

La santé mentale à l'ère du numérique : un impératif stratégique pour le CA

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Suisses

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Caroline Creven Fourrier

- 20+ ans de leadership global (Roche, Novartis, Syngenta) en Europe et Asie ; experte en gouvernance et performance organisationnelle.
- Spécialiste du « Duty of Care » transformant la santé mentale en levier financier, réduction de l'absentéisme et pilier ESG.
- Ph.D. et intervenante en Executive Education, nommée *Top 100 Change Leader 2025* pour ses travaux sur la résilience et l'alignement RH/Business.





Quitterie MARQUE

Polytechnique, IMD
UC Berkeley, NUS



24 ans dans la santé et la
technologie sur 3 continents

4 ans spécialisée en santé
mentale



Agenda

1. Pourquoi le sujet est désormais stratégique pour les CA
2. De la prise de conscience à l'action : structurer une approche mature
3. Concrètement, que peut faire un CA dès demain ?



L'entreprise doit faire avec les carences du système

2/3 des personnes seront confrontées à un trouble de la santé mentale au cours de leur vie.

Et pourtant...

>70%

Déficit mondial

de prise en charge (35-50% dans les pays à revenus élevés)

15

Ans d'attente

entre les premiers symptômes et une prise en charge spécialisée

16%

Demandent de l'aide

des personnes souffrant de dépression

2%

Budget santé

global consacré à la santé mentale

★ 175 pays ont signé en 2025 la déclaration politique de l'ONU pour faire de la santé mentale une priorité centrale des politiques publiques.

**Pourquoi le sujet est désormais
stratégique pour les CA**

Santé mentale : du sujet invisible... au risque business majeur



Un impact massif sur la performance

12 milliards de jours de travail perdus / an
→ anxiété & dépression = 1ère cause d'absentéisme

1'000 milliards USD de pertes / an
→ principalement via productivité dégradée

30–40 % de l'absentéisme lié à des facteurs psychosociaux
→ stress, burnout, surcharge

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Santé mentale : du sujet invisible... au risque business majeur



Le coût caché (souvent invisible au board)

- **Présentéisme = x2 à x3 le coût de l'absentéisme**
→ collaborateurs présents mais moins performants
- **+30 à +50 % de turnover en cas de burnout**
→ coût de remplacement : **6 à 18 mois de salaire**
- **-20 à -40 % de productivité individuelle**
→ erreurs, décisions dégradées, innovation freinée



Santé mentale : du sujet invisible... au risque business majeur



Ce que ça change pour l'entreprise

Pas un sujet RH

Un enjeu de :



Performance opérationnelle



Risque (ESG, réputation, juridique)



Capital humain (actif stratégique)



Création de valeur long terme

Un changement de paradigme amplifié par le numérique



- ◆ **Hyperconnexion et surcharge cognitive**
 - ◆ **Hybridation du travail et perte de repères**
 - ◆ **Frontière entre vie professionnelle et personnelle de plus en plus floue**
- Le travail n'est plus un lieu — c'est devenu un flux continu



Pour les Conseils d'administration :

- ◆ **Transformation structurelle du travail**
- ◆ **Impact direct sur le capital humain, la performance et le risque**

Santé mentale : un impact direct sur la performance de l'entreprise



3 impacts clés sur l'organisation

Productivité ↓

(absentéisme + présentéisme)



Innovation ↓

(fatigue cognitive, baisse de créativité, sécurité psychologique)



Engagement ↓

(turnover, désalignement, démotivation)



Ce que montrent les entreprises qui investissent dans le wellbeing

- ✓ +13 % d'engagement des collaborateurs
- ✓ -81 % d'absentéisme
- ✓ +23 % de profitabilité
- ✓ +17 % de productivité
- ✓ meilleure rétention
- ✓ marque employeur renforcée
- ✓ culture d'entreprise positive
- ✓ réputation améliorée

Un risque stratégique sous-estimé par les conseils



Juridique

- duty of care, responsabilité employeur



ESG

- pression investisseurs & reporting



Réputation

- marque employeur / crises internes



Risque opérationnel





- désorganisation, désengagement

Ce qui n'est pas piloté par le CA devient un **angle mort** stratégique.

Le sujet entre dans les radars des investisseurs



RH
(Ressources Humaines)

- Santé mentale = composante du “S” (social) 
- Attentes croissantes sur :
 - bien-être employés 
 - culture & leadership 
 - indicateurs humains 



GOUVERNANCE



Et dans vos conseils d'administration ?

Et dans vos conseils d'administration ?

Question (sondage ou main levée) :

Le sujet a-t-il été :

- Jamais abordé
- Abordé ponctuellement
- Intégré dans une démarche structurée



Jamais abordé



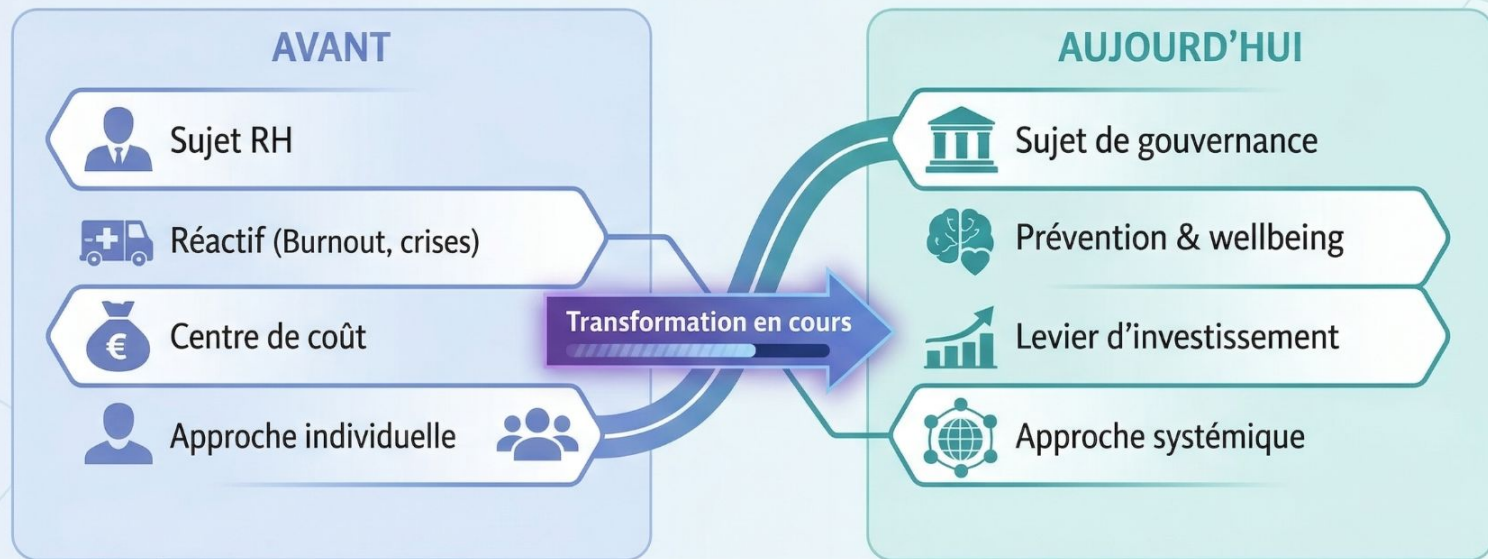
Abordé
ponctuellement



Intégré dans
une
démarche structurée



De sujet RH à enjeu stratégique pour le Conseil d'Administration et la direction



La santé mentale est un indicateur avancé de la performance
et de la résilience de l'entreprise.

La question n'est plus 'pourquoi'... mais 'comment'

Comment passer de la prise de conscience à une approche structurée et mesurable ?





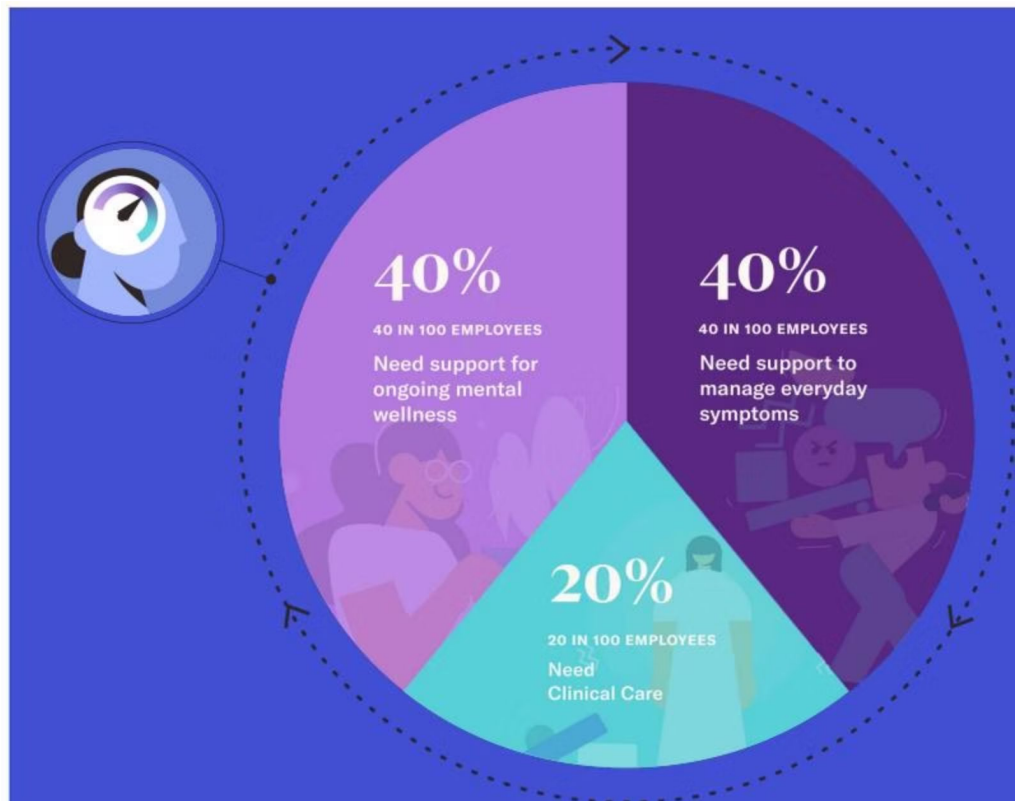
**De la prise de
conscience à l'action :
structurer une approche
mature**

Adresser le continuum des besoins en santé mentale

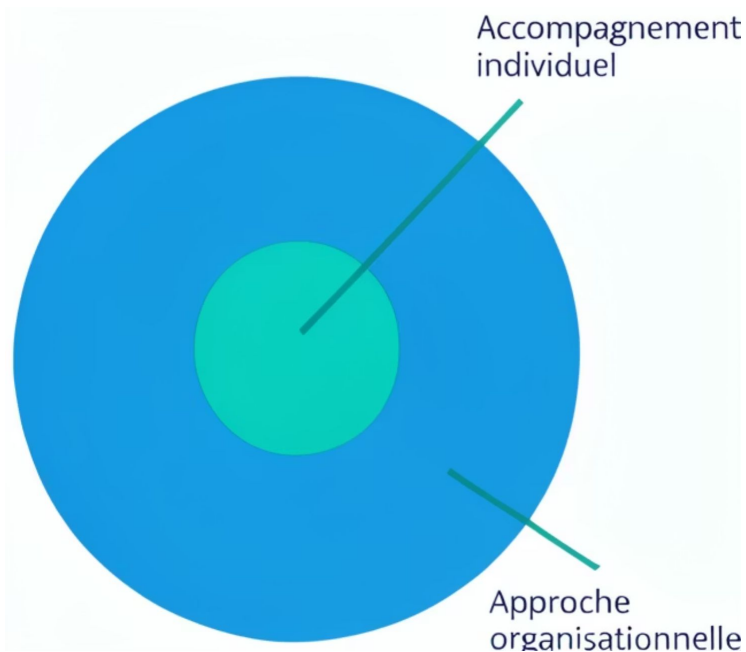
✚ L'ensemble des employés se répartissent selon **différents niveaux de besoins**

🌀 Ces besoins **évoluent** pour chacun tout au long de notre vie

🎯 L'expérience doit être **personnalisée et fluide**



L'importance d'une approche systémique



Les 3 briques organisationnelles incontournables

→ **C-suite**

Les dirigeants doivent porter le message et montrer l'exemple.

