THE BRAIN OF THE PLANNER
THE EMOTIONAL AND CULTURAL BENEFITS OF PLANNING
Procrastination has been widely researched with many previous studies revealing how this behavior is learned and its impact on humanity. Despite extensive research on the topic of procrastination, the inverse—specifically, planning and its benefits—has been far less studied. To better understand how people are emotionally, cognitively and interpersonally affected by planning compared to procrastinating, online retailer Zulily® commissioned a study examining the benefits of planning, specifically among moms.

As heads of households and primary decision makers for their families, moms often have the most responsibility for planning. Researchers wanted to learn what drives early planning behaviors, and is there a reward for moms who plan ahead? Is there truth to the old adage “the early bird catches the worm”? This comprehensive research sets out to determine just that, including a literature review of existing peer-reviewed studies on planning versus procrastination, a quantitative and qualitative study of moms’ attitudes and behaviors, as well as linguistic analysis and coding of emotional reactions via facial expressions.

The research revealed that the Brain of the Planner – and of the Procrastinator – are far more complex than past studies have suggested.

Despite their perceived differences, the study shows evidence that Procrastinators and Planners are driven by a common motivator: anxiety. Both groups use planning and procrastinating behaviors as a means to manage anxiety, but the effects of their actions differ.

While Procrastinators often avoid doing something as a way to evade the anxiety they associate with the task, Planners more proactively complete the task as a way to "avoid" feeling anxiety over not doing it.

The impact, as revealed by the research, is that moms who are Planners are less stressed, happier, healthier and feel more respected by their friends, families, and colleagues than their counterparts, but that Procrastinators can plan effectively and experience these same outcomes with the right strategies in place. While there is no right or wrong way to tackle life responsibilities, this research calls for a closer look at how moms ultimately feel when navigating day-to-day tasks and how planning ahead through small behavioral changes can yield significant cognitive, emotional and interpersonal benefits.
THE HISTORY OF THE STUDY OF PLANNING VS PROCRASTINATION

A literature review of academic and peer-reviewed publications confirms that while procrastination is a well-studied topic, it’s often focused on the negative impacts of procrastination rather than the positive outcomes of its opposite: planning.

We have been procrastinating for centuries...literally.

Procrastination has been talked about since ancient times. Psychologist and author WJ Knaus asserts, “[procrastination] parallels human civilization and may have originated 2.5 million years ago.” Brian A. Wilson wrote in Belonging to Tomorrow: An Overview of Procrastination that the origin of the word procrastination derives from the late 16th century Latin word procrastinat, which means “deferred until tomorrow,” from the verb procrastinare (from pro, “forward” plus crastinus, “belonging to tomorrow”).

The fact that procrastination has been discussed for centuries, even millennia, means it has also been studied extensively, and research suggests that most people have the ability or tendency to procrastinate.

According to Joseph Ferrari, a psychology professor at DePaul University, “Everyone procrastinates, but not everyone is a Procrastinator.” Ferrari conducted research that found that “as many as 20% of adults worldwide are true Procrastinators, meaning that they procrastinate chronically in ways that negatively affect their daily lives and produce shame or guilt.”

Attributes Of Procrastinators Include Impulsiveness And Lack Of Time Management Skills

Prior research shows that personality traits, such as impulsiveness, have been found to be associated with procrastination. Piers Steele, Distinguished Research Chair at the University of Calgary, is often cited regarding these traits. According to Steele’s 2007 paper, “The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure”:

A meta-analysis of the possible causes and effects of procrastination, based on 691 correlations, reveals that neuroticism, rebelliousness, and sensation seeking show only a weak connection. Strong and consistent predictors of procrastination were task aversiveness, task delay, self-efficacy, and impulsiveness, as well as conscientiousness and its facets of self-control, distractibility, organization, and achievement motivation.

Fear of failure, frustration, self-doubt and anxiety are also identified as reasons for delaying or putting off tasks.
Procrastination Can Impact More Than A Late Birthday Gift

Aside from the obvious repercussion of a missed deadline, various studies reviewed have noted numerous negative impacts of procrastination. Procrastination in life is quite reasonable, expected and commonplace, so those individuals exhibiting this behavior should not feel stigmatized or shame. It is important to realize, however, that habitual reliance on this behavior can have an adverse effect on one’s life, including:

- Lower life satisfaction
- Lower personal well-being
- More financial problems
- Increased levels of stress and fatigue
- Poor academic performance
- Fewer happy memories
- Negative impact on sleep

Understanding how and why one procrastinates and how it makes one feel is an important piece to understanding whether this behavior is negatively impacting one’s personal life and thus should be adapted.

