

MSc Public Health and Social Care in Practice

Population Health and Digital Health Promotion

Module code: LCHS7009

Lecturer: Dr Raheela Shaikh

Assignment title: Component 3: Group Project Presentation

MindEase: AI-Enabled University Digital Wellbeing Hub

Target: university students aged 18–25 experiencing stress and anxiety

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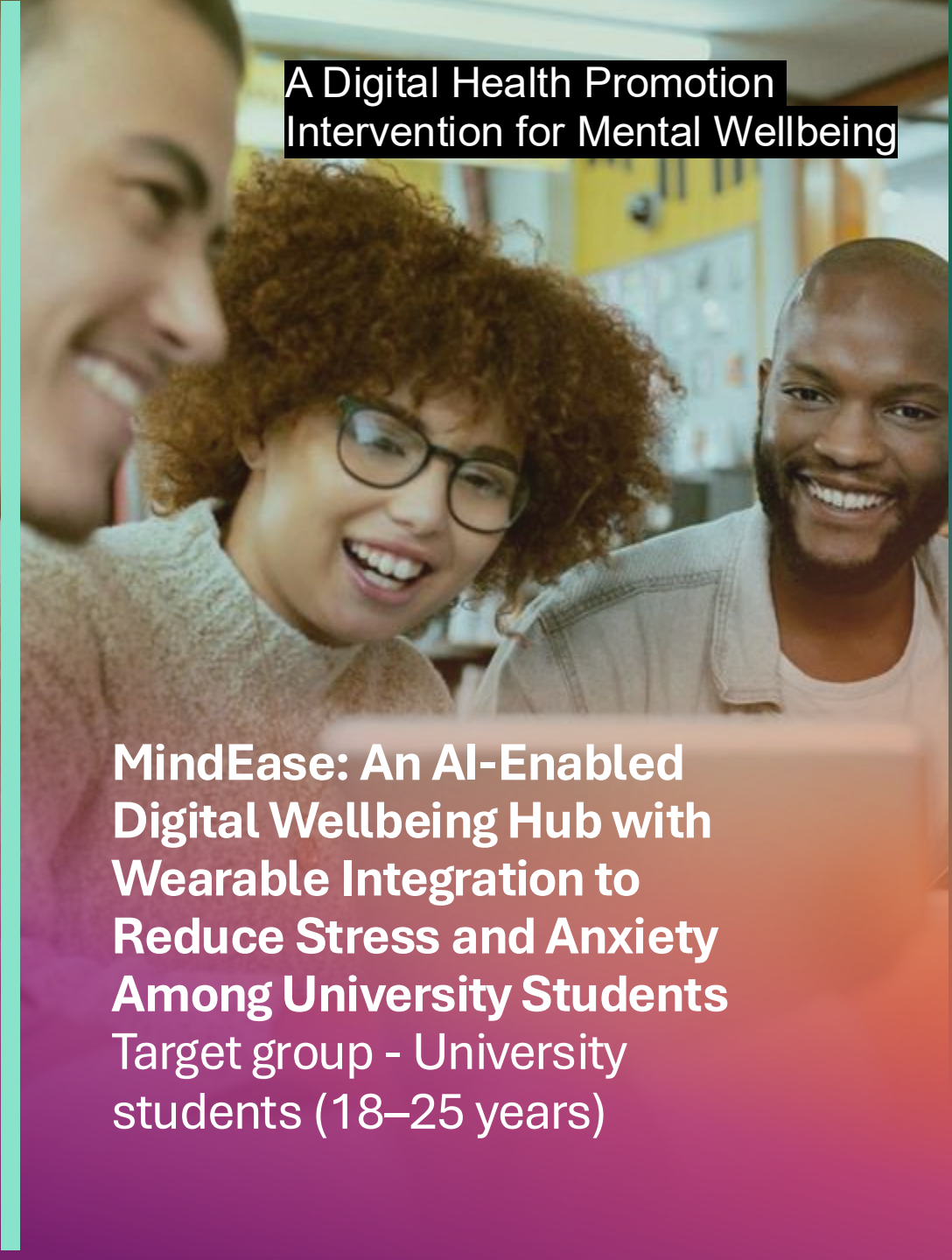
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Presentation Schedule

- **Slide 1 and stakeholders, barriers, legal and ethical considerations** - presented by Desislava Markova
- **Slide 2 and Justification – presented** by Mst Sharmin Sultana Mitu
- **Slide 3 and benefits** – Cadi Salla
- **Application** – presented by Syed Md Raihanul Hoque



A Digital Health Promotion Intervention for Mental Wellbeing

MindEase: An AI-Enabled Digital Wellbeing Hub with Wearable Integration to Reduce Stress and Anxiety Among University Students
Target group - University students (18–25 years)

Why university students are vulnerable - Academic pressure, financial difficulties and social adjustment increase the risk of stress and anxiety among university students (World Health Organization, 2022; Universities UK, 2024).

- The transition to university is associated with increased emotional and psychological challenges that can negatively affect mental wellbeing (National Institute for Health and Care Excellence, 2022).
- Increasing prevalence - Mental health problems, particularly stress and anxiety, have increased among university students in recent years (World Health Organization, 2022).
- Young adults aged 18–25 represent one of the age groups most affected by anxiety disorders (National Institute for Health and Care Excellence, 2022).
- Younger people are particularly vulnerable to anxiety, with those aged 16–29 reported as the age group most likely to experience some form of anxiety (Mental Health Foundation, no date).

Why prevention is important - Early intervention can improve wellbeing, strengthen resilience and reduce the likelihood of more severe mental health problems developing (World Health Organization, 2022).

- Digital health promotion enables timely access to wellbeing support and encourages self-management before symptoms worsen (NHS England, 2023).

Activity aim and content

What the MindEase intervention will do

Overall aim

To reduce stress and anxiety risk by giving students early, accessible and personalised wellbeing support linked to university and NHS services.

