

MELBOURNE GRADUATE  
SCHOOL OF EDUCATION  
*Measuring minds, shaping the world*

# Measuring and cultivating gratefulness with an online positive psychology intervention.

Reuben D. Rusk  
Prof Lea Waters, A/Prof Dianne Vella-Brodick  
Saturday, 6<sup>th</sup> June 2015

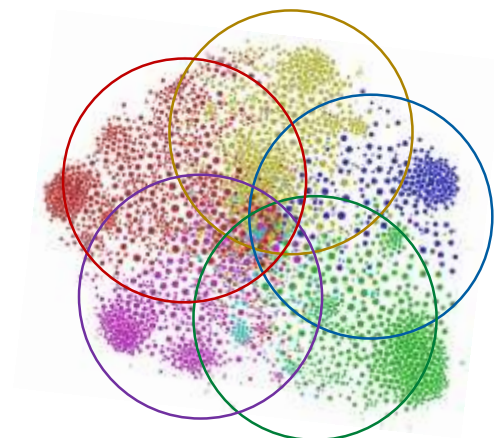
Centre for Positive Psychology  
University of Melbourne

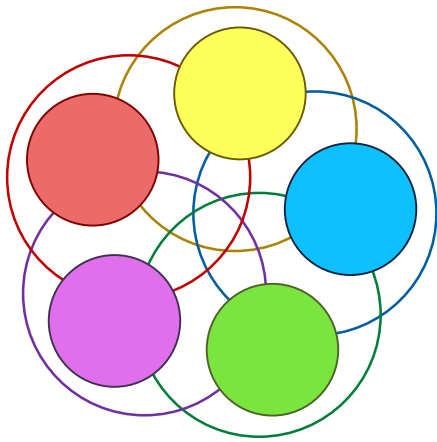
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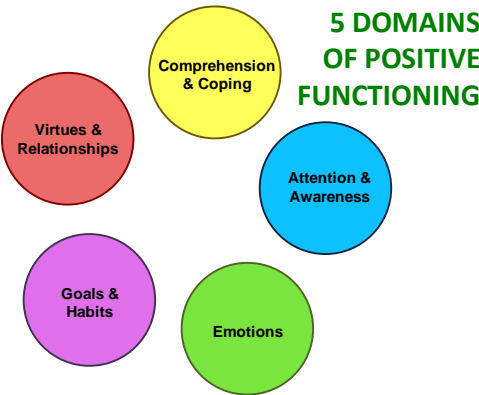

**MEMORIAL GRADUATE SCHOOL OF EDUCATION**  
 Making minds, shaping a future
 **Overview**

$$\frac{3 \text{ Years}}{25 \text{ minutes}} = 44 \frac{\text{days}}{\text{minute}}$$

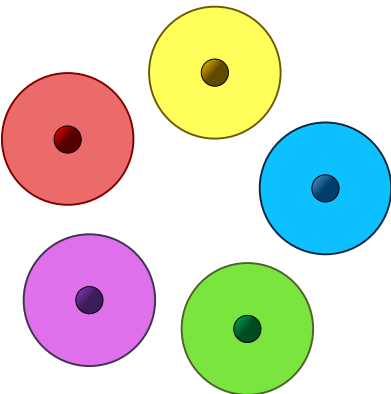
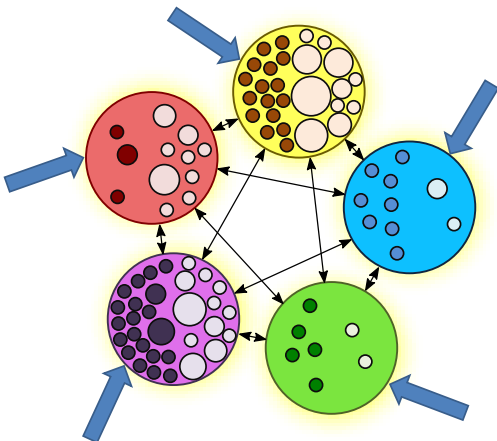
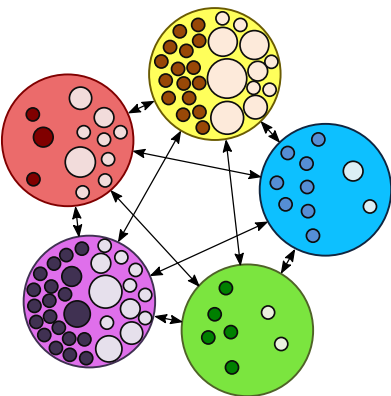
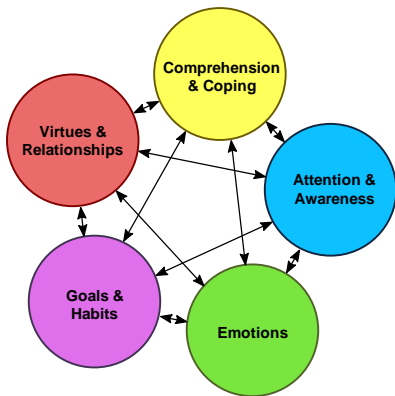


