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Memos to Cope and Communicate

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Memes to Cope and Communicate

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A culminating thesis submitted to the faculty of Dominican University of California in partial fulfillment
of the requirements for the degree of Masters in Marriage and Family Therapy

Dominican University of California

San Rafael, CA

2022

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Abstract

The study's objective was to observe the benefits of creating meme imagery around the participant's stressors and how it affected the participants' mood. This mixed-method study also looked into the meme's ability to communicate their experience of their stressor to others to test whether it would be useful in a therapeutic setting. In order to measure affect change, the researcher utilized the PANAS (Positive and Negative Affect Schedule) before and after the meme creation process. The researcher tested communication through utilization of inter-raters to observe the created meme and respond upon what they believed the participant was going through. This system will allow more validity as more unique people with converging interpretations such as similar descriptions of what they believe the participant is trying to express are more reliable than one singular opinion. There were 26 participants who volunteered to participate and create memes. It was found that meme creation lowered negative affect and that communication worked well for those who create memes around topics that are relatable or descriptive.

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Table of Contents

Abstract	iii
Acknowledgements	iv
List of Tables	vii
List of Figures	viii
Introduction	1
Literature Review	5
Stress	5
Pandemic and Stressors in Society	8
Importance of Taking Care of Mental Health	13
Why People Don't Take Care of Mental Health/ Get Therapy	14
Communication in a Therapeutic Relationship	15
Art Therapy	18
Technology Use Increase Telehealth	20
Humor	21
Memes	22
Methodology	24
Participants	24
Location	25
Confidentiality and Consent	25
Research Design	26
Process	26
Measures & Assessments	29
Materials	30
Data Analysis	32
Risk and Benefits	33
Protection of Human Participants	34
Results	35
Goal 1: Affect	35
Goal 2: Communication	39
Discussion	46
Results Discussion	46

Limitations	48
Validity	49
Future Research	49
Conclusion	51
Simplified Research Communication	53
References	68
Appendix A Call for Participants	80
Appendix B PANAS	82
Appendix C Memes suggested by the researcher for the participants	84
Appendix D Memes Data	90

List of Tables

Table 1 Participant's Positive and Negative Affect Scores and Changes	36
Table 2 PANAS	83

List of Figures

Figure 1 Results of survey question "What is your age range?"	25
Figure 2 Changes in positive and negative average scores	37
Figure 3 Change in PANAS Scores	38
Figure 4 Participant 17 R's meme describing their stress	40
Figure 5 Participant 18's meme describing their housing issues	41
Figure 6 Participant 26's meme regarding stress around their body image	42
Figure 7 Participant 6's meme showing their stress related to their work	43
Figure 8 Participant 21's meme demonstrating an uplifting meme regarding their stress	44
Figure 9 Tired Cat meme	85
Figure 10 They Don't Know meme	85
Figure 11 Angry Arthur meme	85
Figure 12 Cry Cat Thumbs Up meme	86
Figure 13 XX Everywhere meme	86
Figure 14 Elmo on Fire meme	86
Figure 15 Spongebob meme	86
Figure 16 Kermit and Evil Kermit Meme	87
Figure 17 Surprised Pikachu Meme	87
Figure 18 Is This a... meme	87
Figure 19 This is Worthless meme	88
Figure 20 Being Held Back meme	88
Figure 21 Double D Facts meme	89
Figure 22 Participant 1's use of the "This is a..." meme to show their stress	91
Figure 23 Participant 's use of the "Double D Facts" meme to show their stress	91
Figure 24 Participant 3's use of the "This is a..." meme to show their stress	92
Figure 25 Participant 4's use of the "Tired Cat" meme to show their stress	92
Figure 26 Participant 5's use of the "Elmo on Fire" meme to show their stress	93
Figure 27 Participant 6's use of the "Elmo on Fire" meme to show their stress	93
Figure 28 Participant 7's use of the "Kermit and Evil Kermit" meme to show their stress	94
Figure 29 Participant 8's use of the "Kermit and Evil Kermit" meme to show their stress	94
Figure 30 Participant 9's use of the "Tired Cat" meme to show their stress	95
Figure 31 Participant 10's use of the "Surprise Pikachu" meme to show their stress	95
Figure 32 Participant 11's use of the a meme to show their stress	96
Figure 33 Participant 12's use of the "Kermit and Evil Kermit" meme to show their stress	96
Figure 34 Participant 13's use of the "Crying Cat Thumbs Up" meme to show their stress	97
Figure 35 Participant 14's use of the "Elmo on Fire" meme to show their stress	97
Figure 36 Participant 15's use of the meme to show their stress	98
Figure 37 Participant 16's use of the "Tired Cat" meme to show their stress	99
Figure 38 Participant 17's use of the "Being Held Back" meme to show their stress	99
Figure 39 Participant 18's use of the "XX Everywhere" meme to show their stress	100

Figure 40 Participant 19's use of the "Being Held Back" meme to show their stress	100
Figure 41 Participant 20's use of the "Being Held Back" meme to show their stress	101
Figure 42 Participant 21's use of the "Double D Facts" meme to show their stress	102
Figure 43 Participant 22's use of the "Being Held Back" meme to show their stress	102
Figure 44 Participant 23's use of the "Tired Cat" meme to show their stress	103
Figure 45 Participant 24's use of the "Angry Arthur" meme to show their stress	103
Figure 46 Participant 25's use of the "Cry Cat Thumbs Up" meme to show their stress	104
Figure 47 Participant 26's use of a meme to show their stress	104

Introduction

Stress has been increasing throughout the country despite the changes and modernization of society that is supposed to make life easier. The increase is due to several reasons such as the increasing need for change to adjust to the modern world and a lack of flexibility of the government officials due to corporate greed and systemic racism (Chatlani, 2020) (Hub et al., 2021). These reasons have perpetuated the stress amongst the working class especially with the coronavirus, increasing cost of living, stagnant wages, and lack of care for their own livelihood. According to the American Psychological Association, 7/10 (67%) reported that “living through the coronavirus pandemic has been a rollercoaster of emotions” (American Psychological Association, 2021), and with the decreasing amount of free time and necessity to work in order to care for themselves in the pandemic, people are having less time to practice healthy coping mechanisms.

Humans are social creatures who hold social interactions in importance in terms of mental health, however, with the inability to meet and socialize in person due to the necessity of social distancing during the pandemic, it has been increasingly difficult for people to manage their stressors utilizing social methods that they have used before (Young, 2008). There have also been increased tensions between people who have anxiety about the pandemic and people who wish to get back to “normal”. Those who are anxious about the pandemic wish to keep themselves and the people they love safe from the virus (Sleeprelker, 2022). These tensions between opinions about safety during the pandemic can lead to more tensions within one’s social circle and a higher chance of deterioration of their relationship as a whole (Pietrabissa & Simpson, 2020). On top of the stressors stemming from the changes due to relationships and socialization due to the pandemic, there are many systemic stressors built into the everyday lives

of regular people. Stressors due to the effects of systemic racism, poverty, capitalism, police brutality, environmental crises, overwork, etc., can cause difficulties in living life to the fullest. An inability to manage their level of stress which appears to be steadily increasing due to lack of free time and an increase in stress factors can lead to an increase of susceptibility to mental illnesses. Stress can be good in some aspects of life, however, some stress can lead to burnout in which one may feel so distraught about their life and what they are doing that it can lead to lower mood and lower motivation (Pines & Keinan, 2005). It's important that people are able to find an outlet in which they feel comfortable to effectively communicate their emotions and feelings about their life experiences in a way that is both affordable, less stigmatized, and more easily accessible. In order to continue to expand and utilize technology in a beneficial way, we must find a way to help both the clients and therapists connect and communicate more efficiently within online therapeutic settings.

People often would say that "humor is the best medicine" so perhaps humor may be a good way to help cope with stressors and burnout in the short amount of time that people have during their conscious day (Hamilton, 2021). Humor is associated with more positive self-identity, protective factors from stress, and greater positive responses when faced with life events whether it be positive or negative (Martin et al., 1993). One form of internet humor is Memes. Memes according to the Merriam-Webster dictionary consist of two definitions; 1. "an idea, behavior, style, or usage that spreads from person to person within a culture" and 2. "an amusing or interesting picture, video, etc., that is spread widely through the Internet" (Merriam-Webster, n.d.). Memes are an element of culture or behavior that is spread through replication. Over the internet, memes often come in forms of images, videos, or gifs, sometimes with text placed on them to specify a certain meaning. It is a form of communication with

context that perhaps only certain people understand and with that context, the meaning can become clear to the viewer (Shervington, 2013). The use of memes is so widespread, that discourse has entered the larger social and political conversation. Everyone enjoys utilizing memes online to spread their thoughts and ideas, though they may not be accustomed to creating their own personalized meme.

So this research asks the question, can meme creation lead to more positive affect and help adults who use the internet communicate their mood in this time of stress, overwork, and little free time? This mixed methods research is studying the possible benefits of the creation of memes on adults' moods as well as a way to communicate their feelings nonverbally with others online. This research hopes to pave the way for a modern art therapy intervention and coping skills to communicate and emotionally regulate over the internet utilizing more text and more informality to hopefully make expression easier. This will allow more reach to people who may not want to physically meet for therapy/counseling. It can even allow them to practice interpersonal skills and create stronger bonds within their online community. This research will be conducted entirely online via an online survey in order to reach an online population who utilize the internet on a regular basis. Participants will be answering a series of questions in which they will express themselves in words and through memes; they will also be asked to complete a Positive and Negative Affect Schedule prior to and after the meme treatment to measure their affect. Utilizing memes and meme creation will hopefully benefit many people who may also have difficulties expressing their feelings in a more traditional therapeutic setting, allowing them to slowly grow comfortable with the therapeutic process and perhaps grow to be more open to therapy as a whole.

An additional easy-to-understand, spark-notes-type section of this research will be included to be more inclusive to those who may have difficulties with the educated language. This section is meant to be more inclusive to different people and is sensitive to the differences in which people are raised, allowing more equal opportunities to those who may not have the language skills in which schools often require (Kerulis, 2021). This allows more knowledge and information to be passed along to others to allow more opportunities for conversations around the subject. It will include a more diverse set of people from different socioeconomic and ethnic backgrounds who may have had difficulties with academic language due to inequalities in funding, teacher preparedness, and opportunities within the American education system in comparison to the education wealthy white students receive (Darling-Hammond, 2016). This section will appear after the conclusion of the main body of the paper.

Literature Review

Stress

Stress is a regular factor in everybody's lives, in fact, it has helped us all evolve into being the best that we can be, protecting us from dangers and keeping us alert in times of need. It's an ambiguous term as it is different for everyone, some people's stress can be distressing and yet others might find it exhilarating or anywhere in between.

Stress can be useful in certain aspects of life, that is, if one believes the body's stress response is a positive aspect of life, such as an increase in heart rate to give a person energy throughout the day. Stress can be used in a way that drives one's day towards growth and positivity if one takes stress as a learning opportunity through just a shift in mindset. So utilizing the response stress gives to one's body, can lead to more positive feelings of accomplishment when one overcomes the stressful event. Stress can also be an indicator of having multiple engaging activities in one's life that makes one's life meaningful to them. They may have multiple goals which they wish to accomplish and have been working towards them utilizing their body's response to personally grow either in their skills or accomplish their goals. These are all positive attributes to stress and how with the right mindset, stress can be a positive in our lives (Parker, 2016).

Stress, however, is generally looked upon in a negative light in our society which can lead to many attempts to escape from stress. This can lead people to utilize substances and other maladaptive coping mechanisms in a way to manage their stress, which then can perpetuate anxiety and other mental disorders. Excessive amounts of stress can also lead to physical ailments as one's body cannot handle being in a constant state of fight or flight where one's blood pressure has risen and "unnecessary" body functions have stalled leading to strain on one's

physical and mental well-being (Joshi, 2005). This stress can lead to digestive disorders as halting the digestive tract to save energy for managing the stress response for a long period of time without handling the stressful situation can lead to physical digestive problems. This can be physically uncomfortable to manage as prolonged halts of the digestive tract can lead to bloating, constipation, pain, and discomfort. Another negative physical effect of prolonged stress includes cardiovascular diseases. Oftentimes during a stress response, we all experience increased heart rate and similar to the prolonged halt of the digestive system, prolonged increased heart rate can lead to many problems in the cardiovascular system. In fact, there is a 40-60% increase in the chance of developing cardiovascular disease if one is experiencing prolonged stress. Prolonged stress also affects one's interpersonal relationships leading to higher degrees of loneliness. Loneliness is linked to one's immune system and an increased amount of loneliness can weaken the immune system due to one's lack of social support. To top all of that off, chronic stress can lead to accelerated aging as there are connections between stress and telomerase, an enzyme for aging leading to faster aging if one has more stress. Stress can lead to multiple other physical ailments that can lead to a less fulfilling life as all of these physical feelings and forms of escapism can affect one's ability to manage their daily life (Lawson, 2016).

Stress has a huge effect on mental and physical well-being. Depending on personal resilience and environmental factors, one is at risk of developing anxiety, depression, PTSD, or ASD after a stressful and traumatic experience (Bridgland et al., 2021). ASD or Acute Stress Disorder is similar to PTSD (Post Traumatic Stress Disorder) in which a person is afflicted with anxious responses due to a traumatic or distressing event in their lives, with the only difference is it lasts 3 days to a month rather than it persisting past a month. One of the symptoms of these stress disorders includes repetition of their traumas either through actual trauma, flashbacks,

and/or dreams (American Psychiatric Association, 2013). This repetition of their trauma reintroduces this stress to one's mind and without the ability or knowledge on how to emotionally regulate these emotions of anxiety, fear, and stress, it may be extremely difficult for a person to be able to function. They may become fixated or internally preoccupied with their stress, perpetuating the physical responses of their body leading to decompensation in a downward cycle. These mental disorders can be extremely distressing and debilitating as it affects daily level of functioning, making it difficult to practice self-care and manage life stressors. These difficulties can lead to a continuous cycle of negative emotions, stress, and even possible maladaptive coping strategies.

When one does not have the accessibility or ability to properly emotionally regulate after or during a stressful event, one may be more likely to utilize maladaptive coping strategies. Maladaptive coping strategies are efforts made to manage one's emotions in the short term that often lead to a negative long-term effect. An example of maladaptive coping strategies would include utilizing substances. Stress in fact increases the chances of one utilizing or even abusing substances, as substances can provide a short-term positive feeling (Sinha, 2008). It can affect their executive functioning and their motivation in every aspect of their lives, making it harder to build upon a positive mindset of stress, especially if their stress is traumatizing. These behaviors can lead to an increase in developing or worsening mental disorders leading to decompensation of a person's mental well-being.