→ **Formation des managers**

La clé de voûte d'une stratégie efficace.

→ **Diffusion dans l'entreprise**

Intégrer à la culture de l'entreprise, duty of care, responsabilité collective, « ambient marketing ».

Les outils numériques et la data au service du bien-être mental



Solutions pour l'organisation

- Évaluation de la maturité organisationnelle
- Formation manager
- Programme d'ambassadeur
- Toolkit cle en main RH



Services pour l'employé

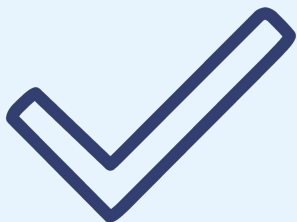
- EAP (Employee Assistance Program)
- Solutions numériques de bien-être
- Plateformes intégrées



Data & Insights

- Suivi et KPI
- Tendances et priorisation
- Utilisation des outils, impact et satisfaction

Opportunités et points de vigilance du numérique



Opportunités

- Solutions et outils numériques
- Accès direct, continu, 24/7, à l'échelle et à coûts réduits
- Formation et supervision
- Détection et prédiction
- Personnalisation du soin et parcours de soin
- Plateformes intégrées et communautés digitales



Points de vigilance

- Fausses informations
- Auto-diagnostic
- Gestion des situations de crise
- Alliance thérapeutique
- Confidentialité et Confiance
- Souveraineté



Les lignes directrices d'une approche mature

1

Du paradigme "maladie" à construire la résilience.

Reconnaître et adresser le stigma. Viser le bien-être mental proactif pour tous. Les six piliers du bien-être mental holistique.

2

Transformer la culture d'entreprise de manière systémique

Posture des leaders, rôle critique des managers, approche pervasive intégrée et à tous les niveaux.

3

S'adapter aux spécificités

Pas de « one size fits all » : tenir compte des différences culturelles, des valeurs et des réalités de chaque entreprise.

4

Approche scientifique et data-driven

En particulier en matière de prévention et de promotion, notamment pour évaluer l'efficacité des outils numériques.

Sondage

Quelle(s) priorité(s) pour les entreprises que vous administrez ?

1

Implication C-suite
Exemplarité des dirigeants

2

Formation manager

3

Solutions employés
EAP, applications de bien-être

4

Évaluation et diagnostic
Maturité organisationnelle

5

Monitoring & insights

6

Plateforme intégrée
Unifier les outils disparates existants

**Concrètement, que peut faire un
CA dès demain ?**

Ce que peut faire un CA dès demain

NIVEAU STRATÉGIQUE



1 Mettre la santé mentale à l'agenda du CA

- En faire un **sujet de gouvernance** (pas seulement RH)
- L'intégrer dans les **risques ESG et capital humain**



3 Aligner les incentives

- Intégrer la santé mentale dans :
 - les objectifs du top management
 - les bonus / rémunérations variables
- ⇒ Passer de l'intention à la **responsabilité réelle**



2 Piloter par la data (KPI)

- Définir et suivre des indicateurs :
 - absentéisme / présentéisme
 - turnover / engagement
 - usage des dispositifs (EAP, outils digitaux)
- Intégrer ces KPI dans les **reportings réguliers au CA** ⇒ Objectiver le sujet



4 Porter une culture "Duty of Care"

- Clarifier les responsabilités des dirigeants et managers
 - Lancer des programmes de sensibilisation et formation
- ⇒ **Normaliser** le sujet au plus haut niveau



Agir aujourd'hui, c'est renforcer la performance durable de l'entreprise et la confiance de toutes ses parties prenantes.

Ce que le CA doit structurer

CHECKLIST POUR LES CONSEILS D'ADMINISTRATION

1 STRUCTURER UNE APPROCHE GLOBALE

STRATEGY, GOVERNANCE & IMPACT

- Définir une stratégie
- Mettre en place une gouvernance
- Mesurer impact et risques

CAPABILITY BUILDING

- Engager les dirigeants
- Former les managers
- Définir le blueprint des solutions/outils

2 PASSER D'UNE LOGIQUE RÉACTIVE À PRÉVENTIVE

- Prévention des risques psychosociaux
- Construction de la résilience, outils pour intervenir tôt
- Maintien des collaborateurs "en bonne santé"

3 INTÉGRATION, ACCESSIBILITY, SCALING

INTÉGRER DANS LE "FLOW OF WORK"

- Pas un programme à part
- Intégré dans :
 - Management
 - Organisation du travail
 - Outils du quotidien

DIGITAL & ACCESSIBILITY

- Capitaliser sur le numérique
- Scaling rapide avec efficacité coûts
- Accès large et continu (24/7)
- Expérience personnalisée et fluide

4 DÉPLOYER DES OUTILS CONCRETS

- EAP (Employee Assistance Program)
- Solutions digitales de wellbeing
- Formation managers
- Champion program
- Mental Health First Aid
- Plateformes intégrées
- Assessment de maturité organisationnelle
- Toolkit clés en main RH
- Programme de campagne de communication
- Intégrer dans les benefits employés
- White papers et sensibilisation
- xxx
- xxx



Une approche structurée aujourd'hui,
pour un impact durable demain.

MERCI



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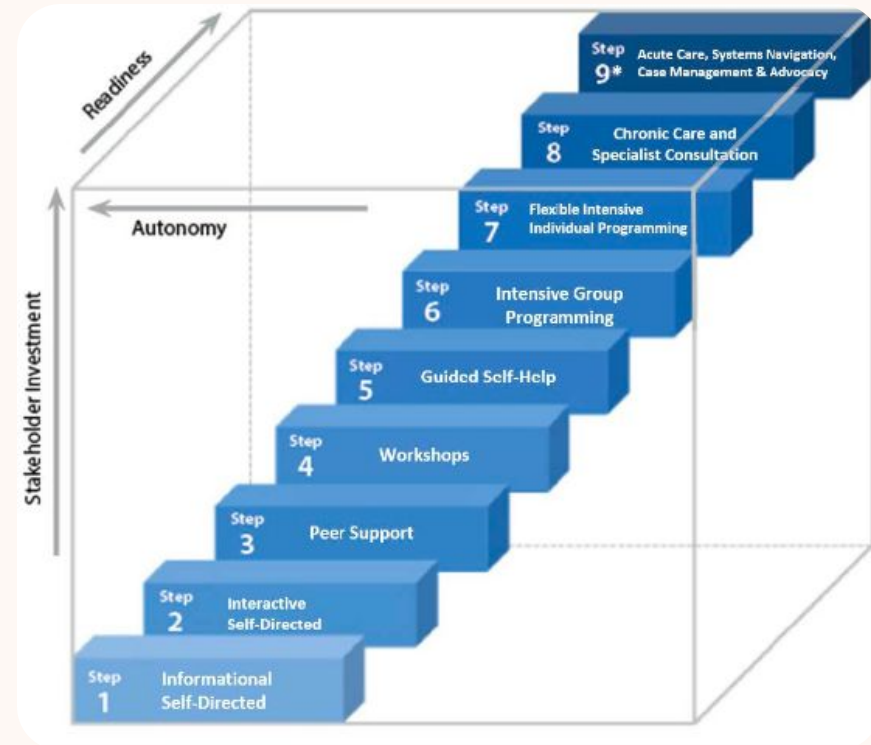
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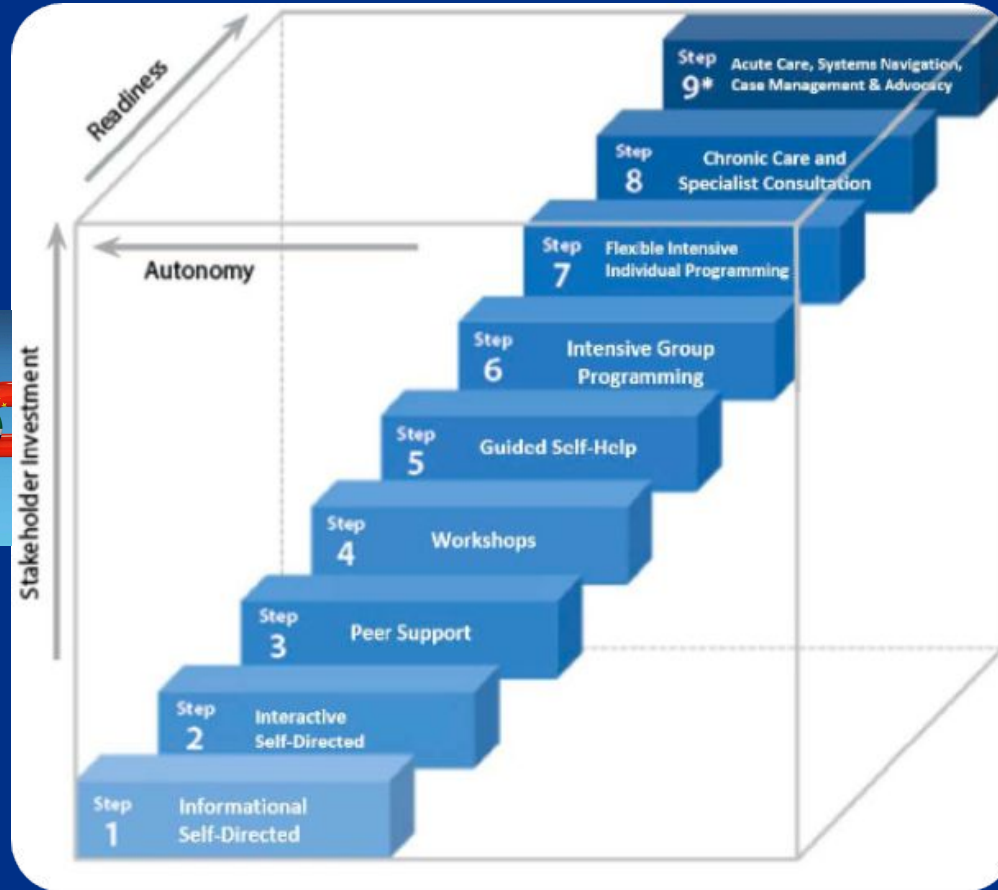
The stepped care model

- Des modèles établis en Australie, en UK et au Canada
- 4 principes clés:
 - a. Un large **éventail d'options** de services
 - b. L'intervention la **moins intensive** est proposée en premier
 - c. Besoins / sévérité des symptômes ET ce à quoi la personne est disposée à faire. Centré sur les objectifs et les préférences de l'individu.
 - d. Flexibilité et adaptabilité - Fluidité

Switch from periodic care driven by crisis to **continuity of care** driven by **prevention** and **prediction**



Le "stepped care model": un écosystème basé sur un modèle de soins gradués centré sur la personne



Les grandes lignes de la conférence Asie sur la santé mentale en 2025

1. Reconnaître les carences en matière de santé mentale
2. Rééquilibrer les ressources entre prévention et soins
3. Intégrer la sante mentale
4. Soutenir les besoins des enfants, adolescents et jeunes adultes
5. Capitaliser sur les opportunités considérables du numérique
6. Investir dans la recherche d'implémentation
7. Le storytelling et l'expérience vécue pour lutter contre la stigmatisation
8. Renforcer la collaboration intersectorielle

S'attaquer à l'éléphant dans la pièce



Addressing the elephant in the room: the stigma

9

out of ten people with mental health problems say that **stigma and discrimination have a negative effect on their lives**

16%

of people with depression worldwide **seek help due to stigma**

48%

of people with **severe mental illness** have experienced **stigma and discrimination from a GP or health professional**

37%

of people with mental illness have experienced **stigma within their own homes**

- Shame is and remains strong globally
- Self-stigma, social stigma, structural (the hardest)
- Human rights violated for thousands of years
- Lived experiences are the most efficient at breaking up stigma, changing the human narrative and creating connectedness

Acknowledging the gap: the poor cousin of medicine

71%

of people with psychosis do not receive mental health treatment. Overall, 75-95% treatment gap.