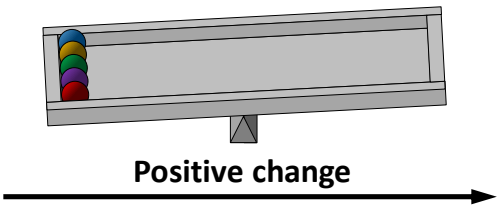
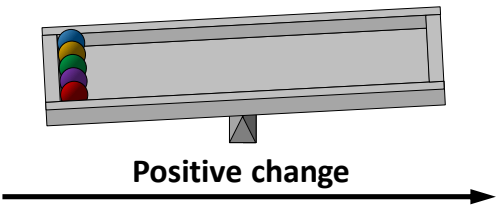


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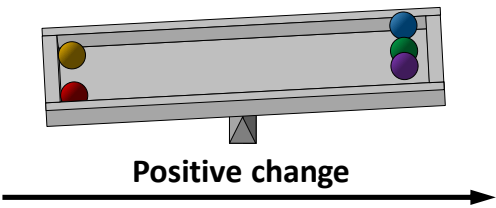


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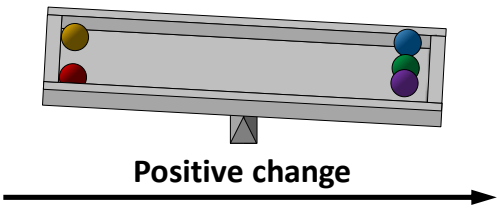




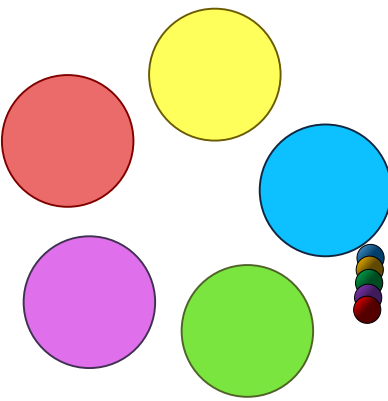
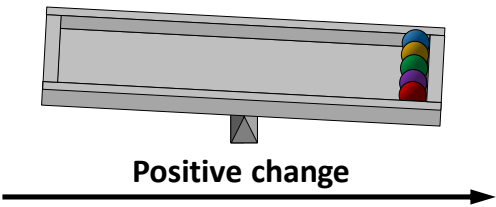
INTERACTION

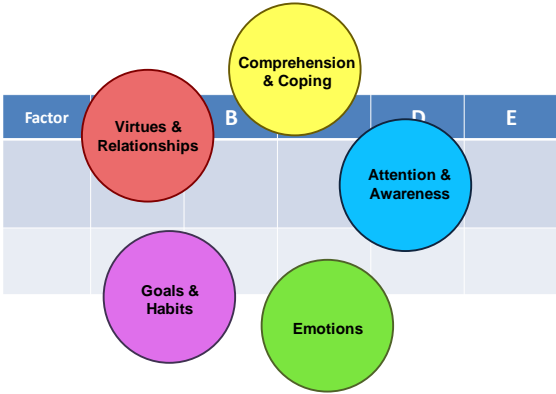


INTERACTION



INTERACTION





| Factor                          | A                            | B                   | C                      | D                      | E                          |
|---------------------------------|------------------------------|---------------------|------------------------|------------------------|----------------------------|
| Gratitude/Gratefulness exercise | Noticing Simple Pleasures    | Counting Privileges | Finding Benefits       | Habits of Gratefulness | Appreciative Conversations |
| Flow exercise                   | Noticing Engaging Activities | Counting Skills     | Finding the Next Steps | Habits of Engagement   | Engaging Conversations     |

**Factorial design**

| Factor                          | A                            | B                   | C                      | D                      | E                          |
|---------------------------------|------------------------------|---------------------|------------------------|------------------------|----------------------------|
| Gratitude/Gratefulness exercise | Noticing Simple Pleasures    | Counting Privileges | Finding Benefits       | Habits of Gratefulness | Appreciative Conversations |
| Flow exercise                   | Noticing Engaging Activities | Counting Skills     | Finding the Next Steps | Habits of Engagement   | Engaging Conversations     |