Stress is a factor that can lead to substance abuse and addiction. What are certain stressors that can lead to these maladaptive coping mechanisms? In the "Rat Park" research done in the 1970s, Dr. Bruce Alexander studied environmental conditions in terms of addiction. In the control scenario, rats were placed in a cage alone with two choices of water, one laced with a

drug and the other plain water. The rats would focus on drinking the drug-laced water and eventually passed due to overdosing on the drug. Dr. Alexander then created what would be considered a “rat park” or a “rat’s paradise” in which it had many fun activities, rat friends, and of course the two choices of water. They found that the rats were less likely to overdose from the drugs as they were able to live their lives to the fullest due to having a community and activities that made them happy. In “Rat Park” we learn the importance of community and having social interaction as well as having a multitude of activities to do to be able to cope with stressors so that it is less likely to rely on maladaptive coping strategies (Sederer & Lloyd, 2020). It’s important to consider this factor as well as discuss how currently through the pandemic there is more encouragement to be socially distanced in order to protect ourselves and our loved ones. We must consider the aspects of how the pandemic and other aspects of life can lead to higher levels of stress.

Pandemic and Stressors in Society

Times are difficult; becoming an adult and living as an adult in the times of the pandemic while expecting life to be the same as when a global pandemic wasn’t a major factor in all of our lives has led to an increase in the stress average society experiences in their daily lives. In a study on COVID-19 and stress, it was found that the the stress that people experience in their lives has risen to almost traumatic levels due to COVID-19 leading to 13% of test subjects even developing PTSD, whereas the rest of the subjects found that a multitude of factors had led to the development of stress similar to generalized anxiety disorder (Bridgland et al., 2021). This increase could be due to a multitude of reasons, such as being away from the usual social activities that one may have once participated in, inability to see loved ones, and/or fear of becoming ill. Along with these factors, the necessity to work, coping with sickness, or even the

deaths of loved ones, and wishing for things to become normal again, people are grieving the life in which they lived before. For those who have lived through being diagnosed and survived COVID-19, there is an increased chance of PTSD, insomnia, and depression. This is due to perceived discrimination and actual discrimination from others that has prevented access to healthcare that is needed, leading to greater psychological distress in survivors (Campo-Arias et al., 2022). No matter one's stance on the policies surrounding COVID-19, everyone has an increased amount of stress comparably from their lives pre-pandemic.

There are a multitude of things that the pandemic has affected that have led to an increase in stress for the average person. For some, people are able to change and work from home and for others, there is the expectation of things going back to normal. Yet there is the looming fear of death due to the need to work for the money for basic needs and due to the possibility of infection from the virus. This leads to a disconnect between different people with different ideologies and outlooks on life (Sleeprelker, 2022). Some may be stressed by the discourse referring to their ability to be free from their discomforts and others' expectations of them and the others may feel stressed by the thought of the lack of care another person may have. Both sides want to be heard by the other, but neither is willing to let up due to fear, discomfort, miscommunication, and lack of consideration for the other party. Also due to this disconnect between groups of people due to COVID-19 and due to their expectations differing from their reality, 18 to 24-year-olds, who once were considered living their best life at the age they are at, are now the most likely age group to have anxiety and depression (Ripley et al., 2020). This may also reflect back upon humanities' need for social connection and having the disconnect between people's thoughts and opinions may weigh heavily upon one's shoulders leading to more stress.

There are also many health risks, which the social changes from the pandemic have caused, that can lead to an increase in stress. These risks include the fact that many people are avoiding non-emergency health treatments, an increased risk of domestic violence, and possible withdrawal symptoms due to lack of access to substances, all of which can be life-threatening. People may be avoiding non-emergency health treatments due to fear of close contact with others in the hospitals or due to inaccessibility as hospitals during the pandemic are overworked. There is an increase in domestic violence as more people are opting to work and study at home, allowing more close proximity to possible domestic abusers and reducing the number of safe havens for victims of domestic abuse. There is also the possibility of people who may have withdrawal symptoms and not have access to either health care or drugs to help manage those symptoms (Andrade, 2020). People may find comfort in using substances due to all these stressors, which may worsen the stress. COVID-19 has brought so much stress to people as shown in the increase of caller volume to helplines with an increase in the topic surrounding fear and loneliness (Brühlhart et al., 2021).

On top of COVID-19, there are multiple sources of stress that can lead to possible mental disorders. Some of which include the cost of living, health care costs, racial disparities, mass shootings, climate change, and much more concerning where people will be in the future; These stresses then have led to an increase in suicidality and maladaptive coping skills (Ripley et al., 2020). In fact, in a new survey conducted by the American Psychological Association, it is found that over 87% of people noted that the past two years have felt like a constant stream of crises, with a majority of the stress for the younger generation stemming from money concerns (American Psychological Association, 2022). There is also a difference in how society has been treating the younger age group, due to the fact that they have more of the social repercussions

passed down from the older generations to handle, leading more of the younger generation to start out in poverty. Studies show how poverty affects mental health in a negative way so much so that a slight increase in the minimum wage would decrease the amount of high distress in those who live in poverty; the proposed Raise the Wage Act, in which there would be a 30% increase in the minimum wage, was submitted to the House and Senate but did not pass (Kuroki, 2021). People in poverty also have a hard time even finding a place to live as many people who live in poverty are not able to buy a house, only leaving them the option to rent. Rental prices recently have been skyrocketing due to high demand as many people are trying to find a place to live leading to so much stress that people can be found begging for a rental property. A realtor in Atlanta quoted “I actually think it’s harder to find a house to rent right now than to buy”, which spells out a lot about how the economy is affecting people in poverty (McNeely, 2022). Poverty then has a hand in suppressing the poor more and while the wealthy have access to education and housing, it has become more of a struggle for the younger generations to be able to afford education and a place to live especially during the pandemic which has set back people trying to reach higher economically and socially (Duffy, 2021).

Education that has been seen as a norm in order to reach higher avenues of life has been found to be stressful for those who have come from lower-income households due to a multitude of factors. Unfortunately, obtaining a higher education is harder than it has ever been before as the price of tuition has skyrocketed compared to average wages. The US Bureau of Labor Statistics and National Center for Education Statistics has found that college prices have increased 169% in comparison to the measly 19% increase in younger workers’ wages. Not only that, but many jobs nowadays also expect a degree of higher education even if the possible applicant could be easily trained in it. However, workers with a bachelor’s degree manage better

than those without one, allowing them a \$45,000 a year wage whereas ones with simply a high school degree make around 30,000 (Hess, 2021). These statistics and societal expectations lead the younger generation to believe that it is a necessity to go to college leading to higher amounts borrowed in loans to afford these colleges. This plus the rise in tuition due to government funding cuts have led to massive amounts of student debt which creates financial stress in households post-graduation (Peterson Foundation, 2021). Students in higher education settings are also faced with a “hidden curriculum” in which there is the need to manage their money in terms of the cost of their own education. Some of these may be possible textbook costs, travel fees that involve getting to school, internship application fees, etc. This does not even cover the fact the rise in the cost of education leads to higher levels of debt for these students as well as students feeling stressed about not getting subsequent support from the schools concerning these factors as debt is expected when attending higher education and this leads to more activities of living life being put off to the side (Wilcox et al., 2021). There are also racial disparities in attaining higher education as African Americans are more likely to have higher debt in comparison to their white peers due to the fact that there is systemic racism in place that keeps families of African American students from being able to support their student; some examples of this include lower level of homeownership, structural inequality in the job market, lower intergenerational wealth, and the student being a first-generation college student (Kim et al., 2017).

There is a multitude of inequities that have led to an increase in stress for people of color, especially African Americans. One of which is racial disparities in the housing market, in which racial bias leads real estate workers to deny or steer away African Americans from more desirable homes in desirable neighborhoods to low-quality homes in neighborhoods with high

poverty and high concentration of people of color (Zonta, 2019). This places more people of color within areas that are more likely to be food deserts, which are areas where it is difficult to find affordable and healthy foods. This includes the fact that poverty is prevalent in these areas, people's dependence on public transport, their responsibility to their families, and struggle to stay substance-free can make it difficult to eat healthy (Brooks, 2014). Stress is better handled when one is able to eat healthily and since many of the people in poverty have less accessibility to healthier foods, they may be more susceptible to stress and the physical discomforts that come with it. In fact, stress can lead to people eating more unhealthy food options or skipping meals in general (Healthwise, 2020). Poverty and mental health are intertwined in a way that is very complex as it involves many aspects of life, such as insecurity, low education, inadequate housing, and malnutrition, leading to difficulties in life that may be hard to cope with without resilience and social support (Kuruvilla & Jacob, 2007).

Importance of Taking Care of Mental Health

As modern society progresses, we have found how important it is to be able to manage our mental health. By taking care of one's own mental health, people are more able to manage the stressors of daily life and the changes that come about in the progression of society and time. Mental health affects how we make decisions and how we go about our days and our lives together, allowing us to be productive and have better relationships. Mental health can have an effect on our physical health as well as an effect on our overall happiness and stress levels (Xiong, 2018). If mental health is not taken care of, it can lead to a multitude of different symptoms that can lead to a less productive and happy life, including fatigue, insomnia, depression, aggression, loss of interest, and/or becoming easily distracted. In fact, half of all workplace disability cases are mental health-related and around 200 million workdays were

taken off due to mental illness. All of these factors can lead to mental illness and mental deterioration over time. In the United States, it is found that at least 1 in 5 people will experience a mental illness at some point in their life and 1 in 25 have a serious mental illness. It is much more prevalent than one may think and which brings to the surface how important it is to practice self-care and acquire the help one may need in preventing serious mental illness (Bailey, 2021). It is important to be educated in mental health and in the self-care techniques that work for oneself so one could live the best life that one could live, however, neglecting mental health is just as prevalent as ever.

Why People Don't Take Care of Mental Health/ Get Therapy

There are so many reasons why people may be having a hard time through life and how these reasons have led to various struggles health-wise both mentally and physically. Many people often are unwilling to seek therapeutic help when they need it due to various reasons such as not believing anyone could help or feeling as if they could handle it on their own. They may also be too embarrassed to talk about it or think it is unnecessary to talk to a doctor about it (Meltzer et al., 2000). There are still a lot of stigmas surrounding therapy and talking about one's own stressors. There could be a multitude of reasons for why this stigma still holds strongly, which includes a social structure of not wanting to look weak, as people before were able to handle way worse than whatever is causing one stress. This may ring especially true to those who have careers in which they are caring for others and appear to be the stronger person, such as firefighters, nurses, doctors, social workers, and mental health workers. Suppressing one's emotions can lead to worsening mental health issues, as though these people appear strong, they are still people who live and have emotions and can go through stressful events as we all are doing in the days of the pandemic. People may also fear change that may come out of therapy.

They may not wish to get lost in the unknown and feel safe in the discomfort with which they are familiar. They may feel that the state in which they are at is what they may consider normal and there may not be something brighter on the other side, so they may be unwilling to try. Of course, there is always the reasoning that therapy is too expensive, which makes a lot of sense as many things in society are costing more and more and wages aren't necessarily getting any higher anytime soon. This in itself is a type of stressor that is not beneficial to anybody. Luckily, there are some but likely not enough therapists that have a sliding scale on which they can lower the cost of their services for people who really need them. People may also have family members against going to therapy, for the same stigmatizing reasons above or because they may believe the family could handle the problems together. There can also be some issues in families trying to work through problems that involve them personally as it could lead to misunderstandings and hurt family connections. This applies to friends as well, as many people may not be able to help manage their stressors when discussed which can lead to hurting their interpersonal relationships (Ciampi, 2011). There are many reasons why people may be avoiding therapy and it's important to change these social stigmas because the importance of managing stress and learning to communicate their issues can lead to healthier lifestyles.

Communication in a Therapeutic Relationship

It is important to properly communicate in order to feel heard and understood as well as to hear and understand another person. Being able to feel heard and understood helps us feel connected to each other and allows us to grow as individuals together as a community. It also feels good to have someone else understand whatever it is one is going through. If one is not able to communicate, it can make one feel unimportant and alienated and it would make the other person feel frustrated and even confused. Communication is number one in how to build upon a

relationship, whether it be a professional relationship, therapeutic relationship, familial, or platonic relationship. In the medical setting, having a good relationship can help speed up recovery and growth as patients can communicate their needs or troubles and feel as if they are heard by a medical professional. The medical professional can help lessen the stress of the situation a client or patient may be going through by actively and mindfully listening to them (Ali, 2018). This can build trust between a healthcare professional and their client which is extremely important in the therapeutic setting where rapport with the client can encourage the client to grow and have them continue with therapy.

Proper communication is a great way to reduce the stigma of mental health and self-care as educating everyone on the importance of mental health and mental health care can open up possibilities for a more mentally healthy society. It is also a great way to teach others about different mental illnesses and disorders allowing others to think mindfully of others and allow insight into others' lives. Communication is extremely important in advertising and bringing people into therapy during their time of need. In fact, in a survey from Active Minds in 2020, of 1000 college students, 55% of them did not know how to access mental health professionals even though 80% felt that they have been affected negatively due to the pandemic (Active Minds, 2020). Due to the high amount of stress college students have reported, it would be important to communicate what mental health services are available to them in these unpredictable times. Researchers surveyed several different college websites in order to see if the services are provided and communicated to their student population, in which they have found that 96% of them provided notice about COVID-19, but only 51% had any sort of remote resources for students in which 10% of the links were broken. There is an essential need for proper communication of resources for counseling and therapy, especially during the time of a pandemic

when in-person resources may bring about more stress or anxiety (Seidel et al., 2020). Proper communication about resources will also open the door to those who may be wary about mental health treatments such as therapy. For example, many veterans, who are diagnosed with PTSD, avoid seeking treatment or care due to the stigma attached to it. Without proper management of PTSD symptoms, people diagnosed with PTSD can rely on maladaptive coping mechanisms such as using substances or self-harm. Communication and education are great ways to reduce the stigma of mental illnesses such as PTSD as it would normalize it as an illness and normalize its treatment of it (Roscoe, 2021).

There are many different ways one can communicate that can affect one's rapport and connection with one another. It is important to keep in mind that one person's preferred method of communication may not work for another. So it is important to keep in mind which methods work best for each individual. According to Professor Willkolmm of Drexel University, there are 5 methods of communication. The first method with which most are familiar is verbal communication. There are different ways to communicate verbally similar to how one would speak differently to a loved one compared to one's boss; one form of communication would be more formal and professional, whereas the other would be more informal. There is also the method of nonverbal communication for example, a difference in the tone used when speaking that can send a different message to the person who is receiving it. Due to these factors, communicating about a sensitive topic could be difficult for certain people as it may cause them stress to talk face-to-face in fear of rejection. These fears could be played out through non-verbal communication as it's hard to separate both verbal and non-verbal communication when speaking to someone face-to-face. Some examples of non-verbal communication include facial expressions, posturing, and reactions such as sighing. It may be difficult to have someone be

comfortable with verbal face-to-face communication when they are overly aware of these factors, which may lead to it becoming more difficult for them to be able to freely speak their mind about sensitive subjects. Listening is another important form of communication as it is necessary to have someone to receive the information to make any communication possible (Willkomm, 2018). Listening is one of the most important parts of healthy communication within the mental health industry as it is one of the most beneficial ways to gain rapport with a client and help them feel supported which benefits mental health recovery and growth. Active listening is an important skill to have as a person working within the mental health industry; active listening is the process of listening with complete attention without interrupting the person talking (Weger HJR et al., 2010). It also includes summarizing and reflection on what the speaker had spoken about, non-verbal communication, and attentive silence which are all skills that need to be practiced to properly communicate one's own understanding of the speaker's words (Robertson, 2005). However, not all people are comfortable with verbally communicating their stressors or emotions due to the stigma around mental health, so it is also important to consider alternative forms of communication. The last two methods of communication include written communication and visual communication. Written communication could include things such as this thesis in which one gains information through the written word. Visual communication involves using things such as pictures or graphics to communicate a message (Willkomm, 2018). These methods of nonverbal communication may help to encourage more ease into sharing one's feelings and opinions.

