

Insights on the Therapeutic Alliance in Digital Mental Health

REEVA LEDERMAN, School of Computing and Information Systems, The University of Melbourne
(reeva.lederman@unimelb.edu.au)

SIMON D'ALFONSO, School of Computing and Information Systems, The University of Melbourne
(dalfonso@unimelb.edu.au)

Recommended citation:

Lederman, R., & D'Alfonso, S. (2019). Insights on the Therapeutic Alliance in Digital Mental Health. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 1-3). Melbourne.

This inaugural gathering on the digital therapeutic alliance was held in Melbourne on August 7th, 2019 in response to growing interest in this important topic. This introduction to proceedings describes the problem space to which the symposium responded and the central ideas in the papers featured in the symposium.

In recent years, high rates of adults living with untreated mental illness has led to an identification of the potential for online and digitized care to fill this problematic gap (Henson et al. 2019). The concept of the traditional therapeutic alliance (TA) describes how psychotherapy clients and therapists connect, behave and engage with each other, and the bond that develops in the therapy room (Horvath et al. 1993). The aim of the symposium is to provide insight into how this alliance can be achieved in the online space and how online therapies can play a role in meeting therapeutic demand. Research into the digital therapeutic alliance explores the role of artificial intelligence (AI) in the form of robots, chatbots, avatars and other online agents and digital settings, in building the therapist-client relationship.

Until recently many online mental-health services were fairly one dimensional, such as providing psychoeducational units (Barnes et al. 2011), online support communities (Fan et al. 2010) or

telemedicine type online consultations (Griffiths et al. 2006). Those that provide more than one of these services are still often using human therapists (Alvarez-Jimenez et al. 2019; Gleeson et al. 2012; Gleeson et al. 2017; Lederman et al. 2019). Questions for the symposium are around the use of such hybrid or blended models as well as those that suggest full replacement of the human therapist with a digitized form.

With the advent of AI we have begun to explore how technology can more closely provide the responsiveness and intuition of the human therapist and to what extent AI can be used to close the gap, as such, between online and face to face care (D'Alfonso et al. 2017). How close are we to full acceptance of the robot computer sitting in a chair in front of us and how refined does the AI in that robot need to be for the human client to develop a relationship with it?

The symposium asks whether digitized services provide an entirely different form of service, with its own set of qualities to which a client might bond, that cannot easily be compared to traditional services. In turn digitized mental health services throw up all sorts of new ethical dilemmas around privacy and security of data (Gleeson et al. 2014; Lederman 2018; Lederman et al. 2003) and further questions around how service users can trust in AI and relate to the therapist-like agents within AI based mental health systems. Furthermore, we need to explore how we measure and evaluate these different phenomena.

The first symposium paper by Harper et al, sets out a research plan for measuring engagement with an online system aimed at addressing bipolar disorder (Harper et al. 2019). The paper drew on the work of Graffigna et al (Graffigna et al. 2015) which identifies thinking, feeling and acting as important factors in engagement with the therapy process.

The second paper by Widyani et al, examines how Indonesians respond to an online counselling service (Widyani et al. 2019) . The results illustrate several reasons why users responded positively to the service. The reason most closely related to the notion of a therapeutic alliance was the idea of trust. Users trusted the site studied, iBunda, because it maintained their confidentiality and made them feel better.

The third paper by Thomas et al examined virtual peer work which is designed to bring about a unique type of therapeutic working relationship. The research described uses SMART (Self-

Management and Recovery Technology) which is a web resource that can be used by itself or with a therapist to work through online videos of peers who share their mental health experiences (Thomas et al. 2019).

Tremain et al's paper reviews the literature regarding Digital Mental Health Interventions (DMHI) for serious mental illnesses where traditional therapy meets obstacles, such as around anonymity and the limitations of a therapeutic hour (Tremain 2019) Digital options could potentially overcome these obstacles through systems which maximise the alliance. The potential role of virtual reality, machine learning and digital phenotyping is proposed for enhancing online therapy and alliance formation.

