Symposium title: Making Internet-Based Interventions Work in Practice: Optimising Support Levels and Delivery Modes

Presenters: Tara Guckel, Katrina Champion, Katrina Prior, Ahmad Jabir

Session Chair: Professor Lexine Stapinski

Session overview:

Ensuring internet-based interventions translate effectively from research settings into real-world practice requires thoughtful consideration of both *how* interventions are delivered and *what level of support* is provided to users. Although the field has made substantial progress in developing evidence-based digital programs, questions remain about the optimal balance between self-guided content, human support, and alternative delivery formats that can maximise engagement, acceptability, and outcomes across diverse populations.

The discourse on engagement, arguably one of the most persistent challenges for internet-based interventions, highlights the need to move beyond "one-size-fits-all" approaches. Understanding how different forms of guidance, support, and delivery modalities influence user experience is essential for designing interventions that are not only effective in trials but also scalable, sustainable, and responsive to the needs of their intended users.

This symposium brings together four presentations from an international team of early- and mid-career researchers, each examining a different configuration of support or delivery mode within internet-based interventions. Collectively, these studies span therapist-guided, self-guided, audio-forward modalities, and peer-supported, offering diverse perspectives on how support can be tailored to enhance engagement and real-world applicability.

The first presentation reports a mixed-methods study examining barriers and enablers to a world-first web-based program targeting co-occurring anxiety and alcohol use among young adults. The study explores the strengths and limitations of a self-guided modality and highlights participant-driven suggestions for incorporating additional support, such as lay-support options. The second presentation presents trial outcomes from a parent-focused intervention designed to improve healthy lifestyle behaviours among low-income adolescents in Australia. Guided by the Multiphase Optimisation Strategy (MOST), this work demonstrates how optimisation frameworks can identify maximally effective yet minimally burdensome components to enhance intervention delivery. The third presentation describes the co-design of an intervention for mothers who drink to cope with anxiety during early parenthood. Co-design insights emphasised the importance of "hands-free" delivery, with strong preference for podcast-style or audio-forward formats that align with the realities of early parenting. The final presentation reports findings from the LvL UP trial, focusing on the role of social support from participants' nominated "buddy" (friend, partner, or family member) in shaping outcomes within an adaptive blended mHealht lifestyle intervention.

Professor Stapinski will chair the session and lead a concluding discussion on future directions for designing and implementing digital interventions that are optimally aligned with the needs, preferences, and contexts of their target populations.

Presentation 1:

Logged in, dropped out? A mixed-methods study exploring young adults' experiences and engagement with an online program for co-occurring anxiety and hazardous alcohol use

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Context: Given the importance of understanding how online mental health programs are taken up in real-world settings, the present study explored the engagement of young adults with co-occurring anxiety and alcohol use concerns who accessed the self-guided *Inroads* online program. The low adherence seen in the naturalistic trial of this self-guided program highlights the challenges of interventions without some level of human support, and this study presents an opportunity to build a greater understanding of barriers and enablers to intervention engagement.

Methods: Using a mixed-methods design, young adults in a self-guided, single-arm naturalistic trial provided quantitative follow-up survey data (n=28) and qualitative data via semi-structured interviews (n=11) and open-text responses (n=28). Reflexive thematic analysis was used for qualitative data, and descriptive analyses summarised survey agreement percentages.

Intervention: Inroads is the first web-based early intervention targeting transdiagnostic anxiety, hazardous alcohol use, and their interplay among young adults. It comprises five self-guided CBT modules incorporating written content, infographics, case examples, audio, quizzes, and reflective exercises. The original version included low-intensity psychologist support through weekly feedback emails and two brief phone sessions. To enhance scalability, the program was updated to a fully self-guided format, replacing clinician contact with automated, tailored weekly feedback aligned with participants' goals, progress, and module content.

Results: Participants generally rated the program positively (46% "good", 25% "very good"). Many found real-life character examples helpful for engagement (43% "somewhat agree", 32% "fully agree"). Qualitative findings identified enablers such as the online format and practical skills, while barriers were largely individual-level factors, including competing priorities. Thematic analysis identified three key themes: (i) Creating the "right" online format and mode of program delivery; (ii) Participants' program expectations and (mis)alignment; and (iii) Intersection of an online program with an individual's offline world.

Conclusions: Key program elements supporting engagement included practical skills, the online format, relatable character examples, and user-friendly design. These findings add to the limited evidence on user experience and engagement in digital interventions addressing co-occurring mental health and substance use concerns.

Implications: Although user-related factors such as accountability and time constraints were common barriers, qualitative insights suggest these may be mitigated through some form of human-guided support alongside self-guided content. Importantly, participants did not feel this support needed to come from a clinician. Determining the optimal level and type of human support remains an important area for future research to not only reach but engage individuals at scale.

Presentation 2:

Optimising a digital intervention to support parents to improve adolescent health behaviours: The Health4Life Parents & Teens factorial trial

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Context: Parent-based interventions can improve adolescent health behaviours, yet they are often time-intensive and face engagement challenges. We used the Multiphase Optimisation Strategy (MOST) to identify a maximally effective and minimally burdensome digital intervention to support parents to improve adolescent health.

Methods: A 2^4 factorial trial was run in parents of teenagers living in disadvantaged areas of NSW, Australia. All parents received the core *Health4Life Parents & Teens* intervention and were randomised to 1 of 16 conditions reflecting combinations of four other components. The primary outcome was 3-month change in parental encouragement of adolescent health habits. Parents also rated the effort required to complete each component. Mixed models estimated component effects ($p<0.10$).