**Factorial design**

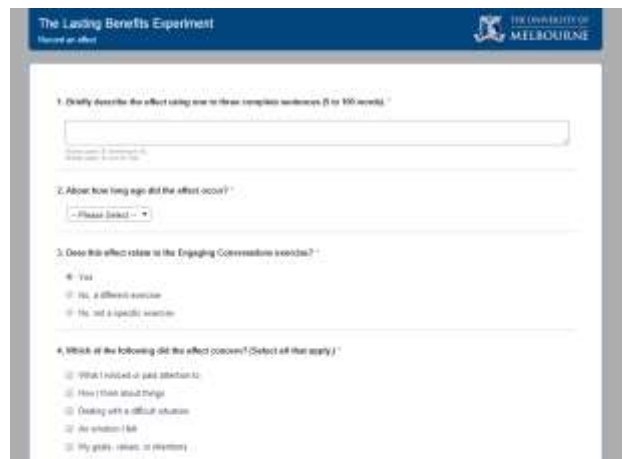
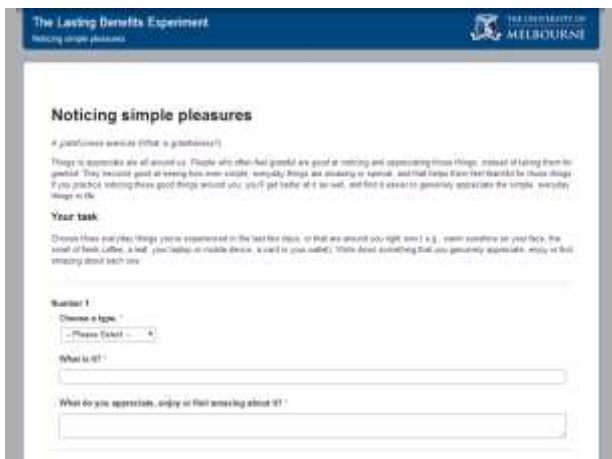
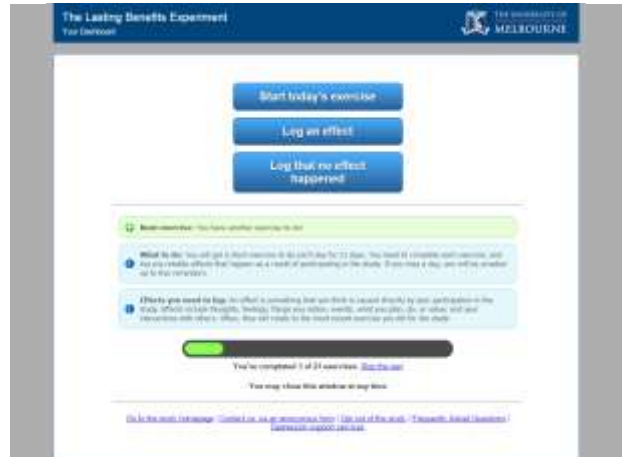
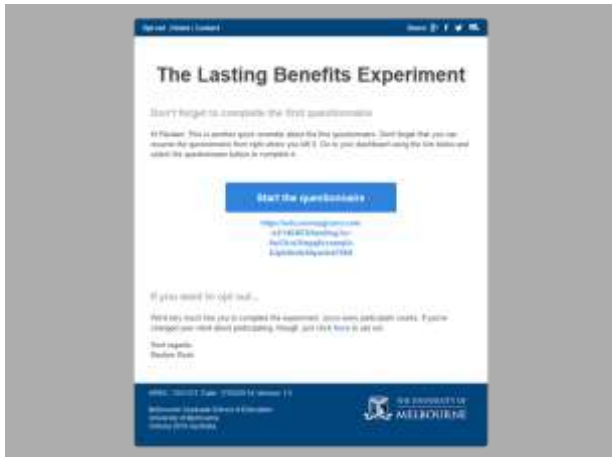
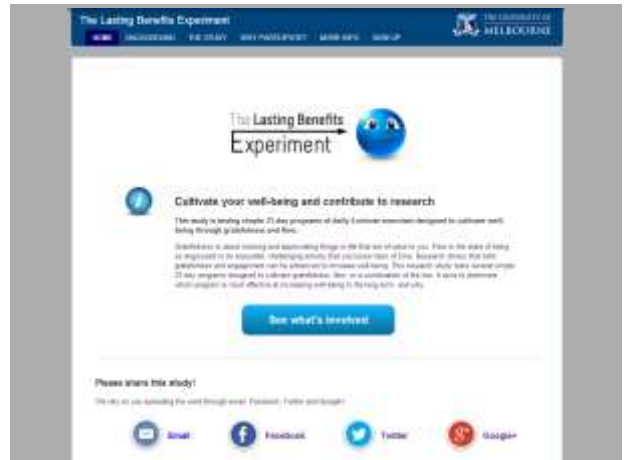
| Factor                          | A | B | C | D | E |
|---------------------------------|---|---|---|---|---|
| Gratitude/Gratefulness exercise | + | + | + | + | + |
| Flow exercise                   | - | - | - | - | - |