The final paper by Bell et al examines the use of smartphone technology in conjunction with routine treatment (Bell et al. 2019). It proposes Ecological Momentary Assessment (EMA) where questionnaires are used to collect life experience and overcome recall bias. The results suggest that the process has the potential to strengthen the therapeutic relationship and promote rapport between therapist and client.

In the following pages we present these extended abstracts which will form the basis for future work.

Paper 1:

Recommended citation:

Harper, A., Meyer, D., Foley, F., & Murray, G. (2019). A Research Plan for Measuring Engagement with an Online Self-Management Program for Bipolar Disorder. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 4-7). Melbourne.

A research plan for measuring engagement with an online self-management program for bipolar disorder

Anthony Harper, Swinburne University of Technology, Hawthorn VIC

Denny Meyer, Centre for Mental Health, Swinburne University of Technology, Hawthorn VIC

Fiona Foley, Centre for Mental Health, Swinburne University of Technology, Hawthorn VIC

Greg Murray, Centre for Mental Health, Swinburne University of Technology, Hawthorn VIC

Introduction

As part of a research program into the effectiveness of an online self-management program for late-stage bipolar disorder it is hypothesised that the program will be more effective when participants are more engaged with the process.

To investigate this hypothesis it is necessary to measure engagement with the program. The research literature was reviewed to identify methods of measuring engagement with both online and offline health interventions. Graffigna, Barello, Bonami and Lozza (2015) suggested that the concept of engagement in offline health settings includes “think”, “feel” and “act” (Graffigna et al. 2015) factors of engagement at four different stages of the patient engagement process. This conceptualisation of engagement as a construct that changes over the course of a therapy is considered critical to the measurement of engagement with an online self-management program, where engagement is likely to vary significantly across the stages of the program. Paz Castro, Haug, Filler, Kowatsch and Schaub (Paz Castro et al. 2017) identified changing engagement over time in a study of engagement with a mobile-phone based smoking cessation intervention in which three engagement trajectories were identified – stable engaged, stable disengaged and unstable (decreasing) . This highlights the potential for changing engagement patterns in online interventions. Unstable engagement leading to complete disengagement has had implications for the statistical analyses in other studies.

Across the literature for online mental health interventions the measurement of engagement has been less developed than in other fields of health. The measures used have tended to be a single variable to represent “adherence” such as number of activities completed. There have been few

attempts to define an engagement construct or understand the change in this construct across time and stages of online mental health interventions.

This proposed study will attempt to identify an engagement construct, and the change in that construct over time, and across groups.

Research Objectives

The proposed research is designed to measure engagement with an online self-management program for late-stage bipolar disorder to enable conclusions to be drawn about the impact of engagement on program effectiveness. The primary research hypothesis is that a user who is more engaged with the program is more likely to exhibit better outcomes in terms of Quality of Life (QoL). Secondary research goals include understanding the nature of engagement, the way engagement varies over time and the way engagement varies between groups.

An engagement structure is to be described, and the change in structure over time is to be investigated. Using the model, the implications of engagement for outcomes, in terms of quality of life measures will be assessed for different groups including gender, level of symptoms, age and education

Research Program

Research Program Data

Data has been recorded as part of a Randomised Controlled Trial (RCT) comparing two programs – Mindfulness for Bipolar 2.0 and Psychoeducation for Bipolar (Fletcher et al. 2018). Each program involved a five week self-guided intervention designed to increase QoL for those with late-stage bipolar disorder. Data were collected via the online software tool including number of logins, time spent on site and number of pages visited. Additional data were collected via a number of assessments conducted at specific time points throughout the study (baseline, 5-weeks post-baseline, 3 months post-baseline and 6 months post-baseline). Assessments include a number of recognised and validated scales including the primary outcome measure QoL.BD (Michalak and Murray 2010), as well as measures of medication adherence, a user feedback and engagement study, and a reasons for discontinuation study. Demographic data, details of previous and current internet use, and mood and treatment data were recorded at baseline.

The proposed variables to assess engagement with the program are shown in Table 1.

