

# Eye-Tracking Guilt Induction

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Psychology

## Purpose

- This study serves as proof of concept for the eye-tracking measure utilizing single-word analysis and demonstrates cognitive processes potentially underlying situational and structural variations in perceptions of guilt induction

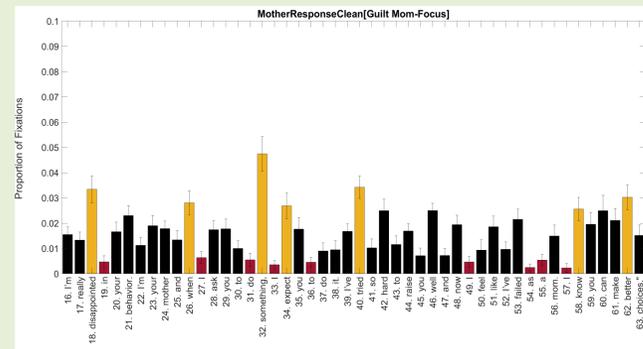
## Results

## Methods Con.

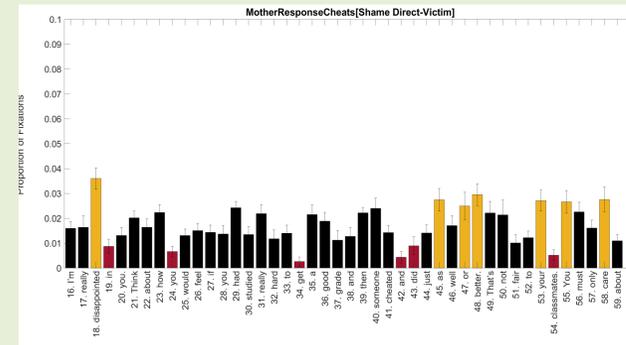
## Introduction / Background

- Guilt induction from a parent can influence children's moral development when it is based on empathetic-related guilt (Rote & Smetana, 2017).
- It can also serve as psychological control and can be harmful for youth regulation (Rote & Smetana, 2017).
- Perceptions of guilt induction vary by situation and statement structure (Rote, 2017)
- Fixation rates on individual words are more attended to when the words had a highly negative emotional affect (Mogg, Bradley, & Williams, 1995).
- This study examines differences in attention to specific words within guilt inductive statements that may underly previously observed variations using vignettes
- Highly negative emotional affect words were added to Vignettes as "meaningful words" for fixation as well as non-meaningful words (disappointed vs as)
- The role of guilt induction by a parent is vital to the understanding how children's development and adjustment is affected.

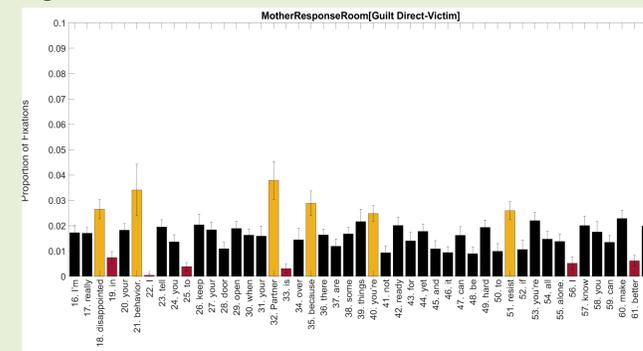
**Mom Response Clean (Guilt Mom- Focus) words by fixation rate Histogram**



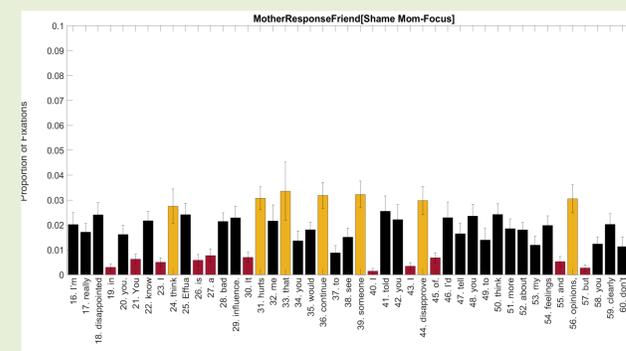
**Mother Response Cheats (Shame Direct-Victim) words by fixation rate Histogram**