| Group | 1 | 2 | 3 | 4 | 5 |
|-------|---|---|---|---|---|
| 1     | - | - | - | - | - |
| 2     | - | - | - | - | + |
| 3     | - | - | - | + | - |
| 4     | - | - | - | + | + |
| 5     | - | - | + | - | - |
| 6     | - | - | + | - | + |
| 7     | - | - | + | + | - |
| 8     | - | - | + | + | + |
| 9     | - | + | - | - | - |
| 10    | - | + | - | - | + |
| 11    | - | + | - | + | - |
| 12    | - | + | - | + | + |
| 13    | - | + | + | - | - |
| 14    | - | + | + | - | + |
| 15    | - | + | + | + | - |
| 16    | - | + | + | + | + |



| Factor                          | A | B | C | D | E |
|---------------------------------|---|---|---|---|---|
| Gratitude/Gratefulness exercise | + | + | + | + | + |
| Flow exercise                   | - | - | - | - | - |

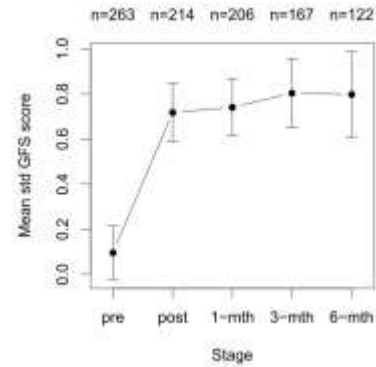
5 exercises x 1 exercise/day x 4  
= 20 completed exercises



## Size of dataset

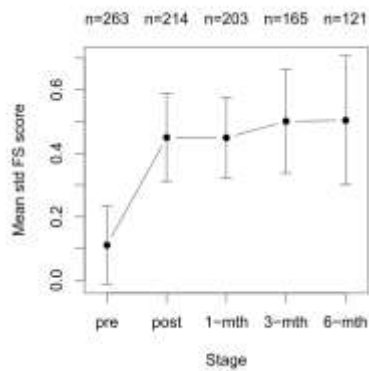
- 786 participants (pre-test onward)
- > 7000 completed exercises
- > 5000 completed log entries
- > 1200 completed measurement surveys

## Overall outcomes: Gratefulness (GFS-32)



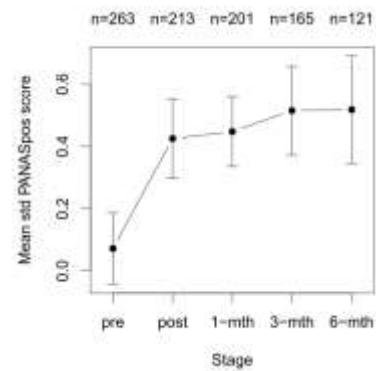
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## Overall outcomes: Flourishing (FS)



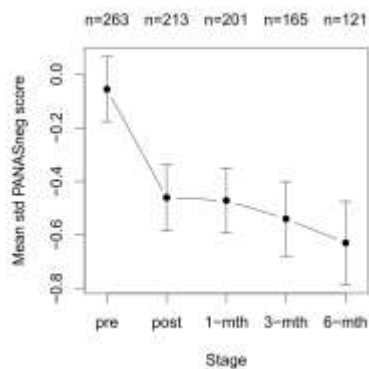
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## Overall outcomes: Positive affect (PANAS+)



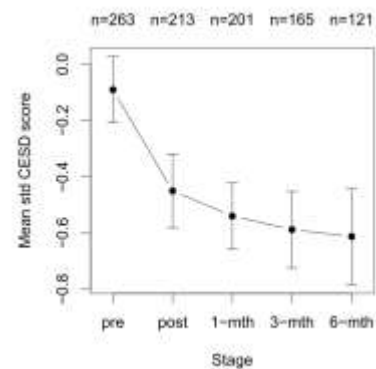
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## Overall outcomes: Negative affect (PANAS-)



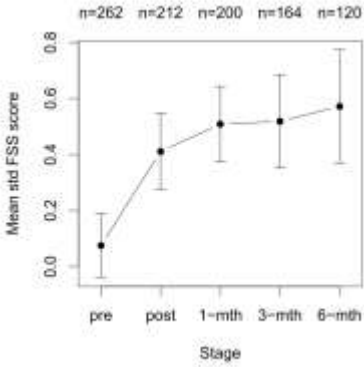
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## Overall outcomes: Depression (CES-D)



