

Appendix A

Literature Review Search Strategy: "@technology term@ AND @health term@"

Technology terms	Health terms
Mobile phones	((mental or affective or developmental or intellectual or communication or autism or ADHD or attention-deficit/hyperactivity or motor or schizophre* or catatoni* or psychotic or bipolar or cyclothymic or depressi* or mood or anxiety or panic or obsessive-compulsive or trauma* or stress* or dissociative or somatic or feeding or eating or anorexia or bulimia or elimination or sleep or sexual or gender or dysphoria or disruptive or impulse or conduct or substance or addicti* or neurocognitive or personality or paraphilic) and (illness* or disorder? or condition?) and (detect* or predict* or monitor* or measur* or assess* or evaluat* or analy*))
Wearables	
Digital sensing	
Social media/ electronic activity	

Snowballing Search Strategy

Reviews:

1. Reinertsen, E., & Clifford, G. D. (2018). A review of physiological and behavioral monitoring with digital sensors for neuropsychiatric illnesses. *Physiological Measurement*, 39(5), 05TR01. <https://doi.org/10.1088/1361-6579/aabf64>
2. Rohani, D. A., Faurholt-Jepsen, M., Kessing, L. V., & Bardram, J. E. (2018). Correlations Between Objective Behavioral Features Collected From Mobile and Wearable Devices and Depressive Mood Symptoms in Patients With Affective Disorders: Systematic Review. *JMIR MHealth and UHealth*, 6(8), e165. <https://doi.org/10.2196/mhealth.9691>
3. Guntuku, S. C., Yaden, D. B., Kern, M. L., Ungar, L. H., & Eichstaedt, J. C. (2017). Detecting depression and mental illness on social media: an integrative review. *Current Opinion in Behavioral Sciences*, 18, 43–49. <https://doi.org/10.1016/j.cobeha.2017.07.005>

4. Cornet, V. P., & Holden, R. J. (2018). Systematic review of smartphone-based passive sensing for health and wellbeing. *Journal of Biomedical Informatics*, 77, 120–132. <https://doi.org/10.1016/j.jibi.2017.12.008>
5. Dogan, E., Sander, C., Wagner, X., Hegerl, U., & Kohls, E. (2017). Smartphone-Based Monitoring of Objective and Subjective Data in Affective Disorders: Where Are We and Where Are We Going? Systematic Review. *Journal of Medical Internet Research*, 19(7), e262. <https://doi.org/10.2196/jmir.7006>

Primary studies:

1. Saeb, S., Lattie, E. G., Schueller, S. M., Kording, K. P., & Mohr, D. C. (2016). The relationship between mobile phone location sensor data and depressive symptom severity. *PeerJ*, 4, e2537. <https://doi.org/10.7717/peerj.2537>
2. Boukhechba, M., Daros, A. R., Fua, K., Chow, P. I., Teachman, B. A., & Barnes, L. E. (2018). DemonicSalmon: Monitoring Mental Health and Social Interactions of College Students Using Smartphones. *Smart Health*. <https://doi.org/10.1016/j.smhl.2018.07.005>
3. Wang, R., Chen, F., Chen, Z., Li, T., Harari, G., Tignor, S., ... Campbell, A. T. (2017). StudentLife: Using Smartphones to Assess Mental Health and Academic Performance of College Students. In J. M. Rehg, S. A. Murphy, & S. Kumar (Eds.), *Mobile Health: Sensors, Analytic Methods, and Applications* (pp. 7–33). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-51394-2_2
4. Barnett, I., Torous, J., Staples, P., Sandoval, L., Keshavan, M., & Onnela, J.-P. (2018). Relapse prediction in schizophrenia through digital phenotyping: a pilot study. *Neuropsychopharmacology*, 43(8), 1660–1666. <https://doi.org/10.1038/s41386-018-0030-z>
5. Ben-Zeev, D., Scherer, E. A., Wang, R., Xie, H., & Campbell, A. T. (2015). Next-generation psychiatric assessment: Using smartphone sensors to monitor behavior and mental health. *Psychiatric Rehabilitation Journal*, 38(3), 218–226. <https://doi.org/10.1037/prj0000130>
6. Canzian, L., & Musolesi, M. (2015). Trajectories of Depression: Unobtrusive Monitoring of Depressive States by Means of Smartphone Mobility Traces Analysis. In *Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (pp. 1293–1304). New York, NY, USA: ACM. <https://doi.org/10.1145/2750858.2805845>
7. De Choudhury, M., Gamon, M., Counts, S. and Horvitz, E., 2013, June. *Predicting depression via social media*. In Seventh international AAAI conference on weblogs and social media. Retrieved from <https://www.aaai.org/ocs/index.php/ICWSM/%20ICWSM13/paper/viewFile/6124/6351>
8. Mestry, M., Mehta, J., Mishra, A., & Gawande, K. (2015). Identifying associations between smartphone usage and mental health during depression, anxiety and stress. In *2015 International Conference on Communication, Information Computing Technology (ICCICT)* (pp. 1–5). <https://doi.org/10.1109/ICCICT.2015.7045656>
9. Place, S., Blanch-Hartigan, D., Rubin, C., Gorrostieta, C., Mead, C., Kane, J., ... Azarbayejani, A. (2017). Behavioral Indicators on a Mobile Sensing Platform Predict

Clinically Validated Psychiatric Symptoms of Mood and Anxiety Disorders. *Journal of Medical Internet Research*, 19(3), e75. <https://doi.org/10.2196/jmir.6678>

10. Zulueta, J., Piscitello, A., Rasic, M., Easter, R., Babu, P., Langenecker, S. A., ... Leow, A. (2018). Predicting Mood Disturbance Severity with Mobile Phone Keystroke Metadata: A BiAffect Digital Phenotyping Study. *Journal of Medical Internet Research*, 20(7), e241. <https://doi.org/10.2196/jmir.9775>
11. DeMasi O, Feygin S, Dembo A, Aguilera A, Recht B. Well-Being Tracking via Smartphone-Measured Activity and Sleep: Cohort Study. *JMIR Mhealth Uhealth* 2017;5(10):e137

Conceptual articles:

1. Onnela JP, Rauch SL. Harnessing Smartphone-Based Digital Phenotyping to Enhance Behavioral and Mental Health. *Neuropsychopharmacology*. 2016;41(7):1691-6.
2. Insel TR. Digital Phenotyping: Technology for a New Science of Behavior. *JAMA*. 2017;318(13):1215–1216. doi:10.1001/jama.2017.11295
3. Torous J, Onnela JP, Keshavan M. New dimensions and new tools to realize the potential of RDoC: digital phenotyping via smartphones and connected devices. *Transl Psychiatry*. 2017;7(3):e1053. Published 2017 Mar 7. doi:10.1038/tp.2017.25
4. Mohr, D. C., Zhang, M., & Schueller, S. M. (2017). Personal Sensing: Understanding Mental Health Using Ubiquitous Sensors and Machine Learning. *Annual Review of Clinical Psychology*, 13(1), 23–47. <https://doi.org/10.1146/annurev-clinpsy-032816-044949>

