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School of Health and Welfare

Switched On:

Aversive Content in Traffic Safety Videos – Psychophysiological Indicators of Message Processing

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AKEN April, 2019

The Problem

- Traffic crashes: Leading cause of death for 15-29's. (worldwide)
- 75% of traffic fatalities for the 20-30's are males. (U.S.)

https://www.cdc.gov/motorvehiclesafety/global/
https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810853

Some of the Answers?

But What About Behavior?

Policy change

PRE-HELMET LAWS

POST HELMET LAWS

Another Answer

Emotion

The Potential Power of Media

Our minds
and physical bodies
are not separate.

Psychophysiology

THE HOOK UP

THE LAB

The Studies

Psychophysiology

1. Does timing of fear-based scenes in traffic safety videos affect message processing?
2. Does propensity for risk taking message processing?

Aim	Method	Analysis	Importance
Timing of Fear	Psychophysiology	Quantitative	Beyond, reach and frequency
Propensity for Risk Taking	Psychophysiology and MAM	Quantitative	How to reach risk taking audience

High Aversive

Tone: Switched

Low Aversive

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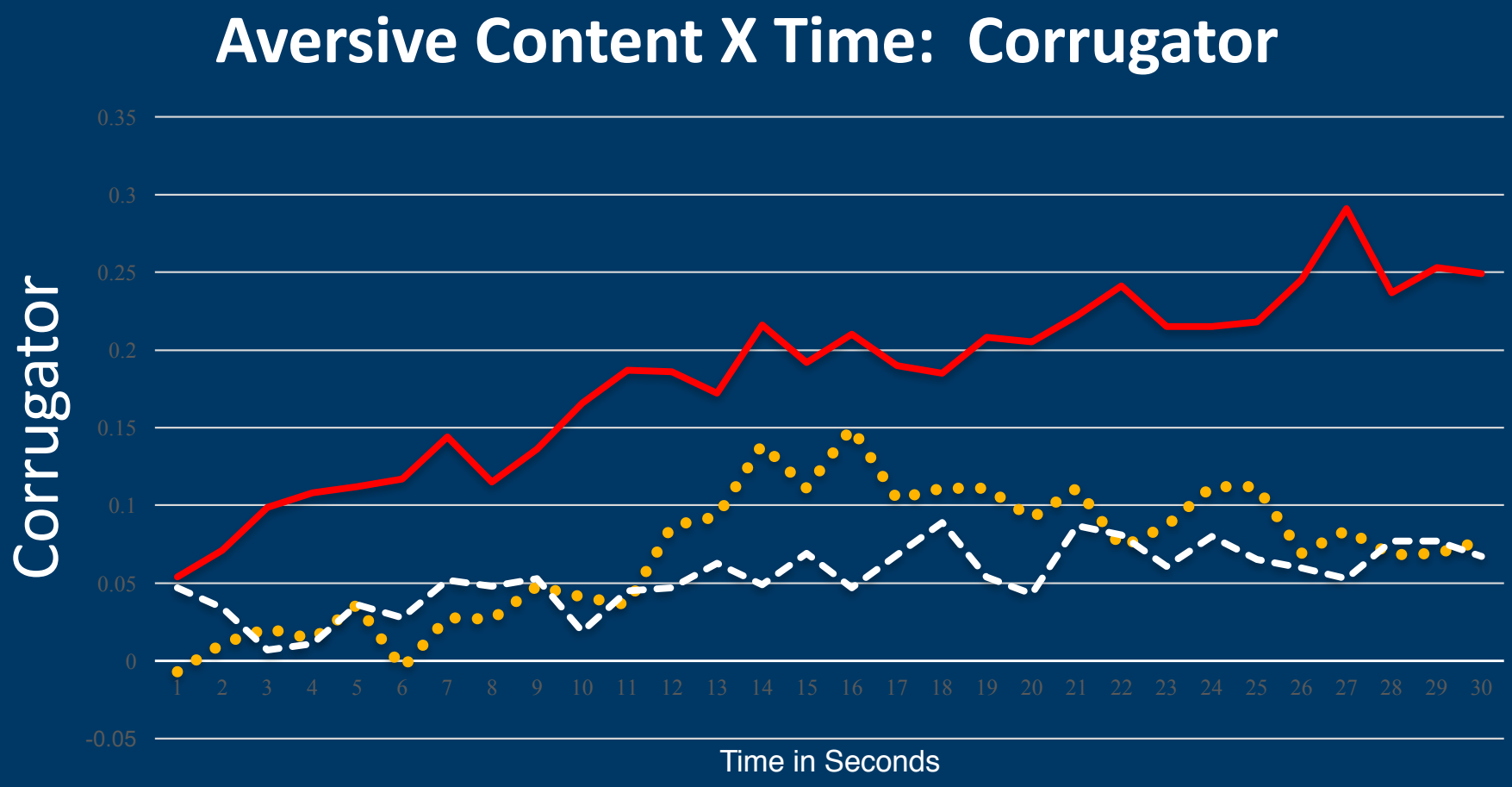
Corrugator