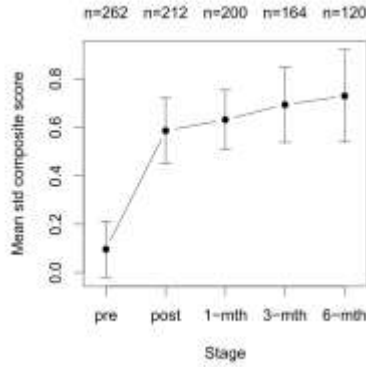
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**Overall outcomes:  
Flow (FSS)**



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**Overall outcomes:  
Composite**



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**Qualitative feedback**

“ I just want to let you know that in the past few weeks this experiment has truly impacted my life. ... **THANK YOU!** ... I am truly grateful to receive your exercises and discover that there is so much joy in my life. ”

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**Qualitative feedback**

“ I liked your positive psychology experiment, that had a great positive impact on my life. ... Many thanks for offering such an opportunity. It indeed changed my life. ”

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**Qualitative feedback**

“ I am (pleasantly) shocked at the effect these 5 days of exercises have made to me. I am in tears at the moment, because it is very emotional. ... This is a great program and I have recommended it to some others too. Thank you. ”

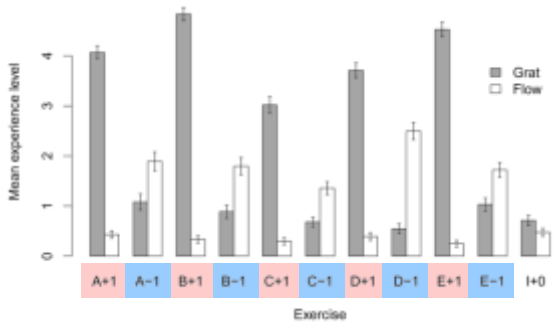
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**EMA effects**



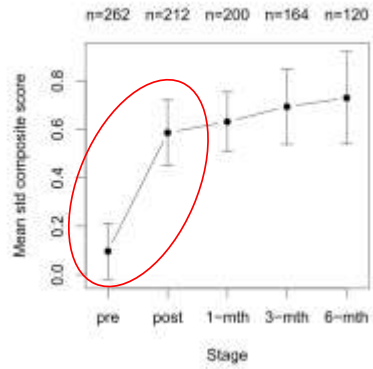
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Manipulation check:  
EMA experiences



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Overall outcomes:  
Composite

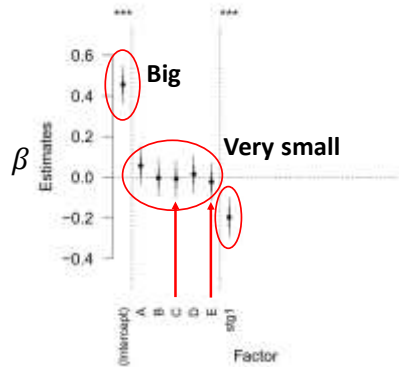


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Factorial regression

$$\Delta Z_1 = \beta_0 + \beta_A A + \beta_B B + \beta_C C + \beta_D D + \beta_E E + \beta_1 \text{Pretest}$$

Pre-post change:  
Composite



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Factorial design

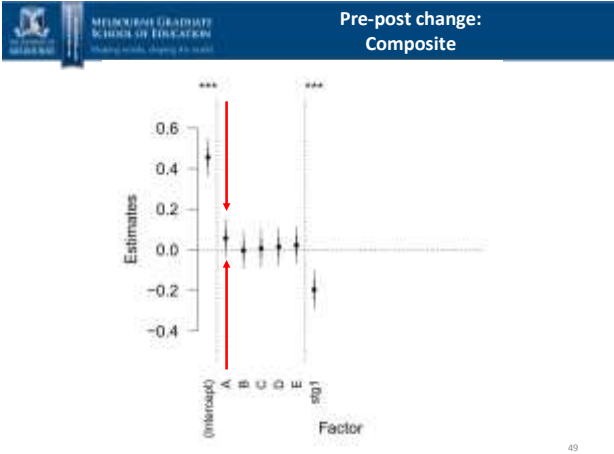
| Factor          | A                            | B                   | C                      | D                      | E                          |
|-----------------|------------------------------|---------------------|------------------------|------------------------|----------------------------|
| More beneficial | Noticing Simple Pleasures    | Counting Privileges | Finding Benefits       | Habits of Gratefulness | Appreciative Conversations |
| Less beneficial | Noticing Engaging Activities | Counting Skills     | Finding the Next Steps | Habits of Engagement   | Engaging Conversations     |

