

Hi MoHB team members and happy 2019!

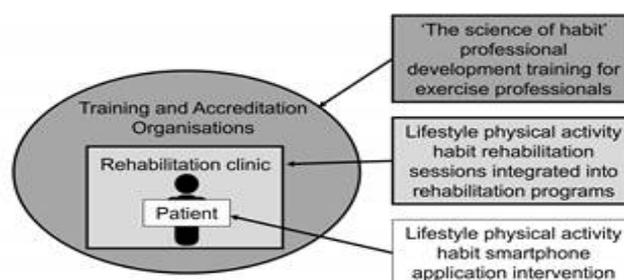
**Next lab meeting: TOMORROW at 10:00a AEST** if you can't make it but still want to chat about anything, let me know.

**Power study update:** Our wonderful project coordinator, Emma Power, has been offered a very cool full time position with My Health so our also wonderful, Kristie Lee will be taking over as project coordinator as of 15 January. At that point, we'll be hitting the ground running with the phase 2 of the power study in which electrical workers will be brought into a simulation lab and we will be doing behavioural coding on their actions as well as code their 'think aloud' processes. We'll keep you posted on that because after data starts rolling in, we'll need help coding the videos. Behavioural coding is my favourite type of data so I'll talk about that a bit more so you know if that's something you may be interested in getting involved with. In particular, we'll be focussing on competence and automaticity of actions.

**My nerdy new variable I'm loving:** So, as part of our collaboration with J Maher, who has collected mass amounts of ecological momentary assessment data, I've come upon this fun new variable we're using in a paper. It's mostly used in biological sciences, but I think it's relevant for social sciences too. See what you think. Here's a bit about it drafted from a forthcoming manuscript:

Although novel for social sciences, entropy scores are common amongst statistics and machine learning fields as a measure of uncertainty. Entropy scores are interpretable as the degree of equalization between probabilities of a set amount of choices. Given that our aim is to test context-dependency (i.e., the degree of stability of contexts in which people engage in the behavior), the entropy scores were reversed, such that the high context-dependency scores indicated higher degrees of stability/certainty of choice, such that high scores indicate more stability or similarity of choice, and low scores indicate when every possible option is nearly equally weighted. For example, a person who only engages in physical activity at the same time of day (mornings/afternoons/evenings) will have a higher context dependency score than someone who engages in activity at variable times of day.

**Bundaberg Rehabilitation Study was a success!:** The study on motivation of exercise within and outside of rehabilitation is completed! That's a huge accomplishment. Now comes the fun part where we dig deep into the data. We have loads of qualitative interview data that Rachael is making her way through, as well as tons of repeated assessment quantitative data that we're starting to dig into. Over the break, I drafted a research proposal as part of my forthcoming NHMRC Investigator application and will be incorporating our findings from that study into the proposal. Here's a pretty picture I made describing how the science of habit needs to be integrated into rehabilitation at the level of individuals (patients), organisations (rehab clinics), and systems (exercise professional accreditation bodies):



**The invisibility of sitting study:** Renae and Kristie-Lee hosted a photoshoot before Christmas as part of our involvement with a study with B Gardner on how we should consider 'sitting' differently as a field because people don't tend to think of their sitting behaviours as actually 'sitting'. Our next step is to pilot people's impressions of the pictures Renae and Kristie-Lee took and to then do the larger study. Thanks for all your prep work on this one, Renae and KL! Just before Christmas, Ben sent through the abstract of the paper with 8 studies that this one will be a part of. Here it is in case you're curious:

## **Is sitting invisible? Assessing mental representations of sedentary behaviour**

### **Abstract**

Growing evidence suggests that sedentary behaviour – primarily, sitting time – is a health risk factor, potentially independently of physical activity. Much sedentary behaviour research is reliant on self-reports of sitting time, and sitting-reduction interventions often focus on reducing motivation to sit. These approaches assume that people are conscious of their sitting time. Drawing on action identification and segmentation theories and methods, this paper argues that people do not mentally represent sitting as sitting, but rather as a sub-component of more meaningful activities. We present studies showing that participants rarely spontaneously report sitting (or postural allocation, more broadly) when describing actions (Studies 1 and 2), and when asked to identify a commonly-seated activity, tend to assign descriptions based on higher-order goals and consequences of action, rather than sitting or other procedural elements (Studies 3-5). In card-sort tasks, participants primarily treated photos as similar based on common higher-order actions, rather than sitting (Studies 6-7). Participants did however identify transitions from sitting to standing, and vice versa, when segmenting a flow of action into discrete events (Study 8). Together these studies suggest that, while not wholly 'invisible', 'sitting' is a less cognitively accessible mental representation of seated activities than are representations based on the purpose and consequences of seated action. This may explain why self-report sitting measures that focus on seated activities, rather than sitting per se, elicit more accurate responses. From an intervention perspective, findings speak to the importance of targeting behaviours that entail sitting, and of raising awareness of sitting as a potential precursor to attempting to reduce sitting time.

Ok – that's enough from me for now. Looking forward to catching up!



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*I respectfully acknowledge the Traditional Owners of the land on which we work and learn, and pay respect to the First Nations Peoples and their elders, past, present and future.*