A new personal framework** for navigating the demands of the modern world

By combining formal research with large-scale field testing, DOSE is becoming one of the first interventions to **bridge neuroscience, storytelling, behaviour change, and wellbeing** into a single, replicable framework.