1 Learn

Stress and anxiety education

2 Check

Mood check-ins and self-assessment

3 Act

CBT-informed self-help, breathing, mindfulness and sleep hygiene

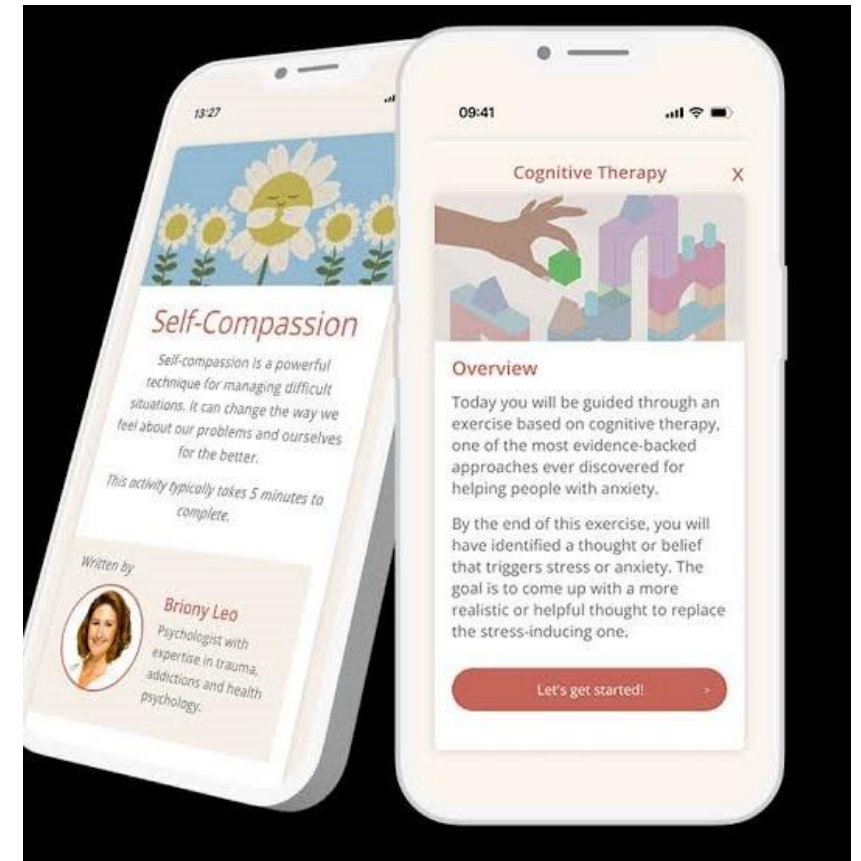
4 Connect

Counselling booking, NHS links and crisis signposting

This reflects a whole-university prevention approach and clear help pathways (Universities UK, 2023; Student Minds, 2024).

MindEase: AI-Enabled University Digital Wellbeing Hub with Wearable Integration

- **Technology Components** - 📱 Mobile Application - Provides 24/7 access to mental wellbeing resources (World Health Organization, 2021).
- 🤖 AI Wellbeing Coach - Delivers personalised stress management advice based on students' mood and wellbeing data (WHO, 2021).
- 🕒 **Wearable Device Integration (Optional)**
- Syncs with smartwatches or fitness trackers to monitor: Heart rate; Sleep quality; Physical activity; Heart rate variability (HRV).
- 🧠 Mood Tracking: Daily emotional check-ins to identify changes in stress and anxiety levels (National Institute for Health and Care Excellence, 2022).
- 🧘 **Evidence-Based Wellbeing Support** - Guided mindfulness; Breathing exercises; CBT-based self-help modules (NICE, 2022).
- 🏠 **Professional Support** - Appointment booking with university counselling services.
- Direct links to NHS mental health services (NHS England, 2023).
- By integrating AI, wearable technology and evidence-based psychological interventions within a single digital platform, MindEase supports proactive mental health promotion while facilitating early intervention and appropriate referral pathways for university students (WHO, 2021; NICE, 2022).



Group Member 1

Student Name: Mst Sharmin Sultana Mitu

Student ID: 2524666

Chosen digital health technology

MindEase platform design

Digital Wellbeing Hub

Mobile app and website with education, self-assessment, wellbeing resources, booking, NHS links and crisis support.

AI Wellbeing Coach

Daily mood check-ins, tailored advice, breathing, mindfulness, CBT-informed tools and study-life balance tips.

Optional wearable integration

Compatible smartwatches can add sleep, activity, heart-rate and stress-trend reflection, but the app remains fully usable without wearables.



Safety boundary: MindEase supports wellbeing and signposts students; it does not diagnose mental health conditions (WHO, 2024).

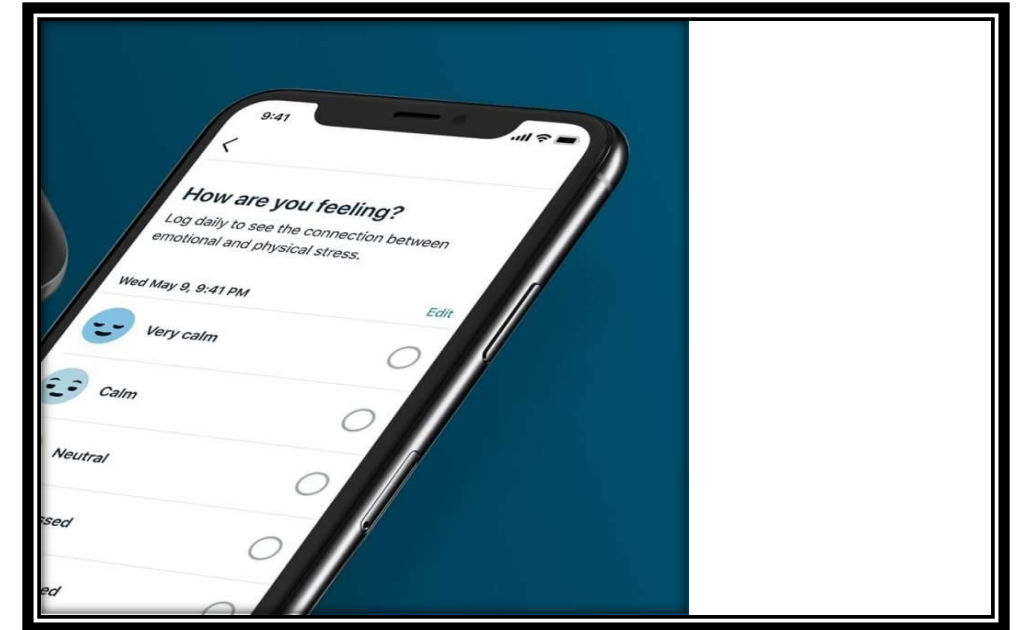
Why university students aged 18–25?