2%

of global health budget

15_{yrs}

between the onset of symptoms and specialised care

- Governance gap, information gap, services gap, resources gap
- Mental health is now a priority for WHO and national cause in several countries
- Need to make mental health professions attractive

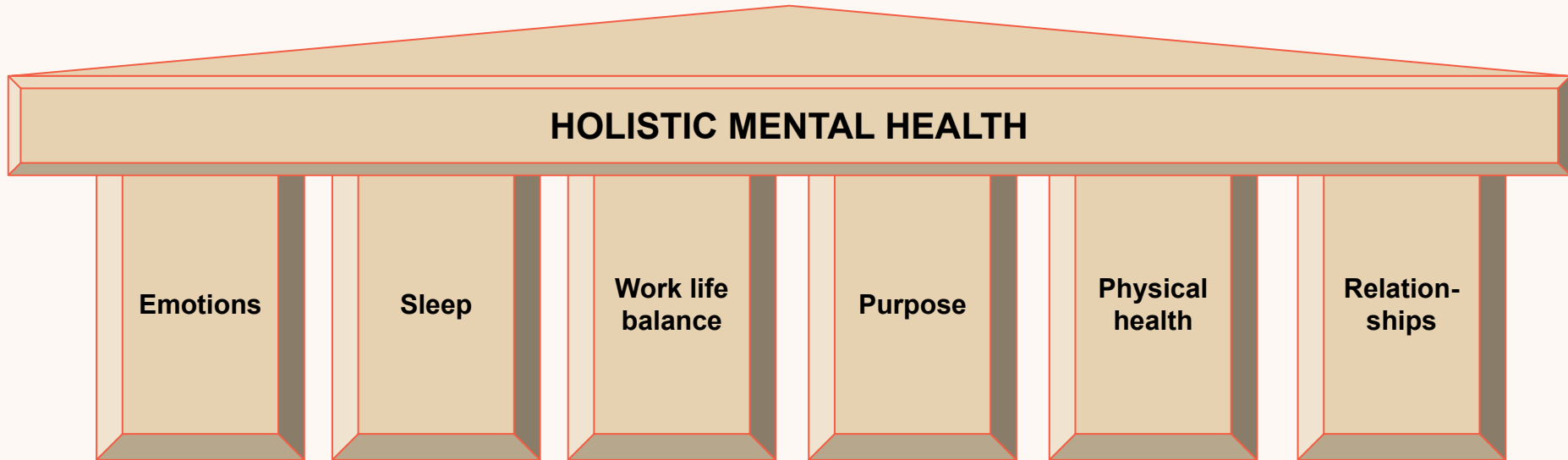
We are one : *It is all connected ...*

There is a strong association between physical and mental health problems

Physical health conditions significantly increase the risk of mental health problems; and, conversely, poor mental health increases the risk of physical health conditions such as cardiovascular disease and diabetes. Bidirectional impact.

- Nearly **1 in 3 people** with a long-term physical health condition also have a mental health condition. People with cancer or long-term health conditions, such as diabetes, are **x2-3 times more likely** to experience a mental health problem. Depression is associated with a **60% increased risk** of type 2 diabetes. Low mood is a predictor of heart disease. Anxiety is associated with increased risk of peptic ulcer disease, hypertension, coronary heart disease, and diabetes.
- People with severe mental health issues **die 15-20 years earlier**; those with common mental health problems, such as mild depression, **die 7-10 years earlier**.
- Evidence that treatment for mental health problems improves outcomes. > 20 RCTs suggests that practising mindfulness can impact processes involved in **inflammation, immunity and biological aging**. Large studies have shown that effective stress management encouraging positive emotions, optimism and life satisfaction have protective roles for CV disease.

We are one: the 6 pillars of holistic mental wellbeing



What about the gym of mental health?

Prioritizing prevention and promotion over treatment

- Need to be more proactive. Building resilience. Building life skills. Why different from physical health? Prevention on daily / weekly basis
- First line psychosocial interventions are the most effective treatment for many mental health conditions. We are overmedicating.
- Key to be scientific and evidenced based in prevention and promotion as well
- Prevention can go a long way. 15 yrs between onset of symptom and receiving specialty care. Digitalization of clinical protocols and framework

➤ ***Exercise:*** *what is the one thing you will do to take care of your mental wellbeing*

L'épidémie pour la santé mentale chez les jeunes

75% of
mental health
challenges emerge
before age 24

0.1%
of global health
budget targets
youth



- Des besoins colossaux. Des chiffres alarmants.
 - Les adolescents ont les taux les plus élevés de problèmes de santé mentale parmi tous les groupes d'âge.
 - Les taux de problèmes de santé mentale graves sont également les plus élevés chez les adolescents.
 - Les jeunes adultes ont des taux de problèmes de santé mentale plus élevés que les adultes.
- Des systèmes pas adaptés pour les jeunes et qui n'ont plus de capacité pour les accueillir, des protocoles pour la plupart non spécifiques
- Une priorité pour de nombreux pays dans les années à venir. A Singapour:
 - Initiative "Let's talk" MOHT pour les 17-25 ans
 - Comité spécial mis en place pour les 3-11 ans (au travers des parents et des éducateurs)
 - Leçon en santé mentale et résilience intégrées dans le curriculum de la maternelle à l'université
 - "Wellness Ambassador" dans les écoles

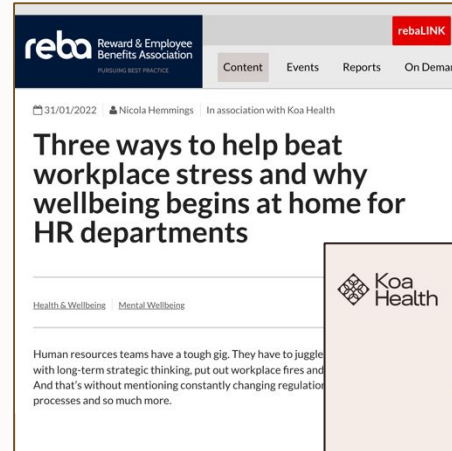
Expert Leadership Advice

Consultation from our in-house clinical experts live as well as a collection of exclusive thought leadership pieces on current relevant topics.

These articles will be a mixture of Koa Health's PR and marketing efforts as well as specifically commissioned pieces.

Topics include:

- Building a mental wellbeing strategy
- ROI/VOI
- Burnout
- Peer Support
- Productivity
- Hybrid working
- Recovery
- Psychological safety



Aperçu : Programme pour managers



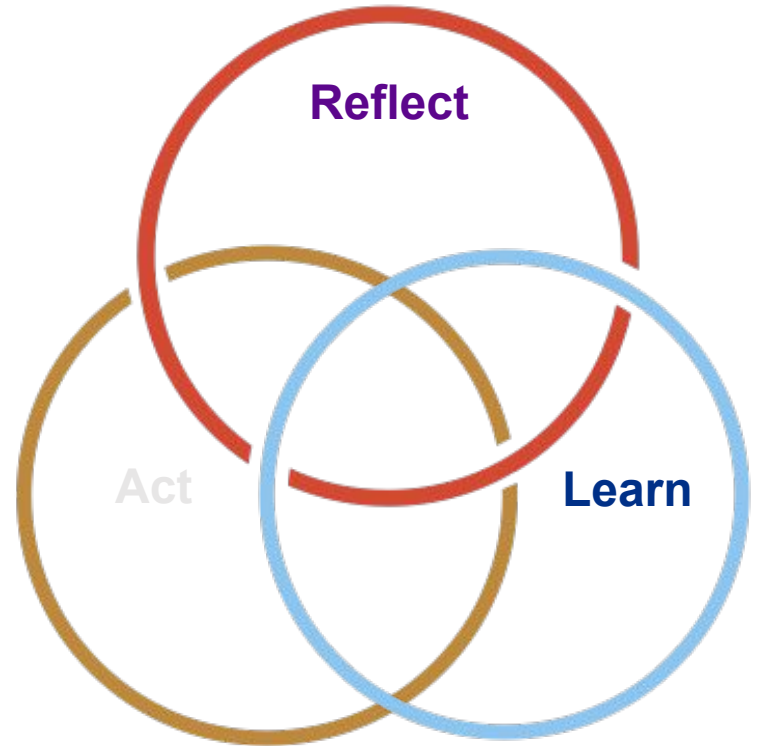
Reflect: Manager self-assessment



Learn: Managing mental wellbeing at work



Act: Mental wellbeing action plan



Overview: Manager program

Koa Health provides offers manager training to support employee mental health & wellbeing.

Three elements come together to create a supportive system for managers and can be launched in unison or longitudinal stages.



Reflect: Manager self-assessment
Building a mental wellbeing strategy



Learn: Managing mental wellbeing at work
Everything managers need to know about managing mental health in the workplace



Act: Mental wellbeing action plan
Proactive conversations for better wellbeing in the workplace.



Reflect: Manager Self-assessment

Assessing the core management behaviors for preventing and reducing stress at work.

10 min online assessment and 45 min linked coaching questions.

This evidence-based assessment provides a report detailing key competency areas in supporting positive workplace mental wellbeing, alongside areas of development.

Reflect on personal behaviors and management style and create an action plan to encourage areas of strengths and mitigate future risks.

The screenshot shows the 'Foundations' section of the assessment. The main behavior is 'Respectful and responsible'. The results are displayed as follows:

- Effective: 90%+
- Reasonable: 78-89%
- Development Need: 75% and below

The sub-behaviors are:

- Integrity**: Being respectful and honest to employees.
- Managing emotions**: Behaving consistently and calmly around the team.
- Considerate approach**: Being thoughtful in managing others and delegating.

Reflect Self-assessment



Managing stress at work

This questionnaire explores how your management approach aligns to behaviors that support wellbeing and reduce stress at work.

Use this as an opportunity to reflect on your own behavior and management style as well as set goals for areas of future development.

Start press Enter ↵

● Takes 7 min



Learn: Managing mental wellbeing at work

Everything managers need to know about managing mental wellbeing in the workplace.

45 min pre-recorded webinar + PDF booklet + 1 pager + email signatures

This pre-recorded webinar covers the groundwork for mental wellbeing, it's aimed at helping support managers with the fundamentals of managing workplace mental wellbeing. The webinar is complimented by the Foundations Manager Guide.

The webinar talks through the signs and symptoms of mental health problems and provides clarity on terminology. It also covers how to promote mental wellbeing as a manager in the workplace.

Koa Foundations
Science-based wellbeing

Managing mental wellbeing at work

Everything managers need to know about managing mental wellbeing in the workplace.

Koa Health

Learn
Training



Foundations

What should I do if someone has a mental health problem?

If someone is experiencing mental health problems they may not be able to process what is happening and find the support that they need. This is where you can help. Start the conversation as soon as you notice someone is struggling with aches and prevent them from becoming more unwell.

Safe spaces to talk. It can be difficult to talk about mental health. It helps to find a place where they might feel safe to share - whether a physical space (confidential office space) or virtual (without others in a meeting or on a call).

Open & honest conversations. Start with open and non-judgmental questions. Such as "how are you doing?" or "how are you finding things at the moment?". Allow them the space to share their experience in their own words. Hold back from any assumptions into their situation or how they might be feeling or what help they might need. Be clear if there are any grounds for concern and address these early, for example a high level of absenteeism which is impacting performance.

Share the available resources. Check that they have access to your EAP (Employee Assistance Programme) details. This is a service that can provide specialist mental health advice and support, such as counselling. If you are not sure of the details, check your employee handbook, or with your HR contact. You might also be able to get further support from your medical and health insurance plans.

Confide that you will support them as a manager. Show how you can support them by making some reasonable adjustments that can help support their situation. It is important to arrange to have time off of working with the user seen to reduce their workload. You should not provide psychological support or try to diagnose their situation. It is important to show some boundaries as a manager and be clear on your role and the support you can provide.

Foundations

Koa Foundations Resources

If you've been having conversations with your team and have heard any of the below phrases, there are tools within Foundations you can suggest to support them.

