



# Attitudes toward e-mental health services in the general population: a systematic review

Jennifer Apolinário-Hagen, Jessica Kemper & Carolina Stürmer  FernUniversität in Hagen

Contact: Dr. Jennifer Apolinário-Hagen, FernUniversität in Hagen / University of Hagen, Dep. of Health Psychology, 58084 Hagen, Germany | E-Mail: jennifer.apolinario-hagen@fernuni-hagen.de

## BACKGROUND

- Regarding potential **(psychological) barriers** to dissemination and **implementation of e-mental-health** services into healthcare, **attitudes and preferences** of help-seeking individuals are considered having predictive value for the large-scale acceptability [1,2].
- However, **research on public acceptability of e-mental health** is a relatively novel field and the evidence base from surveys appears fragmentary.

## Objective

Thus, this review aims at identifying public views on online self-help services.

## METHODS

- **Systematic search of the literature** through electronic databases (e.g. Medline/Pubmed; PsycINFO, PsychArticles)
- **Inclusion criteria:** non-clinical surveys on public views of e-mental health (all age groups were included), published between 01/2005 and 12/2015 in peer-reviewed journal in German or English language
- **Exclusion criteria:** e.g. clinical trials, surveys targeting patients' or professionals' views or narrowed/specific types of e-health services
- **Keywords:** incl. „e-mental health“ and „online self-help“ + „acceptability“; „attitudes“; „preference“; „perceptions“
- **Indicators of acceptability:** „perceived helpfulness“; „likelihood of future use“ (UTAUT framework [3])

## RESULTS. Summary of Key Findings (n = 24 publications \*)

### Study Characteristics

- In total, we identified **24 eligible studies** with sample sizes ranging from 23 to 4.758.
- Participants were between eight and 95 years of age. Data was collected in North America, Australia and Europe (England, Ireland, Germany)
- Most studies applied self-report measures (n=19 studies), some qualitative methods (interviews, n = 4, focus groups and interviews, n = 1)

### Key Results

- Overall, results indicated **preferences to seek professional help provided face-to-face over e-mental health services**.
- With respect to e-mental health services, **professional support** and **immediate feedback** were preferred features.
- **Motives for usage** of e-mental health included **anonymity and flexibility** in terms of time and location.
- **Likelihood of future** using digital services was found being associated with **e-awareness** and in some samples with **sociodemographic factors** (albeit with mixed findings). Nonetheless, the role of individual background on e-attitudes, respectively e-preference remains still largely unclear.

## CONCLUSIONS

### Public views on eMental Health Treatments – „nice to have“ or „must have“?

- Currently, the evidence base on attitudes towards e-mental health services is limited (black box).
- Future studies should address this gap, e.g. by using mixed methods for measure development.

### Limitations

- **Study level:** Lack of both validated measures and theory-lead rationales (e.g. definition of attitudes); indications for low e-awareness and eMental health literacy in some countries (e.g. Germany)
- **Review level:** e.g. keywords did not include „mHealth“ (use of „eMental Health“ as umbrella term)

**Implications:** Psychoeducational information might have an positive impact on attitudes towards e-mental health services, in terms of the likelihood of future use in case of psychological problems [4]

Abb. 1. Basic Technology Acceptance Models [3]



### References. (\* articles included in this review)

[1] \* Muijs, P., Goldstone, P., & Tarr, N. (2014). Understanding the acceptability of e-mental health: attitudes and expectations towards computerized self-help treatments for mental health problems. *BMC Psychiatry*, 14(1), doi:10.1186/s12916-014-0199-2

[2] \* Klein, B., & Cook, S. (2010). Preferences for e-mental health services amongst an online Australian sample. *Electronic Journal of Applied Psychology*, 6(1), 27-38. doi:10.7790/ejap.v6i1.184

[3] Venkatraman, V., Morris, M.G., Davis, G.B., & Straub, D.W. (2003). User acceptance of information technology: toward a unified view. *MIS Quarterly*, 27(2), 425-478.