Interactions

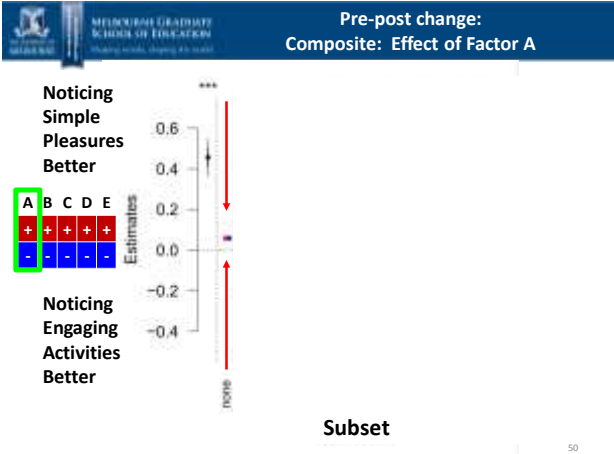
| Factor | A                            | B                   | C                      | D                      | E                          |
|--------|------------------------------|---------------------|------------------------|------------------------|----------------------------|
|        | Noticing Simple Pleasures    | Counting Privileges | Finding the Next Steps | Habits of Gratefulness | Engaging Conversations     |
|        | Noticing Engaging Activities | Counting Skills     | Finding Benefits       | Habits of Engagement   | Appreciative Conversations |

Reds were better with Blues.  
Blues were better with Reds.