HOWELL, M. et al. Switched on: How timing of aversive content in traffic safety videos impact psychophysiological indicators of message processing. ***Health Communication***, v. 12, p. 1-10, 2018.

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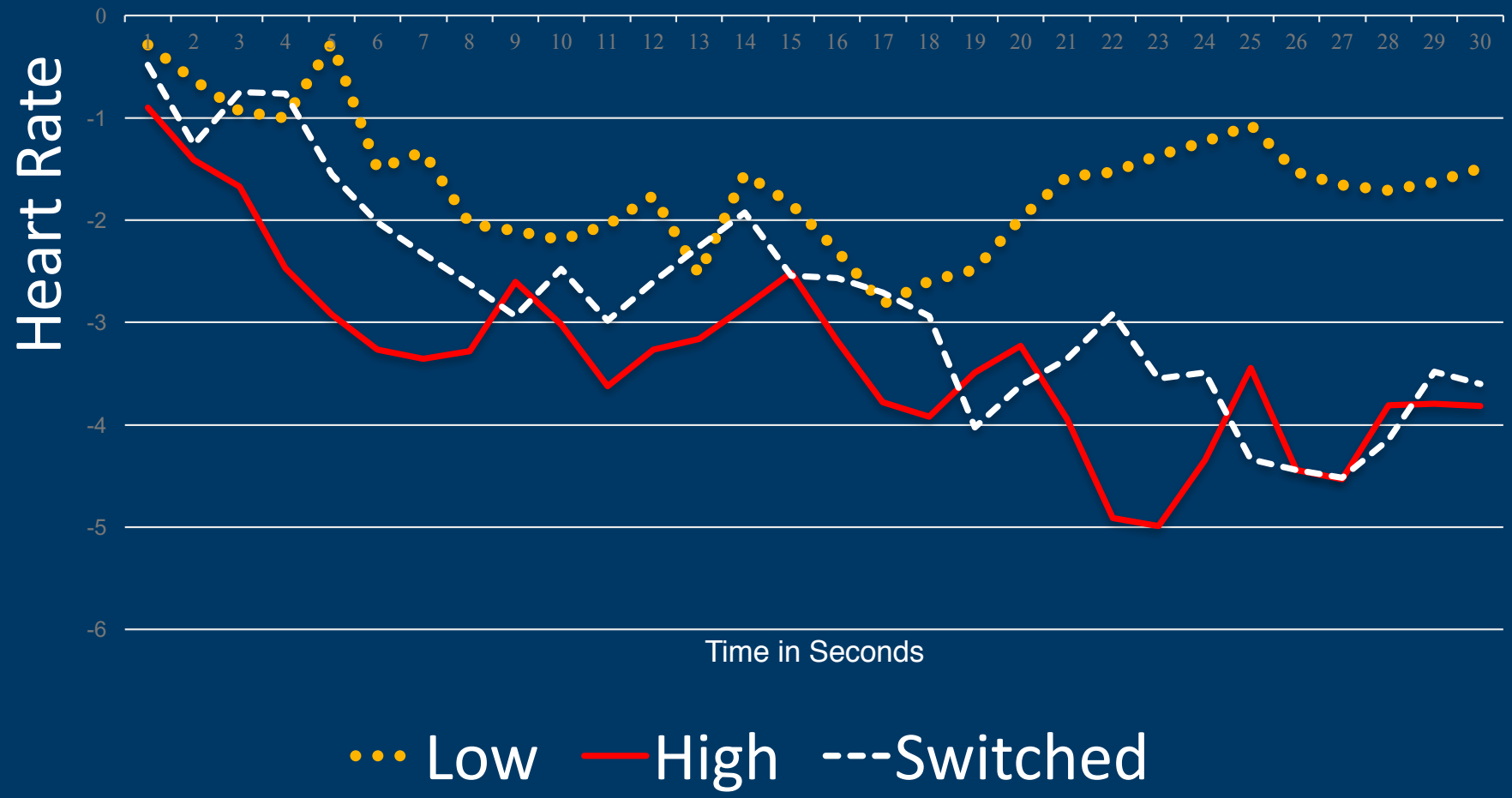
Heart Rate