Table 1: List of variables to assess engagement

Number of logins	Number of journal entries made
Time spent on site	Messages sent
Number of page visits	Number of relationships requested
Number of documents downloaded	Number of relationships approved

Number of forum posts viewed	Number of relationships removed
Number of forum posts made	Number of video listened to
Number of exercises submitted	Number of video favourited
Number of comments posted	Proportion of module pages viewed (unique pages viewed/total pages available)
Number of audio listened to	Average repeat page views (total pages viewed/unique pages viewed)
Number of audio favourited	

Demographic data is to be used to investigate relationships between engagement and demographic and treatment groups, and user feedback and engagement responses is to be used to assess the validity of the engagement construct.

QoL.BD is the key outcome variable of the RCT. Comparison of engagement with levels of QoL.BD will be used to determine the implications of engagement for program effectiveness.

Research Plan Outline

Research Stages

The proposed research will be conducted in stages to allow stakeholder feedback to be incorporated into the subsequent stages of the program. The expected stages are:

1. Conduct an Exploratory Factor Analysis (EFA) to determine the factors of engagement from data recorded by the online program, using data from all five weeks of the program. Conduct Confirmatory Factor Analyses (CFA) and determine the most appropriate factor model. Compare the factors across groups based on gender, level of symptoms, age, education, and between the treatment groups.
2. Compare the engagement model with self-reported engagement outcomes and QoL outcomes for different groups.
3. Incorporate a time component using Structural Equation Modelling (SEM) techniques, and implement a latent growth model based on the five weeks of the program. Test the model structure across groups using invariance tests.

Research Benefits and Uses

There are a number of potential benefits that may be realised by defining an engagement model and identifying differences in engagement models based on key outcome variables. Understanding the way in which engagement contributes to outcomes can help guide improvements in intervention design. Understanding if differences in outcomes between the results for the Mindfulness intervention and the Psychoeducation intervention were affected by user engagement may have implications for the conclusions drawn by the RCT.

Understanding the different engagement types amongst demographic groups (including related to baseline QoL) may allow tailoring of the program to maximise engagement, and hence results, for different groups of participants.

(References at end)

Paper 2:

Recommended citation:

Widyani, B., Fauziyyah, A., & Kiamilev, N. (2019). Why do Indonesians choose to Vent in an Online Platform? An initial Study Case in iBunda.id. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 8-9). Melbourne.

Why do Indonesians choose to vent in the online platform?

An initial study case in iBunda.id

Bianda Retno Widyani, Alya Fauziyyah, Nadia Kiamilev.

biandarwidyani@gmail.com

Purpose of The Study / Introduction

The digital world has made tons of differences in our lives throughout the years. Things get easier, distance gets shorter, and time gets faster. People may attain almost everything they need with just one click, even medical and psychological services. Since its emergence in the past few years, online counseling has become a debate in Indonesia regarding its effectivity. Some believe that digital psychological services could be an aid to those who are unable to reach mental health professionals due to financial, access, or time limitations. However, those also doubting the effectiveness of it Thus, this research aimed to investigate how Indonesians respond to online counseling service, particularly in *iBunda.id*.

Method

Participants were 95 (92 females, 3 males) users of *iBunda.id*, a digital counseling platform in Indonesia. Data were obtained using questionnaires distributed online through *iBunda.id*'s social media. Participants asked to describe why they choose *iBunda.id* as their counseling platform and how they feel after using *iBunda.id* services. Inductive thematic was done to analyze the data. Brief face-to-face interviews were conducted to selected participants to follow-up the results.

Results

The results showed that the majority of participants are using *iBunda.id* because they felt comfortable with the responses they get. They also chose *iBunda.id* to seek for help, seek for friends and find suggestions for their problems. Most participants trust *iBunda.id* because their confidentiality is maintained. There were also minor responses showing the advantages of digital platform such as affordable and fast response. As for how they feel after using *iBunda.id* services, results showed the majority of the participants reported that they feel relieved, while others stated that they get solutions for their problems and feel better. Though there were also very few participants who felt the shortcomings of digital counseling services such as feeling too much probed, blamed and not given suitable suggestions.