The Other Side Of The Coin

As past literature has shown, much of what’s known about these behaviors focuses on procrastination and its negative effects. Procrastination, however, is a learned behavior that can also be modified, tapered back or even unlearned, requiring a shift in mindset and applied behavioral changes influenced by the act of planning. The Brain of the Planner study aims to better understand: what positive effects can come from planning?

To understand the definition of a “Planner,” ENGINE’s researchers began by adopting the expert definition for procrastination as “intentionally putting something off or voluntarily delaying an intended course of action” (Ferrari, 2001; Steel, Brothen, & Wambach, 2001).

For the purposes of this research, planning is defined as the opposite: “formulating in advance an organized method for action.”

To change the conversation around planning and procrastinating, and better understand what positive outcomes can be achieved with planning, researchers sought to answer the following questions in this study: Does planning truly bring tangible benefits? And if so, how can more people do more of it?
Zulily commissioned research partner ENGINE, a global, full-service media and marketing services company, to review the above existing literature and conduct quantitative and qualitative research into planning. As part of this research, ENGINE collaborated with Relative Insight, a text analysis platform that extracts value from words, as well as iMotions, the world’s leading human behavior software platform, which integrates Affectiva’s AFFDEX technology, to gain deeper insight into human emotional reactions via facial expressions. The facial expression algorithm uses automated facial coding to provide the probability that certain facial expressions are expressed, including 20 different facial expression measures, seven core emotions, facial landmarks, behavioral indices, summary scores of overall expressed responses, as well as facial detection and tracking.

THE QUANTITATIVE STUDY:
The study began with a 10-minute online survey with 2,000 U.S. mothers of children aged 0-17. The survey covered topics, such as how they deal with tasks and responsibilities, how much stress they feel, an assessment of life outcomes like happiness and confidence, and how respected they feel by family members, peers and colleagues. Based on their responses to a battery of questions related to how frequently they engage in certain procrastination-related behaviors, researchers segmented respondents into two groups, Planners and Procrastinators.

THE DIGITAL HIVE
Following completion of the survey, researchers offered respondents the chance to participate in a Digital Hive, an online qualitative methodology designed to understand the motivations and emotions connected to planning and procrastination behaviors. One hundred Planners and 100 Procrastinators spent a week engaging in a variety of storytelling and video- and photo-based tasks, including:

- **Journaling their lives:** Moms were asked to create a Pinterest style photo collage of their lives and families and describe their lives as a TV show plot.
- **Debate:** Moms were asked to debate the topic and take a pro or con side to “Nothing good ever comes from doing something at the last minute.”
- **Tackling Scenarios:** Moms were shown a series of scenarios and asked what emotions they felt and why. Researchers captured Planner and Procrastinator moms’ emotional response to statements of intent, such as:
  - Buying a birthday present months ahead of time...and last minute
  - Going back-to-school shopping for their kids in June...and on Labor Day weekend
  - Planning a date night weeks ahead...or the day of
- **The Mission:** Moms were placed into two random groups and asked to participate in a three-day mission where they were shown the scenario of buying a holiday present for their spouse or child months ahead, asked to react to it, and make a purchase decision each day. One mission had descending discounts of 70%, 35% and zero percent on each day to convey a sense of urgency and reward; the other mission had no discount.
- **Video Scenarios:** Researchers also asked moms to record themselves on webcam in two different video activities. Then, researchers reviewed the transcripts and videos submitted by the participants, but also leveraged AI-enabled Text Analytics (Linguistic Coding) and Video Facial Coding tools to get beneath the surface of their responses.

THE FACIAL CODING:
During the Hive, 140 videos were captured from 72 discrete participants, of which the best 27 (top 25%) were submitted through a facial coding platform to map their emotional responses. This technology employs computer vision and deep learning to quantify the emotional facial expressions made by participants, based off a database of over six million faces from 87 different countries. Each video was analyzed for moments of expression along seven different emotions: joy, surprise, contempt, sadness, anger, disgust and fear. For each of the 27 videos, researchers summed across the emotional variables for a total score, ran that score by Planners and Procrastinators and compared the emotional scores (means, minimums and maximums) across the seven individual emotional scores to determine the differences in emotion for each scenario of planning or procrastinating they were reacting to.