**Mother Response Room (Guilt Direct Victim) words by fixation rate Histogram**



**Mother Response Friend (Shame Mom-Focus) words by fixation rate Histogram**



### Key for Histograms

**Black-** Fixation rate within 1 standard deviation on either side of the mean

**Yellow-** Fixation rate at or above +1 standard deviation from the mean

**Red-** Fixation rate at or below -1 standard deviation from the mean

## Participants and Methods

- Participants in this study were 79 college students who were recruited through SONA.
- This study utilized 12 hypothetical vignettes per participant
- varied in the topic over which guilt was induced (e.g., moral transgression vs personal choice vs. Multifaceted), the focus of the mother's criticism (behavior/guilt vs. person/shame), and the highlighted victim (true victim vs parent).
- Participants read and responded to these vignettes while their eye-movement was tracked using an EyeLink 1000plus eyetracker that samples eye-movement at 500hz.
- Fixation rates of each were calculated based on the number of eye fixation periods participants devoted to each word within a vignette

## Vignette examples

**Behavior: Multi: Child not cleaning room. Behavior based criticism Mom focus as victim**

I'm really disappointed in your behavior. I'm your mother and when I ask you to do something, I expect you to do it. I've tried so hard to raise you well and now I feel like I've failed as a mom. I know you can make better choices.

**Behavior: Moral: Child tests on test. Person Criticism. Direct victim Focus**

I'm really disappointed in you. Think about how you would feel if you had studied really hard to get a good grade and then someone cheated and did just as well or better. That's not fair to your classmates. *You must only care about yourself.*

**Behavior: Multi: Child's partner in the room with the door closed. Behavior based criticism. Direct Victim Focus**

I'm really disappointed in your behavior. I tell you to keep your door open when your girlfriend/boyfriend is over because there are some things you're not ready for yet and it can be hard to resist if you're all alone. I know you can make better choices

**Behavior: Multi: Child hanging out with a friend whom the mother does not approve of. Person Criticism. Mom focus as victim**

I'm really disappointed in you. You know I think River is a bad influence. It hurts me that you would continue to see someone told you I disapprove of. I'd tell you to think more about my feelings and opinions, but you clearly don't care

### Chi Square by Domain

High Fixation Word	Chi-Square	df	p value	Frequency Moral	Frequency Multi	Frequency Personal
Tell	6.00	2	0.049	0	0	2
Your	5.78	2	0.056	2	0	0
Would	5.21	2	0.074	5	0	2
Have	5.00	2	0.082	1	0	0
Like	5.00	2	0.082	0	0	1

### Chi-square by Criticism

High Fixation Word	Chi-Square	df	p value	Frequency Guilt	Frequency Shame
Would	3.57	1	0.059	6	1

### Chi Square by Victim

High Fixation Word	Chi Square	df	P value	Frequency Mom	Frequency Victim
As	5.00	1	0.025347319	0	1
Like	5.00	1	0.025347319	0	1
Had	4.00	1	0.045500264	0	1

### Examples of overall significant words in different contexts Left: Mother Victim. Right: Direct Victim

I'm really disappointed in you. Think about how you would feel if you had a kid who stole from you. I've tried so hard to raise you well and **now I feel like I've failed as a mom.** Why do you have to be so selfish?

I'm really disappointed in you. You're good at basketball and you've never been in a play. Why would you switch to something **you might not like or be good at?** You clearly don't care much about your success.

## Conclusions

- Significant words were determined by fixation rates at or over +1 standard deviations from the mean
- Histograms were created divided by vignette type to determine significant words
- A series of Chi Squares were run in order to determine if there were any significant differences in significant words based on vignette type and the likelihood that each individual word was in a specific vignette.
- As seen in the tables to the right the only significant results found were for nonmeaningful words within the vignette when running a chi-square
- Fixation rates of each were calculated based on the number of eye fixation periods participants devoted to each word within a vignette
- There were no significant findings of differences in attention for meaningful word
- There may be evidence that the single word fixations is not applicable when put into the context of real-world conversations and therefore may lack external validity.
- Fixations may be different based around differences in the meaning of the word in context
- Inattentive biases in real world conversations are focused more on the meaning of a sentence and not the individual words.
- There is a difference in connotations involving significant words
  - The word "as" when used in different contexts such as "I feel like I have failed as a mother" versus "You may not like or be good at" (See highlighted vignettes) has a different level of significance possibly based on connotation and affect
- Follow up examination of the results may show a difference in the fixation of important phrases within the vignette and the meaning behind the words in context.
- Future studies should use this examination of the words in context in order to build up methods of how people would respond to real life situations as opposed to single word prompts.

## References

- Rote, W. M., & Smetana, J. G. (2017). Situational and structural variation in youth perceptions of maternal guilt induction. *Developmental Psychology*, 53(10), 1940-1953. doi:10.1037/dev0000396; 10.1037/dev0000396.supp (Supplemental)
- Mogg, K., Bradley, B. P., & Williams, R. (1995). Attentional bias in anxiety and depression: The role of awareness. *British journal of clinical psychology*, 34(1). 17-36.