Conclusion

Generally, participants respond positively according to their experience of using *iBunda.id* as one of digital counseling platform in Indonesia. This shows that digital counseling platform is worth to develop more in Indonesia. Further research should consider another usability of digital psychological tools to aid Indonesian mental health, also the effectivity of online platform compared to offline counseling or treatment.

Paper 3:

Recommended citation:

Thomas, N., Williams, A., McLeod, B., Arnold, C., Peck, C., & Farhall, J. (2019). Virtual Peer Work? Therapeutic Experiences Associated with Viewing the Lived Experience of Others with Severe Mental Illness. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 10-11). Melbourne.

Virtual peer work? Therapeutic experiences associated with viewing the lived experience of others with severe mental illness

Neil Thomas^{1,2}, Anne Williams^{1,3}, Bronte McLeod¹, Chelsea Arnold¹, Claire Peck¹, and John Farhall^{3,4} for the SMART Research Group

1 Centre for Mental Health,

Swinburne University of Technology

2 Alfred Health

3 La Trobe University

4 NorthWestern Mental Health

In services for people with severe mental health problems there has been an increasing utilisation of peers who share their lived experience in service delivery roles. A variety of peer work models have been used, including peer support groups, one-to-one peer work, and peer-run services. Peer work is frequently reported to bring about a unique type of therapeutic working relationship, particularly characterised by mutual understanding, feeling less alone with experiences, and safety in disclosure of mental health difficulties. Studies have found that people who work with peers often describe feeling less alienated, more empowered, and report that their difficult experiences are understood and shared by others. These in turn may be of value in promoting recovery from severe mental illness.

The role of peers with shared lived experience has been influential in the Self-Management and Recovery Technology (SMART) research program: a Victorian government funded project to examine the role of digital technology in mental health service provision. The SMART research program has developed a web resource to be used either independently or with a worker, in which video-recorded discussions of peers sharing their experiences of mental distress and recovery are a core means of supporting learning and communicating therapeutic content. To explore the efficacy and processes of this resource, research studies within the SMART program have employed a number of methodologies including experimental studies, trials of different forms of supported use, and qualitative interviews.

In this roundtable session, we will discuss what the findings from this research program have told us about how digital media can virtually recreate elements of real-life peer support, and reflect on implications for the therapeutic alliance. Drawing on a number of study findings, we will consider: (1) reports by participants about their experiences of watching the peer videos, (2) experimental data on the impacts of the video material on affect and self-efficacy, (3) interactions between peer material and engagement with the resource, and (4) relating findings to broader models of the role of peer contact in relation to self-efficacy and self-stigma. We will also consider how use of this resource on tablet computers as a within-session tool has in turn impacted on the therapeutic relationship with practitioners. We will conclude by considering further directions.

Contact: neilthomas@swin.edu.au

Paper 4:

Recommended citation:

Tremain, H., McEnery, C., Fletcher, K., & Murray, G. (2019). The Therapeutic Alliance in Digital Mental Health Interventions for Serious Mental Illness: Current Status and Future Directions. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 12-14). Melbourne.

Title: The therapeutic alliance in digital mental health interventions for serious mental illness:

Current status and future directions

Authors: Hailey Tremain*¹, Carla McEnery^{1, 2, 3} Kathryn Fletcher¹ and Greg Murray¹

¹Centre for Mental Health, Faculty of Health Arts and Design, Swinburne University, Melbourne Australia

²Orygen, The National Centre of Excellence in Youth Mental Health, Parkville Australia

³Centre for Youth Mental Health, The University of Melbourne, Melbourne

Digital interventions to enhance mental health offer a range of potential benefits, such as overcoming logistical barriers and reducing therapeutic costs. Indeed, digital mental health interventions (DMHIs) offer benefits not attainable through traditional therapy, such as expanding the therapeutic hour, and offering anonymity. DMHIs may hold particular relevance for individuals experiencing serious mental illnesses (SMIs), for whom sequelae such as interpersonal mistrust, shame and impairments to social functioning are common. Several such programs (Horyzons, Alvarez-Jimenez et al., 2019; SMART; Thomas et al., 2019) are currently

being assessed for individuals experiencing SMIs in Australia, including the ORBIT project, which aims to improve quality of life in individuals experiencing bipolar disorder.