Intervention: The core intervention comprised six 20-minute online modules (screen time, smoking/vaping, alcohol, sleep, nutrition, physical activity). The four other components were SMS, personalised feedback, stress management training, and telehealth coaching.

Results: A total of 302 parents participated (79% retention at 3 months). Feedback (B=.21, p=.049) and health coaching (B=.30, p=.005) significantly improved parental encouragement of teenage health habits; SMS had a negative effect (B=-0.32, p<0.01). Health coaching required the greatest effort. Balancing both efficacy and burden, the final intervention included personalised feedback and the core online modules.

Conclusion: This study yielded a scalable, resource-efficient digital program for parents, ready for evaluation in a randomised controlled trial alongside the school-based Health4Life program.

Implications: This study highlights the value of optimisation approaches, such as MOST, for intervention design. Testing components individually, rather than as an intervention package, provides actionable evidence on which components are essential for efficacy, and which can be eliminated to reduce resource use.

Presentation 3:

Co-Design of An Audio-Based Digital Intervention for Mothers who Drink to Cope with Anxiety During Early Parenthood

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Introduction: The common expression "Mummy needs a drink" reflects the substantial stress and overwhelm women experience during early motherhood and increased vulnerability to risky alcohol use as a coping strategy. Despite this, there are currently no treatment programs specifically designed to support mothers experiencing co-occurring anxiety and risky drinking during the early parenting years. There is also little understanding regarding the best modality of delivering the program to this group. This presentation will describe the iterative co-design of a digital intervention developed to address this gap.

Methods: Two sets of focus groups were conducted with mothers who had lived experience of anxiety and risky alcohol use within the first three years postpartum: one in 2024 (n=11) to inform the intervention co-design, and a second one in 2026 (n=6 returning participants) to provide feedback that would help refine a beta version of the program.

Results: Participants in the initial focus group emphasised the need for an accessible, "hands-free" program and strongly endorsed an audio or podcast-style format for delivering the program. They felt this would enhance engagement with, and adherence to, the program. They also supported the idea of including telehealth support in addition to the audio program for accountability and human connection. Mothers in the first focus groups recommended addressing the progressive emotional pressure of early motherhood and the perceived rapid relief alcohol provides, alongside content on perfectionism, self-efficacy, maternal guilt, and strategies for managing high-stress evening periods. After reviewing some sample audio modules in a beta version of the program, mothers in the second focus groups reported that they found the storyline and skills within the prototype relatable and clearly explained. Key refinements included dividing modules into shorter "chapters" to reduce cognitive load, offering a dictation or voice-note option for homework worksheet completion, and including a pressure-cooker or "flipping your lid" analogy to illustrate emotional escalation.

Conclusion and implications: The co-design process was instrumental in producing a feasible, acceptable psychologist-supported audio-based intervention that is tailored to mothers' unique needs and preferences. This process will enhance the likelihood of its beneficial impact on both anxiety and alcohol use concerns.

Presentation 4:

Discrepancies in enacted and perceived social support during an mHealth lifestyle intervention: A time-lagged latent congruence analysis

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Introduction: Social support from friends, family, or loved ones is crucial for promoting and implementing behaviour change among mobile health (mHealth) users. However, support enacted by the supporters may not always align with support perceived by the mHealth users (informant discrepancy). This study examined the factors influencing informant discrepancies to guide the development of strategies for optimizing social support in mHealth interventions.

Method: This secondary analysis of the LvL UP Trial used data from intervention-arm participants (n = 452) during the intensive phase (Oct 24–Aug 25). Participants used the LvL UP app and nominated a "buddy" (friend, partner, or family member) to support them over 24 weeks. Buddies received weekly automated prompts to provide simple support (e.g., encouragement, health tips) and complex support (e.g., listening to challenges, engaging in healthy activities together). At 12 and 24 weeks, participants reported perceived support, while buddies reported enacted support, years known, relationship type, time spent, and adherence to instructions.

Analysis: A weighted two-factor time-lagged Latent Congruence Model (LCM) decomposed dyadic reports into latent mean factors (shared support level) and latent difference factors (discrepancies). These factors were used to predict well-being, behavioural outcomes, and satisfaction.

Results: Most participants (84.7%) were paired with a consenting buddy; 338 buddies (88.3%) completed the 12-week survey and 293 (64.8%) the 24-week survey. Buddies spent an average of 120 minutes per week on support tasks (range: 0–1265). LCM results showed that shared support levels and discrepancies for both support types were stable over time, but buddies consistently over-reported support compared with participants' perceptions. Discrepancies increased over time for simple support but remained stable for complex support. Romantic partners showed lower discrepancies in complex support, and greater time investment predicted lower discrepancies for both support types. Buddies who deviated from instructions showed lower discrepancies at 24 weeks. Higher shared complex support predicted greater well-being and satisfaction at 24 weeks, though not behavioural outcomes.

Conclusion: Agreement between enacted and perceived social support may play a crucial role in improving well-being and satisfaction in the support provided. However, social support can take substantial effort and need to be personalised beyond just the recommended tasks to be better perceived by mHealth users.

Implication: Future research should explore strategies to make support more visible and mutually understood to strengthen supportive relationships over time while balancing the burden of social support within mHealth interventions.