Aversive Content X Time: Heart Rate



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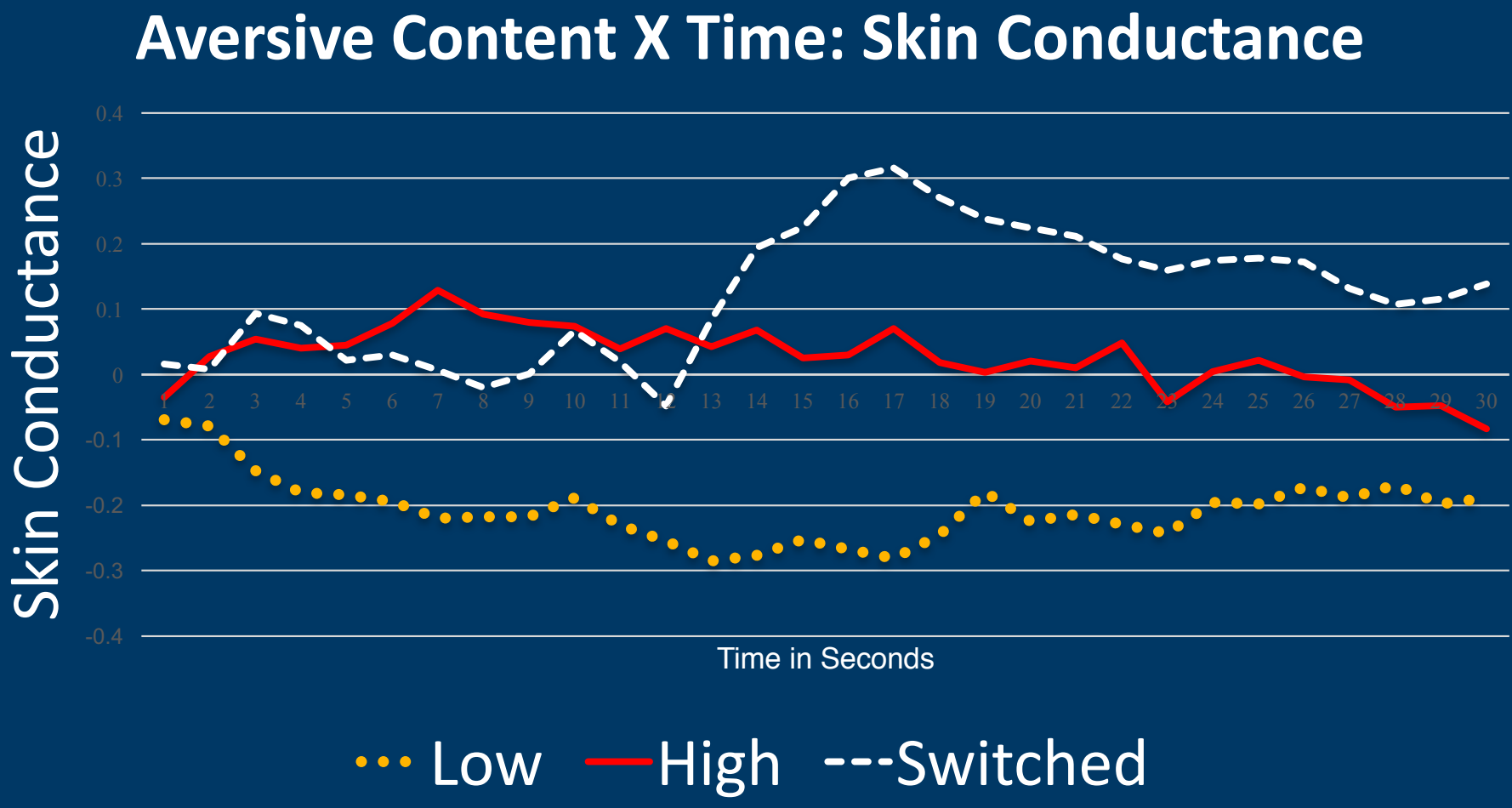
Skin Conductance