[4] \* Coyle, L.M., Joy, A., & Clough, R.A. (2013). The Impact of Information on Attitudes Toward E-Mental Health Services. *Cyberpsychology, Behavior, and Social Networking*, 16(8), 593-598. doi:10.1089/cyber.2012.0255

\* Wallins, L., & Edwards, D. (2010). Adoption of internet-based self-help for mental health services. *Child and Adolescent Mental Health*, 15(4), 296-300. doi:10.1111/j.1469-7610.2010.02100.x

\* Chen, L.H., Yu, A., & Chang, H.A. (2015). The Impact of Information on Attitudes Toward E-Mental Health Services. *Cyberpsychology, Behavior, and Social Networking*, 18(8), 507-516. doi:10.1089/cyber.2014.0203

\* Cha, L., Hoyle, L., Li, S., & Chen, C. (2015). Acceptability of psychological treatment in Chinese and Canadian adolescents: internet treatment options better but face-to-face is preferred. *Social Psychiatry and Psychiatric Epidemiology*, 50(5), 77-81. doi:10.1007/s00127-014-0801-1

\* Clark, S.H., Baker, S., & Whittaker, R. (2015). Health-related attitudes and self-help program use patterns. *Healthcare*, 3(3), 166-170. doi:10.1016/j.healthcare.2015.05.004

\* Coy, D.A., & Goffman, K.M. (2010). Participating in online mental health services: Who is most likely to sign up and why? *Depression Research and Treatment*, 11(1), 46-51. doi:10.1002/da.10747

\* Schilling, C., & Adair, J. (2015). Understanding the Perceived Usefulness and Psychological Factors. *Healthcare Evaluation and Policy*, 10(1), 1-10. doi:10.1002/hec.1484

\* Schilling, C., & Adair, J. (2015). Interest in digital health services: Perceptions, barriers, and facilitators. *Psychiatry*, 78(1), 1-10. doi:10.1080/00140139.2014.941814

\* Ma, L., Glick, P., Sherry, P., Heneghan, T.A., Rosen, J.M., & Hays, R.D. (2015). Young adults' attitudes and behaviors in relation to mental health and technology: implications for the development of online mental health services. *BMC Psychiatry*, 15(1), doi:10.1186/s12916-015-0171-0

\* Shapell, C., & Finkel, S. (2015). Computerized cognitive-behavioral therapy (CBT) and other people: a pilot study to determine factors for adherence to computerized CBT. *Cyberpsychology, Behavior, and Social Networking*, 18(1), 10-18. doi:10.1089/cyber.2014.0203

\* Kim, S.J., Han, N., & Anderson, G. (2015). Acceptability of internet treatment of anxiety and depression: The Royal Australian and New Zealand College of Psychiatrists. *MED*, 20(1), doi:10.1002/med.1201

\* Shapell, C., & Finkel, S. (2015). Factors related to use of the internet for mental health information and support. *Journal of Applied Psychology*, 101(1), 1-10. doi:10.1037/a0038997

\* King, S., Bunting, M., Lloyd, C., Gannon, K., Smith, B., & Wilson, G. (2010). Online counseling: The views and experiences of young people who choose the internet instead of face-to-face or telephone counseling. *Counseling and Psychotherapy Research*, 8(2), 100-110. doi:10.1080/14733150903288820

\* Chen, S., & Cook, S. (2010). Preference for e-mental health services amongst an online Australian sample. *Electronic Journal of Applied Psychology*, 10(1), 1-10. doi:10.7790/ejap.v10i1.184

\* Leahy, L., Chikara, H., Goffman, K.M., Joy, A., & Mackenzie, A.J. (2015). Willingness to seek e-mental health information: perceptions from the Australian public. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Clark, S.H., Baker, S., Whittaker, R., & Whittaker, R. (2014). Exploring e-mental health preferences of consumers. *Journal of Behavioral and Health Services Research*, 11(4), 313-321. doi:10.1007/s11528-014-0040-7

\* McAfee, C., Wilson, L., & Whittaker, R. (2014). A survey of attitudes towards computerized self-help for young people with a history of mental health problems. *Behavioral and Cognitive Psychotherapy*, 42(1), 67-78. doi:10.1017/S1446809013000484

\* Whittaker, R., & Whittaker, R. (2015). Attitudes Towards Computerized Self-Help for Young People and Parents. *Behavioral and Cognitive Psychotherapy*, 43(4), 421-430. doi:10.1017/S1446809014000090

\* Whittaker, R., & Whittaker, R. (2015). Online counseling for young people: A survey of attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Chen, S., & Cook, S. (2010). Preference for e-mental health services amongst an online Australian sample. *Electronic Journal of Applied Psychology*, 10(1), 1-10. doi:10.7790/ejap.v10i1.184

\* Whittaker, R., & Whittaker, R. (2015). Attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Whittaker, R., & Whittaker, R. (2015). Attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Whittaker, R., & Whittaker, R. (2015). Attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Whittaker, R., & Whittaker, R. (2015). Attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1

\* Whittaker, R., & Whittaker, R. (2015). Attitudes towards computerized self-help for young people with a history of mental health problems. *Social Psychiatry and Psychiatric Epidemiology*, 50(1), 107-115. doi:10.1007/s00127-014-0801-1