An Experimental Analysis of the effects of Memes and Emotion Regulation Processes

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Strategic Communication & Media 2022

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Introduction

Emotion regulation is defined as the process by which people modify the duration, intensity, or type of emotions they experience (Gross, 1998). Emotion regulation is fundamental to human behavior; individuals commonly distract themselves, hide behaviors related to emotion, and reassess situations to modify their emotional experiences. The majority of research in this area focuses on the ways in which emotion regulation processes are carried out on an intrapersonal level, while less research explores how digital and social technologies may influence emotion regulation processes.

An internet meme is used to represent concepts or ideas that are spread virally on the internet. These memes often couple still or video images with text in effort to convey a complex idea (e.g., Diaz, 2013; Shifman, 2014). Memes are a popular form of communication messages in online environments shape and reflect social and cultural attitudes (Shifman, 2014).

Recent research indicates the profound effects that the internet and digital technologies have on emotion regulation processes (e.g., Wadley et al., 2020). Within that line of research, experimental evidence suggests that viewing internet memes can regulate emotion in clinically depressed populations (Akram et al., 2020). However, it remains unknown whether or not these effects extend to the general population, and whether or not these effects extend to emotions other than depression. As such, the present study employs an experimental design to understand if memes regulate emotion, specifically anxiety. The following hypothesis guides this study.

H1: Anxious individuals will experience greater emotion regulation effects than non-anxious individuals when viewing memes related to anxiety, compared to other types of memes (i.e., humorous, control).

Key Terms

Emotions: The reactions that we have to ongoing relationships with our environment (Lazarus, 2000).

Emotion regulation: The process by which we change "the emotions we have, when we have them, and how we experience and express them" (Gross, 1998).

Materials and Methods

This study employed a 2 (emotion type: anxiety, no emotion) x 3 (meme type: anxiety, humor, control) between-groups experimental design. A sample of 108 people were recruited from Amazon Mechanical Turk (M-Turk) to participate in this study in August 2021.

Upon agreeing to participate, participants were randomly assigned to emotion condition. The anxiety condition had participants recall and write about a time in their lives in which they felt particularly anxious. The no emotion condition has participants recall and write about a time they did an everyday, mundane task. After this task, participants were assigned to meme condition. Regardless of condition, all participants saw a total of five memes. The nature of these memes depended on condition assignment.

Figure 1. Example of memes used in study (See second document for examples)
After viewing their condition memes, participants then went on to report their anxiety levels using the State Trait Anxiety Inventory-T Form, which uses 20 items to capture the construct of anxiety.

Results

To analyze the data specific to this study, we conducted a univariate ANOVA in which emotion and meme type were added as fixed factors and anxiety was added as the dependent variable. Because the hypothesis predicted a specific relationship, we ran a Bonferroni post-hoc test to assess where mean differences existed, if any were identified. Results of this analysis revealed a non-additive effect that approached significance ($F = 2.11$, $p = .13$), while the individual conditions alone did not demonstrate an effect with anxiety (emotion condition: $F = 0.04$, $p = .85$, meme condition $F = 0.26$, $p = .71$). Figure X plots the means based on conditions. As evidenced in this chart, those who responded to the anxiety prompt experienced the highest levels of anxiety when viewing humorous memes. Furthermore, those who responded to the anxiety prompt experienced the lowest level of anxiety when responding to a control prompt. H1 was not supported.

		Meme Condition		
		Anxiety	Humor	Control
Emotion Condition	Anxiety	4.32 (2.43) $N = 19$	4.94 (2.39) $N = 18$	3.16 (2.69) $N = 19$
	No emotion	4.52 (2.74) $N = 17$	4.67 (2.00) $N = 18$	3.94 (2.29) $N = 17$

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Discussion

We did not find evidence to support H1, which stated that those who responded to an anxious prompt would experience greater emotion regulation effects than non-anxious individuals when viewing memes related to anxiety, compared to other types of memes (i.e., humorous, control). Interestingly, those who responded to the control prompt who viewed control memes experienced the lowest levels of anxiety compared to other groups. Our results also indicate no differences in anxiety levels between anxiety and control emotion conditions when viewing anxiety or humorous memes. Overall, it appears that results of the present study suggest that when feeling anxious, distraction might be the most effective at downregulating anxiety, as evidenced by our anxiety emotion condition reporting the lowest levels of anxiety compared to other groups.

Gross (1998) argues that there exist five emotion strategies individuals employ to modify their emotional experiences (i.e., situation selection, situation modification, attentional deployment, cognitive reappraisal, response modulation). The results of the previous study call attention to the attentional deployment strategy. Specifically, it may be the case that when feeling anxious, it may be beneficial to view meme content that lacks in emotion. Such a possibility is evidenced by our finding that those in the anxiety emotion condition who viewed control memes experienced the least anxiety compared to other groups.

Of course, it is possible that our study design prevented us for detecting an effect supporting H1. It is possible that we did not find support for H1 because our experimental induction for emotion type (i.e., anxiety, control) was ineffective at producing the desired emotion in participants. Previous research has suggested that the process of writing about emotional experiences (as participants did in this study) may actually be a method of emotion regulation (e.g., Pennebaker, Zach, & Rimé, 2001). Another possible explanation may be the small sample size of this study.