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Research to Practice

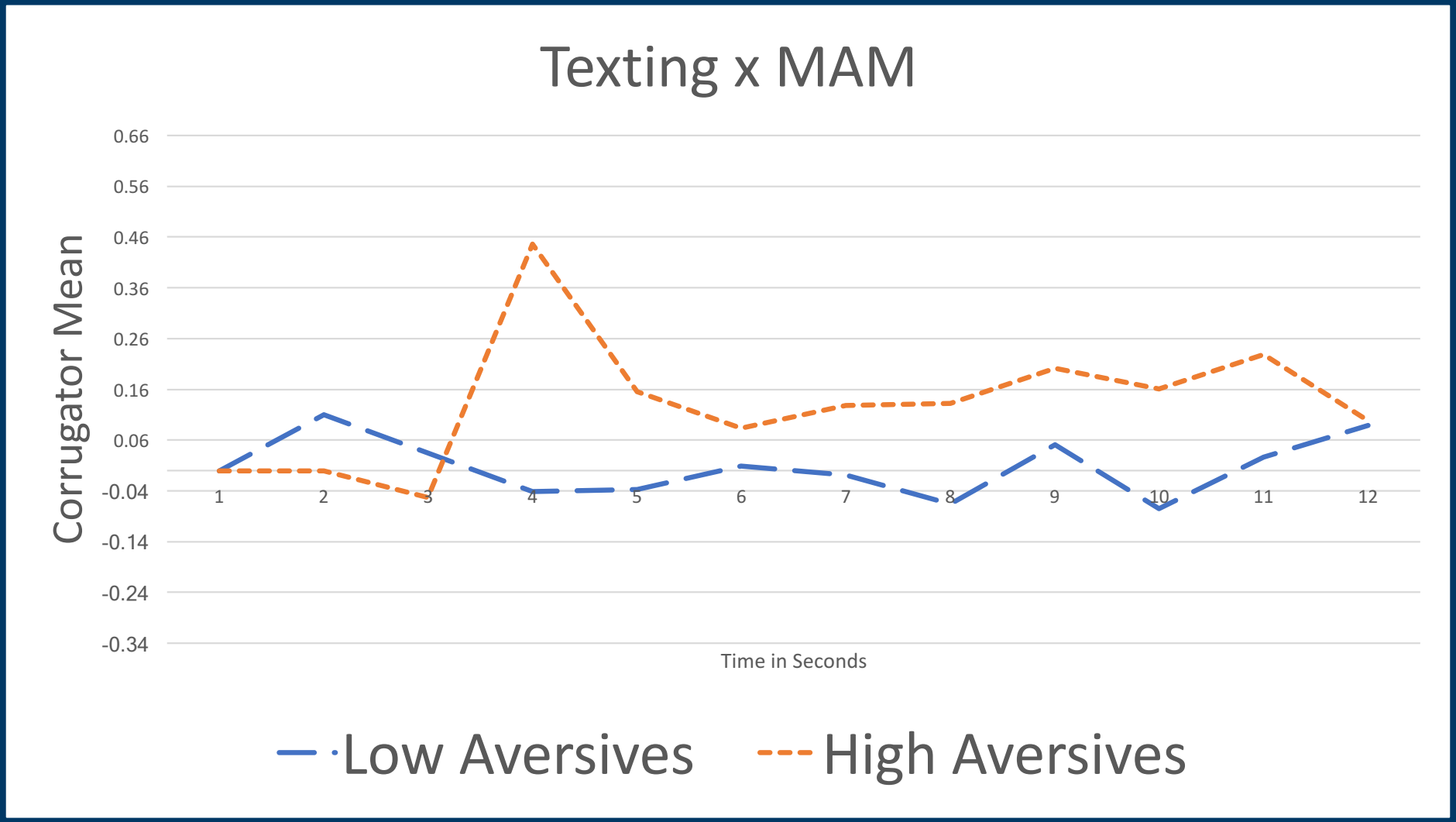
- Participants paid more attention to videos in which tone switched from pleasant to unpleasant and unpleasant throughout than entirely pleasant ones.
- Switched tone videos were more emotionally arousing than pleasant and unpleasant ones.
- Videos that were unpleasant from beginning to end had the highest negativity score.

