The Correlation Between Smiling And Stress Recovery

With the fast manner in which the modern world works, stress has become more of an unhealthy personality trait than just an occasional ailment. ‘The last two decades have witnessed a growing societal concern with stress and its psychological toll’ (Holahan, 1994). Peggy A. Thoits talked about how ‘stressors can negatively affect physical health ;or mental health (or both simultaneously)’ and how stress significantly relates to the occurrence of multiple conditions such as flus, depression, angina, and alcohol and drug use (Thoits, 2013).

Tara L. Kraft and Sarah D. Pressman’s ‘Grin and Bear It’ is an experimental study that explores the relationship between peoples’ stress responses and the action of smiling. The aim of this experiment was to determine whether a specific smile coupled with awareness would result in a faster recovery after an episode of stress. In simpler terms, Kraft and Pressman were investigating the benefits of smiling and trying to find out if the action of ‘grinning and bearing it’ had real-life applications. Through this study, people can gain a better perspective on how to deal with their day-to-day anxiety before it manifests into something more dangerous.One-hundred seventy participants from a Midwestern university were randomly assigned to one of three groups: standard smilers, Duchenne or ‘sincere’ smilers, and neutral-expression control group. Prior to this, they had been ‘screened for facial muscular disorder, lack of English fluency, and psychological disorder’ (Kraft, Pressman, 2012, p. 1373). This was done was by giving the partakers chopsticks to place in their mouths so that they could mimic the correct expression and engage the right muscles. The manner in which the participants’ faces were arranged served as the independent variable. Standard smilers adjusted the chopsticks in such a way that the zygomaticus major muscle was in effect, and the Duchenne smile did the same while also engaging the orbicularis oculi muscle. To ensure the correct muscles were being used, Facial Action Coding System was utilized. These ‘smiling groups’ were then further split into two halves where one half

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After the participants had been trained to hold the chopsticks in the correct manner, they were given automated cuffs that measured their heart rate, which was the dependent variable, every couple of minutes. This would serve as a tracker for the cardiovascular stress response. Then, two different stressful tasks were conducted under the innuendo that the study was testing people's multitasking abilities. The first task consisted of the participants using their non-dominant hand to repeatedly trace a star while looking at a mirror image of their hand and the star. The second task was a cold-pressor task where the participants stuck their hand in ice water for one minute and then recovered again for five minutes. Participants' heart rates were measured during a five-minute recovery period post each task.

The heart rates during the recovery periods were then computed against time onto four different graphs: two depicting the three facial-expression groups (standard smile, Duchenne smile, neutral) after the star-tracer and cold-pressor tasks, and the other two depicting the aware and unaware subgroups against the neutral group post both tasks. Both of the facial-expression graphs showed that the participants that maintained a Duchenne smile had lower heart rates, followed by standard smilers, and then the neutral expression group. The graphs depicting the bpm for the aware/unaware/neutral subgroups showed the aware having lower heart rates, followed by the unaware, and then the neutral. The main conclusions made were that sincere, or Duchenne, smiles were more effective than standard smiles, and that unaware smilers had less (but similar) heart rate benefits than the people who were aware.

This would mean that people who were making an active effort to smile benefited with regards to their stress and this links to the 'Facial-Feedback Hypothesis' which states that our facial expressions 'modulate ongoing emotions, and initiate them' and that they 'may influence the occurrence of specific emotions' (McIntosh, 1996). Still, the data was not significant as the bpm of the aware and unaware smilers were similar in the end. Hence, another way to see these results is that 'smiling did not increase positive affect but instead reduced the detrimental affect influences of stress' (Kraft, Pressman, 2012, p. 1376).

A number of factors have to be considered if we are to say whether smiling is a potential treatment. For one, although the participants had been screened, they all fell in the 'young adult' age range and were university students. This means that these results cannot be applied to the older and younger age groups, as well as people who have less or more stressful lifestyles, different cardiovascular health and stress-coping mechanisms to that of a typical university student.

Another element to consider is that the initial results produced by the methods were inconsistent between the two stressful tasks as there were a number of extraneous factors, such as sex,

perceived task difficulty, condition adherence, and so on, were not accounted for. It was only after a number of covariates were later considered that the results started to make more sense and form steady patterns between the two tasks. However, these variables accounted for difference in stress levels and perceptions in difficulties of tasks among university students alone. They did not account for how it would be for people who have different abilities, stress levels, and tolerances. Further studies that account for a better representation of the population would present better results and depict whether this study can be applied to the public.

There were two methods through which the stress levels were measured: heart rate and self-reporting. The participants were asked to complete a questionnaire prior to the testing so that their 'baseline' could be determined. Considering that the volunteers were under the impression that they were doing a multitasking activity, they could have exaggerated their ability to take on multiple tasks (take on stress) by believing it might impress the researchers. These count as a demand characteristics which are 'aspects of an observational setting that cause people to behave as they think someone else wants or expects' (Schacter, 2017, p. 42). Another problem with self-reporting is that the participants themselves may be confused about how they feel when they're being put in a stressful situation and simultaneously being asked to smile in specific ways. This would mess up the psychological-physiological relationship that is trying to be established as they would be conflicting each other rather than working together. To put it briefly, this study lacked external validity as well as respondent bias. Nevertheless, that does not mean it cannot be learned from.

Measuring heart rate as a way of gaging stress levels also seemed to be a reasonable idea since it has been seen that if an individual shows fear, their cortisol levels rise and hence the cardiovascular response to stress also increases (Lerner, 2007, Results). Lerner's study also found that 'the more indignation individuals displayed in response to the same stressors the lower their cortisol levels and cardiovascular responses' (Lerner, 2007, Results). If emotions are capable of riling people up, perhaps certain emotions, like happiness, can come through a smile and calm people down. In the star-tracer test, the volunteers were given impossible standards to work up to for the activity and were also told that if they accomplished these 'goals', then they would be given chocolate. The incentive to win coupled with the unattainable levels would then contribute to the stress of the groups. This scenario depicts goals and societal standards and can be compared to majority of day-to-day tasks that people undergo. The situation itself is artificial and although it cannot do real-life scenarios justice, it does lay the ground for a good test run.

To conclude, it should be understood that there is a link between smiling and stress-recovery that may benefit people. This link has not shown accurate enough results for it to be a guaranteed way to deal with stress, but it can be further implemented and enhanced, such as through a sample that better represents the population. The 'stress epidemic' is on the rise and these types of studies could be a major factor in fighting it before it becomes even worse. Hence, it's important to look into Kraft and Pressman's work and learn from it.