The Criticality of Matched-Expectancy Placebos in Positive Interventions



CHANGING LIVES
IMPROVING LIFE

Ekaterina Pogrebtsova
Callie Hill
Dr. M. G. Gonzalez-Morales
University of Guelph





What is a Placebo?

- Beneficial effect of an inert substance (Sliwinski & Elkins, 2013):
 - Meta-analyses including unpublished trials show placebo pills are as effective as antidepressants – Unless in the most severe depression score range (Kirsch et al., 2008; Kirsch & Sapirstein, 1998)



Reconceptualization of "Placebo"

- Question classic view of placebo as negative, deceptive,
 "inert"
- Researchers claim term "placebo" be removed from clinical contexts (Blease, 2011; Louhiala & Puustinen, 2008)
- Replaced with "Positive Care Effect" for patient transparency (Blease, 2011)



Reconceptualization of "Placebo"

• If treatments are improved when combined with placebo, then it is in the clients' best interest to bolster placebo effects (Sliwinski & Elkins, 2013)

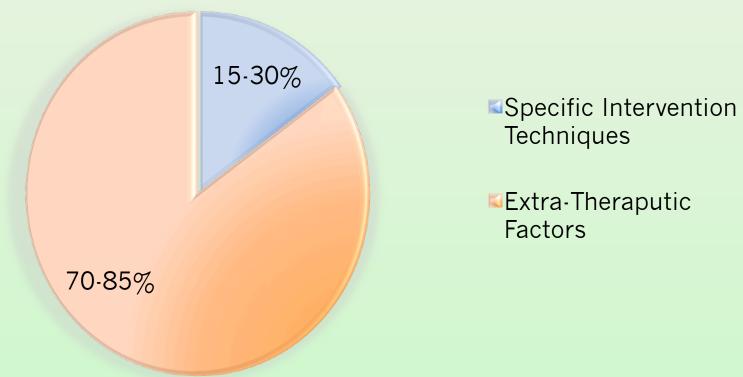


Placebo versus Positive Psychology Interventions?



Does "positive care effect" matter in Positive Interventions?

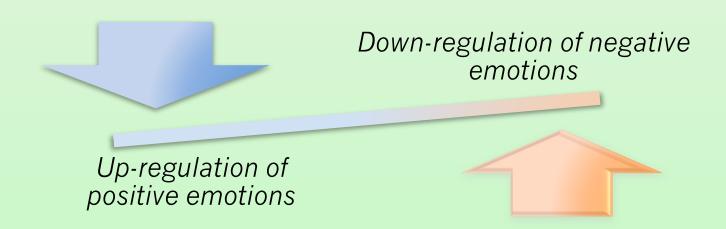
Clinical Psychology Meta-analyses suggest...



Thomas, M. L. (2006). The contributing factors of change in a therapeutic process. *Contemporary Family Therapy*, 28, 201–210.

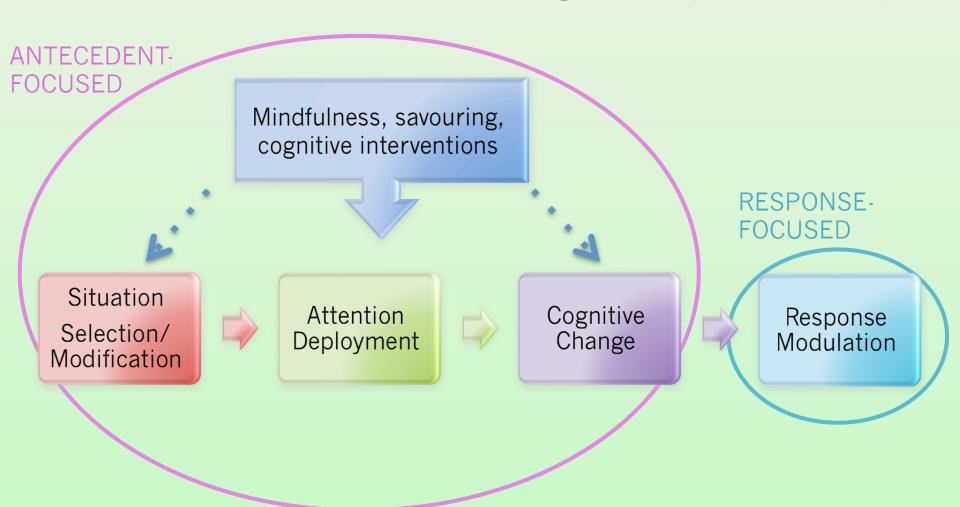
Current Intervention: Emotion Regulation "Toolkit"