Heard this?	Suggest this...
"I am feeling really overwhelmed with everything that is going on." "It's all piling up to be too much for me."	5-4-3-2-1: Take a mindful STOP This is a quick exercise to be used anytime you are feeling overwhelmed.
"I just can't stop worrying." "My back and shoulders are so tense." "I can't remember the last time I felt relaxed."	4-7-8 breathing to unwind This simple breathing exercise has been shown to reduce stress and anxious thoughts. Challenge your thoughts: 5-step program Write down your thoughts, identify any negative thinking and find the right tools to balance your thoughts.
"I am furious with them? I can't believe they did that!" "They made me so angry, I can't speak to them anymore."	Release your anger This quick exercise is designed to help you to take a moment to process why you are so angry and take the next steps towards cooling down.
"I'm not sure, I can't decide." "I am never doing anything right, everyone on the team is smarter than I am."	Build your self-esteem: 6-step program Learn about self-esteem and the skills for obtaining healthier self-confidence.
"I have such a busy head all the time." "I am struggling to concentrate." "There's no end to the to-do list." "I forget about the ball."	Managing intentions Setting manageable goals at the beginning of your day (not week) can help refocus you and provide clarity and direction.

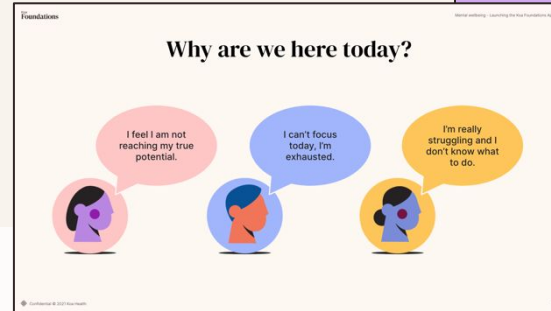


Champion training

Foundations Champion Program

Creating & supporting champions to support the roll-out of the Foundations app as well as to support a culture of mental health within your organization.

30 min pre-recorded webinar + PDF booklet
+ Interactive LMS



Activation events for your entire workforce

Themed events run to increase awareness of mental wellbeing and to reduce the stigma of mental health.

Selection of webinars, and event collateral (posters, leaflets etc) on topics such as:

- Mindfulness
- Burnout
- Stress
- Sleep
- Confidence
- Relationships
- Recovery
- Manager support



Integrating mental wellbeing initiatives in the workplace

Significantly boosting productivity and company attractiveness

Studies show that companies with strong wellbeing programs experience

- ★ a **13% increase in employee engagement**
- ★ an **81% decrease in absenteeism**
- ★ a **23% increase in profitability**
- ★ a **17% higher productivity**
- ★ along with higher **retention rate, stronger employer brand, positive culture, improved morale, enhanced reputation**



Exercise:

- Reflect where is your company at today?
- What will you change for your team?
- What will you change for your company?
- How will you lead by example and embrace the topic, changing the paradigm?



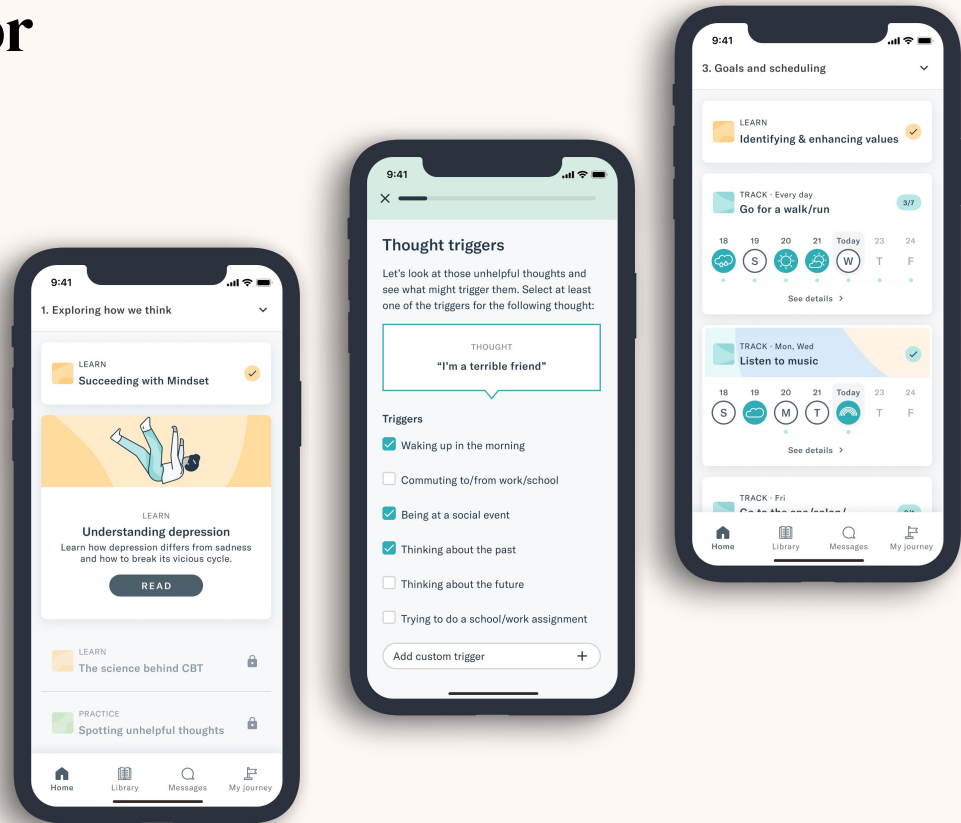
TCC numérisée

Supervised CBT program for depression

During the eight-step program, individuals work through exercises that explain the roots of depression and offer science-based techniques to better manage them.

Mindset offers:

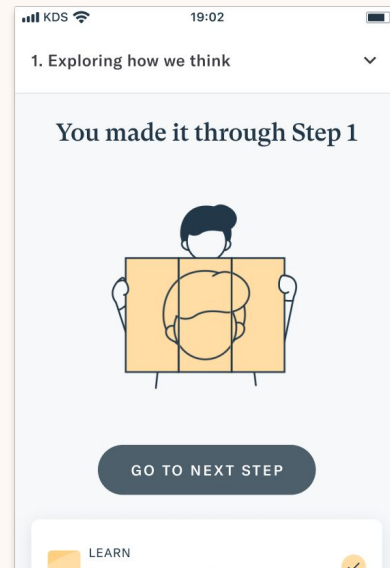
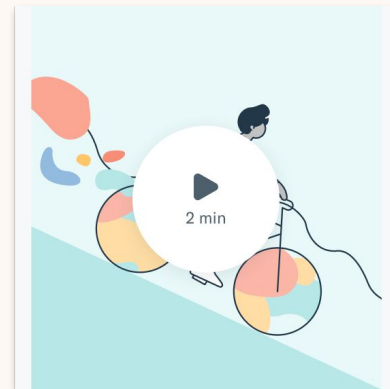
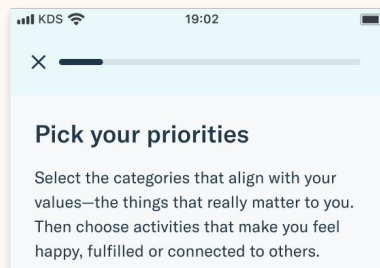
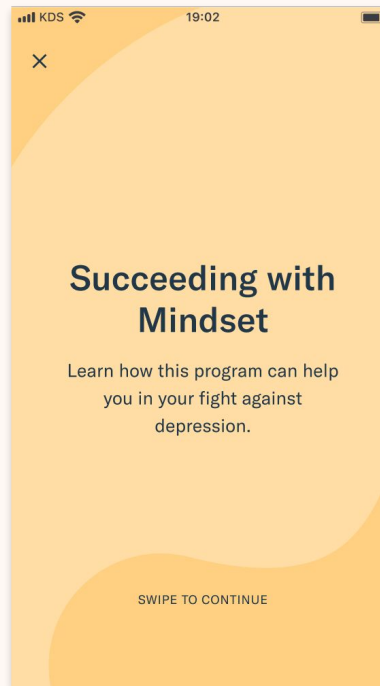
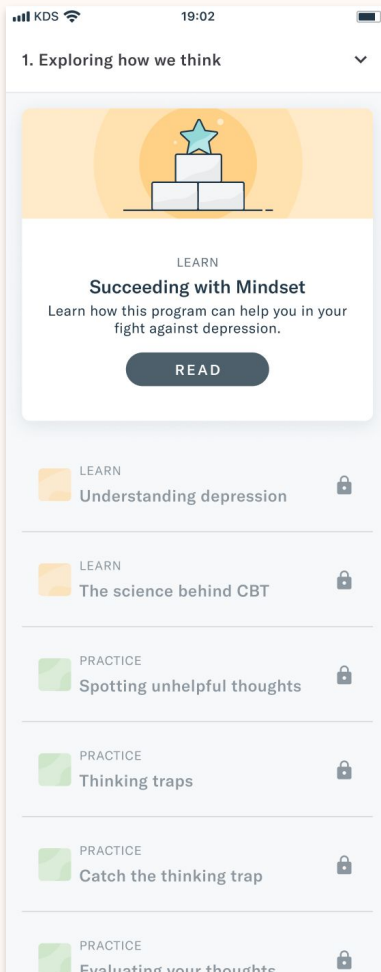
- Science-based learning
- Cognitive restructuring
- Tracking and scheduling tools
- Mindfulness exercises





UX, UI, Content

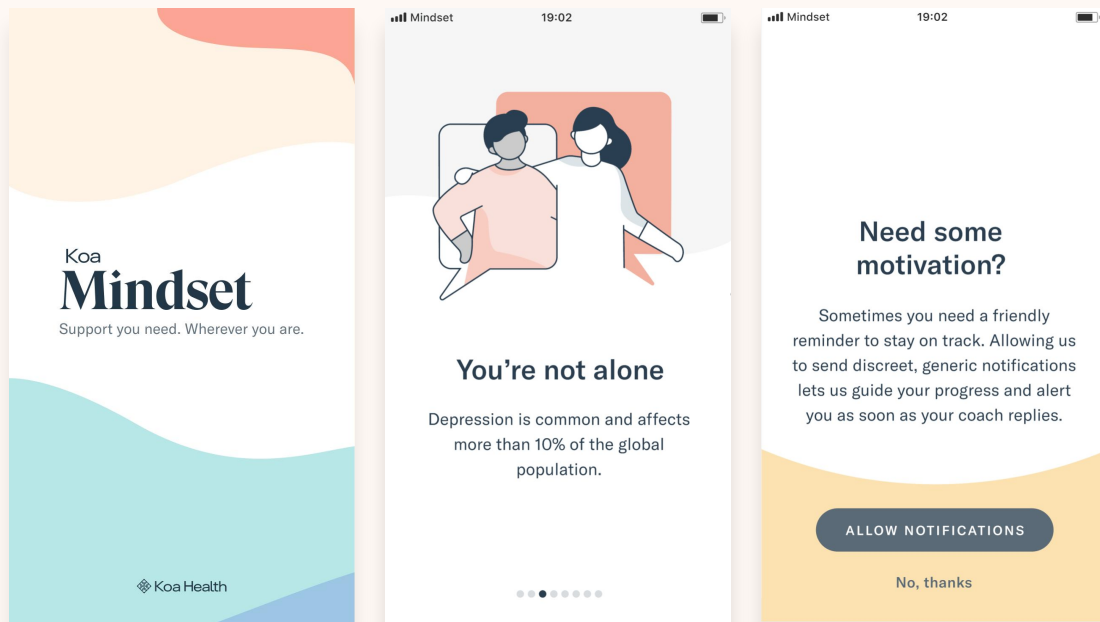
- + Clean design with a soothing color palette
- + Clear, approachable language
- + Encouraging, supportive tone of voice
- + Supporting video and audio content