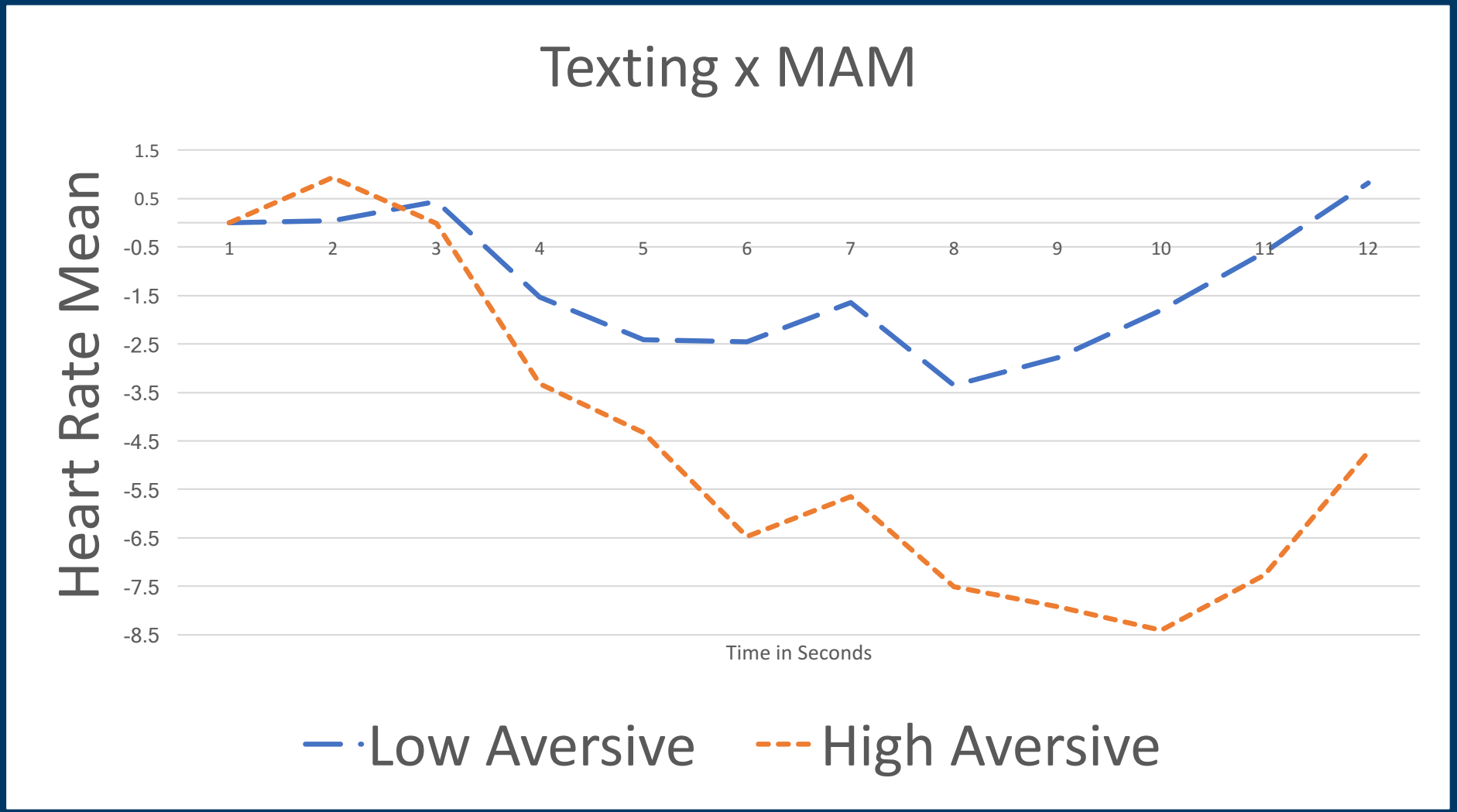
Risk Taking and Media Affects

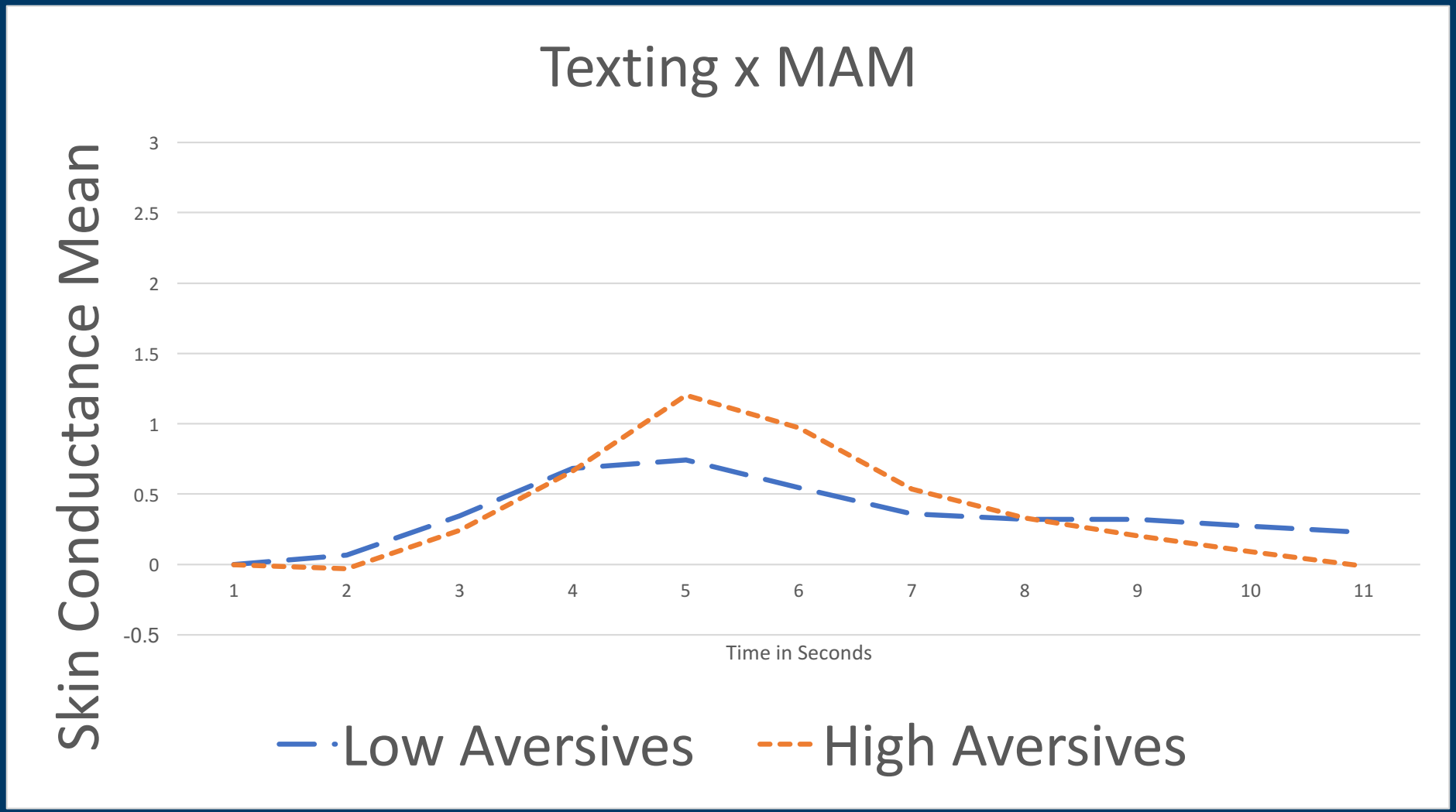
Motivated Activation Measure

low aversive

- ”high sensation seekers are more likely to pay attention to, remember, and respond to messages that are high in sensation value.”
- sensation seeking is a function of resting activation in the appetitive and aversive motivational systems.


Texting x MAM
Corrugator Mean
0.66
0.56
0.46
0.36
0.26
0.16
0.06
-0.04
-0.14
-0.24
-0.34
1
2
3
4
5
6
7
8
9
10
11
12
Time in Seconds
Low Aversives
High Aversives


Texting x MAM
Heart Rate Mean
1.5
0.5
-0.5
-1.5
-2.5
-3.5
-4.5
-5.5
-6.5
-7.5
-8.5
1
2
3
4
5
6
7
8
9
10
11
12
Time in Seconds
Low Aversive
High Aversive


Texting x MAM
Skin Conductance Mean
3
2.5
2
1.5
1
0.5
0
-0.5
1
2
3
4
5
6
7
8
9
10
11
Time in Seconds
Low Aversives
High Aversives

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