Justification of target group and setting

University life can create a high-pressure transition period.

- ❑ Academic workload, exams and coursework deadlines can intensify stress (NHS, 2023).
- ❑ Moving away from home, independence, new social networks and financial burdens are linked to student mental health risk (Campbell et al., 2022).
- ❑ Students need low-barrier support because stigma and uncertainty can delay help-seeking (Lewis and Stiebahl, 2025).

Judgement: the target group is specific, high-need and suitable for early digital health promotion.

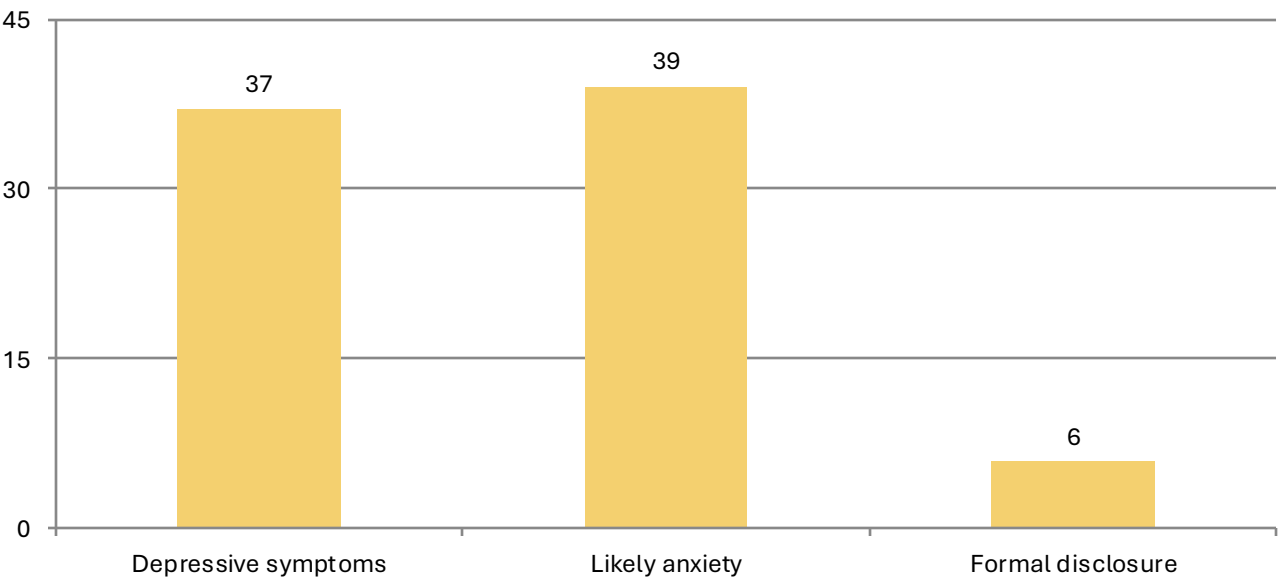


Prevention focus: support before stress and anxiety become crisis-level.

Evidence demonstrating the need for intervention

Statistics and formal disclosure data

37%	39%	5.8%
first-year students showed moderate to severe depressive symptoms	first-year students showed signs of likely anxiety	students disclosed a mental health condition to university in 2022/23
(Office for National Statistics, 2021)	(Office for National Statistics, 2021)	(Lewis and Stiebahl, 2025)



Interpretation

Formal disclosure data underestimates need because many students do not disclose distress to their university. Confidential symptom data suggests a wider hidden burden (Lewis and Stiebahl, 2025).

Public health case: early, universal and low-barrier support is justified.

Consequences of failing to address stress and anxiety

Why early action is needed

Student wellbeing

Sleep problems, low mood, reduced concentration, isolation and delayed help-seeking (NHS, 2023).

Service pressure

Late help-seeking can increase demand on counselling and NHS pathways when problems are more severe (Neves et al., 2024)

Academic outcomes

Mental health conditions can negatively affect continuation, completion, attainment and progression outcomes (Office for Students, 2023).

Public health risk

In severe cases, poor mental health may be linked with self-harm and suicide risk, requiring clear crisis signposting (Lewis and Stiebahl, 2025).

Judgement: MindEase is justified because it targets early support before difficulties become crisis-level.

National guidance and policy alignment

Why MindEase fits current direction

Universities UK	A whole-university approach sees mental health as foundational to university life (Universities UK, 2023).
Student Minds	The Charter gives evidence-informed principles for whole-university wellbeing (Student Minds, 2024).
NHS	Students should seek support when stress affects life or university work (NHS, 2023).
NICE / NHS	Digital support can widen access when evidence-based and connected to professional care (NICE, 2024).
WHO	AI in health requires safety, transparency, governance and human oversight (WHO, 2024).

Alignment point: MindEase strengthens early support, signposting and access pathways; it does not replace counselling or NHS care.