References
Akram, U., Drabble, J., Cau, G., Hershaw, F., Rajenthran, A., Lowe, M., ... & Ellis, J. G. (2020). Exploratory study on the role of emotion regulation in perceived valence, humour, and beneficial use of depressive internet memes in depression. Nature, 10(1), 1-8.
Díaz, C. M. (2013). Defining and characterizing the concept of Internet Meme. CES Psicología, 6(2), 82-104.
Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. Review of General Psychology, 2(3), 271-299.
Shifman, L. (2014). Memes in Digital Culture. Cambridge, MA: MIT press.
Wadley, G., Smith, W., Koval, P., & Gross, J. J. (2020). Digital Emotion Regulation. Current Directions in Psychological Science, 29(4), 412-418.

Acknowledgments

anxiety: something bad is about to happen
me: what do you mean anxiety:

Me: Stop overthinking this. It'll all work out.
My Anxiety:
@thedryginger
[laughs in hidden]

Anxiety: "What if this happens?"
Me: "But it won't."
Anxiety: "But what if it does?"
Me:
- You got me there

Me: I'm having such a good day today!
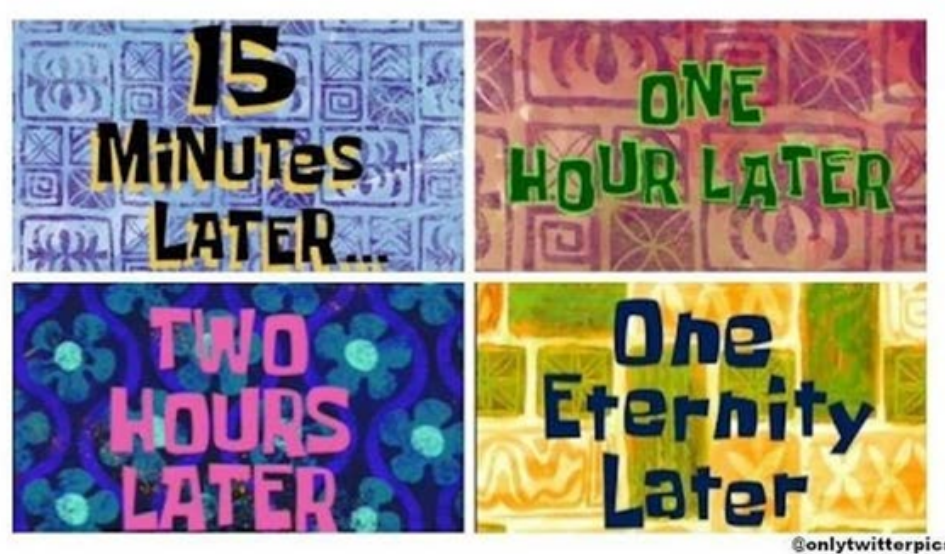My anxiety:
@MyTherapistSays
Time to sabotage

When you wake up and enjoy the 30 seconds of calm before your anxiety kicks in

When you try to explain your anxiety to someone and they reply with "don't worry, you'll be fine"
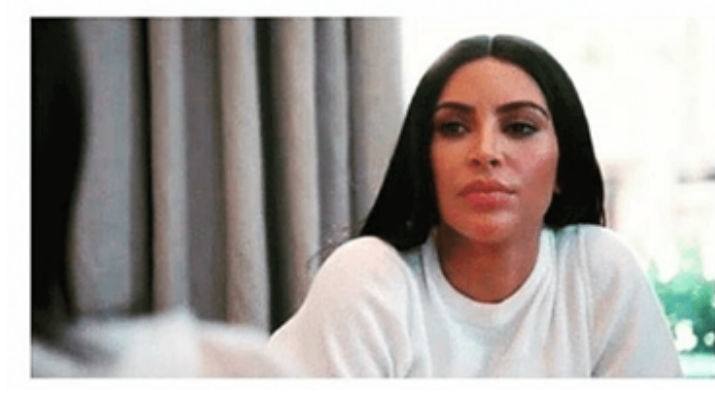
waiting for anxiety to go away
15 MINUTES LATER...
ONE HOUR LATER
TWO HOURS LATER
One Eternity Later
@onlytwitterpics

when you promise yourself you won't be anxious today but then decide to think about that awkward thing you said 4.5 years ago
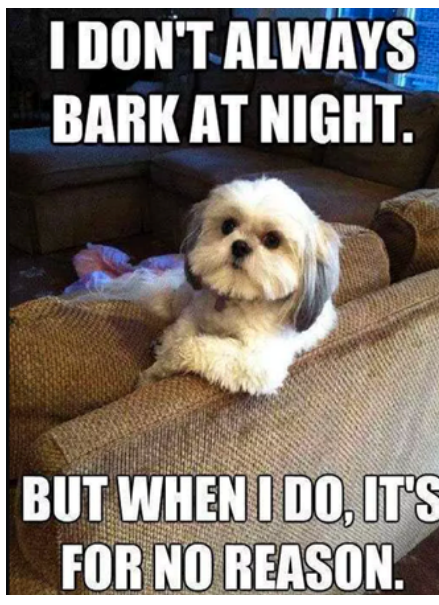why are you like this

"what do you have to be anxious about?"
things that were
things that are
and some things...
that have not yet come to pass

@trill_linaa
Me: *remotely happy/calm*
Anxiety:
THAT'S OVER. IT'S CANCELLED.