Art Therapy

The stressors of life and social inequities can be considered traumatic as the adults experiencing it may feel scared or helpless. Some ways of managing these stressors would be art

therapy as it allows a safer space for people to manage and express their emotions on the subject in a way that does not feel so direct and to the point (Haen, 2017). Art therapy is a form of therapy in which a therapist utilizes art-making, creative process, human experience, and psychological theory to enrich the lives of people (American Art Therapy Association, 2017). As we noted, visual communication is a great nonverbal way of expressing one's emotions, and utilizing the creation of art can assist in practicing communicating things one may not be comfortable communicating verbally. Art is not only a method of communicating but a method of coping with stressors one may be experiencing within one's life. One example of using art as a form of coping mechanism would be during math classes. Math classes are often one of the more stressful subjects that students have to learn in school as the way it is taught in current schooling can be looked upon as dehumanizing, due to the methods of teaching which separate students' identities from what they learn. Students have a diverse range of cultures and community backgrounds in which they can utilize mathematics to talk about and express themselves, especially with the stressors of society and the pandemic. A university class in mathematics utilized art through homework assignment prompts related to the lesson that required the creative process as a way to connect students' creativity with the subject of mathematics. This allowed the students to utilize their curiosity and imagination to reimagine the concepts that they learned in class. This non-standard format of learning allowed the students to express themselves as well as reduce the stress of needing to learn in the classic structured format that most everyone dreaded about math classes (Fairbairn et al., 2021).

Another example of utilizing art therapy to allow people to get in touch with their emotions includes a research in Person-Centered Expressive Art Therapy (PCEAT) Training in Japan, where they have studied psychological growth in people. The participants have found that

difficulties and crises that arise within the training were viewed upon as opportunities for growth as they were able to connect to their feelings as it focuses on nonverbal artistic expressions with a focus on body awareness. This body awareness allows the participants to be aware of how their body reacts to these difficulties, allowing them to then get an understanding of their own emotions in a way that is not uncomfortable to them (Ono, 2018). As shown in the research, this connection of the participants to their feelings through the utilization of art that focused on body awareness helped to connect participants to their bodies which then connected them to their emotions which then can lead to psychological growth. This allowed them to look upon difficult and stressful events as an opportunity for growth. Art also allows participants to manage their stressful events better by allowing them to express themselves in a nonverbal way, which may allow more people to be open to trying to express their emotions and feelings to the fullest. This may help alleviate people's fear of therapy as a whole as many people's fears emerge from a lack of understanding or experience in therapy themselves. Art may open the door to therapy for many people of color who may have more fears about therapy due to both cultural differences and racial bias in the health and mental health sector (Turner et al., 2020).

Technology Use Increase Telehealth

Therapy may also be more easily accessible with the use of technology. Due to the need for social distance and the urge to stay connected, many people have been turning to technology and utilizing the internet to share thoughts and socialize with others, with 58% of people saying that it has been essential to them, though not perfect, increasing from 53% when the pandemic first started (McClain et al., 2021). The use of telehealth and online therapy has increased as many therapists and counselors found that it can reach a broader audience as online services have made therapy more affordable and accessible to the average person as well as removed barriers

that may have kept people from getting help in person. This makes online therapy a great first step toward getting support for one's mental health. It benefits the clients who may not be able to afford therapy in person either due to the cost of being seen or due to the cost of travel. However it is noted that practitioners have found it more difficult to build rapport with a client online (Novotney, 2017). Online therapy proved to be beneficial for those who are struggling the most in cost and in connecting people to mental health services even though people may not be fully used to it at the moment and are having difficulties connecting online. There are multiple ways practitioners can build upon rapport with their clients online such as the use of art therapy and possibly the use of humor.

Humor

A way of alleviating and opening the door to deep conversations and communication about mental health is through the use of humor. Humor and laughter are also great ways of managing stress, pain, and other negative affects; in fact, laughter can lead to a chemical reaction that lowers stress and increases pain tolerance (Louie et al., 2016). This has been tested through the use of hospital clowns on pediatric patients who are undergoing chemotherapy, where they found that hospital clowns have made significant positive changes to the pediatric patients' physical and mental states while going through chemotherapy (Arriaga et al., 2020). Another example in which humor has been used to help alleviate depression symptoms is in hemodialysis patients. The patients reported a higher level of subjective happiness and satisfaction with life in general. They also found that humor alone does not necessarily decrease stress in significant proportions within these patients, however. It is actually recommended to utilize humor as a method to create a dialogue as a potential therapy in order to help patients in a multitude of ways; such as decreasing stress, anxiety, depression, pain, and fatigue while also increasing

immunity, quality of life, joy, quality of sleep, and resilience (Mota de Sousa, 2019). Humor is beneficial in many ways when utilized in a way that would encourage one to open up about themselves and to cope with the stressors within their lives. Humor and laughter are also beneficial in a way that there is little cost to participating in it as well as no side effects; this can alleviate certain stressors which are caused by money, specifically lack thereof. Not only does the low cost of humor and laughter lessen stress but spontaneous laughter helps produce endorphins within one's brain which allows people to reduce stress and create the feeling of being well, creating a positive mood. It would be beneficial to utilize humor within a therapeutic setting to create a sense of lightheartedness within settings that may cause significant distress as well as increase positivity and resilience within a person (Louie et al., 2016).

Memes

On the topic of humor, memes are “units of popular culture that are circulated, imitated, and transformed by individual Internet users, creating a shared cultural experience in the process” (Shifman, 2013, p. 367). Memes are essentially images that tell the stories and thoughts of the creators that are shared amongst people on the internet, creating a social experience that can be experienced by anyone who comes across the meme. They also can be altered in ways so that anybody can create their own to show their own meaning or story. Memes are the amalgamation of art and humor used on the internet and generally are quite personalized to one's own thoughts and feelings on certain subjects (Wong & Holyoak, 2021). Memes have a way of connecting people with the same interests allowing the construction of collective identity and norms (Gal et al., 2016). This allows others to connect with others and normalize their personal thoughts and opinions which may be beneficial for those who are under a lot of stress and possible self-esteem issues. It can also provide a useful perspective on certain topics,

validation, and comfort in whatever the creator is experiencing and this can lead to a higher positive affect. These memes are often used in a humorous way and have been found to have a possible influence on the psychological state of a person as it has been tested on adults viewing memes about COVID-19 and these adults reported lower COVID-19 stress in comparison to adults who did not view the memes (Myrick et al., 2022).

Stress within today's society is increasing and there's only so much one can do to manage the stressors to be able to go about life in general. Unfortunately, not much can be done about the stressors that are afflicting many Americans due to inequalities, but more can be done or more options can be explored to find more affordable ways to introduce mental health care to all people. With the knowledge of the benefits of humor, memes, and art therapy, it would be interesting to explore the mixing of all three to study the creation of memes and how it can affect a person's affect as well as how well that person's meme can be used to discuss what they are feeling.

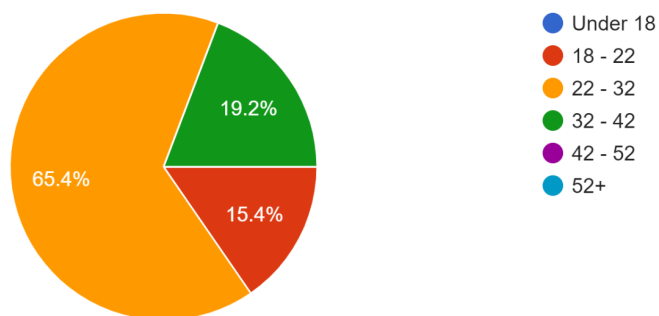
Methodology

Can meme creation lead to more positive affect and help adults who use the internet to communicate their mood? This mixed methods research is studying the possible benefits of the creation of memes on adults' moods as well as a way to communicate their feelings nonverbally with others online. This research hopes to pave the way for a modern art therapy intervention and coping skills to communicate and emotionally regulate over the internet. This will allow more reach to people who may not want to physically meet for therapy/counseling. It may even allow them to practice interpersonal skills and create stronger bonds within their online community.

Participants

In order to reach this population, the research study was posted on multiple social media platforms such as Twitter, Facebook, and Reddit and chat groups such as Discord in order to reach a wider range of participants. Participants who found the research fun and appealing were asked to share in order to reach a wider diversity of people. Twenty-six participants volunteered to take part in this research and were invited via internet post which they viewed on a social media website of their choosing. The main demographic in this research is primarily adults who have used the internet. The age ranged around 65.4% being in the 22-32 y/o range, 19.2% in the 32-42 y/o range, and 15.4% in their 18-21 y/o range. Participants were given a chance to create their own pseudonyms in order to humanize their data within the research process; they were advised to not use any name or handle that could be used to identify them in any way. All participants in this research consented to participation in the research as well as sharing and reproducing their artwork.

Figure 1 Results of survey question "What is your age range?"



Location

The main research was done via Google forms to maintain the anonymity of the participants as well as to keep the entire research on the internet.

Confidentiality and Consent

Participants were shown a digital consent form at the beginning of the survey in which they must consent prior to participating. This consent form described the research and the process in which it progressed as well as the requirements of the participants. It began with a check to make sure the participant is within the age range of 18+ to filter out those under the age of 18. It also provided the participant with emergency mental health hotlines if they need within every page of the form. These hotlines were included throughout in case a particular section or thought that occurs during the research process leads to some sort of negative emotion or stress. This allowed the participant to be able to access the resources they may need at whatever point in the survey. The consent form also described some risks pertaining to expressing strong emotions within the meme creating process which can lead to a lowering in mood or an increase in stress which may not be tolerable for those who struggle to emotionally regulate. The participants also consented to the use of their meme within the communication aspect of the research as well as

for their meme to possibly be reproduced within the finished thesis if published or presented. At the end of the consent form, participants were given the option to provide a pseudonym of their choosing. Participants were informed and encouraged to maintain anonymity throughout this research project to maintain their confidentiality. All of their information was saved within a password-protected account on a password-protected device.

Research Design

The research design that was used to answer this question was a mixed methods design in order to more accurately define communication as well as quantify a change in affect. The quantitative portion of the research included the PANAS survey to test the participants' affect before and after making their meme. There is also a qualitative format to test the communication factor, in which a group of inter-raters, from Research Completion Class, observed the memes created and described what they observed from what they believed the participants were trying to convey. This description was then qualitatively compared to what the participants initially quoted as their stressor. The participants' quoted change in mood will also be looked at in comparison to their qualitative changes.

Process

In order to carry out this research, Google Forms was used to create a survey as this entire research will be conducted on adults who use the internet, so the research had them self-report via the internet. Google Forms was used as it neatly compiled all of the information collected into a google sheet which is similar to Excel which made it easier for the researcher to manage and analyze the data. This process allowed the participants to create their meme without the judgment of another person observing them. The survey flyer was posted on several social media websites such as Facebook, Twitter, Instagram, and Imgur; as well as chat rooms such as

Discord. The first page of the Google Form was primarily created to receive consent from the participant telling them the risks of participating in this research project as described in the above paragraph.

Once consent was received, the second page asked the participant to describe a moment in their lives that provided stress and prompted them to take the Positive and Negative Affect Schedule to find the participants' baseline affect at the beginning of the research. The prompt read "Please reflect on a situation that has caused you some sort of stress recently, you will be making a meme out of this situation or experience. Please do not use one that causes severe distress in yourself and please do not use a story in which you can be easily identified." The Positive and Negative Affect Schedule (PANAS) is a self-report questionnaire in which participants gauged their feelings about a series of 20 words that either have a positive or negative connotation. They chose from a 1-5 Likert scale rating to score and measured their positive and negative affect with scores ranging from 10-50.

The third page of the form provided a description of a meme to the participants for those who are unfamiliar with the concept; "A meme is a unit of popular culture such as a viral image that is edited to tell a story or make commentary of something in life. Some memes include text to help connect what story one wants to tell to the image. You can simply create your meme by adding text to a picture, however, there are also more options such as photo editing and drawing on top of a picture to create more meaning. How can you link your emotions to the picture in your own way? You will have a choice of using images of popular memes selected by the researcher to edit to fit your own meaning or story OR create your own meme and upload it to this survey."

Afterwards, the participants were prompted to create a meme to make fun of a light stressor in their life using two options of either a template (please refer to the appendix for the templates) or creating their own meme utilizing the internet's wide variety of images and editing softwares. This option allowed full creativity for those who wish to perfect their meme as well as allowing a simpler version for those who may not fully understand it. For the meme template, participants were presented with 5-10 meme templates from which they chose from to create a meme and provided a caption on top of the image and at the bottom for their meme. They were also given an option to insert a caption on any portion of the meme as they described it. The memes were then created by the researcher through the use of Paint 3D exactly as the participant described their meme to be. For those who wished to upload their own personal meme concerning their stressor/experience, they were provided a space to create and upload their own. After the creation of the meme, the participants took a moment to describe what that meme means to them, their process in creating their meme, and what they are trying to express with the sharing of their meme. Afterwards, the participants retook the Positive and Negative Affect Schedule once again. Once the participants finished the survey, they were allowed to have a portion of the survey in which they had the option to comment. At the end of the entire form, there was a meme of the researcher's dog, thanking the participants for their participation.

For the second portion of the research project, the participants that consented to share their memes with inter-raters from the Research Completion Class at the Dominican University of California had their memes shared with the art therapy students who analyzed the meme and deciphered the meaning of what the creator intended to communicate with zero knowledge of who the person is and their situation. The graduate art therapy students selected a few describing words to describe what they analyze from the meme and provided a short comment of what they

believed the creator of the meme was trying to express. The research used all memes in order to produce a more accurate result. This process of sharing was conducted through google forms for simplicity and ease of access for the graduate students who are giving up a bit of their time to help with the study.

Measures & Assessments

This research started off with the prompt “Please reflect on a situation that has caused you some sort of stress recently, you will be making a meme out of this situation or experience. Please do not use one that causes severe distress in yourself and please do not use a story in which you can be easily identified.”

The Positive and Negative Affect Schedule (PANAS) is a self-report questionnaire in which participants gauged their feelings about a series of 20 words that either have a positive or negative connotation (Watson, et al., 1988). This questionnaire can be located in the appendix for reference. The PANAS has good internal reliability ranging around 0.8 for both the positive and negative affect. For this research, the PANAS’ negative affect scores have good convergent validity with stress, negative events, and depression which may show clear levels of stress changes (Riopel, 2021).

A selection of memes were provided in which the participants were able to select from to create their meme. The participants were also allowed to create their own meme and upload it to the google forms allowing full creativity. Participants were prompted with “Please select a meme that you find fits your experience or story which you have described earlier in the survey. Feel free to save any of these templates to create your meme and upload it (right click and save)! If you'd like to make your own using what is found on the internet, please pick "I'll make my own"

and upload on the next question!” The meme they created was used to assess the communication aspect of what mood they are feeling.

