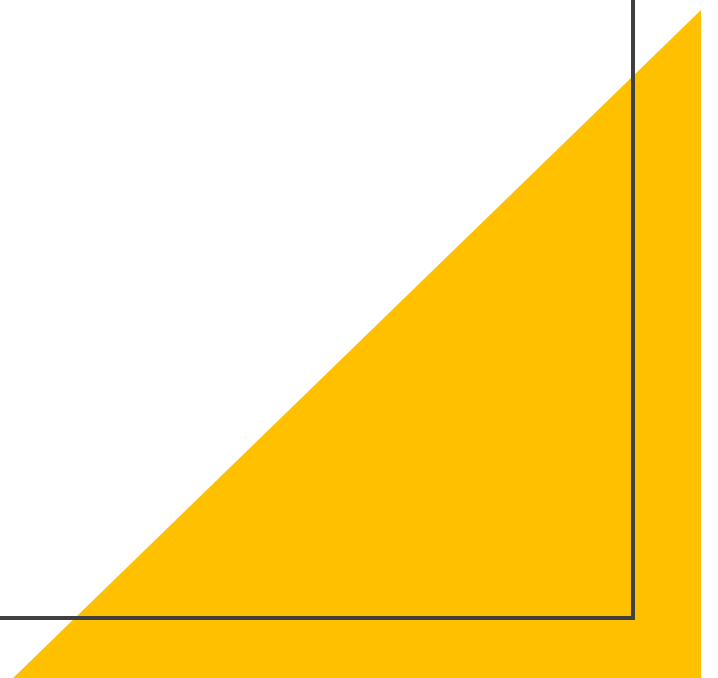


# The Relationship Between Emotion, Pain, and Perspective Taking

By: Aleasia Ryan, Dr. Erin Dannecker



# Background

- People with chronic pain often have negative emotions, such as increased anxiety, depression, and anger. (Gilam et al., 2020)
- Positive emotional states have been associated with reduced pain ratings. (Lumley et al., 2011)
- Emotion has been shown to influence perspective taking. (Binyamin-Suissa et al., 2019)

# Methods

- Online Survey
  - Taken on one occasion
  - Measurements:
    - Depression
    - Sadness
    - Annoyance
    - Irritation
    - Worry
    - Pain intensity
    - Perspective taking while rating own pain intensity
- Analysis
  - IBM SPSS
    - Frequency and Descriptive Statistics
    - Spearman Bivariate Correlations
    - Multinomial Regression Model

# Results

	N	Minimum	Maximum	Mean	Std. Deviation
<b>Sad</b>	246	1	5	1.88	.95
<b>Depressed</b>	246	1	5	1.80	.95
<b>Frustrated</b>	246	1	5	2.25	1.14
<b>Irritated</b>	246	1	5	1.87	1.01
<b>Worried</b>	246	1	5	2.48	1.14

# Results

	Frequency	Percent
<b>None of These Comparisons</b>	20	8.10%
<b>Self Only</b>	184	74.80%
<b>Other Only</b>	12	4.90%
<b>Combination Self and Other</b>	30	12.20%

# Results

Current Pain Intensity and Emotion		
	R Value	P Value
Sad	0.13	0.04*
Depressed	0.16	0.01*
Frustrated	0.06	0.39
Irritated	0.07	0.27
Worried	0.05	0.43

# Results

- **Perspective Taking and Emotion**
- Emotion explains the probability of perspective taking better than an empty model
  - $X^2 = 34.21, p < .01$
- 'Worry' explains a significant amount of variance in perspective taking
  - $X^2 = 17.03, p < .01$
  - 0.89 unit increase in 'worry' increased the probability of 'self' perspective taking
  - 0.91 unit increase in 'worry' increased the probability of 'self and other' perspective taking

# **Conclusion**

- Current pain intensity was significantly positively correlated with depression and sadness.
- An increase in worry increases the odds of 'self' and 'self and other' perspective taking.



# References

- Binyamin-Suissa, L., Moyal, N., Naim, A., & Henik, A. (2019, July 03). Perspective taking and emotion: The case of disgust and sadness. Retrieved from <https://www.sciencedirect.com/science/article/pii/S1053810018303581?via=ihub>
- Gilam, G., Gross, J. J., Wager, T. D., Keefe, F. J., & Mackey, S. C. (2020, June 19). What Is the Relationship between Pain and Emotion? Bridging Constructs and Communities. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0896627320303937?via=ihub>
- Lumley, M. A., Cohen, J., Borszcz, G., Cano, A., Radcliffe, A., Porter, L., . . . F. (2011, June 5). Retrieved from <http://europepmc.org/article/MED/21647882>

# **Questions?**

If you can any comments or questions, please don't hesitate to reach out!

**Email: [alrbbg@umsystem.edu](mailto:alrbbg@umsystem.edu)**