- Emotion regulation utilized widely in positive interventions (Quoidbach, Mikolajczk & Gross, 2015)
 - 3 Good Things: gratitude, love, happiness, joy
 - Mindfulness/mediations: acceptance of emotions
 - Positive Meditations "loving kindness": gratitude, love
 - Gratitude journaling: gratitude, love, happiness
 - "Best possible self": hope, excitement, inspiration



How Emotion Regulation Interventions Work

Process Model of Emotion Regulation (Gross, 2015)



Current Study

Primed

"Mental Wellbeing Toolkit"

INTERVENTION

Mindfulness

Savouring

Positive Reappraisal "Mental Wellbeing Toolkit"

PLACEBO

Breathing Exercise

Distant Memory Recall

Recent Memory Recall "Cognitive Activity
Toolkit"

ACTIVE CONTROL

Breathing Exercise

Distant Memory Recall

Recent Memory Recall

Priming

"The distant memory reflection is a researchbased, helpful practice to understand yourself better and really learn to reflect on your life and who you are as a person. Next time you think about the past, look deeper and examine the details. Why should you reflect on distant memories and how does it promote well-being? Self-reflection can allow us to understand ourselves, our lives, and the people in it better to reduce our stress in the present."

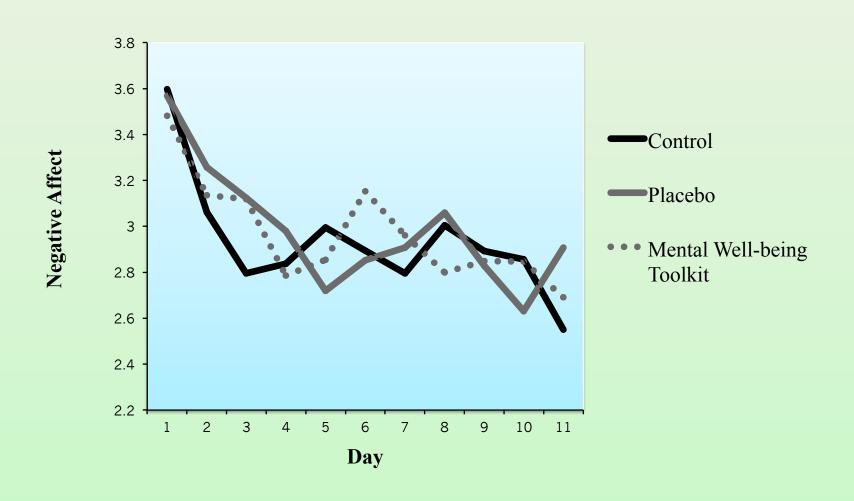
Current Study **Canadian Undergraduate Students** N = 130Control **Placebo** Intervention Assigned =42 Assigned =45 Assigned =43 Pre-Intervention Analyzed =38 Analyzed =38 Analyzed =36 Daily Intervention Analyzed=39 Analyzed=41 Analyzed=39 Days=375 Days=384 Days=374 Post-Intervention Analyzed=28 Analyzed=32 Analyzed=29 1-Month Follow-Up Analyzed=23 Analyzed=13 Analyzed=12

TOTAL = 119 participants, 1133 daily data points

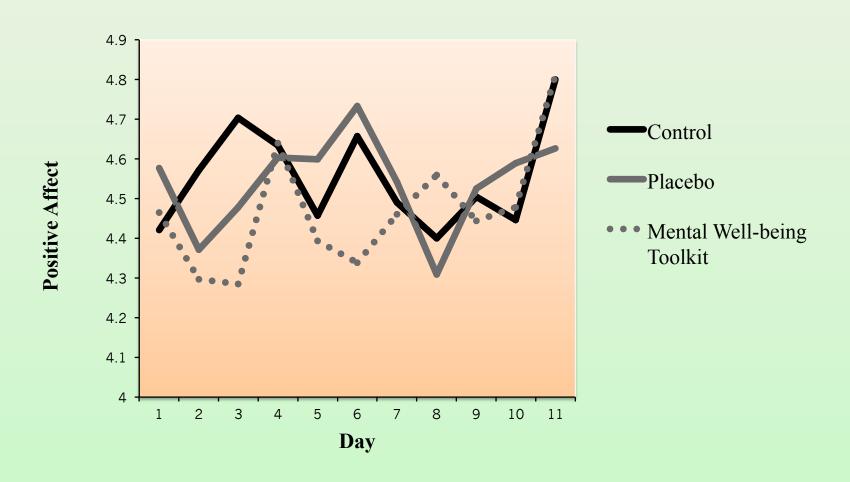
Results

- Manipulation Check
 - E.g., "How confident are you that this Toolkit will be successful in improving your mental wellbeing?" (Treatment Credibility Scale; Borkovek & Nau, 1972)
 - Non-significant ANOVA differences across all conditions in expectancy beliefs, p = .59