The participants were then asked after the entire process to “Please describe your meme and/or your process in creating this meme! How did it affect your mood?”

Materials

Materials include Google forms, Paint 3D, and the Internet database in which the memes templates and participants were found. A flyer was used to call for research participants as shown in Figure 1. 13 popular meme templates were suggested to the participants, they were not required to use these templates, however, it helped to make the process a bit easier for the participant to go through and make a meme without needing to research through the internet’s vast array of meme images. The student researcher has chosen these particular memes to attempt to offer a more diverse expression of different negative emotions as well as attempt to offer diverse types of memes such as cartoons, photographs, and screencaps that are all quite popular. The participants, however, had the option to make their own using the internet to explore different types of memes other than the ones chosen for them. Of all of the participants, four out of the twenty-six (Participants 11- Saga, 15 - Ellie, 22 - Janus, and 26 -Greg) decided to create and make their own meme. They uploaded it to the survey and afterwards, all information that could lead to them being identified were redacted. The rest of the twenty-two memes were put together by the researcher. All these memes can be found in the Appendix.

Figure 2: ‘Tired Cat Meme’ shows a portrait of a small white cat with ears shifted to the sides of its head squinting downwards looking tired, worried, or sad. This image was chosen as it gives off the feeling of exhaustion in a cute cat meme. Cats have been popular in media on the internet especially in memes and has been shown that it can increase positive mood (Myrick,

2015). As it is a relevant point in internet history, the student researcher decided it was important to include some popular cat memes.

Figure 3: 'They don't know...meme' shows an image of a party in which one person with a party hat is standing in the corner looking sad and distraught whilst others dance around them having fun. It was chosen as it has the feeling of isolation and is often used to make one feel as if they stand apart from the crowd.

Figure 4: 'Angry Arthur Meme' shows a screencap of PBS Arthur's fist clenched at his side. (This scene was prior to when he hit DW) This image was chosen as it expressed the feeling of anger and wanting to do something about a situation such as violence or other aggressive act.

Figure 5: 'Cry Cat Thumbs Up Meme' shows an image of a crying cat holding a thumbs up with its paw. This image was chosen as it elicits the feeling of trying one's best during hard times, it's often used to show a front that people have whilst they are internally suffering inside.

Figure 6: 'X,X Everywhere meme' is an image of Disney-Pixar's Toy Story characters, Woody, looking worried while Buzz Lightyear has his hand on Woody's shoulder with a smile showing Woody something off screen. This image was chosen to elicit the emotion of worry about many things throughout the world.

Figure 7: 'Elmo on Fire' which is an image of Elmo from Sesame Street arms outstretched to the sky as he is lit ablaze. This image through the use of warm tone colors and Elmo's almost lifeless eyes brings a feeling of existential dread, which led to it being chosen.

Figure 8: Spongebob Meme is an image of Spongebob Squarepants at the Krusty Krabs in a mocking chicken pose with his pupils looking in different directions and a frown on his face. This image was chosen to depict a mocking sort of tone.

Figure 9: Kermit and Evil Kermit meme is an image of Kermit the Frog looking at himself shrouded in a black robe. The shrouded Kermit appears to be saying something to Kermit. This meme depicts an “evil” thought similarly to one’s id in Freudian terms, where a less socially acceptable idea may be depicted.

Figure 10: Surprised Pikachu meme depicts a blurry image of Pikachu from Pokemon with his mouth open in shock or surprise. This meme was chosen as it depicts a shock face usually used to make fun of those who are ignorant.

Figure 11: “Is this a ...” meme showing an image of an anime character with glasses referencing with his hand a yellow butterfly and speaking about what it may be. (Usually it is never a butterfly.) This meme was chosen to express ignorance or lack of knowledge in a subject as the original image depicts an anime character referencing a butterfly and asking if it is a bird.

Figure 12: “This is worthless” meme shows two screencaps from Gravity Falls, one of a strip of paper being held by Dipper's hands and the other of Dipper commenting on how the strip of paper is worthless. This meme was chosen to give participants the opportunity to express disdain to a certain thing.

Figure 13: “Being Held Back” Meme depicts a comic strip of a person reaching out to a large yellow ball and in the second panel shows a pink monster holding the person back from achieving the yellow ball. This meme was chosen to express the inability to make it towards one’s goal.

The final meme in Figure 14: “Double D Facts” Meme depicts two screencaps from Ed, Edd, and Eddy in which Edd (Double D) is holding a book titled Facts and he opens it up and points to a page in the book whilst smiling. This meme was chosen to allow the participants the ability to express factual things in order to make a statement against a thought or procedure.

Data Analysis

After the participation period ended and all responses were collected in Google Sheets, two factors were analyzed: The quantitative changes in the Positive and Negative Affect Schedule from before and after meme creation and the qualitative comparison of the participants' meme message and the graduate student art therapists' perception of the message once shown the meme. The quantitative portion of the analysis involved comparing the numerical changes between the participant's first positive and negative scores on the PANAS to their final scores taken after the meme-creating factor. The average scores before and after were then plotted on a bar graph to show the visual changes for both positive and negative scores. Each of the 20 describing words were also analyzed in their before and after average to see if there was a more specific change in certain emotions or feelings. These averages were plotted on a barbell chart to show the average change for each feeling on one graph.

The qualitative portion of this research studied the communication aspect of each meme through the comparison of the creator's original statement and the graduate art therapy students' analysis of the meme. The graduate students were given a survey containing primarily the image of the meme that the participants created and were prompted to answer the following questions: "Describe what you analyze from the meme in single word descriptions" and "What do you think the creator is trying to communicate?" If the meme effectively communicated the participant's emotions and opinions on their situation, the graduate art therapy students were likely able to generalize how the participant felt about it. This was compared to whether the participant's meme was effective in communicating their feelings and if their affect improved after meme-creating, further showing the importance of communicating emotions in order to cope with stressful situations.

Risk and Benefits

Risks in this study were minimal, however some potential risks to participants included increased risk of anxiety, panic attacks, and/or increased stress. Every page of the survey had several hotlines of different formats so participants could contact and talk in need. These hotlines were provided on every page of the survey so that in the case of overwhelming stress, the participant will be able to access care that they need without much searching as the student researcher was not overseeing the participants as they engaged in the survey. At the end of the survey, participants found an uplifting meme of a cute dog to enjoy as well in order to mitigate negative feelings.

Participants may have learned that utilizing memes as a way of coping and expressing their stress may work quite well for them. They may have also found that it helps them think critically about what is going on in their lives and how to express it in a way that they find humorous to share with others and connect more.

Protection of Human Participants

All participants in this research will remain anonymous. The data is confidential as none of the participants provided any identifying information except for their age. They were reminded through the consent form to not provide personal information and were reminded in front of the prompt to not provide information that is too personal. Any identifying information transmitted during the data collection process was redacted upon receipt, replaced with their participant ID, and not stored with their data. Participants had the option to choose their own pseudonym to be used within this research. Data is stored on a private and password-protected device on a password-protected google drive. The Institutional Review Board at the Dominican University of California has reviewed and approved this research prior to conducting this

research. This research follows the ethical guidelines of the California Association of Marriage and Family Therapists and/ or the California Association for Licensed Professional Clinical Counselors, the American Art Therapy Association, and Dominican University of California.

Results

Memes are popular forms of communication and expression amongst those who use the internet, especially when experiencing stressful situations to make light of or find humor within it. This mixed-media research asks the question: can meme creation lead to more positive affect and help adults who use the internet communicate their mood? The first goal of this research is to find if there are any changes in positive and negative affect in a quantitative format in which the PANAS was utilized. The second goal is to study the effectiveness of communication through the utilization of memes.

Goal 1:Affect

The PANAS was utilized to measure changes in affect, both the negative and positive changes were measured before and after creating a meme in order to quantify the changes. In the questionnaire, a higher number score in negative affect means they have been feeling more negatively, if the numerical score dropped, it would mean they are feeling less negative.

Twenty-one out of the twenty-six (80%) participants scored themselves less negatively after completing the meme prompt. Two out of the twenty-six (7%) participants increased their scores in negative affect in which they scored themselves feeling a bit worse, and three out of the twenty-six(11%) found no change in negative affect. The average of the negative scores dropped from 23.8 to 16.8 which means more of the participants reported feeling less negatively.

In terms of the positive score, a higher numerical score for positive affect in the PANAS would mean the participant reported a higher positive mood. After the intervention of meme creation, fifteen out of twenty-six or 57% of the participants had a negative change in their positive score. This means the numerical score for positive affect dropped and they were feeling less positively after the intervention. Nine out of twenty-six or 34.6% of the participants

increased their positive score, reporting a more positive affect and two out of twenty-six or 7% of the participants experienced no change in their positive score. The average of the positive scores shows a 0.25 increase in positive affect from 25.65 to 25.9, meaning there was a small change positively in positive affect overall.

Table 1 Participant's Positive and Negative Affect Scores and Changes

Participant	Pre-Meme (+)	Post-Meme (+)	Change in Positive Score	Pre-Meme (-)	Post-Meme (-)	Change in Negative Score
1	32	27	-5	19	12	-7
2	36	36	0	19	12	-7
3	18	22	+4	32	16	-16
4	39	44	+5	14	10	-4
5	25	17	-8	40	40	0
6	25	20	-5	16	12	-4
7	35	33	-2	20	11	-9
8	19	26	+7	20	17	-3
9	13	10	-3	17	12	-5
10	35	34	-1	19	19	0
11	14	25	+11	25	14	-11
12	24	19	-5	19	10	-9
13	32	30	-2	26	15	-11
14	31	23	-8	32	16	-16
15	14	16	+2	23	14	-9
16	28	26	-2	16	24	+8
17	20	18	-2	25	12	-13
18	22	35	+13	39	21	-18

Participant	Pre-Meme (+)	Post-Meme (+)	Change in Positive Score	Pre-Meme (-)	Post-Meme (-)	Change in Negative Score
19	29	27	-2	31	33	+2
20	28	27	-1	24	19	-5
21	13	35	+22	24	12	-12
22	20	25	+5	28	20	-8
23	27	19	-8	36	26	-10
24	27	17	-10	18	10	-8
25	21	21	0	19	12	-7
26	40	43	+3	18	18	0
Averages	25.65	25.9	+0.25	23.8	16.8	-7

Figure 2 Changes in positive and negative average scores

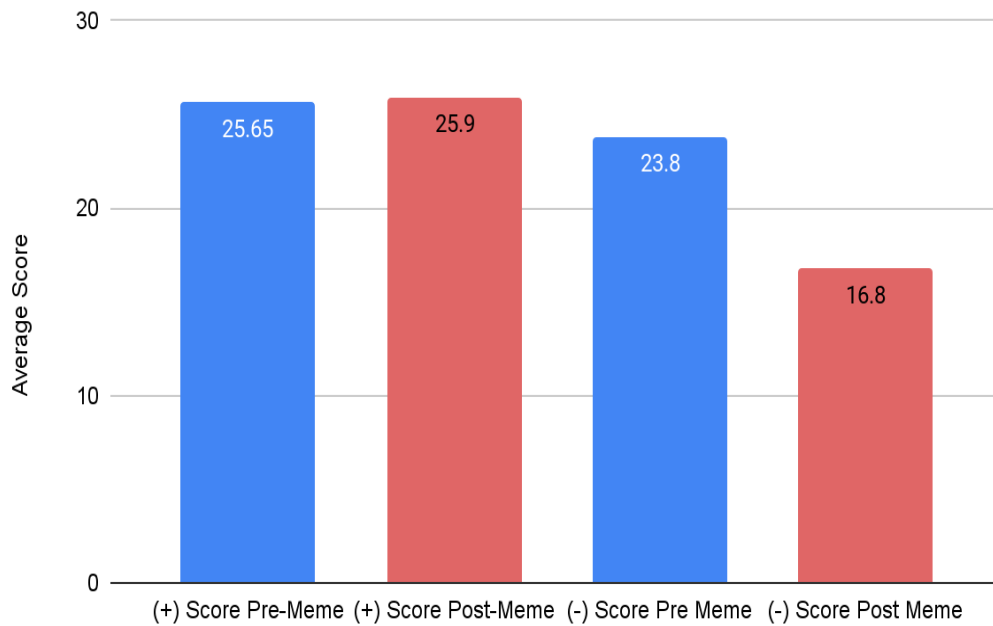
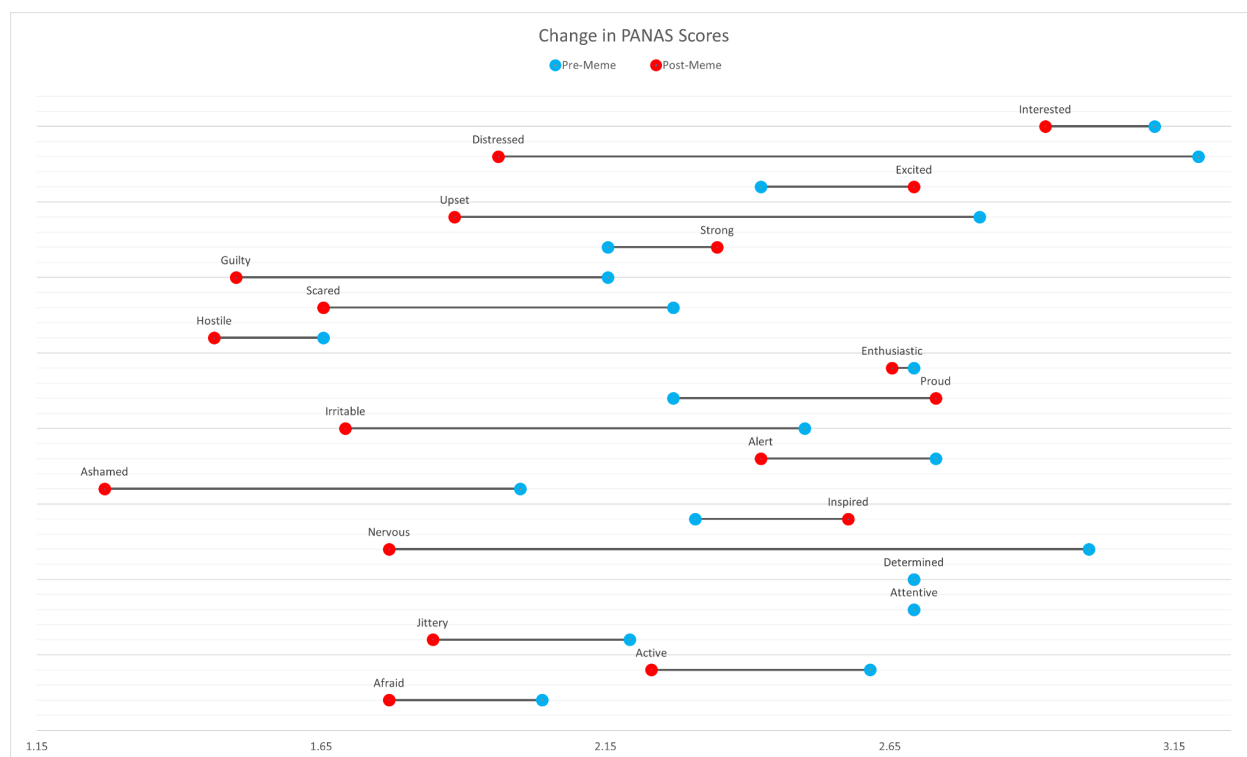


Figure 3 Change in PANAS Scores



A barbell graph (dumbbell graph) was utilized to illustrate the changes in the two PANAS scores for each affect to look more in depth into certain affects that have decreased or increased after creating a meme. In the more in depth changes in the participant's PANAS scores, most scores dropped for both positive and negative affects. Four positive affects actually increased post-meme: 'excited, strong, proud, and inspired'. The largest increase in positive affect would be 'proud', with a 0.5 increase in the average amongst all the participants. Participants also had a large decrease in negative affects such as feeling 'distressed, nervous, upset, and ashamed'. The average amongst all the participant's 'distressed' scores dropped about 1.2 from the original control score. 'Determined' and 'Attentive' averages did not change at all post-meme.