Why MindEase is the most suitable intervention

Evidence-informed digital health promotion

A strong digital intervention should be accessible, evidence-informed, personalised and safely connected to real services.

Access

App and web access gives students a low-pressure first step before formal help-seeking.

Personalisation

AI coach uses mood check-ins and goals to suggest relevant self-help and healthy habits.

Inclusion

Wearables are optional, so students without smartwatches can fully use the platform.

Evidence position

- ❑ Digital mental health interventions can improve anxiety, depression and wellbeing among college students, but engagement quality is vital (Lattie et al., 2019).
- ❑ AI should support self-management and signposting, not diagnosis or crisis decision-making (WHO, 2024).
- ❑ Human support pathways must remain visible and easy to access (NICE, 2024).

Group Member 2

Student Name: Syed Md Raihanul Hoque

Student ID: 2521856

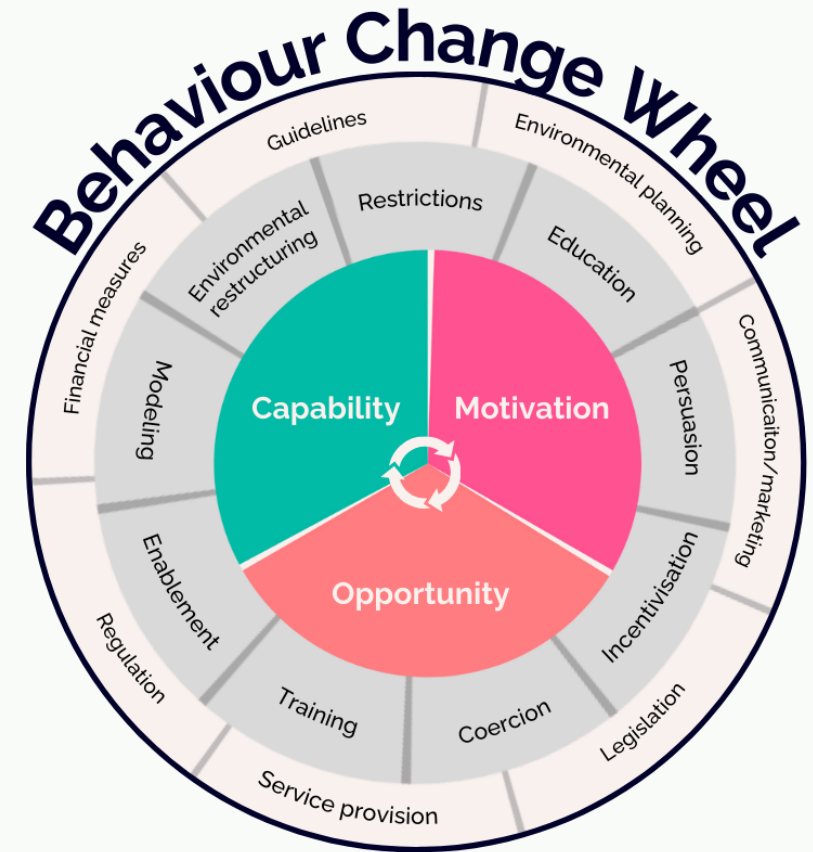
Behaviour Change Wheel with COM-B

- ❑ COM-B explains behaviour through Capability, Opportunity and Motivation (Michie et al., 2011).
- ❑ MindEase targets self-monitoring, coping, daily routines and earlier help-seeking.
- ❑ The model links student needs to practical platform features.

Planning purpose

Diagnose barriers first, then select the right digital support functions.

Critical judgement: BCW turns MindEase from an app idea into a structured behaviour-change plan.



MindEase as a planned digital intervention



Digital Wellbeing Hub

Education, screening, resources and service navigation.

AI Wellbeing Coach

Check-ins, prompts and CBT-informed self-help.

Optional Wearables

Sleep and activity trends only if students opt in.

Digital mental health tools can support students, but uptake and sustained use remain critical (Lattie et al., 2019).

Critical judgement: AI and wearable features must stay supportive, optional and linked to human services.

Step 1: Define what students should do

1

**Recognise
stress**

2

**Practise
coping**

3

**Protect
routines**

4

Seek support

GAD-7 and PSS-10 can support self-reflection, not diagnosis (Spitzer et al., 2006; Cohen et al., 1983).

Critical judgement: The design is stronger when it targets observable behaviours, not vague “wellbeing”.

Step 2: Diagnose barriers to change

Capability

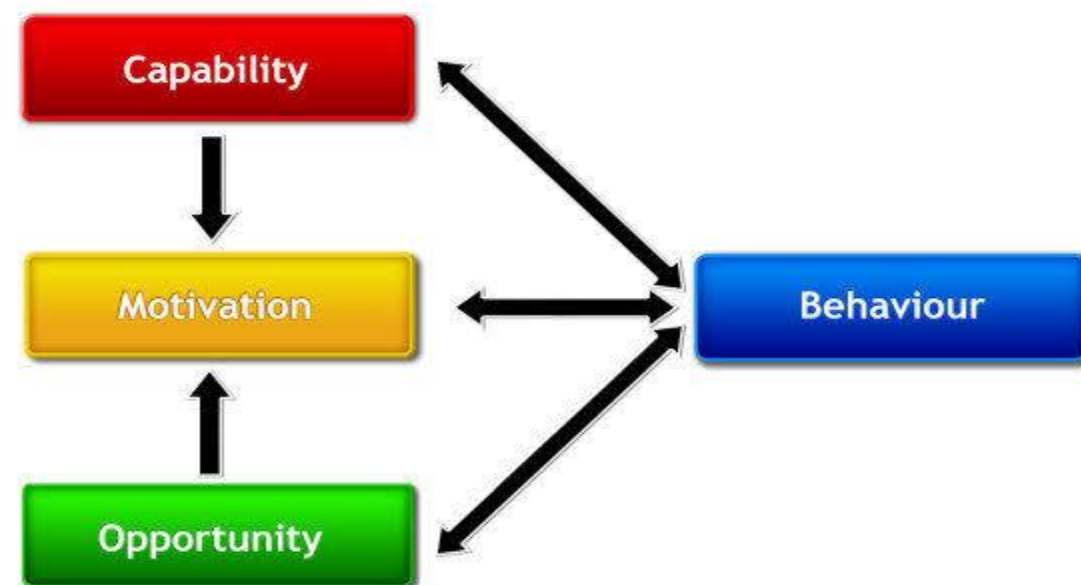
Mental health literacy and coping skills.