The therapeutic alliance is strongly linked with therapeutic outcomes in face-to-face (FTF) therapies, exerting greater influence upon outcomes than therapy brand itself. While evidence is less consistent, the therapeutic alliance also appears to play a key role in DMHIs. Additionally, client-rated alliance in DMHIs may equal or exceed that in reported within FTF therapies. Overall, it appears that the therapeutic alliance is robust to the reduced contact, communication differences and distance in DMHIs. Cavanagh and Millings (2013) suggest that 'common factors' promoted within the FTF therapeutic alliance, might be achieved within DMHIs via the combination of professional support and the intervention itself; a "triadic alliance". Further, some data suggest that online support within DMHIs may assist users to achieve therapeutic outcomes through improved motivation, engagement and adherence, as well as by facilitating, alongside intervention elements, therapeutic mechanisms both common and specific. However, research in this area is still relatively scarce and a number of questions remain about both the nature of the therapeutic alliance and optimal conditions for the therapeutic alliance in DMHIs.

Therefore, due consideration to both the type and intensity of support, and principles of system design which maximise the alliance is necessary. This presentation will review the literature regarding DMHIs for SMIs and in particular, the therapeutic relationship therein. Some examples of the interaction between persuasive system design (PSD) elements and support will be examined in this presentation, and specific applications within recently developed DMHIs for SMIs (e.g., ORBIT) will be discussed briefly for the purposes of illustrating examples. Current limitations of DMHIs and specifically those impacting the therapeutic alliance will be reviewed.

Directions for future research, including the potential roles of virtual reality, machine learning approached and digital phenotyping will be discussed.

Paper 5:

Recommended citation:

Bell, I., Moore, E., Williams, A., & Thomas, N. (2019). The Use of Ecological Momentary Assessment and Intervention as Tools within Psychological Therapy: Fast-tracking Treatment and Strengthening Therapeutic Rapport. In R. Lederman, & S. D'Alfonso (Ed.), *Proceedings of #digitalta2019: Symposium on the Therapeutic Alliance in Digital Mental Health*, (pp. 15-16). Melbourne.

The use of ecological momentary assessment and intervention as tools within psychological therapy: fast-tracking treatment and strengthening therapeutic rapport

Imogen H. Bell¹ (speaker), Elissa Moore¹, Anne Williams¹, & Neil Thomas¹

¹Centre for Mental Health, Swinburne University of Technology, Melbourne, Australia

Technological advancements in smartphone technology are being realised within mental health research. Smartphones apps can run programs that collect clinically relevant, ecologically valid information from users and deliver interventions in the moment they are needed. People with experiences of psychosis are a population with considerable unmet need for mental health care. Existing treatments are limited in their effectiveness and are difficult to access due to their complexity and the expertise required for their delivery. Technologies have potential to address these issues through innovative solutions that can improve accessibility and help clinicians deliver more effective and potent treatments. A key question in this research area is whether people are willing and able to engage with digital technologies within standard treatment, and if so, what impact does this have on the therapeutic relationship.

One opportunity recognised within the literature but with very limited research is the use of smartphone-based assessment and intervention within routine treatment. Ecological momentary assessment (EMA) is an approach involving the collection of momentary experiences by way of short questionnaires completed on a smartphone in daily life. Information collected is both ecologically valid and can overcome recall bias, which is commonly encountered in

psychological therapy due to difficulties recounting complex experiences outside of their naturally occurring context. Thus, the potential of EMA to inform assessment and formulation is an important avenue of research. Ecological momentary intervention (EMI) is a related approach involving the use of mobile devices to prompt intervention strategies in daily life, which could assist in the generalisation of therapeutic strategies from the immediate therapy room to daily life. Thus, EMA and EMI are two promising technologies offering an unprecedented ability to bridge the gap between clinical contexts and daily life.

