A mobile based randomized controlled trial on the feasibility and efficacy of major depression disorder screening: study protocol.

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Abstract

Background: Major depressive disorder (MDD) is a major public health problem, both in terms of quality-of-life losses and costs. Mobile-based screening interventions, to detect and treat MDD in an early stage, might be a promising approach for effectively reducing MDD burden in high-risk populations. In the present study, the feasibility and effectiveness of screening for MDD will be evaluated by providing a mobile-based screening protocol. Methods: This study will be a three-arm, parallel randomized control trial (RCT) performed within the municipality of Rotterdam (the Netherlands), Rotterdam-South specifically. The trial includes two intervention groups that will be screened 4-weekly for MDD during 12 months period and a control group who do not receive mobile-based screening for MDD. 1786 eligible adult participants will be included in the RCT, with 446 taking part in each of the two intervention arms (standard and limited intervention) and 893 taking part in the control arm. Participants in the standard intervention arm will be referred for further diagnosis and treatment, if necessary, after a single positive test score for moderate-severe major depression symptoms (PHQ-9 ≥10). Participants in the limited intervention arm will be referred for further diagnosis and treatment, if necessary, only after three consecutive positive test scores. Primary outcomes include participants' quality of life after 12 months (EQ-5D-5L). Secondary outcomes include participants' quality of life after 24 months (EQ-5D-5L), evaluating the occurrence and severity of MDD symptoms (PHQ-9), intervention adherence (self-reported questionnaire), and identifying public mental health differences based on sociodemographic characteristics, including age, gender, ethnicity, financial situation, educational background and living area. Discussion: The information gained from examining the feasibility and (cost-) effectiveness of mobile-based screening for MDD could be of guidance for mental health policy implementations and support the introduction of mobile-based, personalized screening for MDD in the Netherlands and/or other nations.

Recent Publications

1. Rohde, P., P. M. Lewinsohn, D. N. Klein, J. R. Seeley and J. M. Gau (2013) Key characteristics of major depressive disorder occurring in childhood, adolescence, emerging adulthood, and adulthood Clinical Psychological Science 1(1): 41-53.
2. Abdoli, N., N. Salari, N. Darvishi, S. Jafarpour, M. Solaymani, M. Mohammadi and S. Shohaimi (2022) The global prevalence of major depressive disorder (MDD) among the elderly: A systematic review and meta-analysis. Neuroscience & Biobehavioral Reviews 132: 1067-1073.
3. Liu, Q., H. He, J. Yang, X. Feng, F. Zhao and J. Lyu (2020) Changes in the global burden of depression from 1990 to 2017: Findings from the Global Burden of Disease study. Journal of psychiatric research 126: 134-140.
4. James, S. L., D. Abate, K. H. Abate, S. M. Abay, C. Abbafati, N. Abbasi, H. Abbastabar, F. Abd-Allah, J. Abdela and A. Abdelalim (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. The Lancet 392(10159): 1789-1858.
5. Siu, A. L., U. S. P. S. T. Force, K. Bibbins-Domingo, D. C. Grossman, L. C. Baumann, K. W. Davidson, M. Ebell, F. A. García, M. Gillman, J. Herzstein, A. R. Kemper, A. H. Krist, A. E. Kurth, D. K. Owens, W. R. Phillips, M. G. Phipps and M. P. Pignone (2016). Screening for Depression in Adults: US Preventive Services Task Force Recommendation Statement. Jama 315(4): 380-387.

	STUDY PERIOD					
	Enrolment	Allocation	Post-allocation			
TIMEPOINT	*-t*	0	t_0	t_6	t_{12}	t_{24}
INTERVENTIONS:						
Control (N=893)			X	X	X	X
Standard Referral (N=447)						X
Limited Referral (N=446)						X
ASSESSMENTS:						
Baseline			X			
EQ-5D-5L questionnaire			X	X	X	X
PHQ-9 questionnaire			♦—	—	—♦	
Screening evaluation				X		X

Fig. 1 Timeline MOOD-study Rotterdam. A cross indicates one-time screening measurement. A bold line represents a 4-weekly screening measurement. *Patient information form/Informed consent.

More information can be found on www.moodstudie.nl



Michelle Zandbergen is a second-year Ph.D. candidate in the Department of Public Health, driven by a profound passion for making a societal impact on (mental) public health. Holding a Master's degree in Neuroscience with a specialization in science, management, and innovation, Michelle possesses a unique blend of scientific expertise. Her academic journey reflects a commitment to bridging the gap between science and society, a bridge she envisions as essential for meaningful advancements in public health. As she progresses through her Ph.D., Michelle remains dedicated to contributing valuable insights and solutions that address real-world health challenges, with the ultimate goal of positively influencing public health on a policy scale.

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