Opportunity

Simple access, low stigma and clear pathways.

Motivation

Prompts, goals and feedback before crisis.



Person-based design improves fit with user needs and preferences (Yardley et al., 2015).

Critical judgement: MindEase must address skill, access and motivation barriers together.

Step 3: Choose the right intervention functions

Education

Stress and anxiety literacy

Training

Breathing and sleep skills

Enablement

Goals, booking and signposting

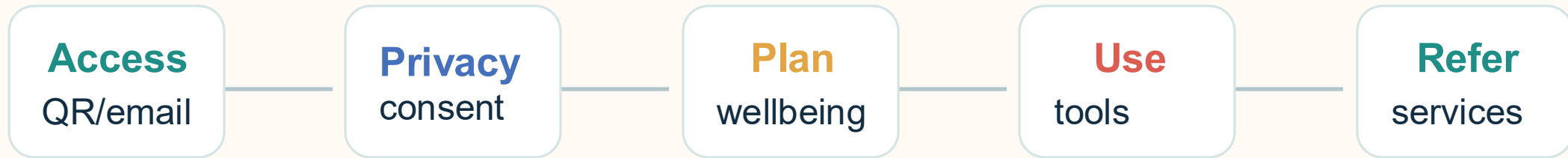
Persuasion

Personalised reminders

BCW functions guide intervention choice; persuasive system design supports tailored prompts (Michie et al., 2011; Oinas-Kukkonen and Harjumaa, 2009).

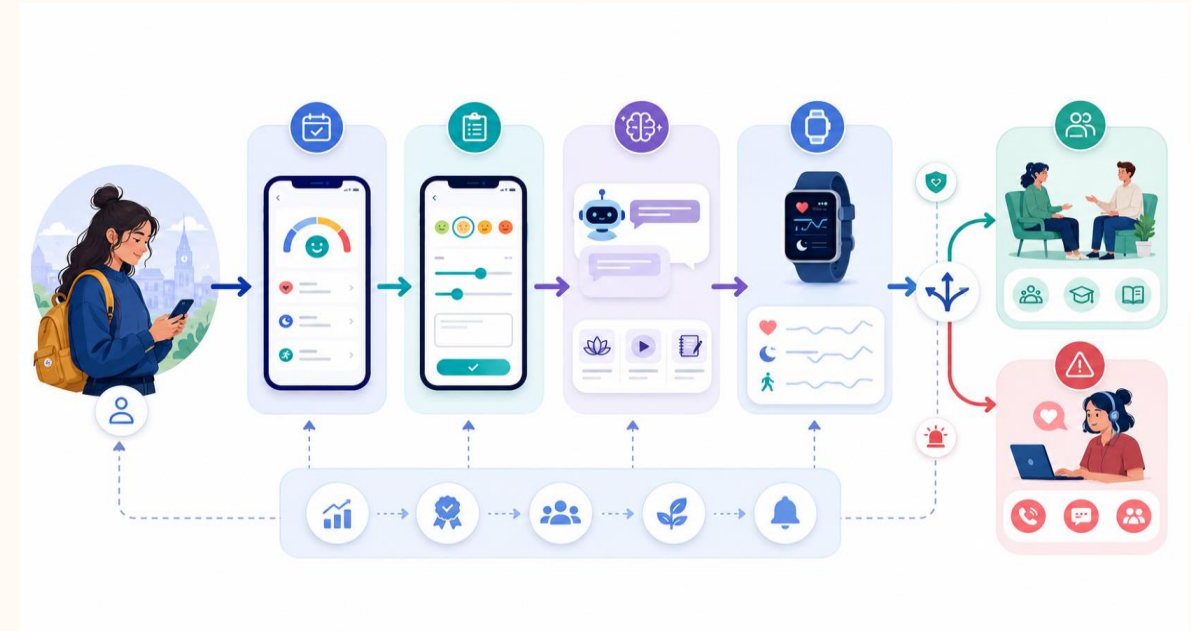
Critical judgement: Coercive functions are unsuitable because student mental health support must remain voluntary.

Step 4: Deliver through a safe student pathway



WHO digital health guidance stresses feasibility and equity; NHS clinical safety standards require health IT risk management (WHO, 2019; NHS England, 2025).

Critical judgement: The pathway keeps AI as support while higher-risk patterns move toward human services.



Step 5: Design for trust, access and sustained use

Co-design

Test language and usability with students.

Flexible use

Short tools and adjustable reminders.

No exclusion

Wearables are optional; app and web remain complete.

Engagement includes actual use and user experience (Perski et al., 2017).

Critical judgement: The main equity risk is unequal trust, access and continued engagement.

Step 6: evaluate before scale-up

Reach

Who uses it?

Effectiveness

Does it help?

Adoption

Do services use it?