ONBOARDING

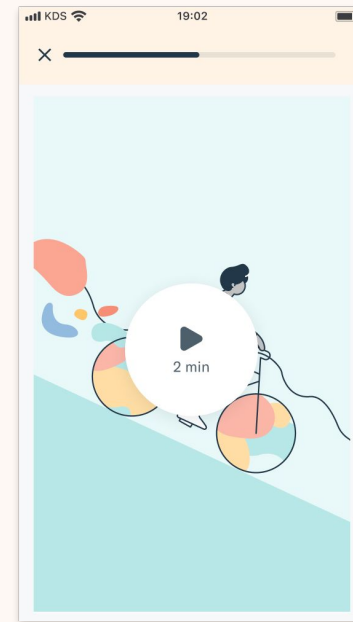
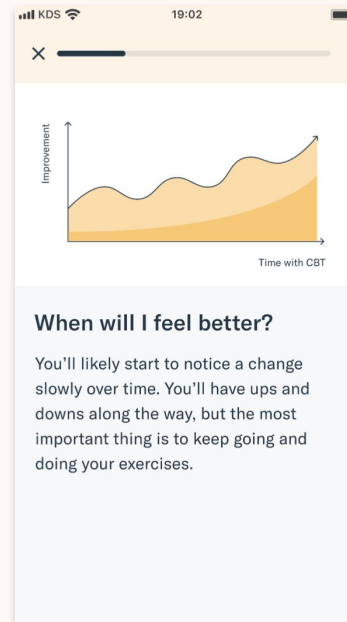
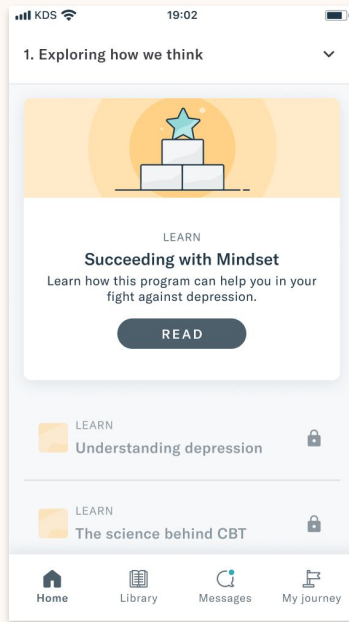
After activating their account, patients are offered a quick introduction to the app including what the program is about, how it works and its main features.





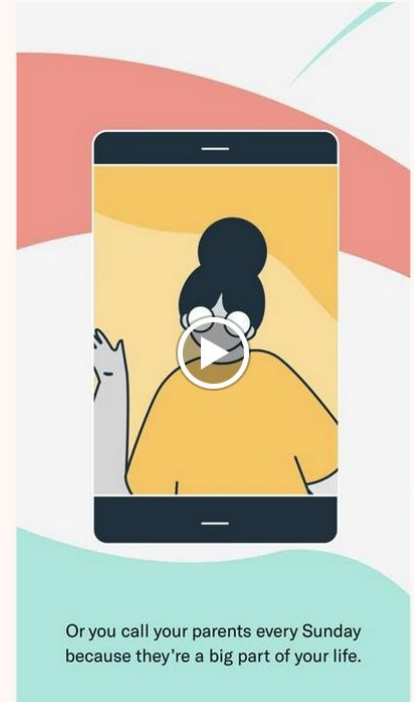
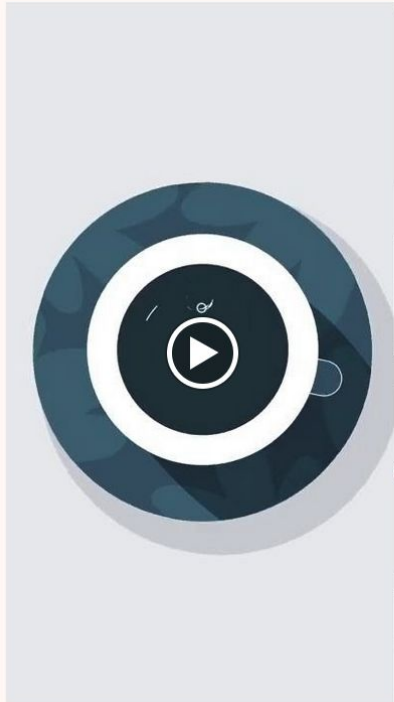
EVIDENCE-BASED GUIDANCE

The program consists of eight sequential steps designed around evidence-based behavioral health methods. In Step 1, patients learn about depression and CBT through informative text and videos.





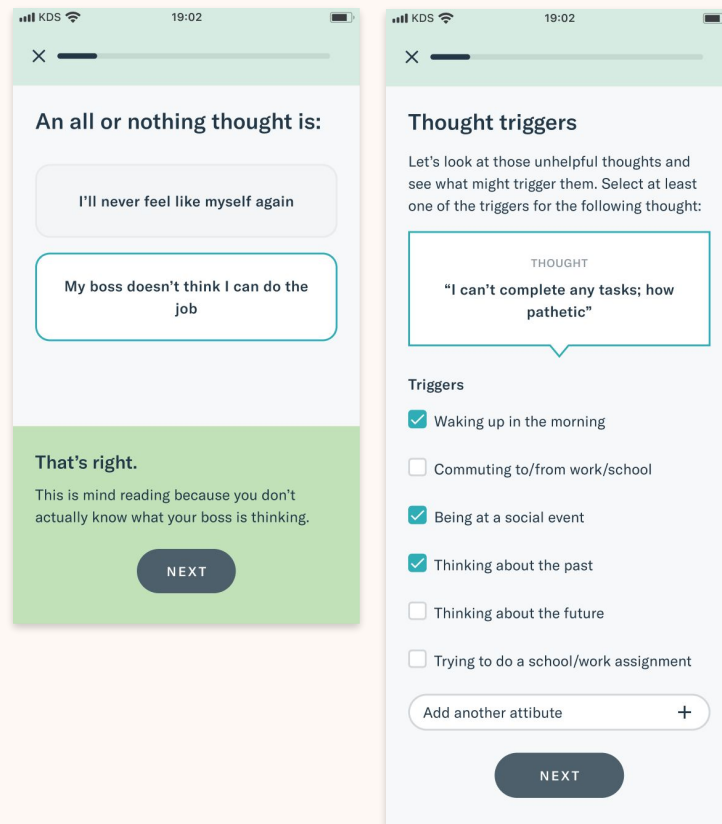
EDUCATION DELIVERED VIA ENGAGING ANIMATIONS, [videos](#)





COGNITIVE RESTRUCTURING

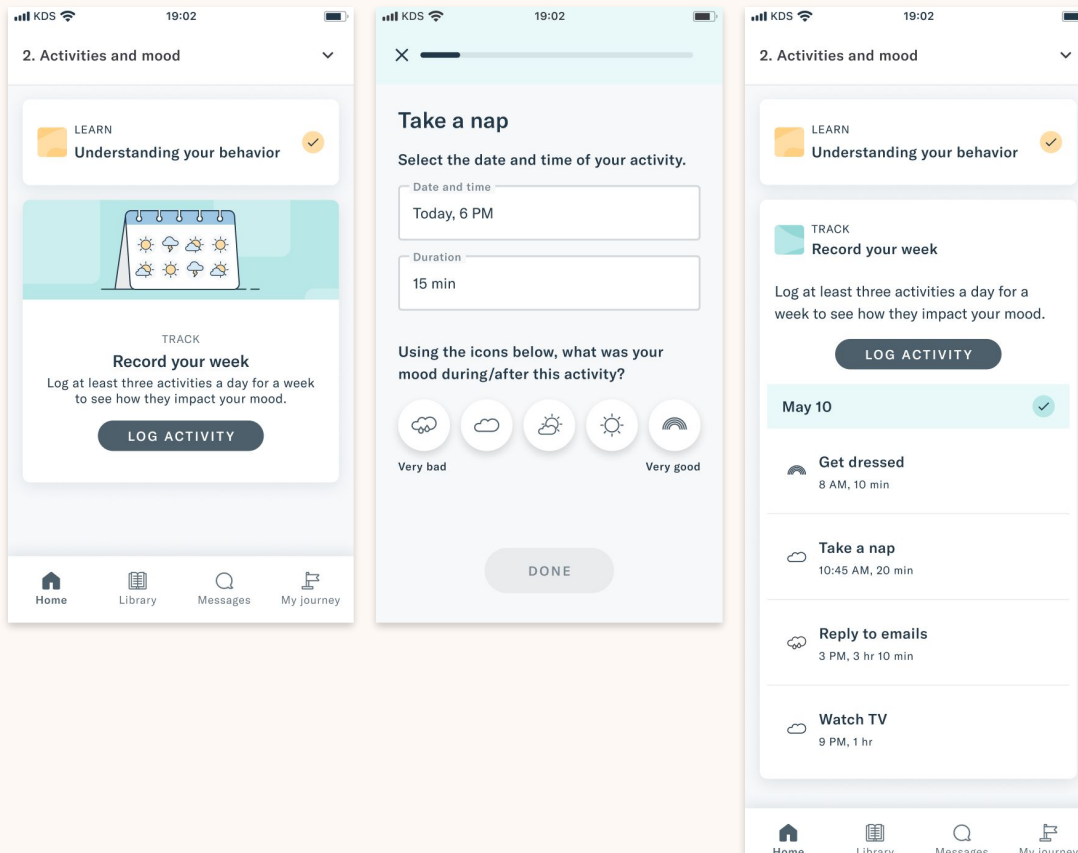
Step 1 also focuses on the cognitive aspect of the program. Patients are asked to note their unhelpful thoughts, examine their triggers and learn about thinking traps. They then learn how to question their unhelpful thoughts using a set of questions.





LOGGING

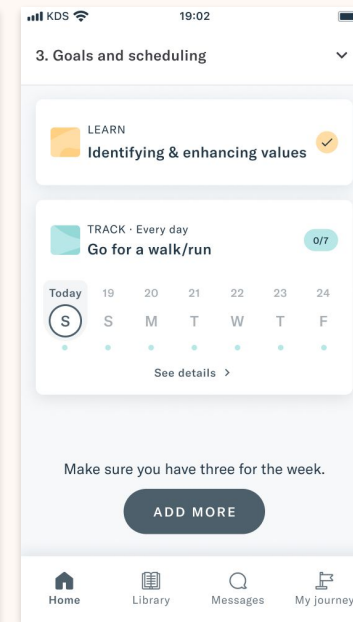
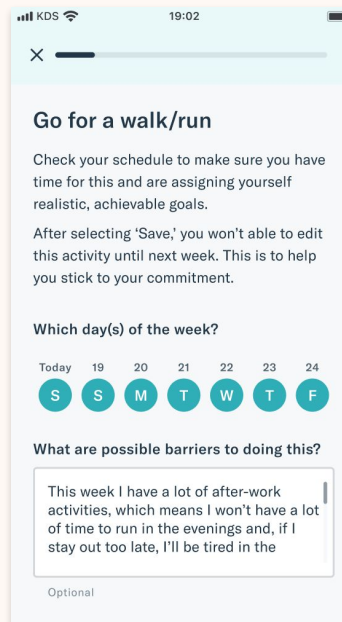
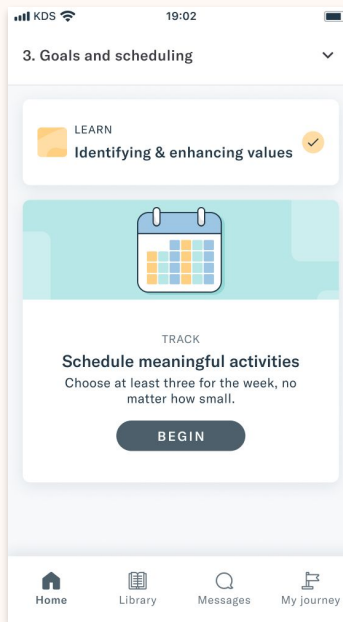
The next step is for patients to record the week's activities without making changes to their usual routine. They log each activity, along with its impact on their mood, to better understand what things make them feel better (or worse).