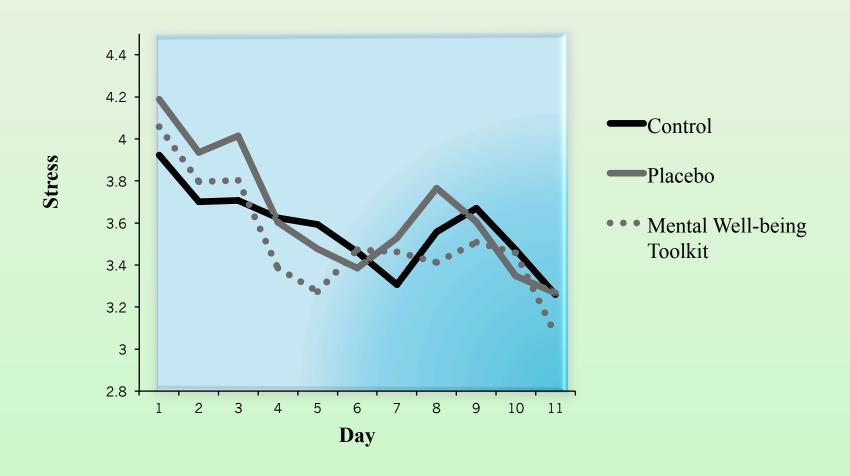
Negative Affect Change Over 2-Week Intervention



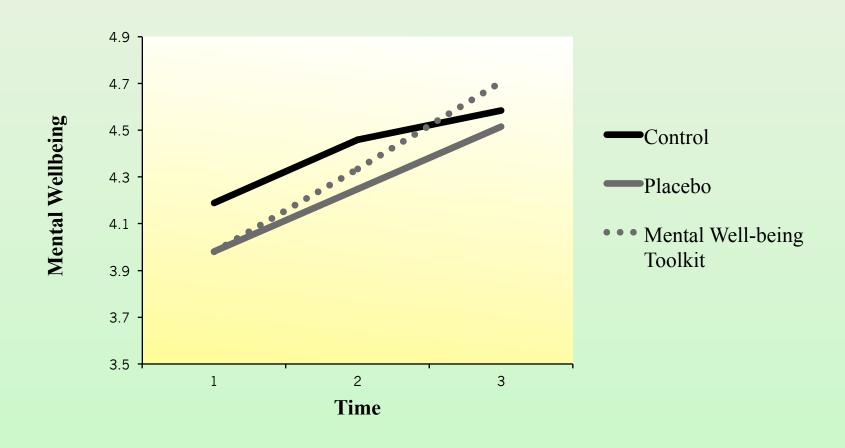
Positive Affect Change Over 2-Week Intervention