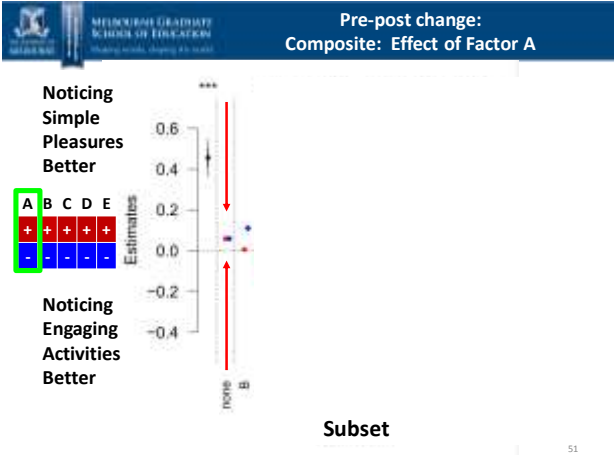




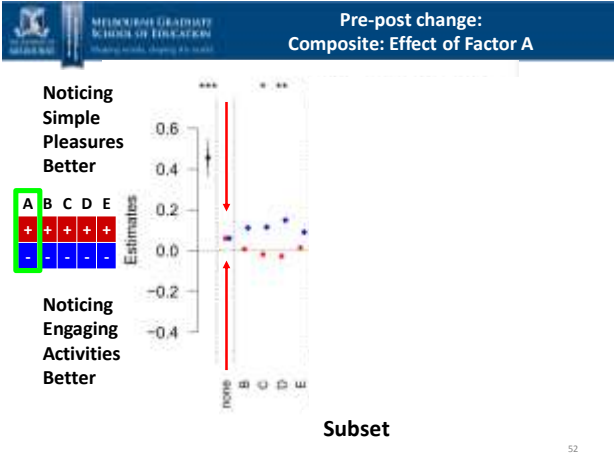
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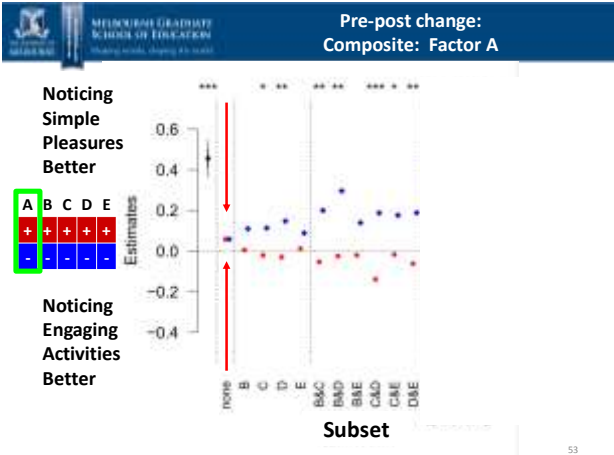
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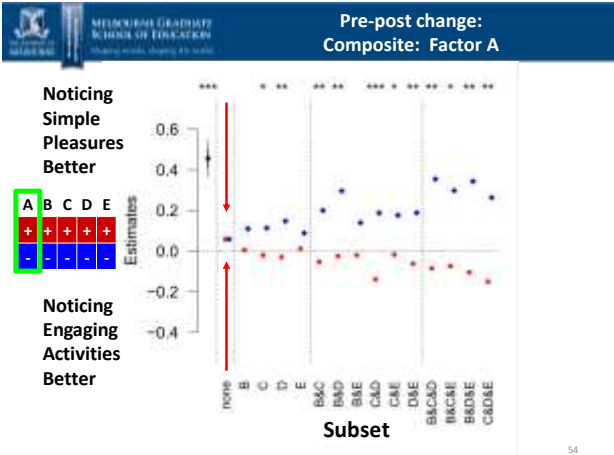
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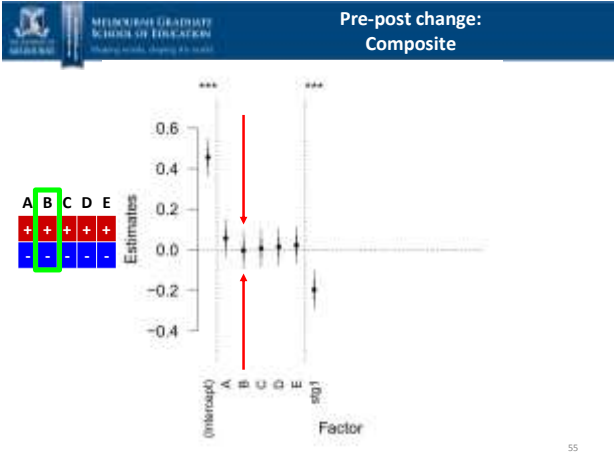
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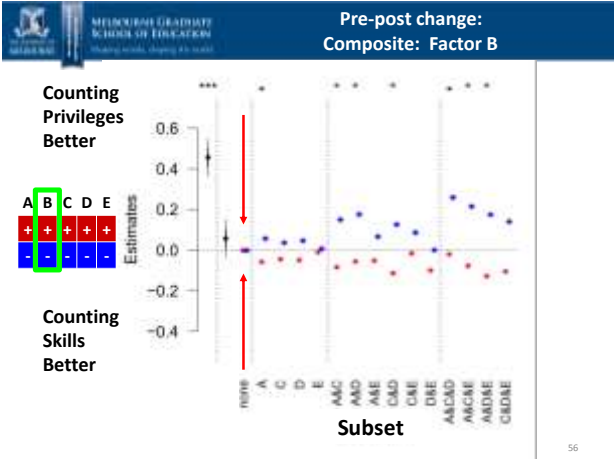
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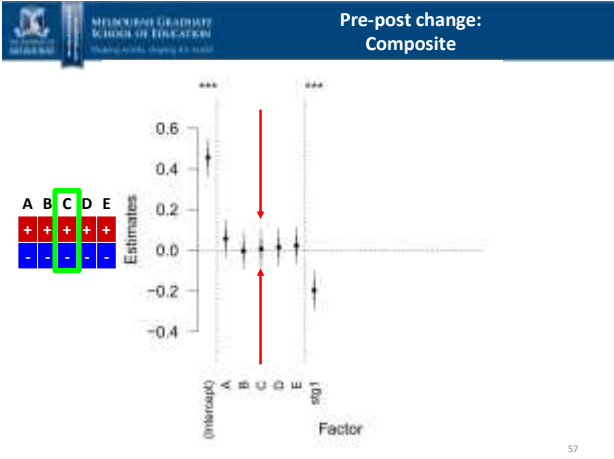
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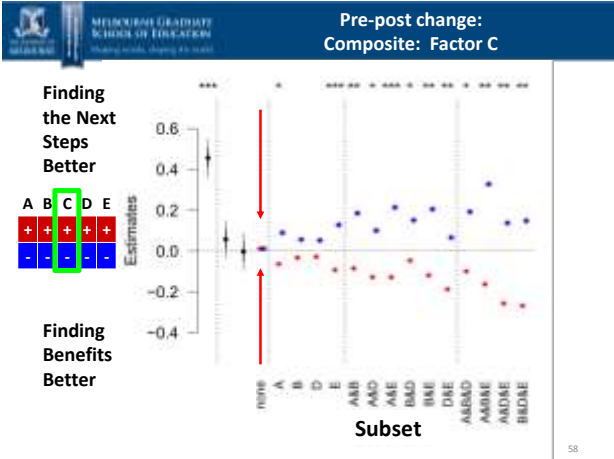
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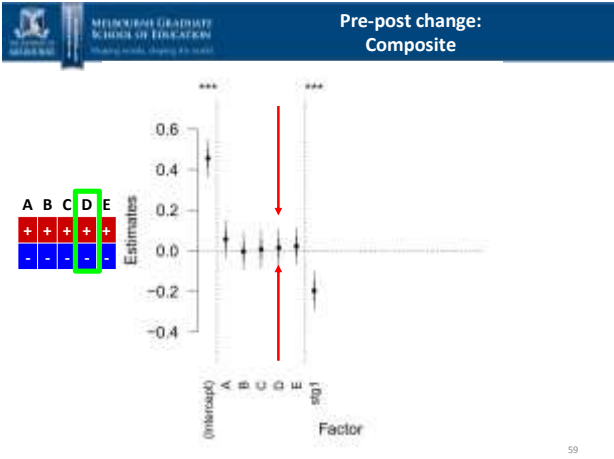
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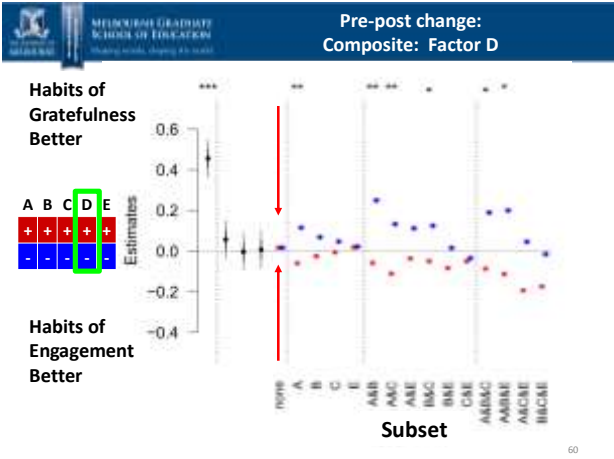
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**Further research**