Many of the participants noted upon their meme creation that it helped them feel a bit better through sharing their meme with those around them. One of the participants described how they would usually create memes and enjoy the community of people that relate to the meme that

they had created, which helped them feel better as it normalizes what they are going through, making them not feel bad that they are becoming stressed over a certain topic. Participant 19, Lance (some participants chose pseudonyms), discussed a bit about how due to not having a reaction from others through this survey, they were not able to be affected emotionally from it as the creation of the meme itself does not serve them in their expression. Many of the participants ended up feeling some sort of validation about how they are feeling during the moment. They did not necessarily feel better however, even though some of them had enjoyed a bit of the humor of it.

Goal 2: Communication

Communication in this portion of the research was measured qualitatively utilizing inter-raters to play the role of one who is receiving the meme with no prior knowledge of the participant. The inter-raters went through each meme and answered two questions: “Describe what you analyze from the meme in single word descriptions” and “What do you think the creator is trying to communicate?” The inter-raters’ answers were then compared to the description that the participant had given.

Overall, it appeared that the memes that communicated well often fell into the category of general stressor in which most people would be able to relate to, such as economic struggles or interpersonal ones that included more general topics like customer service issues. Generally, the memes that had a lot of information about their stressor made it a lot easier for the inter-raters to comprehend and understand where the participant was coming from.

Figure 4 Participant 17 R's meme describing their stress



Participant 17, R, created a meme that illustrates their stressor about wanting to buy a home. They write about how they feel hopeless in their ability to own a home due to how the government has been managing things and how the state of the economy is for regular people. They discussed how it's near impossible to do what "normal" people are supposed to do and discussed how politicians don't care to help fix the situation. Inter-raters described this meme with the words "loss of hope", "unfair", "trapped", "anxiety", "uncomfortable", and "resignation" as well as "society", and "generational". R's choice in this meme helped communicate their mood through simply the meme as all of the inter-raters fully understood what R was trying to communicate in this meme as they all described almost exactly what R was becoming stressed about. The simple visuals of the sweat droplet on the millennials and the almost unheinged look on the government and economy expresses a discomfort and loss of hope in the ability of doing what seemed in reach at first.

Figure 5 Participant 18's meme describing their housing issues



Participant 18 is another example of housing issues and difficulties finding housing for them and their family. Their meme had a lot more details within it to describe more about their situation and stressors, allowing the inter-raters to have a full grasp of the situation. The imagery of the characters spoke to participant 18 in their visual emotional expression and since it relates well to their emotions, it was more easily translated when viewed by other people such as the inter-raters. The slight cross-eyed look on Buzz Lightyear and the distress on Woody's face made it simpler to express the emotions and frustration that the participant is feeling. Participant 18 also had an increase in their positive affect of +18 after sharing their meme with their partner. This sharing was not part of research, but they also decided to share this fact in their reflection on how their process and finished results made them feel.

There were a few topics that were difficult for the inter-raters to really comprehend and those often were the ones that used unique symbols or wordings that were personal to the creator. The creator went to describe a bit more about their situations and their purpose of their creation, but their creation itself did not communicate the issues well just through the meme format.

Figure 6 Participant 26's meme regarding stress around their body image



Participant 26, Greg, made a unique meme with the classical black and white format similar to some older memes that came about around 2010. Greg wrote about how their main stressor is body image. The imagery itself has no timeline or explanation other than the figure ingesting coins repeated four times. Greg also described how the meme “has no meaning and it is up to the viewer to establish that.” This had led to a lot of confusion from the inter-raters as it is a form of humor that is less specified as well as a stressor they may not have related with specifically, so the inter-raters made their own assumption of what this meme meant. The inter-rater’s analysis in single word descriptions included “capitalism”, “gluttony”, “torture”, “nourishment”, “model”, “society”, “unintelligent”, “thoughtless”, “futility”, “joke”, and “oops.” Some descriptions could be considered somewhat similar to a stressor of body image such as “trying to explain that they are having a difficult time” and “Think before you do something. What you think is an EPIC PRANK may kill you. Don't be stupid to try to fit in.” Overall, most

of the descriptions were about money as the imagery and lack of description on the meme itself lead to.

Figure 7 Participant 6's meme showing their stress related to their work

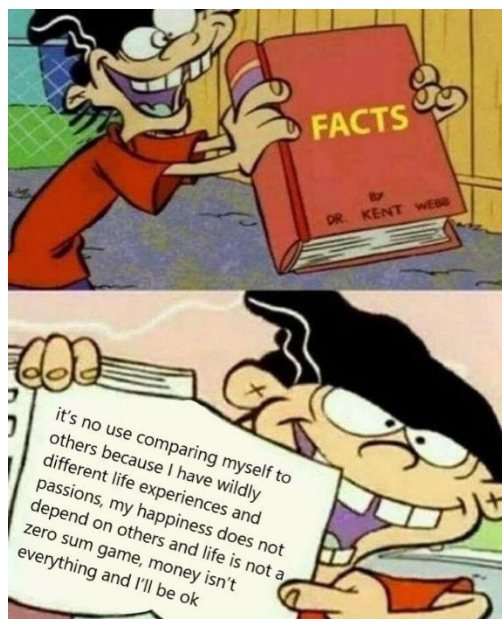


The lack of description and explanation also got lost in translation through the meme for participant 6, who we will call Yoshi. Yoshi describes their main stressor to be very specific to their work as a software developer. They mention how the work they do are called stories which is not a general piece of knowledge that many people would refer to as stories. Many of the inter-raters interpreted this meme as writer's block. They were however able to somewhat understand the emotion that Yoshi experienced, analyzing the emotion expressed to be "distressed", "shame", "isolation", "confused", "antagonist", "irony", "villainous", and "stressed." Most of these descriptions fit into Yoshi's story, in which they are under pressure to complete their story by a certain deadline and the completion of one story can be dependent on others, meaning having issues can block the progress of the work as a whole. Yoshi has been stressed about having their story or someone else's story being the blocker of progress. The

choice of the meme was able to slightly express Yoshi's emotions about the situation even if the specifics were not fully understood.

Participant's intention is important in the communication of what they are trying to express as well. Such as in participant 21's meme in which they had decided to make more of an uplifting meme rather than express their stressor through the meme. Their stressor actually revolved around how they feel about their major and not being able to make money off it compared to tech majors. Their meme however was more encouraging to themselves in their situation. This has led to more positive analysis descriptions from the inter-rater such as "self-talk affirmation", "self love", "consolation", "comparison", "reassurance", "motivational", "perspective", "understanding", "attitude", and "life." The inter-raters were able to get a general gist of the situation about comparison to others where it is not as specific to their situation, but in general. It is also interesting to look at the participant's change in negative and positive affect as they took this survey in a whole other direction in which they increased their positive affect by 22 and decreased their negative affect by 12.

Figure 8 Participant 21's meme demonstrating an uplifting meme regarding their stress



This research has found that the creation of memes had an impact on lowering one's negative affect. There was not much change in positive affect, though many of the participants felt proud after completing their meme. It was also found that in terms of communication utilizing memes, most memes were understandable when they either had a lot of textual context or were a general stressful situation that the viewer could relate to. It's also important to note what the participant's intended to express in the end as it could change what is interpreted.

Discussion

Memes are such interesting forms of expression that are popular and easy to access. In this chapter, the researcher explores what the results show, the limitations to the current study, validity, and implications for further research into this topic. This research has explored whether a meme creation leads to more positive affect and helps adults who use the internet communicate their mood.

Results Discussion

The results have shown that a majority of the participants reported feeling better after completing their meme as the average negative affect score decreased by 7. There is less conclusive evidence of positive affect change as the average positive affect score only increased 0.25 after completing their meme. Most participants also decreased their positive affect score with a few outliers that increased it (Participant 21 increasing their positive affect score by 22). After reviewing the data, this could be due to the fact that specifically reflecting on a negative moment could make the participant brew over their negative feelings more. There was an instance in which there was a large positive increase which led to the increase of average positive score in participant 21's meme as they opted to create their meme utilizing more positivity and self-care rather than negative stress expression. This action led to the participant increasing their positive affect score by 22. They also noted how it encouraged them to reflect upon more of the positive aspects of their life and what unique attributes they have leading to more positive feelings. Perhaps utilizing memes in a way to shift and reframe thoughts about a negative situation allowed the participant to understand and encourage themselves to continue forward and move past their stress. Overall, the average score for negative affect dropped by 7 whilst the average positive score increased by 0.25.

The main positive affects that increased the most post-meme included ‘excited, strong, proud, and inspired.’ It appeared that many participants found that they became more proud after completing their meme, which is similar to how creating art increases positive affect (Chang, 2020). The largest change was the decrease in negative affects including ‘distressed, nervous, upset, and ashamed.’ The biggest drop in negative affect was distress. It appears that even though through expression of negative stressors, negative affect dropped significantly, it does not necessarily result in overall mood improvement.

In terms of communication, the imagery of the meme itself helps to speak upon the varying internal emotions the participant was going through. When it came to the specifics of the situation, the participant would have to write a lot to explain what they mean if their main stressor was something that was not a general topic. So in some cases, meaning was lost in the meme. However, there are many cases in which the full story does not need to be explained for the meme to bring joy, such as sharing it in a group that would understand the complexities of the meme or just appreciate it for its unique humor. The creator may find connection, comfort, and/or validation from those that they share with, allowing them to have cognitive support in their expression (Rimé, 2009). People don’t always have to be totally understood or even known in order to connect with others in shared experiences. It may not tell someone’s life story, but it’s still an important form of expressing an emotion that may be hard to translate into words much like art, but without the need to be able to create something entirely new and personal.

The use of memes allows a comfortable distance of sharing certain feelings and emotions that explains their emotion at the time without sharing too much. The internet provides a simpler form of communication that allows more control, less expectation, and less formality allowing more freedom and choice within how their emotions are shared (Krämer & Kappas, 2011). This

may allow more comfort in expression as a whole, allowing the participant to set the boundaries of what they share. It may be beneficial to use meme creation in Art Therapy in the future to start a conversation and allow more rapport as it may help the therapist connect and build rapport with their client.

Limitations

Limitations to this research include the fact that the researcher had to put together all the memes. The structure of this research required the student researcher to create memes for participants which confounds the data as there is no visual of their finished meme unless they made it on their own afterwards. Unfortunately as a student researcher, it is definitely hard to be able to create a program in which the meme could be created on the spot in which the participants can see it and alter it to their liking. The limited choices may have altered the affect in the end. Perhaps the affect change could have been greater or less due to being able to visually see their memes and experience their own humor prior to retaking the PANAS. Research done with a program that utilizes the internet database so that participants have a full range of options to express their experiences would have produced different results. This will expand on creativity and possible satisfaction in the end which also might increase their positive affect. There could however be benefits to using a restricted set of memes as many people often become overwhelmed with the amount of choices they may have which in the end could increase their negative affect.

Participant recruitment introduced a second limitation: The algorithm of social media sites often link together like-minded individuals leading to more favorable results (Taylor & Francis, 2016). This is a bit of a speculation, but it is possible. However due to the anonymity of the research as a whole, it cannot be certain.

Validity

This research was paired together with qualitative research as well as the PANAS, which is a validated measure to look at affect. The PANAS has good internal reliability ranging around 0.8 for both the positive and negative affect. The PANAS' negative affect scores have good convergent validity with stress, negative events, and depression (Riopel, 2021). This allows more validity in the research even with the visual research. The use of multiple inter-raters with similar and converging perspectives such as similar descriptions of memes can lead to higher validity. There is also a limitation to the inter-raters in this research however as all of them are somewhat like-minded folk in the same Research Completion class and they often see things in visual stimuli like the artists they are. This can allow more deeper thought into the emotion that the memes could have expressed which may affect the visual research validity.

Future Research

It does appear that memes have some sort of effect on one's emotional wellbeing much like every form of expression. This research brought up many questions and future research into this topic will be beneficial for accessibility reasons, self-care reasons, learning to express and communicate, and much more that could be looked into.

In terms of repeating this study, it would be beneficial to have a team in which to create a meme making app to allow visual creation of memes easier for all those who wish to create one. This will then allow the participants to see their meme and have their own connection to it. This may lead to different affect changes and allow more reflection as the participants can see their meme visually and see the humor in which they have created (Myrick et al., 2022). It may even increase their positive affect of being proud of what they have made much like how in art therapy, the participants can step back from what they are working on to see their completed

piece. It is definitely something that is important to include during the next trials of this research to have that visual stimuli to the participants.

It would also be interesting to redo this entire research but prompt the participant to reframe their stressful thoughts into more positive ones. Positive anticipation for the future can lead to more hopefulness and positive emotions as one traverses stressors (Leslie-Miller et al., 2021). Prompting participants to think positively of the future may lead to larger increases in positive affect scores. This thought was brought up after participant 21 decided to create a more hopeful and positive meme and it led to an increase in positive affect post-meme creation. Would the reframing of a stressor through the use of a meme increase the positive affect scores of the participants post-meme? Does the intervention need to be creating a meme to have this large of a positive effect on one's overall mood?

Another consideration to make if continuing this research in the future would be the act of sharing the meme to a community of people and observing the change in affect after communicating and seeing the responses of other people viewing the meme. Communication is extremely important in the healing process of stressors and perhaps having others see and validate the emotions and feelings they express within the meme helps boost their scores towards more positive avenues (Rimé, 2009). There were some participants that shared their meme with people around them and oftentimes they had scored significantly less negatively in affect post-meme creation, meaning they felt less negative. In consideration of this, it might be beneficial to have two groups of participants in the future. One in which will create a meme and set it aside and the other that will also create a meme but share it with those that they trust with said information and have them take the PANAS after sharing. It would also be important to keep in mind the differences in responses that others could express as not all people would react in a

reassuring and positive way, some could respond with hostility (Swerdlow & Johnson, 2022). Due to this possible factor in the research process, it would be good to consider different reactions and responses people may receive during the process of meme-creation and sharing process and how that could affect people's mood and affect.

