

## Promoting Inclusion and a sense of Belonging in a new Intro Stats course: an Inside-Out Bottom-Up approach:

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**Happy Intro Stats (STAT 136):** New Course fully inclusive, designed to address the importance of **self-care** on **mental health** and help students understand inequities in mental health status and access via statistical learning.

**STAT 135:** Our traditional Intro Stats Course which requires calculus as a prerequisite, uses a pricey textbook, and is taught without some inclusion-oriented interventions.

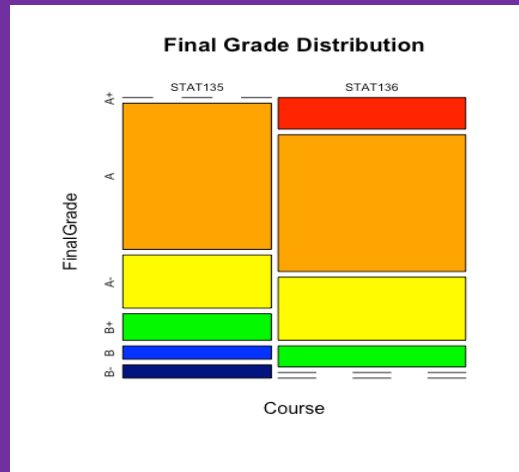
### DIFFERENCES in Happy Intro Stats (HIS):

- HIS is **inside-out** (emphasizing self-care and mental health first) and **bottom-up** (designed "from the margins")
- HIS imposes **no prerequisites**
- HIS uses an open-access textbook, **IMS**
- HIS teaches **simulation-based inference** (randomization & bootstrapping), while Stat 135 teaches normality-based methods
- HIS uses a blocked-based coding tool (**RBlocks**) before teaching syntax-based R
- HIS students practice **self-care exercises** while discovering the scientific evidence behind them via reading & discussion
- HIS is **student-centered**, student-driven, and **co-created** with two student interns
- HIS puts "humans" first; it values values of different background and voices (diversity) and dedicates in-class time for **community building** and group collaboration
- HIS students can share their honest opinions via anonymous online surveys

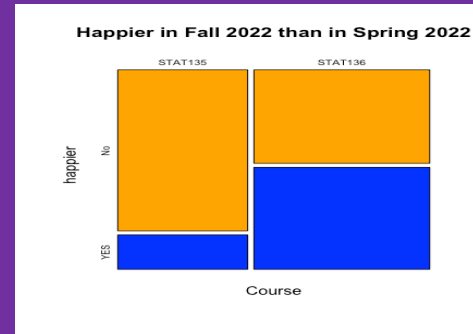
### THEORETICAL FRAMEWORK

- Deci, E. L., & Ryan, R. M. (2008). **Self-Determination Theory (SDT):** A macrotheory of human motivation, development, and health. *Canadian psychology/ Psychologie canadienne*, 49(3), 182-185.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Merlo, G. (2021). *Happiness and Self-Care*. Principles of Medical Professionalism. Oxford Academic.

# Happy Intro STATS: Positive Impacts of Self-Care practices and Inclusive pedagogies on undergraduate student learning in Statistics and Happiness. 😊



\* NO statistical significance in students' responses to their happiness level in Spring 2022 between two courses.



\* NOTE: One of the four students in STAT 135 who didn't participate in the study failed the course (receiving an F).



Scan to access shared course materials, including:

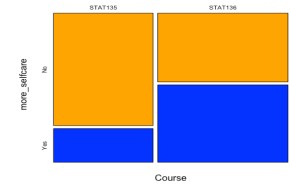
- ✓ Weekly Self-Care Practices
- ✓ Selected Class Examples
- ✓ Selected R Activities
- ✓ Group Project Datasets

### Our Beliefs

- Inclusive pedagogies in HIS promote students' sense of belonging (**relatedness**)
- Student-centered designs help facilitate students' sense of agency (**autonomy**)
- Designing HIS "from the margins" (imposing NO prerequisites nor prior experiences) enlarges students' confidence (**competency**)
- Practicing weekly self-care exercises with others while learning statistical evidence behind those practices benefits students not only in their learning but also in life

### More Results

Increase self-care frequencies over Fall 2022



Item 1: "Overall, I feel a sense of belonging in this class"

Belonging	Course	
	STAT 135	STAT 136/ HIS
2	1	0
3	1	0
4	0	1
5	3	4
6	6	7
7	7	11
Total	18	23

Item 2: "Overall, I feel the learning community we co-created in this class is very welcoming and inclusive"

Inclusion	Course	
	STAT 135	STAT 136/ HIS
2	1	0
5	2	3
6	2	6
7	13	14
Total	18	23

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