Netflix: "Are You Still Watching?"
Me:

I DON'T ALWAYS BARK AT NIGHT.
BUT WHEN I DO, IT'S FOR NO REASON.

dankmemeuniversity
Telekinesis
Telekinephews
yourethebestthingiveseen
this is the kind of humor I'm into

THAT MOMENT
WHEN YOU SEE YOUR BOSS ON THE GOLF COURSE AFTER CALLING IN SICK
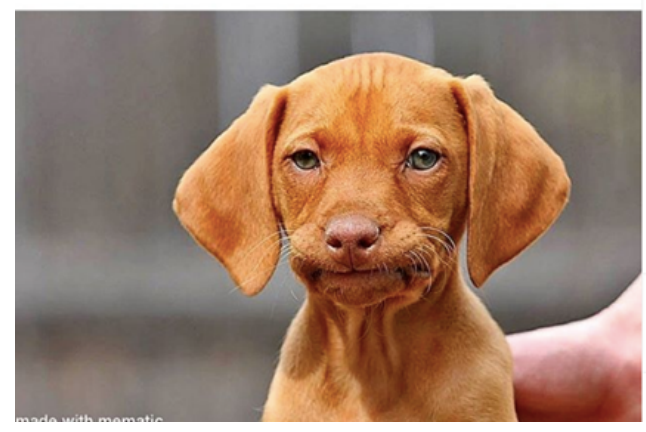
When you find out your normal daily lifestyle is called "quarantine"

When you walk past a coworker you don't know quite yet

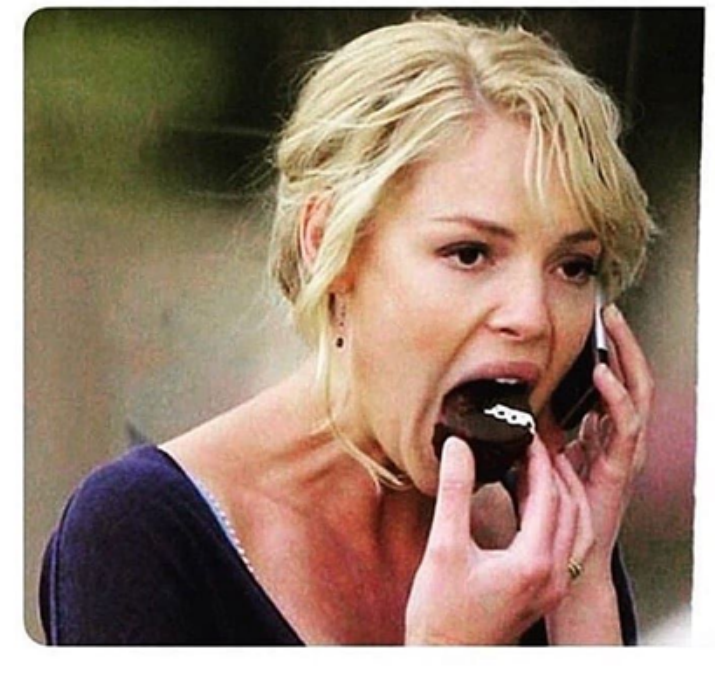2020 every second
BUT WAIT, THERE'S MORE

Me calculating how much sleep I'll get if I watch one more episode:
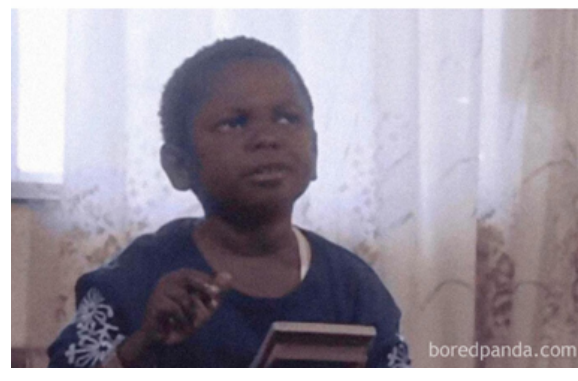
When you gotta turn the radio down to see the house address

Me: "Idk why Im not losing weight."
Also me:

Person: "you can't watch 9 years worth of television in 2 weeks"
Me:
- YOU HAVE NO IDEA HOW HIGH I CAN FLY.

Me reading the CDC's list for Coronavirus and wondering how a Fever, Cough, & Shortness of breath lead to a toilet paper shortage

WHAT YOU KNOW ABOUT
THE GOOD LIFE?
memeshappen.com