Conclusion

This research is overall a good stepping stone into learning more about utilizing technology and modern-day humor to cope with the stressors of everyday life. This intervention, however, will not help fix the real struggles that come from society, but it can serve as an introduction and talking point to speak upon in therapy. It can open up conversations as it brings humor and makes fun out of a stressful situation which people may rather keep to themselves for reasons such as being embarrassed by it (Meltzer et al., 2000). Memes can disguise these stressors as a joke so that it may be less embarrassing since the creator is making fun of the stressor itself, allowing the meme creator to take the first step in discussing these stressors in therapy without as much discomfort. If the therapist is utilizing this method over the internet, it may take away more discomfort in expressing their stressors as they do not have to participate in the nonverbal communication that is involved with in-person situations such as facial expressions (Willkomm, 2018). In the end, more needs to be done to help tackle these problems directly, because putting a band-aid on the situation won't help. Hopefully, in the future, society can connect with each other to help each other to tackle these stressors directly.

Perhaps utilizing memes can bring people together, to talk about these stressors in which we all struggle with. This could help those to connect with humor over a topic that resonates with them allowing people to build community around issues. This research has shown that those who have similar experiences connect well with those who speak upon those experiences even

without knowing the person at all. Society can utilize this fact to bring people together so that people are able to build connections and strengths in themselves and in communities, discussing the aspects that cause collective stress and brainstorming together in order to take care of each other and to make a change.

Simplified Research Communication

Scholarly writing can be confusing and restrictive to many people who may not have the level of English that most scholars like to utilize. This keeps regular everyday people from gaining knowledge from many research papers that can honestly be tangential and hard to read. So, I decided to sparknotes my entire thesis, to make getting to the point much easier to read. It's not exactly formatted in a way that is fitting for classical education and would get a failing grade in English. However, I believe true education is meant for all, not just for the few who are privileged enough to be able to afford it throughout their lifetime, hence simple notes. I hope at least one person finds this to be helpful in their ventures into learning more.

Introduction

- I. Stress has been increasing.
 - A. Due to many factors that make life a struggle for the average person.
 1. Corporate greed, politics, poverty, etc.
 2. coronavirus.
 3. Lack of free time
 - a) Less time to socialize
 - b) Less time to practice coping mechanisms.
 4. Changes within relationships
 - B. Stress can be good, but too much can affect a person negatively.
 1. We know this, yet many people do not seek mental health care
- II. How can one take care of oneself in such a stressful time
 - A. Need to communicate feelings
 1. Use of humor?
 2. Consider: memes
 - a) Memes are popular internet culture that allows ppl to communicate with others in a humorous way.
 - B. How can we find an affordable way to
 1. Utilize technology?

- III. Can we utilize memes as a possible way to cope and communicate negative stressors in a therapeutic setting?
 - A. To help invite people to be open to the idea of therapy with less stigma as it is more informal.
- IV. How this research will be conducted
 - A. Online survey w/ participants who utilize the internet regularly
 - 1. Participants will write about a possible stressor they have or are experiencing
 - 2. They will take the Positive and Negative Affect Schedule
 - a) Measures affect - how they are feeling
 - 3. They will create a meme on their stressor
 - 4. They will write about their process and/or their meme
 - 5. Last they will retake the Positive and Negative Affect Schedule

Literature Review Simplified:

I. Stress

- A. We all have it and everyone experiences it differently.
 - 1. It can be useful (Parker, 2016).
 - a) Allows more energy and drives growth.
 - (1) This can also make you feel more accomplished.
 - (2) Must have positive mindset however to allow for this to happen.
 - 2. Stress Negatives (Joshi, 2005); (Lawson, 2016).
 - a) Can lead to escapism
 - (1) Substance use
 - (a) Leading to more anxiety and other mental disorders
 - b) Physical ailments
 - (1) High blood pressure
 - (2) Digestive Problems
 - c) Interpersonal (Social) Issues
 - (1) Higher degrees of loneliness
 - (a) Weakened immune system

- d) Faster Aging
 - 3. Stress on Mental Well-being
 - a) Stress, one's own resilience, and environmental factors are all factors that can lead to developing a mental illness. (Bridgland et al., 2021).
 - 4. Emotional regulation (making oneself feel better)
 - a) Can be hindered due to stress leading to maladaptive coping skills (Sinha, 2008)
 - (1) Leads to longer term negative effects ie: substance use.
 - b) Important to have community and a good environment to manage and avoid maladaptive coping skills. (Sederer & Lloyd, 2020).
- II. Pandemic and Stressors in Society
- A. Overall Stress and development of trauma increased due to COVID-19. (Bridgland et al., 2021)
 - 1. Increased chance of PTSD, insomnia, and depression after being diagnosed with COVID-19 (Campo-Arias et al., 2022)
 - 2. Fear due to disconnect between differing ideas and opinions on the pandemic (Sleeprelker, 2022).
 - a) 18-24 year olds most likely age group to have anxiety and depression (Ripley et al., 2020)
 - 3. Avoidance of public places/ in person places
 - 4. Increase of domestic violence
 - 5. Inability to access healthcare of drugs to handle withdrawal symptoms when coming off of substances (Andrade, 2020).
 - 6. Increase of helpline caller volume in topics surrounding fear and loneliness. (Brühlhart et al., 2021)
 - B. Cost of Living Stress, Healthcare costs, racial disparities, mass shootings, climate change and more.
 - 1. Increase in suicidality and maladaptive coping skills (Ripley et al., 2020)
 - 2. 87% of people noted that the past two years from 2020-2022 felt like a constant stream of crisis (American Psychological Association, 2022).

a) Younger generations' main concerns stemmed from money or lack of it.

(1) Poverty affects mental health and a slight increase would have major benefits on one's mental health (Kuroki, 2021).

(2) Renting is harder than buying (McNeely, 2022)

(3) Poverty suppresses the poor from having access to education and housing (Duffy, 2021)

3. Education

a) College prices increased 169% and jobs expect a degree of higher education.

(1) Those with a bachelor's degree can make \$15,000 more than those with just a highschool degree (Hess, 2021).

(2) Increase in student debt leading to more financial stress (Peterson Foundation, 2021).

(a) +Hidden curriculum of money management, work, and school (Wilcox et al., 2021)

4. Racial Disparities

a) African American more likely to have higher debt due to systemic racism (Kim et al., 2017)

b) Housing market inequalities

(1) Racial bias in real estate (Zonta, 2019)

(a) Leads to more POC in food deserts and more substance use in the area (Brooks, 2014)

(i) Stress better handled with access to healthy foods (Healthwise, 2020)

5. Poverty and mental health are intertwined (Kuruvilla & Jacob, 2007)

III. Importance of Taking Care of Mental Health

A. Mental Health has an effect on physical health, happiness, and stress levels (Xiong, 2018)

B. $\frac{1}{5}$ people will experience a mental illness and $\frac{1}{25}$ have a serious mental illness (Bailey, 2021)

C. Must learn of ways that work for people to manage their emotions or manage their symptoms of mental illness.

IV. Why People Don't Take Care of Their Mental Health/ Get Therapy

A. Embarrassed to talk about it or think it is unnecessary (Meltzer et al., 2000).

1. Stigma, social structure of not looking weak, cost, feeling safe in their discomfort, family against it, etc.
2. Can hurt interpersonal relationships as they may believe they can handle it together without outside help (Ciampi, 2011)

V. Communication in a Therapeutic Relationship

A. Communication is good in every relationship and in a medical setting can speed up recovery (Ali, 2018).

B. Helps reduce stigma of mental health care and bring more people who need it in (Active Minds, 2020).

1. Communication and Education reduces stigma of mental illness such as PTSD and normalize treatment of it (Roscoe, 2021)

C. 5 Methods of Communication (Willkomm, 2018)

1. Verbal Communication

a) Formal/Informal; tone

(1) Can affect the message as one communicates

2. Non-verbal Communication

a) Facial Expression, Posturing, and Reactions (like sighing)

3. Listening

a) Active Listening: process of listening w/ complete attention w/o interrupting the person who is speaking - also includes reflecting and summarizing what is said (Weger et al., 2010).

(1) Helps build rapport

4. Written Communication

a) Like what you are reading right now!

5. Visual Communication

a) Pictures and graphics

- b) These two methods may help encourage more ease into sharing one's thoughts and emotions.

VI. Art Therapy

A. Art Therapy is a form of therapy utilizing art-making, creative process, human exp, and psychological theory to enrich people's lives (American Art Therapy Association, 2017)

1. Gives space to manage and express emotions that is not so direct and to the point (Haen, 2017).
2. Art communicates and can be used as a way to cope.
 - a) Math utilizing art to manage the stressors of learning math connect students' creativity with math. It reduced stress and benefited learning (Fairbairn et al., 2021)
 - b) Nonverbal artistic expression of body awareness to become aware of how the body reacts to difficulties to help them learn more about their own emotions in a non-stressful way (Ono, 2018)
 - (1) Helped them learn stress is an opportunity for growth
3. Art opens the door for people who have fears of therapy due to cultural differences or racial bias in the health and mental health sectors (Turner et al., 2020)

VII. Technology Use Increase Telehealth

A. Therapy can be more accessible with technology

1. More people use technology to share thoughts and socialize with others; many note that it is essential to them (McClain et al., 2021)
2. Therapists use it to reach a broader audience.
3. Benefits the clients as well due to making it more affordable and easier to access.
4. May be more difficult to build rapport however (Novotney, 2017).

VIII. Humor

A. Humor and laughter can help manage stress, pain, and other negative emotions; laughter lowers stress and increase pain tolerance (Louie et al., 2016)

1. Hospital clowns made significant positive changes to pediatric patients' physical and mental states during chemotherapy (Arriaga et al., 2020)
2. Utilizing humor as a method to create dialogue as a potential therapy can lead to decrease stress, anxiety, depression, pain, and fatigue whilst also increasing immunity, quality of life, joy, quality of sleep and resistance (Mota de Sousa, 2019)
3. Little cost and no side effects
4. Produces endorphins to reduce stress and brings a positive mood to an otherwise stressful environment (Louie et al., 2016)

IX. Memes

- A. Memes are “units of popular culture that are circulated, imitated, and transformed by individual Internet users, creating a shared cultural experience in the process” (Shifman, 2013, p. 367)
 1. Memes are a mix of art and humor that can be personalized to the creator's thoughts and feelings (Wong & Holyoak, 2021)
 2. It connects those with similar interests and normalizes their thoughts and opinions (Gal et al., 2016).
 3. Can influence psychological state in lowering stress through viewing a meme (Myrick et al., 2022)

Methodology Simplified

Can meme creation lead to more positive affect and help adults who use the internet to communicate?

- I. This research is a mixed methods study to study possible benefits of creation of memes on adults' moods as well as a way to communicate their feelings nonverbally with others online.
 - A. Study modern art therapy interventions
 - B. Allow more reach to people needing therapy.
 - C. Allows people to practice interpersonal skills and create strong bonds
- II. Participants
 - A. 26 participants volunteered
 1. Invited via the internet through social media sites.

2. 65.4% were 22-32y/o
3. 19.2% were 32-42y/o
4. 15.4% were 18-21 y/o
5. Given chance to provide pseudonyms and advised to not use any identifying information
6. All participants consented to participate and have their artworks reproduced in this thesis.

III. Location

A. This research was posted on several social media websites such as Twitter, FB, Reddit, and chat groups such as Discord.

B. Research survey was done over Google Forms

IV. Confidentiality and Consent

A. Participants were given a digital consent form prior to participating.

1. They must be 18+
2. Informed of hotlines on each page of the survey
 - a) In case of mental health emergency and ease of access to these hotlines
3. Described risks pertaining to strong negative emotions
4. Consent to use their meme being reproduced
5. All info behind password protected device and account.

V. Research Design

A. Mixed Methods Approach

1. Quantitative Affect - Using PANAS (Positive and Negative Affect Schedule) survey to measure positive and negative affect
2. Qualitative Format - Communication Aspect
 - a) Utilize Inter-raters from the Research Completion Class
 - (1) Try to interpret what the participants are trying to convey with their meme.
 - (2) Compare to participants' descriptions

VI. Process

A. Google forms utilized as main survey

1. Also allowed participants to create their meme without judgment or anxiety of another person watching them.
 2. Posted on many social media sites
 3. Consent
 4. Page two
 - a) Participants asked to reflect upon negative event
 - b) Participants then take the PANAS (Positive and Negative Affect Schedule) Survey to measure base affect
 - (1) PANAS is a questionnaire in which participants gauge their feelings on a 1-5 scale about a series of 20 words (10 negative and 10 positive).
 - (2) Scores can range anywhere from 10-50 for positive or negative affects.
 - (3) Has good convergent validity with stress, negative events, and depression
 5. Meme creations
 - a) Utilize meme prompts provided or make their own
 - b) Add text to personalize their meme (top text, bottom text, and/or other text)
 - c) Memes were then created by student researcher utilizing Paint 3D unless participant uploaded their own
 6. Participants describe their meme, what it means to them, their process, and what they are trying to express.
 7. Retake PANAS (Positive and Negative Affect Schedule)
 8. Option to comment
 9. Picture of researcher's dog thanking the participants for participating
- B. Inter-raters view memes via second google forms w/ zero knowledge of the participants.
1. Describe what they analyze in a few words
 2. Describe what the participant is trying to express

VII. Measures and Assessments

- A. Prompt: “Please reflect on a situation that has caused you some sort of stress recently, you will be making a meme out of this situation or experience. Please do not use one that causes severe distress in yourself and please do not use a story in which you can be easily identified.”
- B. PANAS (Positive and Negative Affect Schedule) (x2)
- C. Prompt for Meme Creation: “Please select a meme that you find fits your experience or story which you have described earlier in the survey. Feel free to save any of these templates to create your meme and upload it (right click and save)! If you'd like to make your own using what is found on the internet, please pick "I'll make my own" and upload on the next question!”
- D. Prompt: “Please describe your meme and/or your process in creating this meme! How did it affect your mood?”

VIII. Materials

- A. Google Forms, Paint 3D, Internet Database, Flyer
- B. Meme Templates
 - 1. Chosen by student researcher to make it easier for participants to choose from if they can't decide.
 - 2. Offers a more diverse expression of different negative emotions as well as diverse types of memes.
 - a) Figure 2: Tired Cat Meme
 - b) Figure 3: “They don't know...” meme
 - c) Figure 4: Angry Arthur Meme
 - d) Figure 5: Cry Cat Thumbs Up Meme
 - e) Figure 6: X,X Everywhere meme
 - f) Figure 7: Elmo on Fire Meme
 - g) Figure 8: Spongebob Meme
 - h) Figure 9: Kermit and Evil Kermit meme
 - i) Figure 10: Surprised Pikachu meme
 - j) Figure 11: “Is this a...” Meme
 - k) Figure 12: “This is Worthless” meme

- l) Figure 13: Being Held Back Meme
- m) Figure 14: Double D Facts meme

IX. Data Analysis

- A. Quantitative Changes in Positive and Negative Affect Schedule from their before and after meme creation.
 - 1. Average Changes, Individual Changes, and Average Affect Changes
 - a) Average Specific Affect Change plotted on Barbell (dumbbell) graph
 - b) Average Changes in positive and negative scores plotted on bar graph
- B. Qualitative Comparison of graduate student art therapists' (inter-rater) perception of msg shown on meme vs participants' msg.
 - 1. Graduate student art therapists' prompts
 - a) "Describe what you analyze from the meme in single word descriptions"
 - b) "What do you think the creator is trying to communicate?"
 - 2. If participants were able to successfully communicate, inter-raters would have been able to generalize the participant's feeling through the meme

X. Risks and Benefits

- A. Minimal Risk
 - 1. Some potential ones include anxiety, panic attacks, and/or increased stress
 - 2. There are hotlines on every pages for participants to access if needed
 - 3. Happy dog meme at the end to help mitigate negative emotions
- B. Benefits
 - 1. Maybe using memes could help the individual in their own symptom management and expression.
 - 2. Might help them think critically on their situation
 - 3. Fun and funny!

