Could remote measurement technologies help with depression in young people?

What are remote measurement technologies (RMT)?

- Smartphones & wearable devices.
- Collect information from a person in real-time during day-to-day life.
- Could monitor & detect changes relevant to mental health.

**Aims & Methods**

- Understand how & why, for whom & the contexts in which RMT may or may not work for depression in young people aged 14 - 24.
- Carried out a realist review with 2 young, lived experience co-researchers.
- Literature searches produced a total of 6114 records.
- 100 were relevant & included.
- Spoke to young people with lived experience of depression about our findings.

**How & Why?**

Young people most preferred using smartphones.

- May be an overestimation of how much they are likely to use RMT for their mental health with many worried about data privacy.
- Depression best detected by changes in:
  - Sleep patterns
  - Movement & location
  - Social communication
  - Mood logs

**For whom?**

- RMT could be used for depression screening & self-monitoring.
- More research needed before use in relapse-prevention.
- Self-monitoring helped in understanding the links between certain events or thoughts & later emotions, known as:
  - Emotional self-awareness

**For what?**

- RMT require daily engagement, which may be difficult during depression if low energy & motivation.
- Likely to be of most benefit to those with:
  - Prior interest in RMT & motivated by the data
  - Lower depression severity
  - No comorbidity where self-monitoring could cause harm e.g. eating disorder, OCD, health anxiety

**In what context?**

- RMT most commonly used to detect worsening depression during transition to university.
- Schools often banned use of RMT meaning important data about stress during class time may be missed.
- Integration of alert-based systems of worsening depression / relapse into primary & secondary healthcare likely to be very difficult to implement.
- Could widen digital divides unless adaptability to context, language & culture.

**Recommendations**

- For future research:
  - Potential harms.
  - Relapse-prevention & how this would work in the real world.
  - Use of the information collected to adapt & deliver brief interventions.

- For practice:
  - During watchful waiting & once on waiting lists.
  - During therapy to enhance its effects on emotional self-awareness.

**For what?**

- Behaviour that can be targeted to improve depressive symptoms e.g. improve sleep, reduce stress & increase positive activities

**For whom?**

- Male

**In what context?**

- Prior interest in RMT & motivated by the data

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