SCHEDULING: THE CORE OF TREATING DEPRESSION

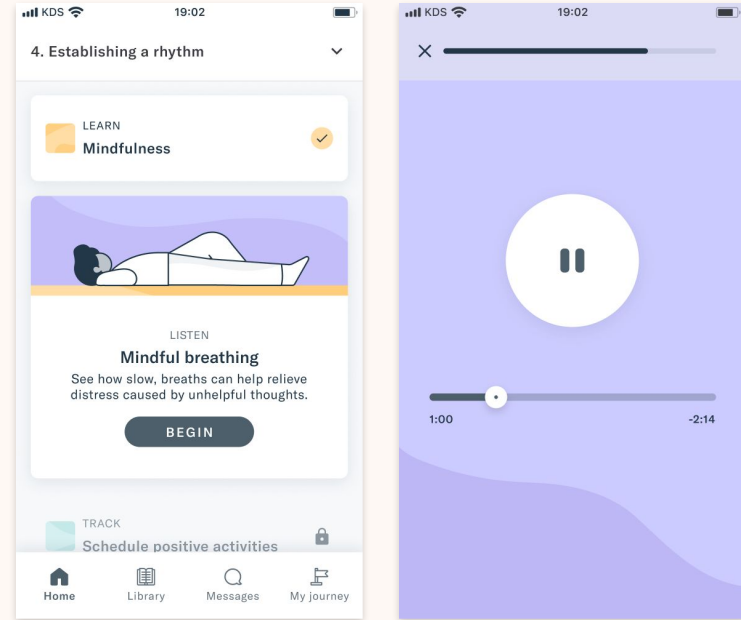
Scheduling meaningful activities is the main intervention in CBT for depression. From Step 3 onwards, patients commit to at least three activities per week and are held accountable by their practitioner. By scheduling meaningful activities that align with their values, patients create a good habit.





MINDFULNESS

Mindset offers three guided exercises, specific for depression, to teach patients conscious breathing, grounding and other tools to help them focus on the present rather than the past or future.

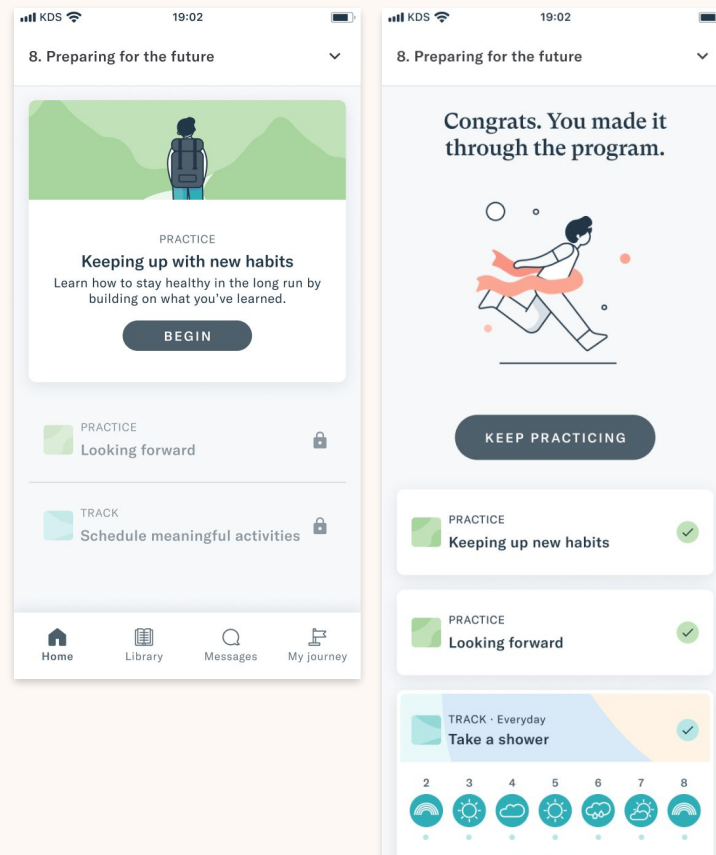




STAYING WELL

The program ends with a recap of what users learned and a reminder of the coping tools they now have. They're also taught how to plan for and deal with future challenges.

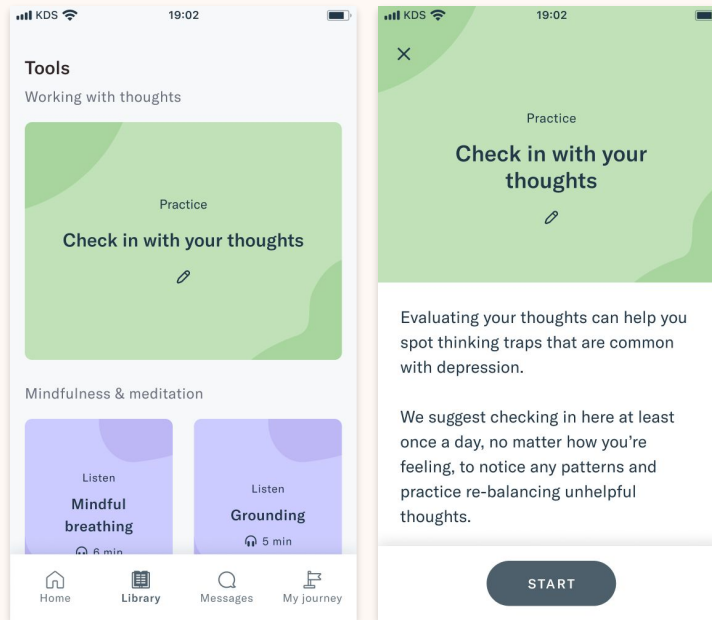
Patients can continue to schedule meaningful activities after completing the eight weeks for as long as they want.





LIBRARY

Users can practice what they've learned in the program with tools in their Library. It features video, audio and practice exercises including thought evaluation and mindful breathing.

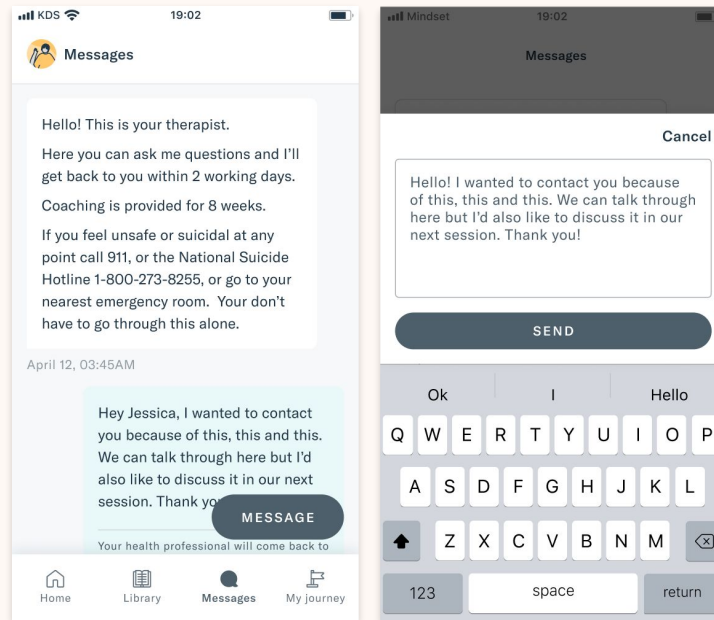




MESSAGES

Users can send non-urgent messages directly to their therapist via the app's Messages feature.

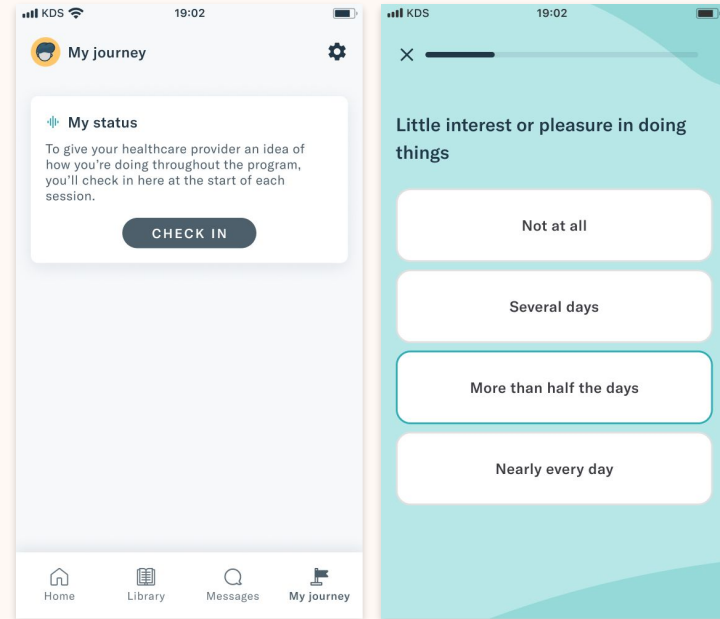
Users are also notified of the response time (typically 3 working days).





MY JOURNEY

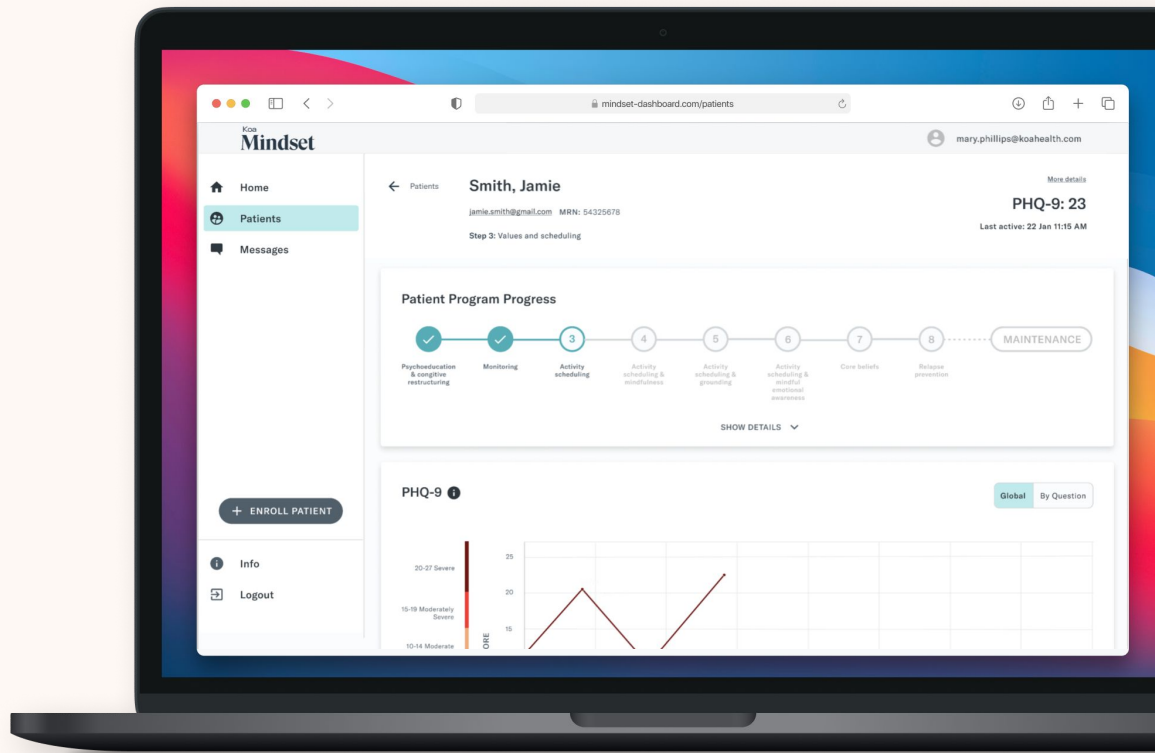
Users will fill out a weekly PHQ-9 questionnaire via the 'My journey' tab for the duration of the program. Results are sent directly to their therapist and can be viewed via the Mindset Patient Care dashboard.