XI. Protection of Human Participants

- A. All anonymous
 - 1. No ID information

- a) If any will be redacted
- 2. Choice of pseudonym
- 3. All files save behind a password protected device on a password protected google drive.
- B. IRB at DUC has reviewed and accepted this research proposal.
- C. Research follows the ethical guidelines of CAMFT, AATA, and DUC

Results Simplified

- I. Goal 1: Is there any change in negative/positive affect after meme?
 - A. 80% scored lower negative affect (less bad feels)
 - B. 7% increased in negative affect (more bad feels)
 - C. 11% no negative affect change
 - D. 57% decreased positive affect (no good feels anymore)
 - E. 34.6% increased positive affect (more good feels)
 - F. 7% no positive affect change
 - G. Average +0.25 increase in positive affect (small feel better)
 - H. Average -7 decrease in negative affect (significant feel less bad)
 - 1. Increased positive affects (largest change in all caps)
 - a) Excited, strong, PROUD, inspired
 - 2. Decreased negative affects (largest change in all caps)
 - a) DISTRESSED, nervous, upset, ashamed
 - 3. 'Determined' and 'Attentive' had no change
 - I. Participants felt a bit better
 - 1. Noted sharing might help boost positive affect
 - 2. Mostly felt validated
- II. Goal 2: Communication
 - A. Used inter-raters
 - 1. "Describe what you analyze from the meme in single word descriptions"
 - 2. "What do you think the creator is trying to communicate?"
 - B. Memes communicate well when main stressor is general stress that is relatable
 - 1. Ex. Economic Struggles

- C. Visual cues from memes makes it easier to get emotional cues of how the participant might feel.
 - 1. Sweat droplet, unhinged faces, discomfort in meme
- D. Utilizing a lot of detail to describe situation
- E. Difficulty in non-detailed meme
 - 1. No clear visual cues from main meme
 - 2. Leads to assumptions from inter-raters
- F. Difficulty understanding specific terminology
 - 1. A participant utilized the word ‘story’ and ‘blocker’ to describe work as a software developer.
 - a) Inter-raters are not knowledgeable in this field - leading to more assumptions
- G. Participant intentions important
 - 1. What are they trying to express?
 - 2. Participant 21 wanted to make an uplifting meme rather than express their stressor of their major not being “good enough”
 - a) Caused inter-raters to assume more positive thought
 - (1) They were able to understand what the stressor might be however due to some context clues.
 - (2) Important to keep in mind this method increased the participant’s positive affect by 22.

Discussion Simplified

Research Repeated: Can Meme Creation lead to more positive affect and help adults who use the internet communicate their mood?

- I. Results Discussion
 - A. Significant change in negative affect
 - 1. Majority rated lower negative affect (Feeling less bad)
 - B. Lowered positive affect scores
 - C. In case of increased positive affect score
 - 1. Participant 21 utilized uplifting meme
 - a) Increase positive score by 22

b) They reflected upon positive aspects of their life, reframe their thought, and encourage themselves to continue forward

D. Participants became more proud after meme-creation

E. Participants became less distressed after meme-creation

F. Imagery of meme helps to understand creator's emotions

G. If the stressor is specific and not a general stressor that the viewer is familiar with, more information (text) would need to be added to explain the situation.

1. In some cases meaning was lost in the meme

a) Not all needed explaining to bring joy

b) Sharing with group with an understanding can help with feelings of validation, connection, and/or comfort (Rimé, 2009)

H. Use of meme allows comfortable distance of sharing

1. More control, less expectation, and less formality (Krämer & Kappas, 2011)

II. Limitations

A. Researcher had to put together the memes

1. Student researcher could not create a program to have the meme created on the spot for the participants to see and view

a) Might alter affect

B. How participants were gathered

1. Algorithms on social media sites link together like-minded people leading to more favorable results (Taylor & Francis, 2016)

a) Not for sure however due to anonymity, student researcher cannot check.

III. Validity

A. Mixing visual research and validated method - PANAS

1. Helps increase the validity of it

B. Inter-rater Limitation

1. All somewhat like-minded folk in the Same Research Completion class.

2. Also as artists they see visual stimuli differently from non-artists and can see deeper thoughts into emotions through the memes

IV. Future Research

- A. Memes have some sort of effect on emotional wellbeing
- B. Perhaps repeat this study with a meme creating app allowing more visual stimuli of finished product.
 - 1. Perhaps seeing meme visually can lead to different affect changes (Myrick et al., 2022)
- C. Reframing stressful thoughts to positive thoughts
 - 1. Like participant 21 who did an uplifting meme rather than stressful leading to 22 point increase in positive affect score.
- D. Sharing a created meme and having responses lead to a larger change in affect?
 - 1. Could it be validating or comforting (Rimé, 2009)?
 - a) Some participants shared their meme and had lowered their negative score significantly
 - b) Might be beneficial to have two groups of participants in the future
 - (1) One to just create a meme
 - (2) One that also shares their meme
 - c) Must keep in mind not all responses are reassuring or positive
 - (1) Some respond with hostility (Swerdlow & Johnson, 2022)

V. Conclusion

- A. Good stepping stone into learning more about memes and technology to cope.
 - 1. However it is band-aid to real-life struggles
- B. Perhaps utilize memes to bring people together
 - 1. People connect with memes and shared experiences
 - a) Build community
 - 2. Connect and change for the better.

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Appendix A
Call for Participants

Call for Research Participants!



Are you 18 years or older and actively use the internet?

We are looking for volunteers to participate in a research study about memes, looking into its beneficial factors of coping and communicating. If you have about 15 minutes of free time to fill out this survey it will be greatly appreciated!

If you are interested in participating please use the link below!

<https://forms.gle/1TZYiQjqG9TUn4Cg6>



Any Questions?

Please email: nox.ngo@students.dominican.edu

Appendix B**PANAS**

Table 2 PANAS

1 - Very Slightly or Not at all	2 - A Little	3 - Moderately	4 - Quite a Bit	5 - Extremely
------------------------------------	--------------	----------------	-----------------	---------------

1. Interested _____	11. Irritable _____
2. Distressed _____	12. Alert _____
3. Excited _____	13. Ashamed _____
4. Upset _____	14. Inspired _____
5. Strong _____	15. Nervous _____
6. Guilty _____	16. Determined _____
7. Scared _____	17. Attentive _____
8. Hostile _____	18. Jittery _____
9. Enthusiastic _____	19. Active _____
10. Proud _____	20. Afraid _____

PANAS (Watson et al. 1988)

Appendix C

Memos suggested by the researcher for the participants

Figure 9 Tired Cat meme



Figure 10 They Don't Know meme



Figure 11 Angry Arthur meme



Figure 12 Cry Cat Thumbs Up meme



Figure 13 XX Everywhere meme



Figure 14 Elmo on Fire meme



Figure 15 Spongebob meme



Figure 16 Kermit and Evil Kermit Meme



Figure 17 Surprised Pikachu Meme



Figure 18 Is This a... meme



Figure 19 This is Worthless meme



Figure 20 Being Held Back meme

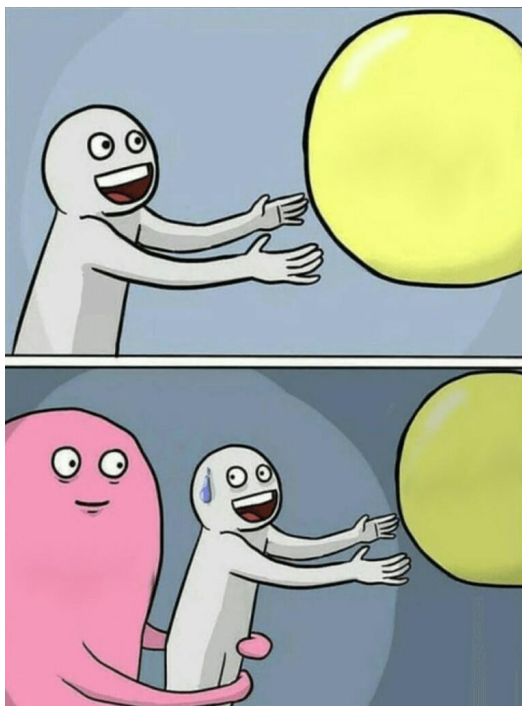
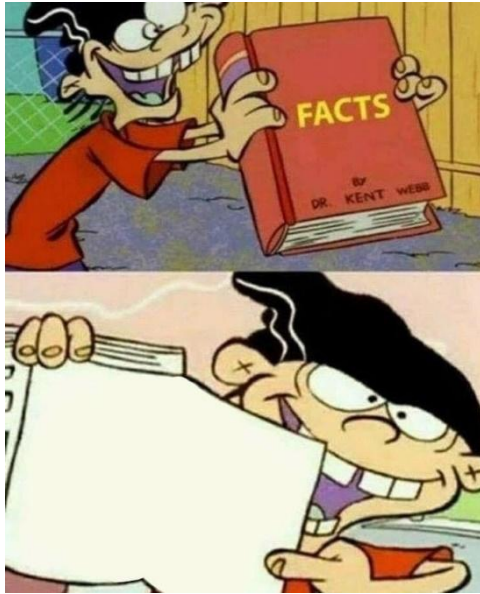


Figure 21 Double D Facts meme



Appendix D**Memes Data**

Figure 22 Participant 1's use of the "This is a..." meme to show their stress



Figure 23 Participant 's use of the "Double D Facts" meme to show their stress

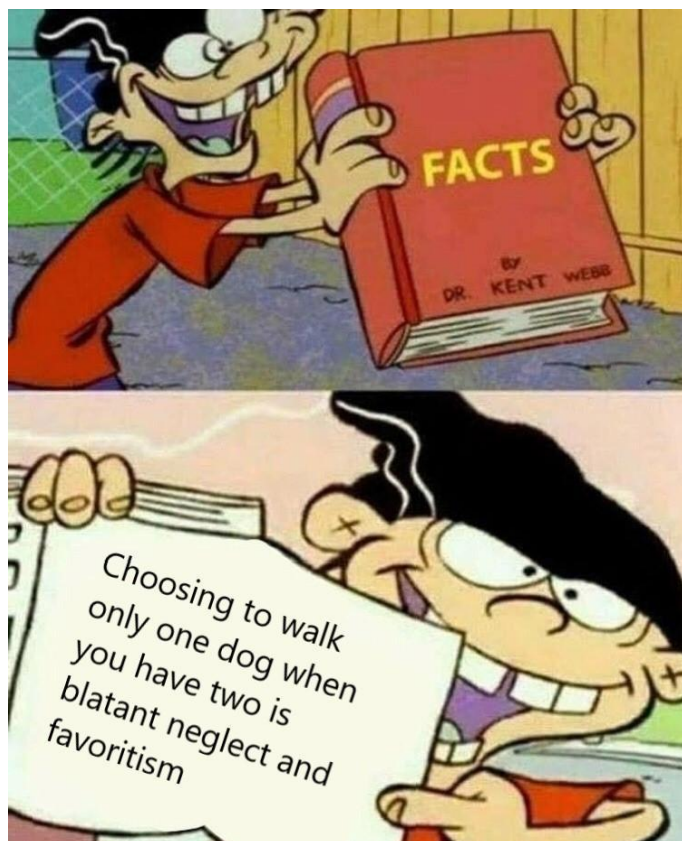


Figure 24 Participant 3's use of the "This is a..." meme to show their stress

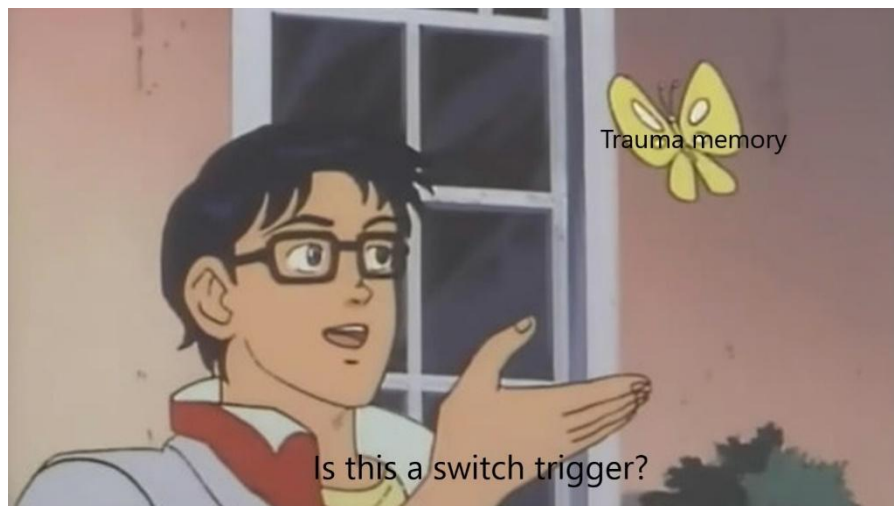


Figure 25 Participant 4's use of the "Tired Cat" meme to show their stress



Figure 26 Participant 5's use of the "Elmo on Fire" meme to show their stress

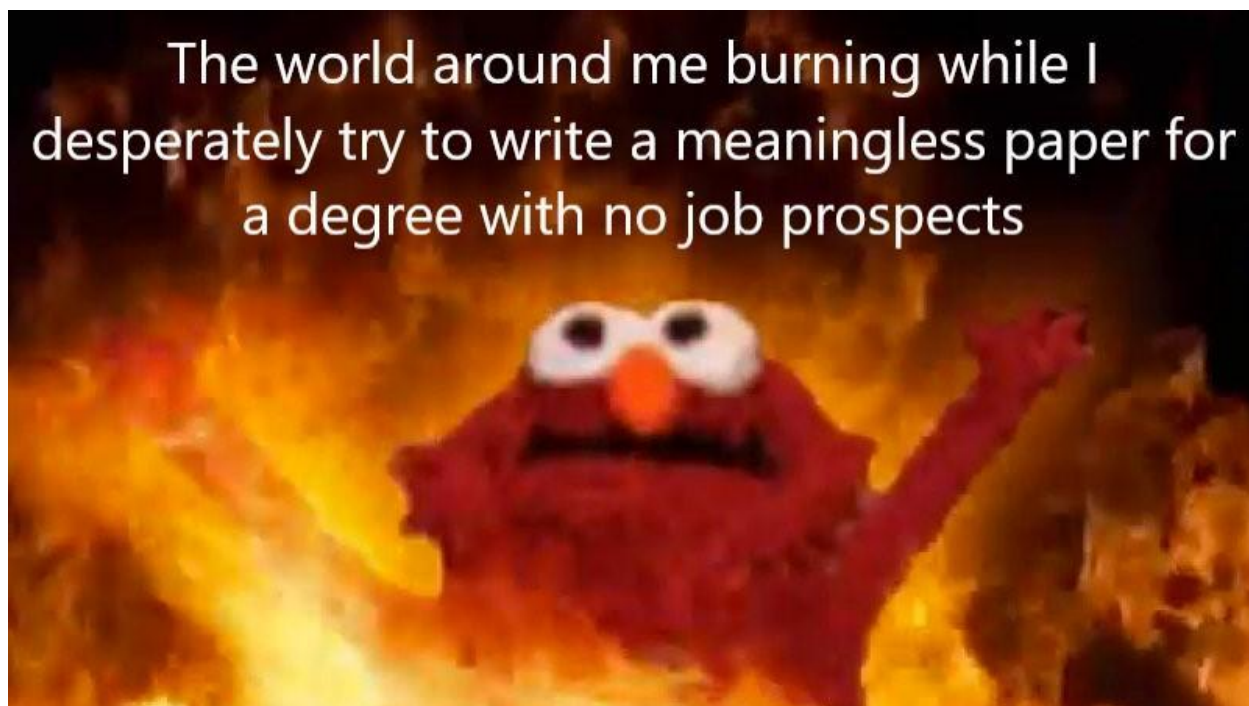


Figure 27 Participant 6's use of the "Elmo on Fire" meme to show their stress



Figure 28 Participant 7's use of the "Kermit and Evil Kermit" meme to show their stress

