PROFESSIONAL AND ORGANISATIONAL FACTORS TO CONSIDER FOR SUCCESSFUL DIGITAL BEHAVIOURAL INTERVENTIONS

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BACKGROUND

• Digital behaviour change interventions (DBCI): *Devices and programs using digital technology to foster or support behavior change* (Michie et al. 2017)

• Effectiveness of Internet-based (Webb et al. 2010), smartphone (Zhao et al. 2016) and serious games (DeSmet et al. 2014) DBCI for a range of behaviours

• User engagement is essential for successful DBCI (Yardley et al. 2016)
BACKGROUND

• Many studies on individual determinants of successful DBCI
• Professional and organisational determinants received less attention
• However, they are essential to ensure adoption, integration and sustainability of DBCI
Theories provide a structured way to understand factors influencing digital health adoption and integration

- Psychosocial theories (e.g. Diffusion of Innovation, Technology Acceptance Model, Theory of Planned Behavior...)
- Theory of professions
- Organisational and institutional theories
- Sociopolitical theories
PROFESSIONAL DETERMINANTS OF DIGITAL HEALTH ADOPTION

• Reviews of individual determinants of digital health adoption by healthcare professionals (Gagnon et al. 2016)

• Very few studies focus on DBCI acceptance from the providers’ perspective

• Indirect evidence available from e-health intervention adoption in general
PROFESSIONAL DETERMINANTS OF DIGITAL HEALTH ADOPTION

Most common determinants of m-health acceptance by professionals (Gagnon et al. 2016):

• Time issues
• Risk-benefit equation
• Agreement with the technology
• Familiarity and ability with digital tools
Determinants of e-health intervention acceptance (Hennemann et al. 2017)

• Social factors: expected attitude by colleagues and patients toward the use of e-health

• Performance expectancy (professionals’ beliefs in e-health benefits)
PROFESSIONAL DETERMINANTS OF DBCI ACCEPTANCE

Conditions for successful e-health coaching (Brandt et al. 2018)

• Establishing an empathic relationship
• Identifying realistic goals based on personal barriers
• Staying connected in asynchronous coaching
Few studies focused on organisational determinants of digital health adoption.

For older technologies (telehealth), the size of the organisation, the presence of physicians in executive positions, and the localisation (rural/remote) positively influenced adoption (Gagnon et al. 2005).
Organisational determinants of successful digital mental health interventions (Hill et al. 2017):

• Lack of evidence-based solutions for mainstream implementation (the number of available e-therapies far outstrips the number of evaluations)

• Healthcare organisations lack experience in both producing and commercialising usable and engaging products
ORGANISATIONAL DETERMINANTS OF DIGITAL HEALTH ADOPTION

For digital mental health interventions (Mohr et al. 2017):

• Technological requirements
• Time available from staff
• Allowable operations in a clinic
• Processes and constraints of routine care settings (designing and implementing referral processes; managing coaching or support in the context of a clinic; ensuring communication among providers)
• Individual determinants of DBCI adoption are well documented, but there is a paucity of evidence on professional and organisational factors affecting the success of these interventions
• Indirect evidence is available from studies on digital health in general, but are the determinants similar in the case of DBCI?
DISCUSSION

• There is a need to consider the professional and organisational determinants for successful DBCI using relevant theories and frameworks
• These factors should also be documented in a structured way in implementation studies of DBCI, for instance by using the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al. 2009)
**Research Agenda**

- Include professionals and healthcare organisation managers in the design of DBCI
- Use theories to study the professional, organisational and systemic determinants of successful DBCI
- Consider these dimensions in the evaluation of DBCI implementation and effectiveness

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Questions or Comments?

THANK YOU!

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References


Michie, S., Yardley, L., West, R., Patrick, K., & Greaves, F. (2017). Developing and evaluating digital interventions to promote behavior change in health and health care: recommendations resulting from an international workshop. JMIR, 19(6), e232.