Mindset Patient Care

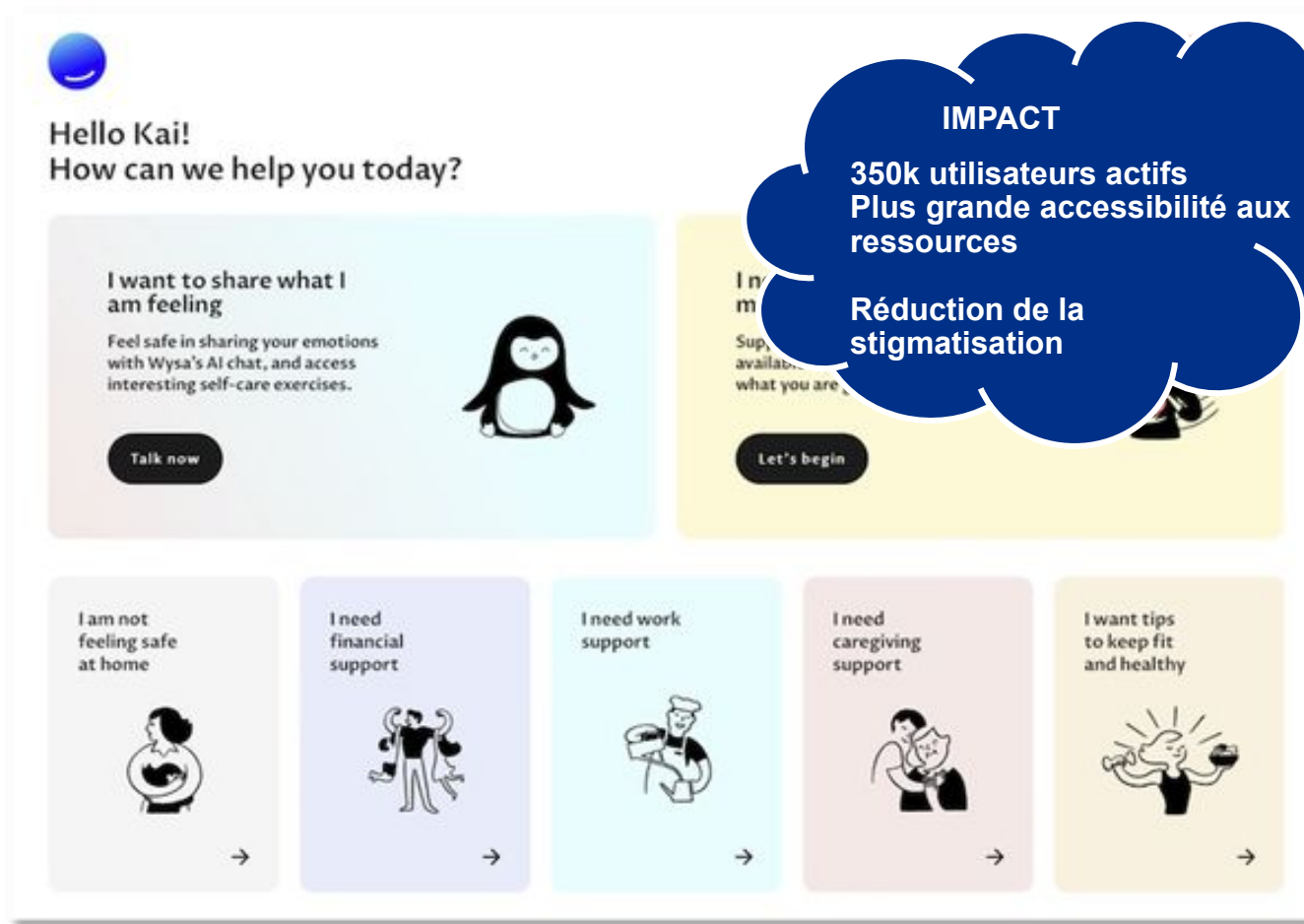
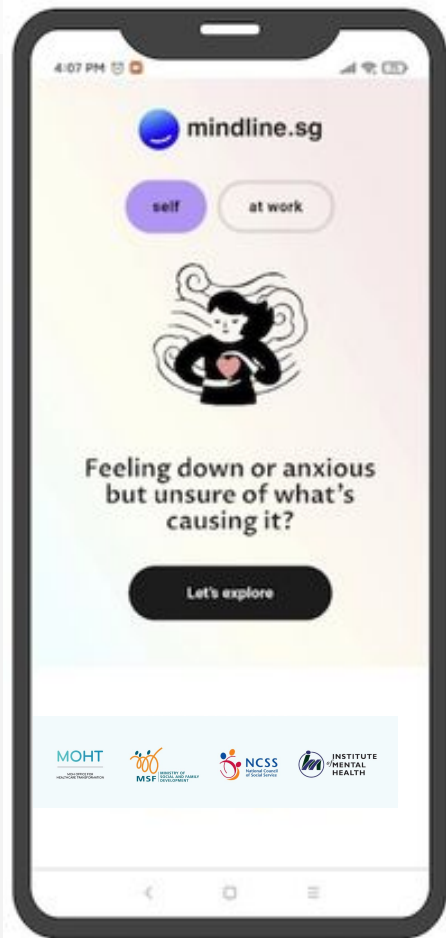
The Mindset Patient Care dashboard enables therapists to enroll and monitor patients using Mindset.

The dashboard can also be used to track patient progress, add notes, send messages and monitor patient data such as questionnaire results and mood tracking.



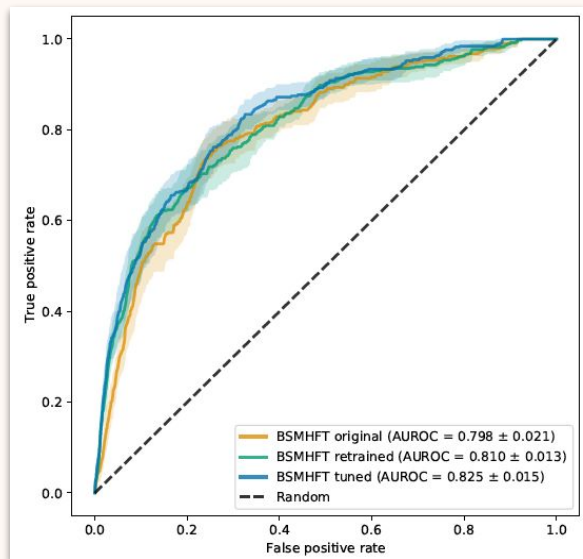
Prévention et prédiction

MINDLINE: un point d'entrée unique pour les 6 millions résidents

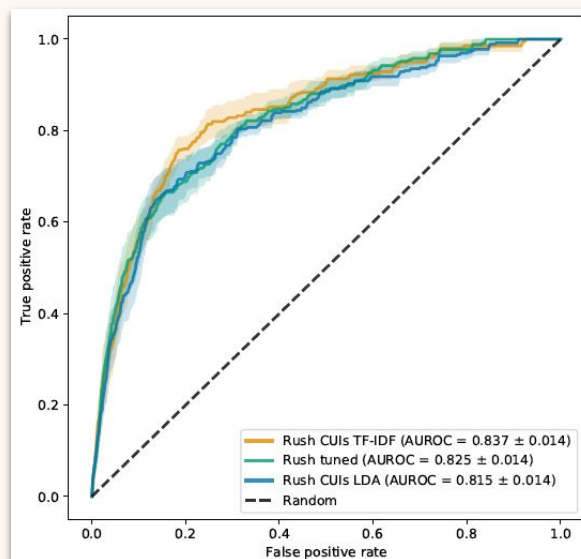


IMPACT
350k utilisateurs actifs
Plus grande accessibilité aux ressources
Réduction de la stigmatisation

Prédire la crise en santé mentale 4 semaines à l'avance



ROC curves of the NHS-based models

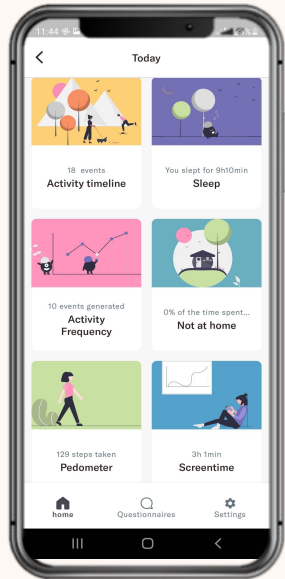


ROC curves of the Rush-based models

Two key differences emerged between NHS and Rush data sets:

- **Mental health crisis definition**, which influences the transferability of the algorithm and is tuned whenever the algorithm is exported to a different healthcare system.
- **Granularity of patient's medical history available**, which highlights a **fundamental difference between UK and US healthcare**.

Monitoring passif des indicateurs de santé mentale



Signaux respectueux de la vie privée pour le phénotypage numérique :

- Chronologie des activités
- Sommeil
- Fréquence des activités
- Podomètre
- Temps passé devant l'écran
- Localisation
- Schémas de balayage



Phénotypage numérique: extraire des fonctionnalités complètes reflétant les signaux comportementaux et cognitifs, ainsi que les caractéristiques personnelles.

Disponible pour iPhone et Android
Consommation de batterie négligeable

References: Buda S, Khwaja M, Matic A, "Outliers in Smartphone Sensor Data Reveal Outliers in Daily Happiness". Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2021
Khwaja M, Vaid S, Zannone S, Harari GM, Faisal AA, Matic A, "Modeling Personality vs. Modeling Personalid: In-the-wild Mobile Data Analysis in Five Countries Suggests Cultural Impact on Personality Models", Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies archive (IMWUT), Volume 3 Issue 3, Presented at UbiComp 2019, London, UK, September 2019.
Khwaja M, Matic A, "Personality is Revealed During Weekends: Towards Data Minimisation for Smartphone Based Personality Classification", In proceedings of INTERACT conference (29% acceptance rate), 2019
Constantinides M, Busk J, Matic A, Faurholt-Jepsen M, Kessing LV, Bardram JE, "Personalized versus Generic Mood Prediction Models in Bipolar Disorder", Mental Health and Well-being: Sensing and Intervention Workshop in

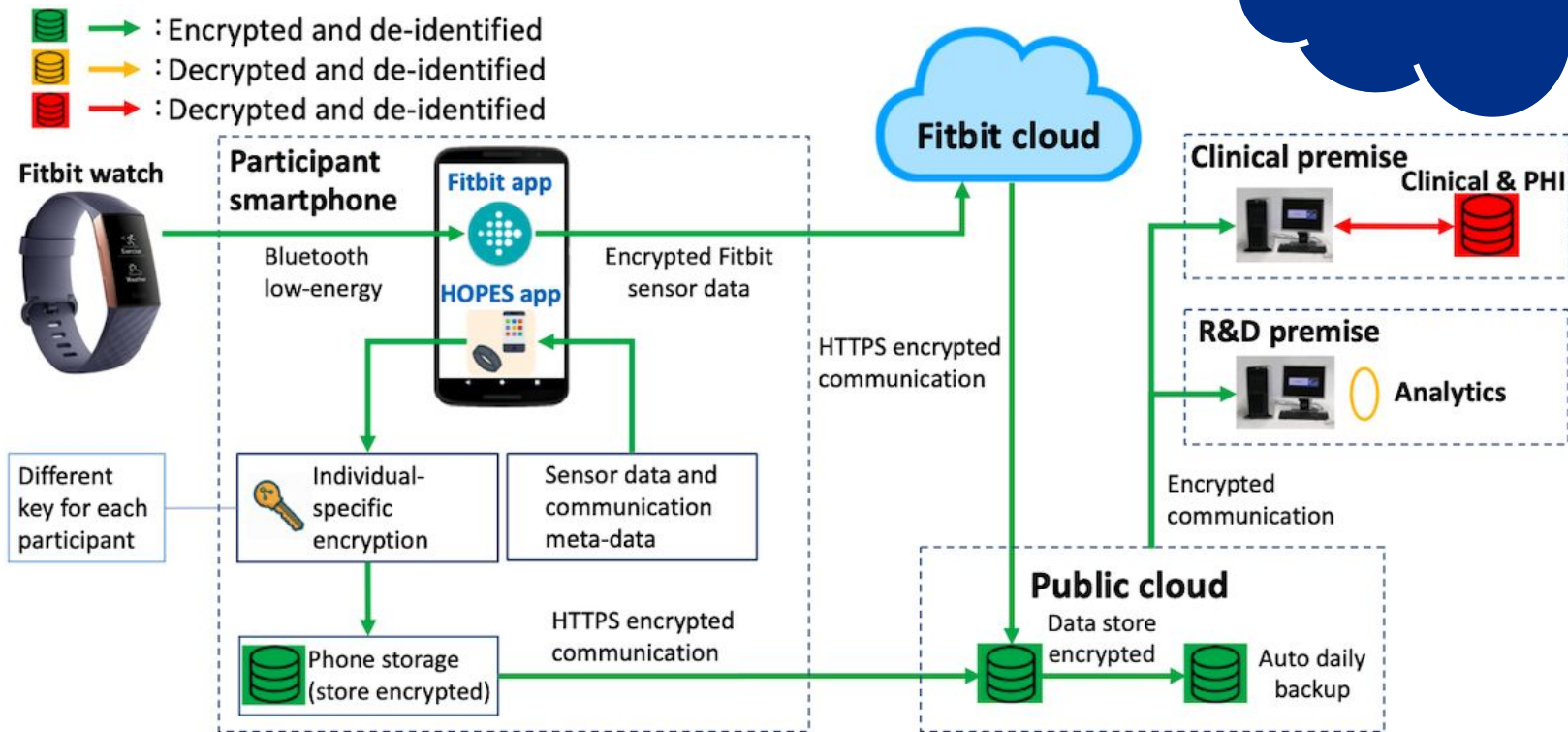
conjunction

with UBICOMP 2018 Conference, Singapore, 2018.