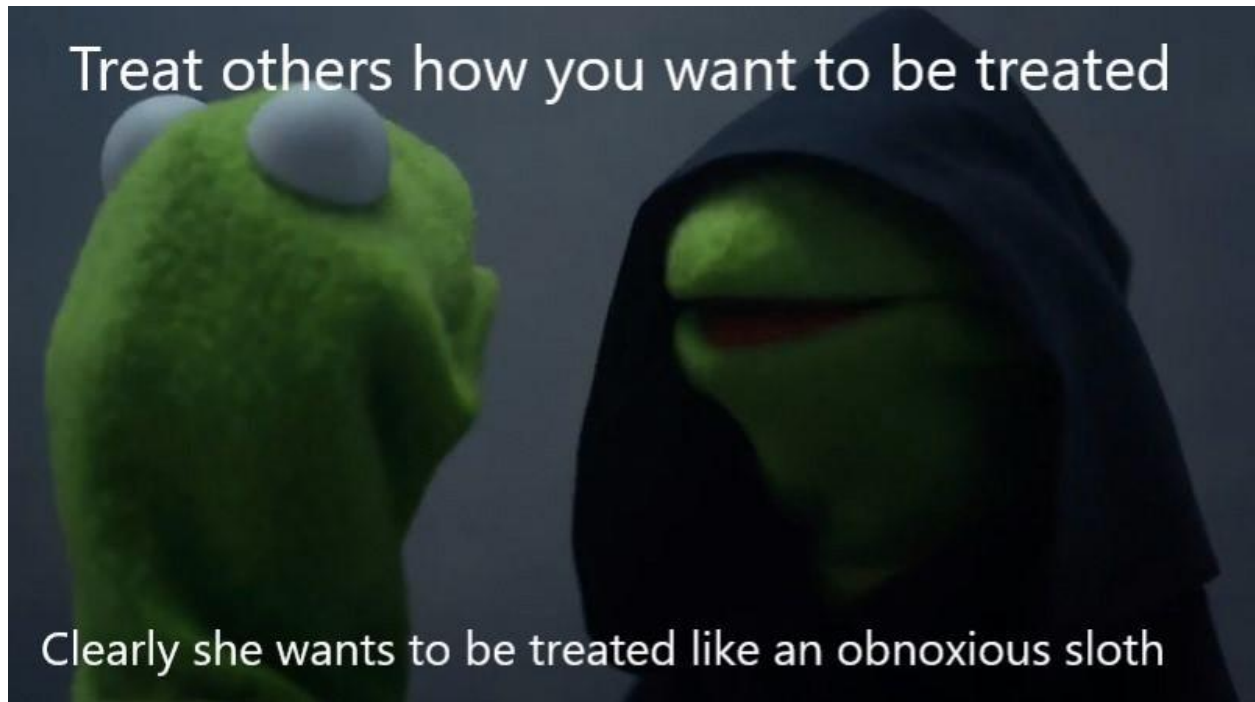


Figure 29 Participant 8's use of the "Kermit and Evil Kermit" meme to show their stress

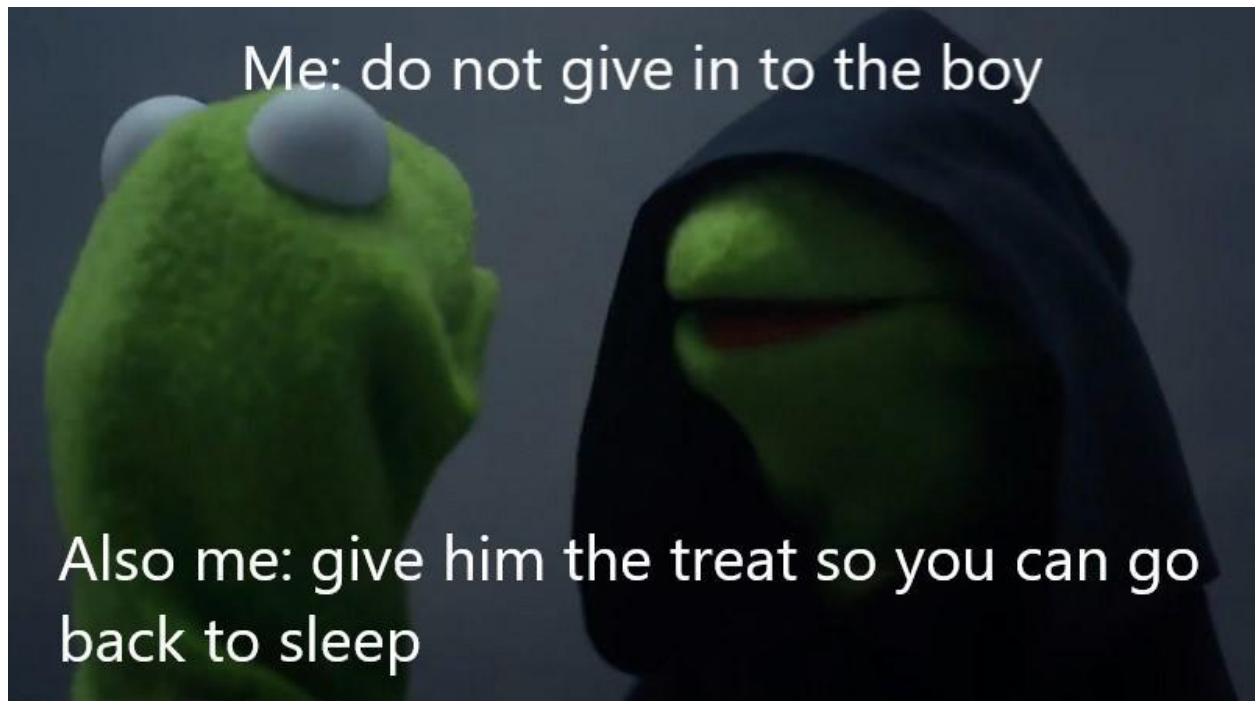


Figure 30 Participant 9's use of the "Tired Cat" meme to show their stress



Figure 31 Participant 10's use of the "Surprise Pikachu" meme to show their stress

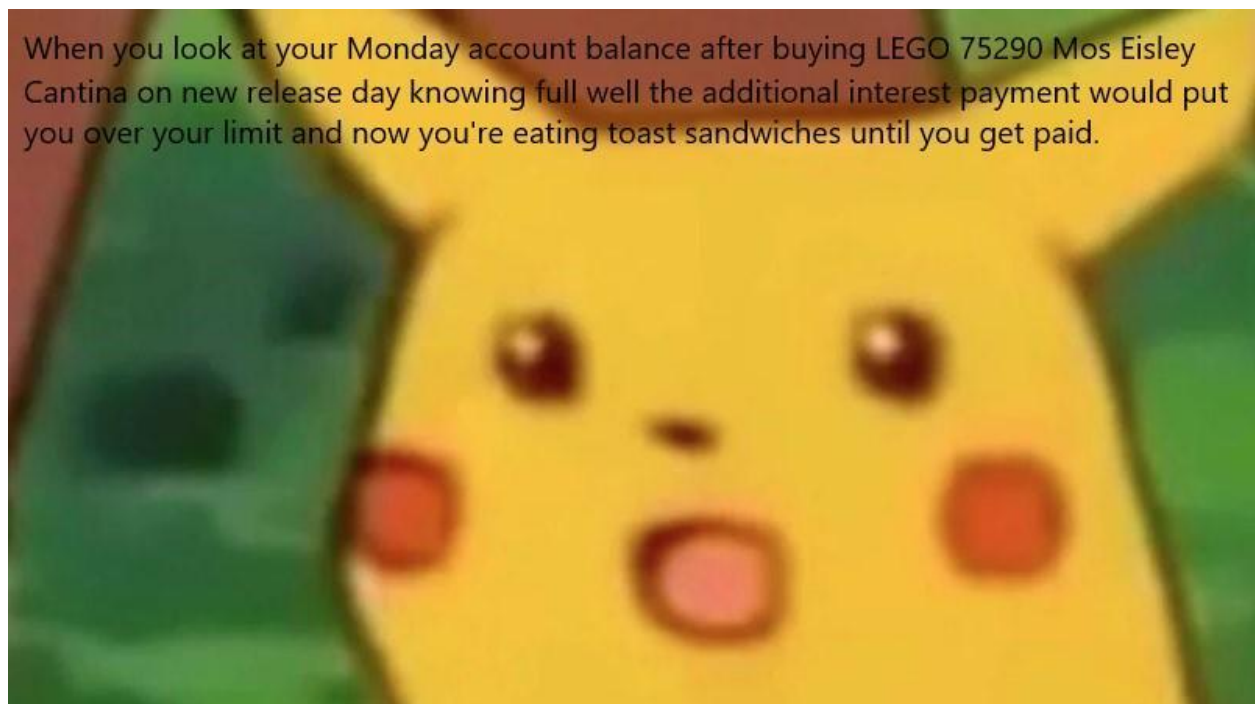


Figure 32 Participant 11's use of the a meme to show their stress



Figure 33 Participant 12's use of the "Kermit and Evil Kermit" meme to show their stress



Figure 34 Participant 13's use of the "Crying Cat Thumbs Up" meme to show their stress



Figure 35 Participant 14's use of the "Elmo on Fire" meme to show their stress



Figure 36 Participant 15's use of the meme to show their stress



Figure 37 Participant 16's use of the "Tired Cat" meme to show their stress



Figure 38 Participant 17's use of the "Being Held Back" meme to show their stress



Figure 39 Participant 18's use of the "XX Everywhere" meme to show their stress



Figure 40 Participant 19's use of the "Being Held Back" meme to show their stress



Figure 41 Participant 20's use of the "Being Held Back" meme to show their stress

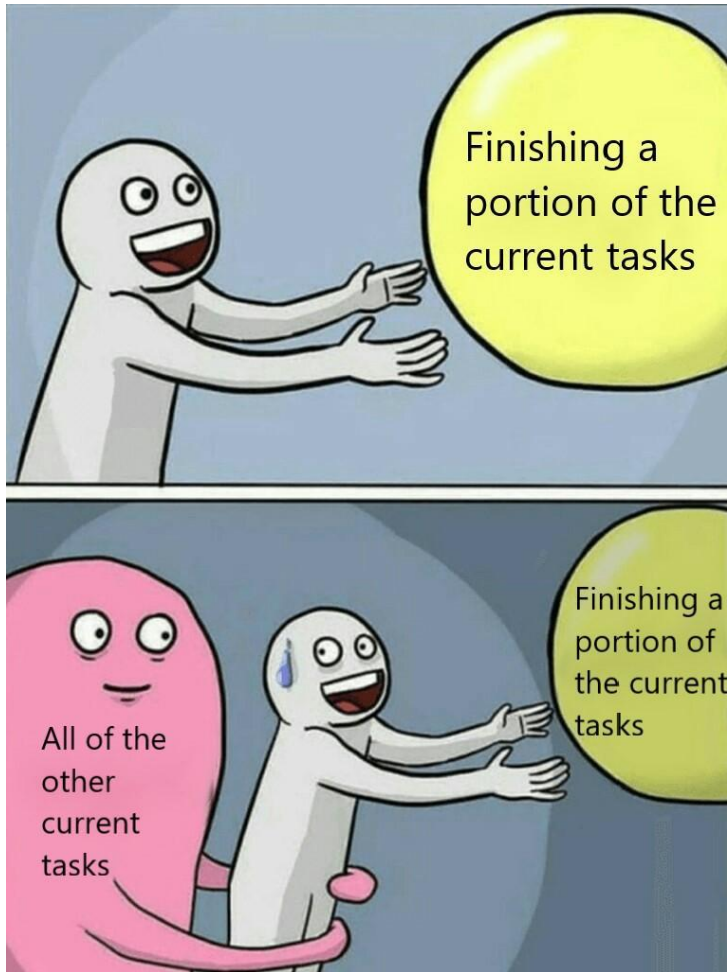


Figure 42 Participant 21's use of the "Double D Facts" meme to show their stress

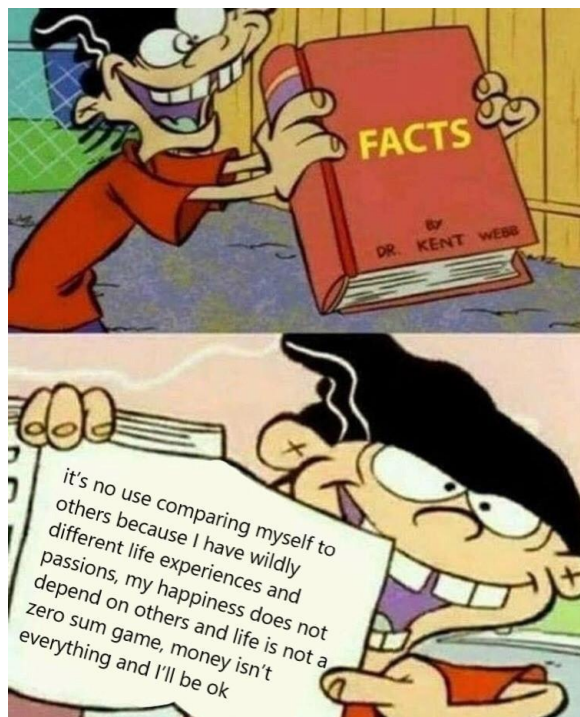


Figure 43 Participant 22's use of the "Being Held Back" meme to show their stress



Figure 44 Participant 23's use of the "Tired Cat" meme to show their stress



Figure 45 Participant 24's use of the "Angry Arthur" meme to show their stress



Figure 46 Participant 25's use of the "Cry Cat Thumbs Up" meme to show their stress



Figure 47 Participant 26's use of a meme to show their stress