In order to examine these capabilities, an intervention model was developed which blended the use of these technologies with a brief, coping focused intervention for distressing voice hearing experiences (Smartphone-Assisted coping focused interVention for Voices: SAVVy). The intervention was evaluated in a pilot randomised controlled trial with 34 participants, and a qualitative study with 12 participants, experiencing distressing and frequent voices. This presentation will focus on the findings most relevant to how the involvement of these technologies impacted on the therapeutic relationship. Findings suggest the approach has potential to fast track core therapeutic processes and strengthen rapport between therapist and client, contributing to a growing body of research supporting the promise of blended models of clinical care involving the combined use of standard face-to-face treatments along-side specialised digital tools.

Contact: ibell@swin.edu.au

References

- Alvarez-Jimenez, M., Bendall, S., Koval, P., Rice, S., Cagliarini, D., Valentine, L., D'Alfonso, S., Miles, C., Russon, P., Penn, D. L., Phillips, J., Lederman, R., Wadley, G., Killackey, E., Santesteban-Echarri, O., Mihalopoulos, C., Herrman, H., Gonzalez-Blanch, C., Gilbertson, T., Lal, S., Chambers, R., Daglas-Georgiou, R., Latorre, C., Cotton, S. M., McGorry, P. D., and Gleeson, J. F. 2019. "Horyzons Trial: Protocol for a Randomised Controlled Trial of a Moderated Online Social Therapy to Maintain Treatment Effects from First-Episode Psychosis Services," *BMJ Open* (9:2), p. e024104.
- Barnes, E., Simpson, S., Griffiths, E., Hood, K., Craddock, N., and Smith, D. 2011. "Developing an Online Psychoeducation Package for Bipolar Disorder," *Journal of Mental Health* (20:1).
- Bell, I. H., Moore, E., Williams, A., and Thomas, N. 2019. "The Use of Ecological Momentary Assessment and Intervention as Tools within Psychological Therapy: Fast-Tracking Treatment and Strengthening Therapeutic Rapport, ," *Proceedings of the First Annual Symposium on the Digital Therapeutic Alliance, Digitalta19*, R. Lederman and S. D'Alfonso (eds.), Melbourne, Australia, pp. 15-16.
- Cavanagh, K., and Millings, A. 2013. "(Inter)Personal Computing: The Role of the Therapeutic Relationship in E-Mental Health," *J Contemp Psychother* (43:4), pp. 197-206.
- D'Alfonso, S., Santeteban-Echarri, O., Rice, S., Wadley, G., Lederman, R., Miles, C., Gleeson, J., and Alvarez-Jimenez, M. 2017. *Frontiers in Psychology* (8).
- Fan, H., Smith, S., Lederman, R., and Chang, S. 2010. "Why People Trust in Online Health Communities: An Integrated Approach," *21st Australasian Conference on Information Systems, December 1-3, 2010*.
- Fletcher, K., Foley, F., Thomas, N., Michalak, E., Berk, L., Berk, M., and ...Murray, G. 2018. "Web-Based Intervention to Improve Quality of Life in Late Stage Bipolar Disorder (Orbit): Randomised Controlled Trial Protocol," *BMC Psychiatry*, (18:1).
- Gleeson, J., Alvarez-Jimenez, M., and Lederman, R. 2012. "Moderated Online Social Therapy for Recovery from Early Psychosis," *Psychiatric Services* (63:7).
- Gleeson, J., Lederman, R., Herrman, H., Koval, P., Eleftheriadis, D., Bendall, S., Cotton, S. M., and Alvarez-Jimenez, M. 2017. "Moderated Online Social Therapy for Carers of Young People Recovering from First-Episode Psychosis: Study Protocol for a Randomised Controlled Trial," *Trials* (18:1), p. 27.
- Gleeson, J., Lederman, R., Wadley, G., Bendall, S., McGorry, P., and Alvarez-Jimenez, M. 2014. "Safety and Privacy Outcomes from a Moderated Online Social Therapy for Young People with First-Episode Psychosis," *Psychiatric Services* (65:4).
- Graffigna, G., Barelllo, S., Bananomi, A., and Lozza, E. 2015. "Measuring Patient Engagemant: Development and Psychometric Properties of the Patient Health Engagement (Phe) Scale," *Frontiers in Psychology* (6).
- Griffiths, L., Blignault, I., and Yellowless, P. 2006. "Telemedicine as a Means of Delivering Cognitive-Behavioural Therapy to Rural and Remote Mental Health Clients," *Journal of Telemedicine and Telecare* (12), pp. 136-140.
- Harper, A., Meyer, D., Foley, F., and Murray, G. 2019. "A Research Plan for Measuring Engagement with an Online Self- Management Program for Bipolar Disorder,"