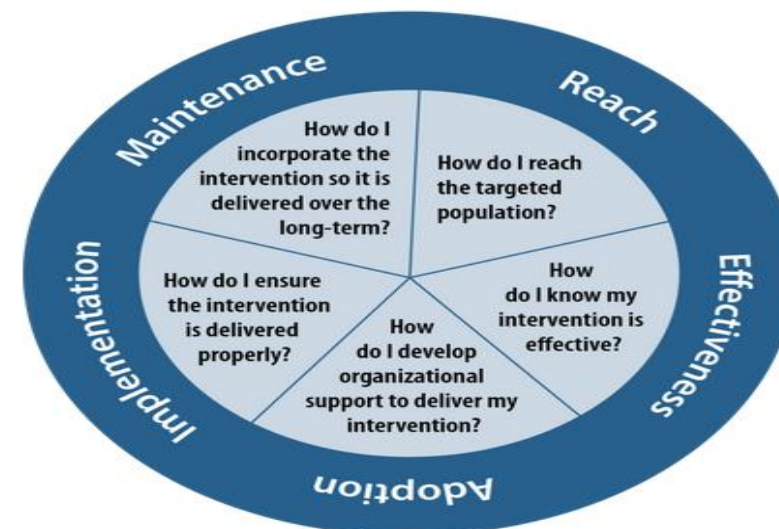
Implementation

Is it delivered well?

Maintenance

Does use continue?

Elements of the RE-AIM Framework



RE-AIM measures public health impact; The NICE ESF gives a standardised evidence approach for digital health technologies (Glasgow et al., 1999; Unsworth et al., 2021).

Critical judgement: MindEase should scale only if it reaches diverse students and proves safe, usable and effective.

Group Member 3

Student Name: Desislava Markova

Student ID:2512936

Why Stakeholder Collaboration Matters

MindEase requires collaboration between universities, healthcare professionals, technology providers and students to support safe and sustainable implementation (NHS England, 2023; National Institute for Health and Care Excellence, 2022).

Multi-stakeholder collaboration can strengthen governance, improve student engagement and ensure that the intervention responds to students' mental health needs (World Health Organization, 2022; Universities UK, 2023).

Collaboration is particularly important because MindEase will combine AI, sensitive mental health data, wearable technology and professional referral pathways, requiring expertise across health, technology and data governance (World Health Organization, 2021; Unsworth *et al.*, 2021).



Potential Stakeholders and Their Contributions for MindEase

Stakeholder	Contribution
Universities	Leadership, funding, governance and infrastructure (Universities UK, 2023).
Counselling and wellbeing services	Professional support and referral when digital self-management is insufficient (National Institute for Health and Care Excellence, 2022).
Students and student unions	Co-design, engagement and ensuring that student voices influence decisions about mental health support (Student Minds, 2018).
NHS mental health services and GPs	Referral and access to evidence-based psychological therapies when students require professional care beyond digital self-management (NHS England, no date).
AI developers and wearable providers	Platform design, maintenance, integration and technical reliability (World Health Organization, 2021; Unsworth <i>et al.</i> , 2021).
IT and data protection teams	Cybersecurity, privacy and compliance with data protection requirements (Information Commissioner's Office, no date c; National Cyber Security Centre, no date).



Student-Level Barriers to engage with MindEase

- Mental health stigma may discourage students from engaging with MindEase or seeking professional support when needed (Student Minds, 2018).
- Low engagement and declining adherence over time may reduce the effectiveness of digital mental health interventions (Ng *et al.*, 2019; Torous *et al.*, 2020).
- Digital exclusion may disadvantage students without suitable smartphones, reliable internet access or compatible wearable devices (NHS England, 2023; World Health Organization, 2021).
- Limited digital health literacy may reduce some students' confidence and ability to use AI-enabled wellbeing technologies effectively (World Health Organization, 2021; NHS England, 2023).

Organisational and Technical Barriers



- Limited organisational resources, workforce capacity and technical infrastructure may create barriers to implementing and sustaining MindEase, particularly where staff require time to develop new digital skills (The King's Fund, 2022; Universities UK, 2023).
- Staff training requirements may create implementation challenges because professionals need appropriate knowledge to use AI-enabled technologies safely and respond to student referrals (World Health Organization, 2021; Universities UK, 2023).
- Wearable devices may produce inaccurate physiological measurements, potentially affecting personalised recommendations and causing unnecessary concern among students (Bent *et al.*, 2020).
- Algorithmic bias may result in unequal or inappropriate recommendations for diverse student populations if AI systems are trained on unrepresentative data (Leslie, 2019; World Health Organization, 2021).

Legal Issues

- UK GDPR and special category data: MindEase must comply with UK GDPR and the Data Protection Act 2018, as mental health information and some wearable-derived health data may constitute special category data requiring additional protection (Information Commissioner's Office, no date d; Data Protection Act 2018).
- Lawful basis and consent: An appropriate lawful basis must be identified for processing personal data, and students should receive clear information and meaningful choices about the use of optional wearable data (Information Commissioner's Office, no date a; Data Protection Act 2018).
- Cybersecurity and confidentiality: Robust security measures are required to protect sensitive mental health information against unauthorised access, loss or data breaches (National Cyber Security Centre, no date; Data Protection Act 2018).
- Equality and accessibility: MindEase should be accessible to disabled students and implemented consistently with the Equality Act 2010 to reduce the risk of discriminatory exclusion (Equality Act 2010).



Ethical issues



- **Human oversight:** AI should support rather than replace qualified mental health professionals, particularly where severe distress, safeguarding concerns or significant decisions are involved (World Health Organization, 2021; Information Commissioner's Office, no date b).
- **Transparency:** Students should understand when AI is being used, what data inform recommendations and the limitations of automated wellbeing support (World Health Organization, 2021; Leslie, 2019; Information Commissioner's Office, no date c).
- **Algorithmic fairness and bias:** the bias will be minimised to reduce the risk of unequal or inappropriate recommendations for diverse student populations (Leslie, 2019; World Health Organization, 2021; Information Commissioner's Office, no date c).
- **Autonomy and privacy:** Students should retain meaningful control over participation, optional wearable integration and the use of their personal information (Information Commissioner's Office, no date b; World Health Organization, 2021).