Park S, Matic A, Garg K, Oliver N, "When Simpler Data Does Not Imply Less Information: A Study of User Profiling Scenarios With Constrained View of Mobile HTTP (S) Traffic." Journal ACM Trans on the Web (TWEB) 12, no. 2 (2018): 9.

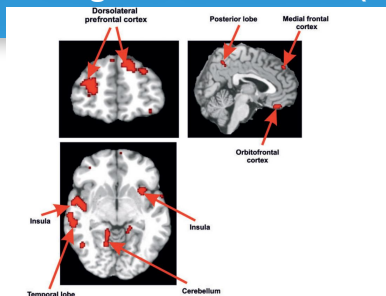
HOPES: intégration dans la communauté et les cliniques

IMPACT
17 cliniques sur 24 offrent des services de santé mentale



Prédiction des diagnostics de dépression

Prédiction du diagnostic de trouble dépressif majeur (MDD) avec l'imagerie structurale (sMRI)

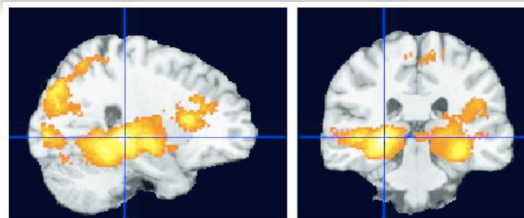


Classification diagnostique multicentrique des examens individuels de neuroimagerie structurale de patients atteints de trouble dépressif majeur

Mwangi et al., 2012, Brain

Précision de prédiction élevée de 90 % pour les patients, grâce à des scans de structure cérébrale pondérés T1.

Prédiction du diagnostic de MDD avec l'IRM fonctionnelle lors d'événements de perte (fMRI Loss Events)

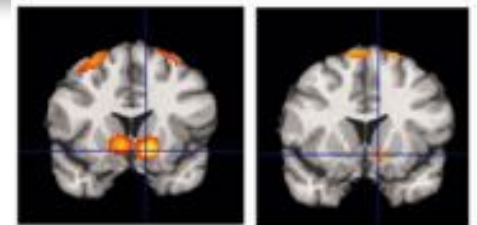


Prédiction du diagnostic de MDD avec l'IRM fonctionnelle lors d'événements de perte (fMRI Loss Events)

Johnston, Tolomeo et al., 2015, Brain

Prédiction du diagnostic de MDD avec l'IRM fonctionnelle lors d'événements de perte (fMRI Loss Events)

Prédiction du diagnostic de MDD avec l'IRM fonctionnelle lors d'événements de récompense (fMRI Rewards Events)



Échec de la désactivation hippocampique lors d'événements de perte chez les patients souffrant de dépression résistante au traitement

Johnston, Tolomeo et al., 2015, Brain

Une activité anormale du striatum a permis de prédire le statut diagnostique individuel de 84 % des patients.

Personnalisation et sciences comportementales

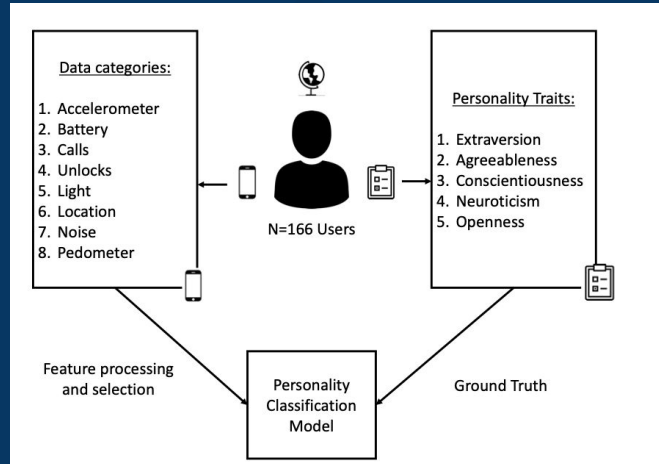
User profiling

Detecting personal characteristics

Personality modelling

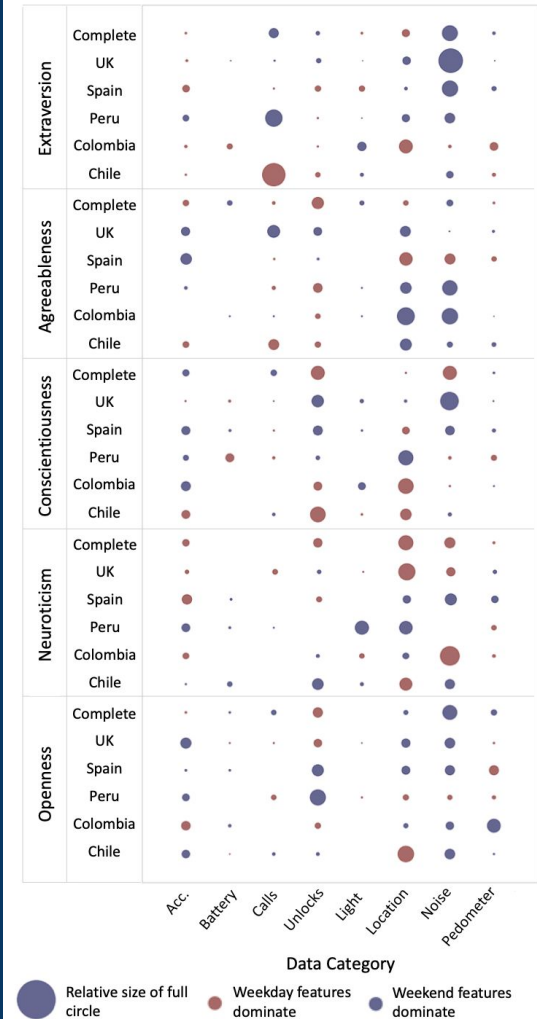
Approach

- Objectively and unobtrusively sensed behavioural habits from smartphone sensors
- Day-to-day activities as well as subtle behavioural signals
- AI based mapping of behaviours to personal characteristics



Source: Koa Health research collaboration with LSE - publication

Personality / Culture



Relative size of full circle, Weekday features dominate, Weekend features dominate

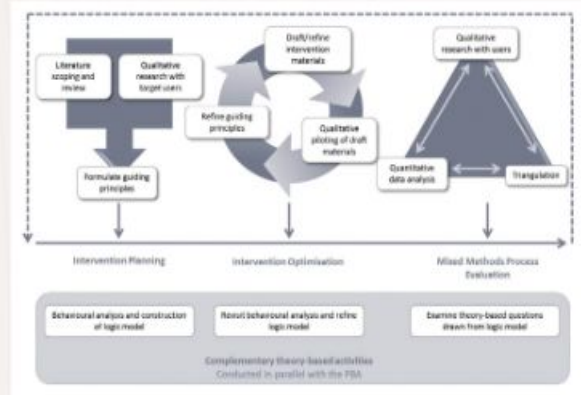
5. Implementing behaviour change techniques

We need to present interventions in **the best way to encourage engagement and motivation to complete recommended health behaviours.**

To do this we can use research-backed tools such as:

- **The person-based approach**
- **Self-determination theory**
- **The COM-B model**

These models help us to decide what and how we want to display content to users.



Self-determination Theory (SDT) & Basic Psychological Needs (BPN)

We are all different and unique as humans. However, there are some key fundamentals that we universally share. These are Basic Psychological Needs (BPN).

Autonomy: Having control and being able to make meaningful choices.

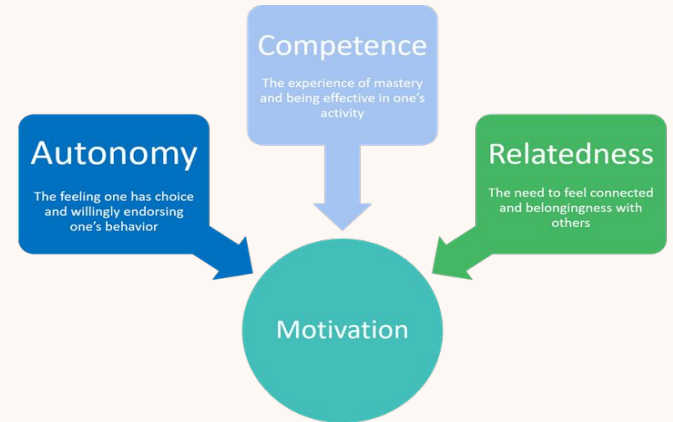
E.g. providing guided and meaningful options for content

Competence: Feeling as though you have the ability to complete a task and are learning and growing

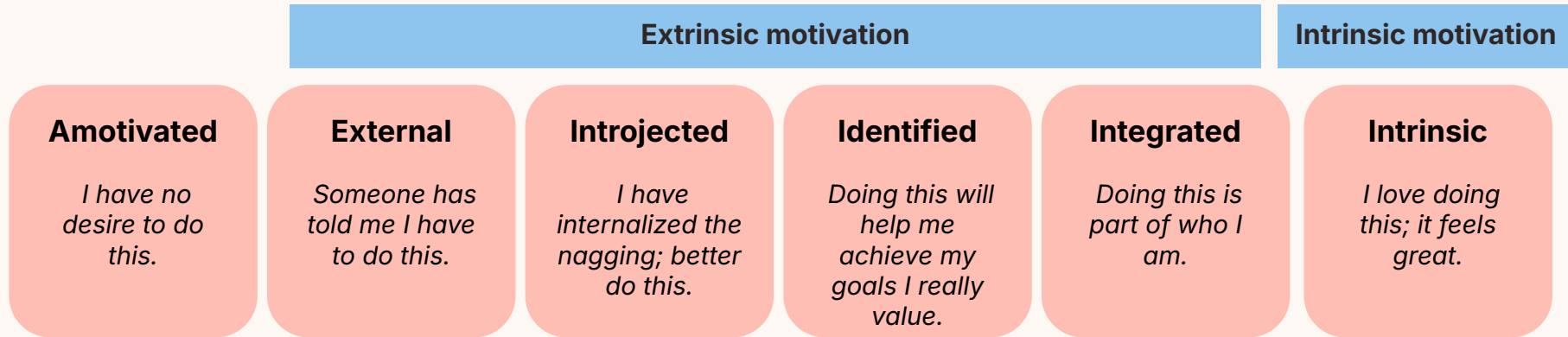
E.g. Showing progress, feedback and identifying obstacles and blockers.

Relatedness: When people feel they are part of something larger than themselves.

E.g. Feeling part of a community, connected to a higher power, emotional connections.



Motivational Quality



Self Determination Theory is not a unitary construct. It not only looks at how *much* motivation someone has but also the *quality* of the motivation.



Overcoming barriers to behavior change: Using the COM-B model

We should also address potential barriers to behavior change.

The COM-B model shows how behaviors are more likely to happen if people have the **capability**, **opportunity** and **motivation** to carry them out.

This model recognises that behavior is part of an interacting system involving all these components.