- Proceedings of the First Annual Symposium on the Digital Therapeutic Alliance, Digitalta19*, R. Lederman and S. D'Alfonso (eds.), Melbourne, Australia pp. 4-7.
- Henson, P., Peck, J., and Torous, J. 2019. "Considering the Therapeutic Alliance in Digital Mental Health Interventions," *Harvard Review of Psychiatry*.
- Horvath, A., Gaston, L., and Luborsky, L. 1993. "The Therapeutic Alliance and Its Measurement," in *Psychodynamic Treatment Research* N.E. Miller, L. Luborsky, J. Barber and J.P. Docherty (eds.). New York: Basic Books.
- Lederman, R. 2018. "Trust. Input Paper for the Horizon Scanning Project "the Effective and Ethical Development of Artificial Intelligence: An Opportunity to Improve Our Wellbeing".", Melbourne, Australia.
- Lederman, R., Gleeson, J., Wadley, G., D'Alfonso, S., and Rice, S. 2019. "Support for Carers of Young People with Mental Illness: Design and Trial of a Technology-Mediated Therapy," *ACM Transactions on Computer-Human Interaction (TOCHI)* (26:1).
- Lederman, R., Shanks, G., and Gibbs, M. 2003. "Meeting Privacy Obligations: The Implications for Information Systems Development," *ECIS: AISel*.
- Michalak, E. E., and Murray, G. 2010. "Development of the QoL-Bd: A Disorder-Specific Scale to Assess Quality of Life in Bipolar Disorder," *Bipolar Disord.* (12:7), pp. 727-740.
- Paz Castro, R., Haug, S., Filler, A., , Kowatsch, T., and Schaub, M. P. 2017. "Engagement within a Mobile Phone Based Smoking Cessation Intervention for Adolescents and Its Association with Participant Characteristics and Outcomes," *Journal of medical Internet research* (19:11).
- Thomas, N., Williams, A., McLeod, B., Arnold, C., Peck, C., and Farhall, J. 2019. "Virtual Peer Work? Therapeutic Experiences Associated with Viewing the Lived Experience of Others with Severe Mental Illness," *Proceedings of the First Annual Symposium on the Digital Therapeutic Alliance, Digitalta19*, R. Lederman and S. D'Alfonso (eds.), Melbourne, Australia, pp. 10-11.
- Tremain, H., McEnery, C., Fletcher, K., Murray, G. 2019. "The Therapeutic Alliance in Digital Mental Health Interventions for Serious Mental Illness; Current Status and Future Directions,," *Proceedings of the First Annual Symposium on the Digital Therapeutic Alliance, Digitalta19*, R. Lederman and S. D'Alfonso (eds.), Melbourne, Australia, pp. 12-14.
- Widyani, B. R., Fauziyyah, A., and Kiamilev, N. 2019. "Why Do Indonesians Choose to Vent in an Online Platform? An Initial Study Case in Ibunda.Id," *Proceedings of the First Annual Symposium on the Digital Therapeutic Alliance, Digitalta19*, R. Lederman and S. D'Alfonso (eds.), Melbourne, Australia,, pp. 8-9.