Recommendations

- **Co-design with students and stakeholders:** MindEase will be developed collaboratively with students, university wellbeing services, healthcare professionals and technology specialists to improve relevance, trust and engagement (World Health Organization, 2022; Universities UK, 2023).
- **Optional wearable integration:** Wearable integration should remain optional to reduce digital exclusion and ensure that students without compatible devices can access the core intervention equally (NHS England 2023; World Health Organization, 2021).



- **Human oversight and escalation:** AI-generated recommendations should complement rather than replace professional judgement, with clear escalation pathways for severe distress or safeguarding concerns (World Health Organization, 2021; Information Commissioner's Office, no date b).
- **Privacy and cybersecurity by design:** Strong data governance, secure processing and appropriate cybersecurity safeguards should be embedded throughout implementation to protect sensitive student information (Information Commissioner's Office, no date c; National Cyber Security Centre, no date).
- **Continuous evaluation:** Engagement, accessibility, AI performance, user satisfaction and unintended consequences should be regularly monitored to support ongoing improvement (Unsworth *et al.*, 2021; World Health Organization, 2021).

Conclusion



- MindEase offers potential to promote early intervention, self-management and timely access to mental health support among university students experiencing stress and anxiety (World Health Organization, 2022; National Institute for Health and Care Excellence, 2022).
- Although AI-enabled digital interventions may improve accessibility and early support, digital exclusion, algorithmic bias and limited engagement may reproduce existing inequalities unless non-digital alternatives, human oversight and inclusive co-design are maintained (World Health Organization, 2021; NHS England, 2023; Leslie, 2019).
- The intervention should therefore be implemented as a complement to human support rather than a replacement for professional mental healthcare, with strong governance, meaningful human oversight and equitable access (World Health Organization, 2021; Information Commissioner's Office, no date b).
- Overall, MindEase could provide a safe, accessible and sustainable approach to university mental health promotion, but its success depends on effective stakeholder collaboration, responsible AI governance and continuous evaluation (Universities UK, 2023; Unsworth *et al.*, 2021).

Group Member 4
Student Name: Cadi Salla
Student ID:2216157

Benefits of digital technology apps: Mind Ease

Mind Ease promotes health by making mental wellness accessible and unique to each student. This empowers users leading to the reduction in anxiety and stress through decision making

Benefits of Mind Ease in university students' mental health aged 18 to 25:

1-AI incorporated into the system:

AI has been shown to assist in increasing awareness of mental health issues (Thakkar, Gupta and De Sousa, 2024). This means through using the AI coach from Mind Ease, university students would be able to recognise if they were suffering from stress or poor mental health.

This is crucial because it begins the process of seeking professional assistance (Varma and Batterham, 2025). If this is not done students are more likely to not seek treatment or use digital tools such as Mind Ease to help improve their mental wellbeing.

As this problem is increasing among university students worldwide (Li, Li and Fan, 2025), it is likely that AI detections and predictions of stress and mental health issues will increase and becoming more effective (Yan, Ruan and Jiang, 2022).

Benefits of Mind Ease (continued)

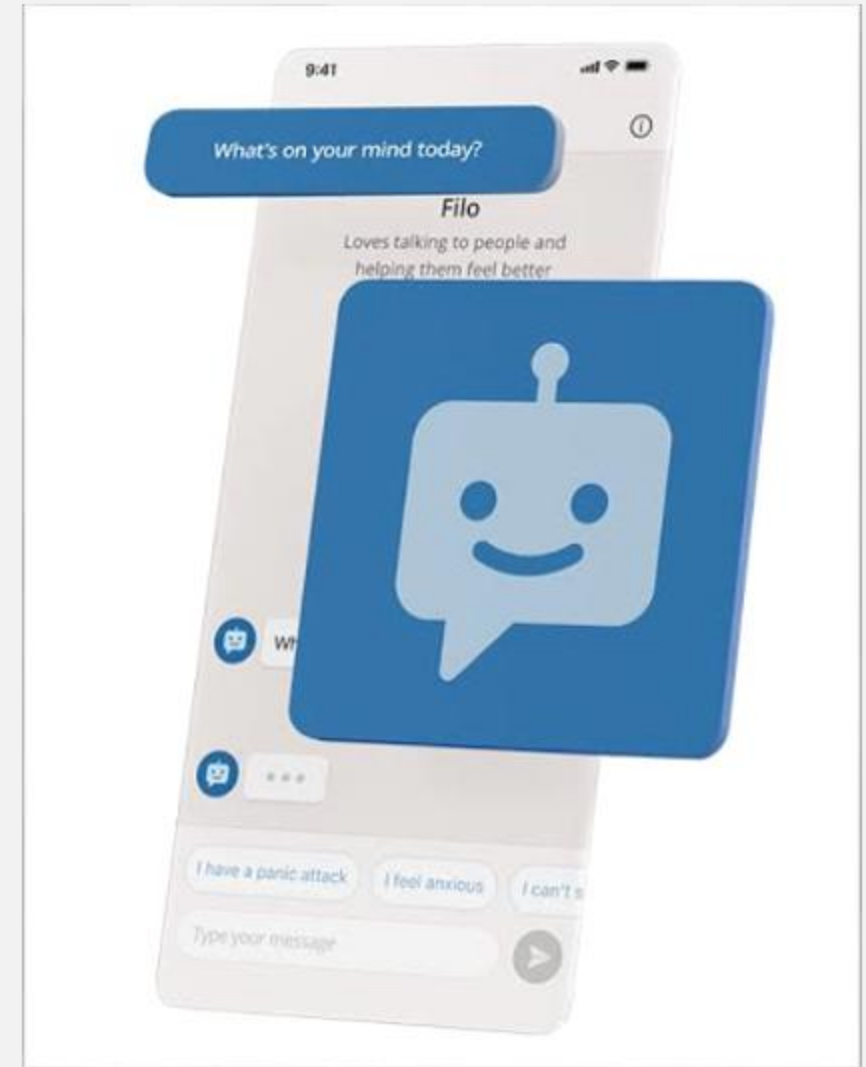
2-Another advantage of Mind Ease utilising AI systems is that it provides personalised support (Olawade *et al.*, 2024).