- Further testing of interactions
- Process vs. construct
  - Exercise variants made little difference
  - Exercise pairs shared *processes* in common
    - E.g. engaging attention enhanced self-awareness, regardless of the construct
- 5-domain interventions
  - Unusual levels of sustained benefits
  - Was this due to using 5-domains, dosage, or just placebo, etc.

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**More information**



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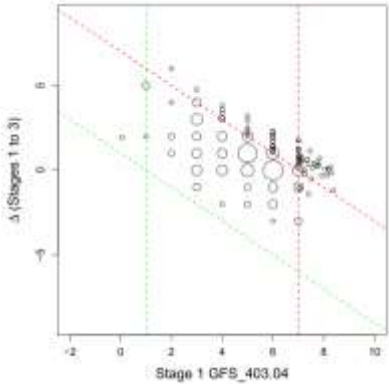
Rusk, R. D., & Waters, L. E. (2013). Tracing the size, reach, impact, and breadth of positive psychology. *The Journal of Positive Psychology*, 8(3), 207–221. doi:10.1080/17439760.2013.777766

Rusk, R. D., & Waters, L. (2015). A psycho-social system approach to well-being: Empirically deriving the Five Domains of Positive Functioning. *The Journal of Positive Psychology*, 10(2), 141–152. doi:10.1080/17439760.2014.920409

Rusk, R. D., Waters, L., & Vella-Brodrick, D. A. (in press). Components of appreciative functioning: A thematic analysis of relevant literature and content analysis of existing measurement scales. *Psychology of Well-Being: Theory, Research and Practice*

**Questions and comments**

**Tobit adjustment**

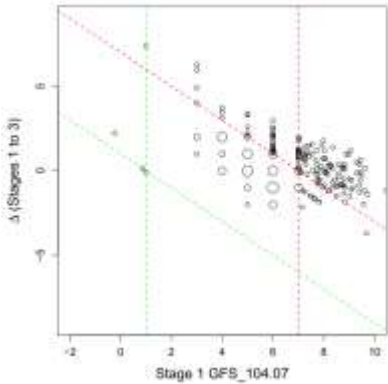


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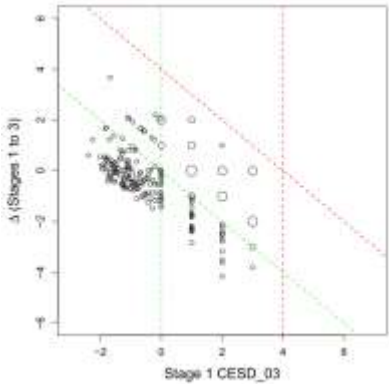
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**Tobit adjustment**

**Tobit adjustment**



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$$\Delta Z_1 = \beta_0 + \beta_A A + \dots$$