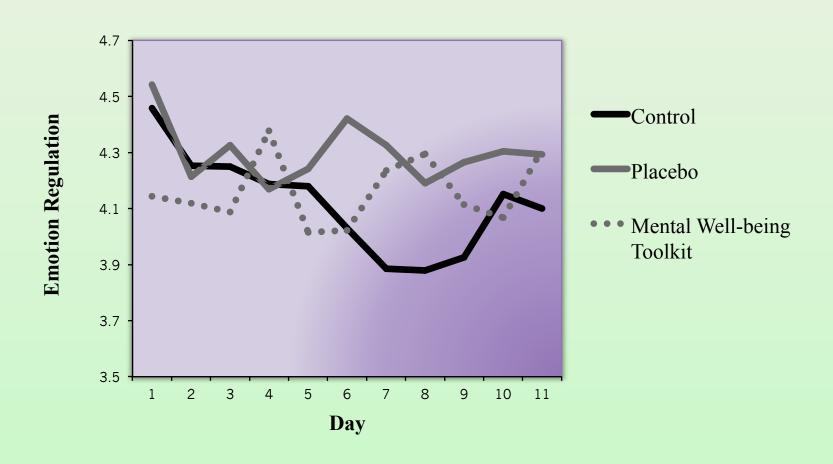
Stress Change Over 2-Week Intervention



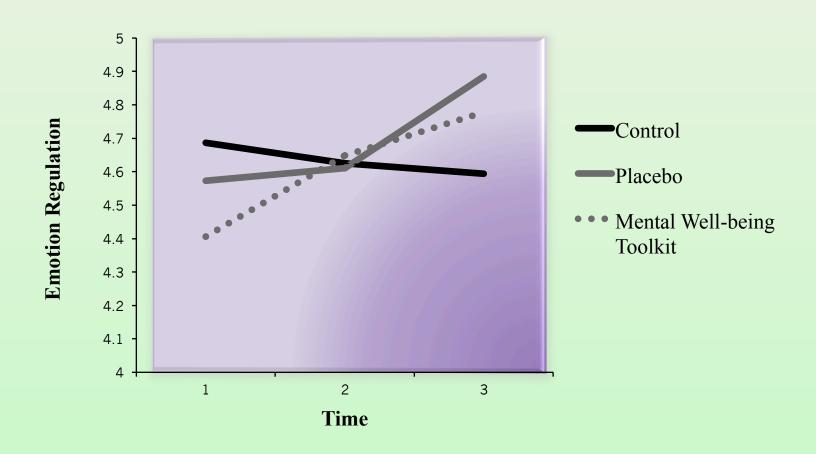
Mental Wellbeing Change Baseline – 1-Month Follow-Up



Emotion Regulation Change Over 2-Week Intervention



Emotion Regulation Change Baseline – 1-Month Follow-Up



Multilevel Growth Results for Emotion Regulation

| | Model 2 | | | |
|----------------------------------|----------|------|------|----------|
| Parameter | Estimate | SE | df | t |
| Between-Persons | | | | |
| Intercept | 4.29 | 0.09 | 1011 | 49.11*** |
| Intervention vs. Placebo | -0.15 | 0.12 | 116 | -1.22 |
| Placebo vs. Control | -0.08 | 0.12 | 116 | -0.67 |
| Residual Variance | 0.76 | 0.87 | | |
| R^2 | 0.01 | | | |
| Within-Persons | | | | |
| Time | -0.02 | 0.01 | 1011 | -2.11* |
| Time*Intervention vs. Placebo | 0.02 | 0.01 | 1011 | 2.04* |
| Time*Placebo vs. Control | 0.03 | 0.01 | 1011 | 2.56* |
| Residual Variance | 0.28 | 0.53 | _ | |
| R ² | 0.00 | | | |

Implications

- Placebo is Powerful (not "inert" but ACTIVE based on how it is used)
- Reconceptualization of "Placebos" in healthcare, schools, workplaces...
 all services
- "Positive Care Effect" communicated for full client and research transparency

Focus on POSITIVE intervention EXPERIENCE more than specific strategies

Thank you!

Critically examine and harness the power of placebos







References

- Blease, C. (2012). The principle of parity: the 'placebo effect' and physician communication. Journal of medical ethics, 38(4), 199-203.
- Boot, W. R., Simons, D. J., Stothart, C. & Stutts, C. (2013). The pervasive problem with placebos in psychology: Why active control groups are not sufficient to rule out placebo effects. *Perspectives on Psychological Science*, 8(4), 445-454
- Chiesa, A., Brambilla, P., & Serretti A. (2010). Functional neural correlates of mindfulness meditations in comparison with psychotherapy, pharmacotherapy and placebo effect. Is there a link? Acta Neuropsychiatrica, 22(3), 104-117.
- Kirsch, I., Deacon, B. J., Huedo-Medina, T. B., Scoboria, A., Moore, T. J., & Johnson, B. T. (2008). Initial severity and antidepressant benefits: A meta-analysis of data submitted to the food and drug administration. *PLoS Medicine*, 5, e45.
- Kirsch, I., & Sapirstein, G. (1998). Listening to Prozac but hearing placebo: A meta-analysis of antidepres- sant medication. *Prevention and Treatment, 1.*
- Louhiala, P., & Puustinen, R. (2008). Rethinking the placebo effect. *Medical humanities*, 34(2), 107-109.
- Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase wellbeing? *Current Directions in Psychological Science*, 22(1), 57-62
- Mongrain, M., & Anselmo-Matthews, T. (2012). Do positive psychology exercises work? A replication of Seligman et al. (2005). Journal of Clinical Psychology, 68(4), 382-389.
- Ng, W., & Diener, E. (2009). Feeling bad? The "Power" of positive thinking may not apply to everyone. *Journal of Research in Personality*, 43, 455–463.
- Temple, R., & Elllenberg, S. S. (2000). Placebo-controlled trials and active control trials in the evaluation of new treatments. *Annals of Internal Medicine*, 133(6), 455-563