Personalised mental health support includes students in their care plan meaning they will be able to decide which areas they would like to be supported in (Sheikh *et al.*, 2024).

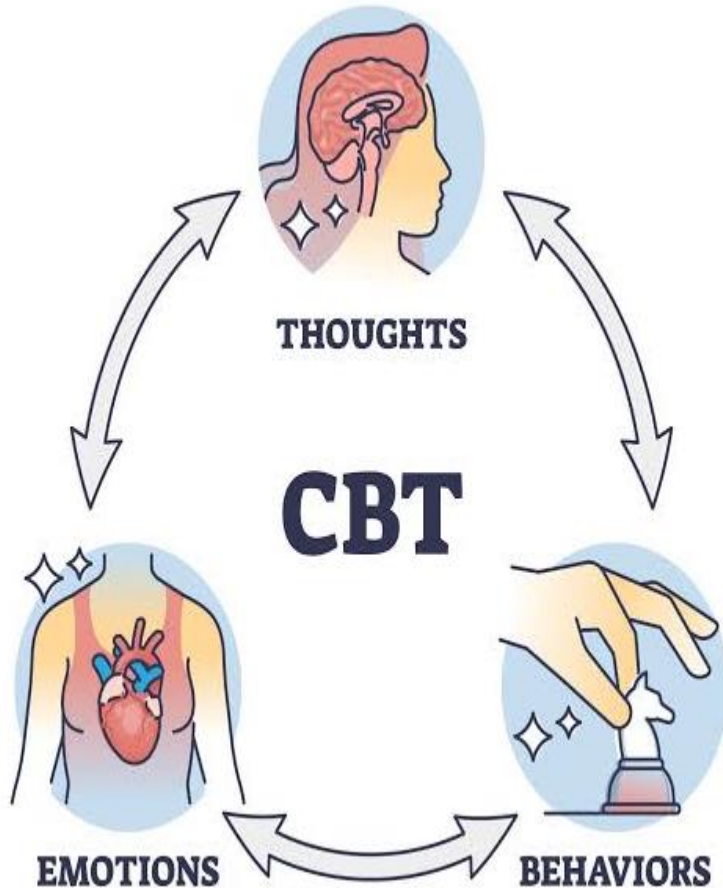
This improves outcomes and life experiences (Johnson *et al.*, 2023).

This empowers students to make decisions by themselves while using Mind Ease as an assistant.

Empowering students struggling with stress or mental health disorder leads them trust health care providers as they encourage patients to utilise mental health apps to increase their own independence (François *et al.*, 2024).



Benefits of Mind Ease (continued)



3-Mind Ease is a flexible approach to address stress and mental health issues from the students.

Using a mental health support apps leads students to self-monitor their mood and symptoms making them more aware of their own wellbeing (Almuqrin *et al.*, 2025).

Flexibility allows students to live normally as they can have access to the app at any time through their phones. Through using the apps, students will have Cognitive Behavioural Therapy (CBT) approaches to assist them into identifying how they think and how it might impact them negatively so to change that pattern (Shahsavar and Choudhury, 2025).

Mind Ease and health promotion

Mind Ease aims to improve mental health. However, by improving mental health the physical wellbeing will also be improved as both factors are connected(Fiorillo *et al.*, 2023).

The benefits described also aim to promote students' wellbeing and health.

The mental health apps including Mind Ease, promote health mainly through:

Exercises: To be aware of own emotions to respond to strategies(Menefee, Ledoux and Johnston,2022).

Connecting users: To improve mental health and reduce isolation(Holt-Lunstad, 2024).

Mind Ease implication in policies

Policies are a set of guidelines that direct the course of an action or procedures (Pollack Porter, Rutkow and McGinty, 2018).

As mental health apps collect sensitive users' data, there must be policies to protect the users' privacy. Due to the increase in users, there are increased risks of data breaches (Iwaya *et al.*, 2022).

To ensure that the data shared is secure, app developers inform users about data collection to assist them giving their data safely (O'Loughlin *et al.*, 2019).

The Organisation for the Review of Care and Health Apps (ORCHA), found that developers are not being cautious and ensuring that their app is researched based and approved by experts (Zych *et al.*, 2026).

Mind Ease is a reliable mental health app as it is approved by psychologists and psychotherapist from the European Association for Behavioural and Cognitive Therapy.

Mind Ease Implication in research

Mind Ease apps is beneficial in research due to data tracking and collection.

This allows researchers to collect a high amount of data in a short-period of time (Quagan, Woodsand Powers, 2021).

Users shared that data tracking analysis would help in creating more effective interventions(Watson, Fletcher-Watson and Kirkham, 2023).

This means that some agree into sharing their data to contribute and facilitate research.

As mental health issues is increasing, more data will be collected and analysed to identify patterns and causative agents of stress and mental health disorders.

Implication of Mind Ease in education:

Integrating Mind ease in educational settings will improve student's wellbeing, emotional control. Mental health apps use has been increasing amongst university students (Oliveira *et al.*, 2021).

By using mental health apps such as Mind Ease to improve mental health, students see improvement in academic performances (Lahkan *et al.*, 2025).

Despite having benefits, there are students who hesitate using the apps (Bautista and Schueller, 2023). This is because of factors such as privacy and confidentiality issues and the quality of the interventions (Riboldi *et al.*, 2024).

To ensure students use this interventions universities must promote the use of the apps by educating students and using financial incentives (Delavande *et al.*, 2026).

Promoting the use of Mind Ease will allow students to have high grades while improving themselves outside education.

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