THE LINGUISTIC CODING:
As part of the Hive analysis, researchers submitted all qualitative data into a linguistic coding platform to tease out differences in language, words and emotions displayed by Planners versus Procrastinators. The platform blends comparative linguistics with data science to extract insights from language data. For this specific project, 20 transcripts were passed through the platform, amounting to 515,548 words in total then tagged for topics, grammar, emotions, words and phrases. Once codified, the data was divided between Procrastinator and Planner responses and compared against each other to identify the unique elements in the language of the two groups. As a final step, significance testing was performed to ensure the results being displayed met a 99% confidence threshold, to ensure that the differences and similarities presented were an accurate reflection of the overall transcript data.
Who Is A Planner And Why Do They Plan?

In the quantitative study, which led this research, respondents were classified as either a Planner or a Procrastinator based on how frequently they reported experiencing issues with eight different common activities. If respondents selected “Never” or “Not very often” to four or more of the eight statements, they were classified as a Planner. All other respondents were classified as a Procrastinator. Nearly four out of 10 moms were classified as Planners via this methodology, and they tended to skew older and higher income and education than those that classified as Procrastinators. When asked how they would classify themselves, the vast majority of Planners put themselves in this group, while this was also true of just over half of Procrastinators.

In the Hive, researchers asked Planners and Procrastinators to describe themselves and their lives.

THE FINDINGS

Procrastinators described themselves as friendly, funny, independent, determined and smart. They claim to work better under pressure, which is a factor in putting things off. Their self-analysis leads them to believe:

• Waiting ensures that they have obtained all necessary information to make the proper decision, as opposed to acting quickly and potentially missing something.
• They often get distracted and end up with too many things to do at one time.
• They wish they could be more of a Planner because it would take away stress; however, it has become too much of an ingrained habit.
• Planning ahead is not the issue; it is the follow through – the making of a final decision with the attendant anxiety that it could be the wrong choice or that time will reveal new information that will mean they moved too quickly – that causes them to procrastinate.
• Planners view Procrastinators as lazy, irresponsible and stressful.

Meanwhile, Planners described themselves as fun, outgoing, kind, loyal and reliable. Their self-analysis leads them to report:

• Feeling very calm and happy about their decision-making process and not putting things off until the last minute (Planners hate the feeling of being rushed or having anxiety about having too much to do in a short timeframe).
• They see planning as a way to prevent stress and chaos.
• Their plan-ahead lifestyle doesn’t have any drawbacks except for occasionally having to change plans once they got closer to an event or a date because they ended up planning too far in advance, but even this was pleasurable as it allowed them to plan again.
• Procrastinators view Planners as organized, responsible, crazy and rigid.
When asked why they plan ahead, Planners most frequently say it’s because it reduces their stress and anxiety. However, when asked why they procrastinate, Procrastinators most commonly say that they avoid doing things that make them feel anxious.

This shows that Planning versus Procrastination really are two sides of the same coin, with two ways of dealing with stress and anxiety. The difference is that Planners take an active approach to the problem, while Procrastinators use an avoidance strategy.

Through the Hive, researchers found that Procrastinators display anxiety through every stage of a deadline scenario, while Planners self-reported anxiety only towards the last minute. When presented with the idea of completing a task weeks or months ahead, Procrastinators reported that they felt stressed at the idea, as that is not how they typically operate. A lot of their anxiety was rooted in feeling that they might make a misstep, that situations might change, or details could emerge later that would cause their choice to be a wrong one. Meanwhile, Planners were far more likely to be decisive and not display any sense of fear that their ultimate decision would prove to be incorrect. In fact, Planners, while self-reporting anxiety in a last-minute scenario, did not display any such fear or anxiety on their faces. When participants engaged in video scenarios relating to planning ahead and procrastinating, facial coding revealed that Planners overall were far more in control of their emotions.

By analyzing their micro-expressions while moms were reading through and reacting to the different scenarios of planning and procrastinating—or in the second video task, describing planning or procrastinating moments from their own lives—the research uncovered that Planner moms were far less likely than Procrastinator moms to show anger or fear. At the same time, they were far more prone to expressing positive emotions of excitement and surprise, even when presented with an imminent deadline. This suggests that either they know these last-minute procrastinatory scenarios are unrealistic for them or they feel prepared and able to tackle emergent situations, such that they do not inspire anxiety.

Meanwhile, in the micro-expression facial analysis of their videos, Procrastinators showed far more emotional variability on their faces and displayed higher levels of emotional reaction along all the dimensions of joy, surprise, contempt, sadness, anger, disgust, and fear in every scenario. Procrastinators showed a much higher propensity than Planners to display negative emotions on their faces during procrastination scenarios, suggesting that confronting their procrastination had them descending into anger or panic. Overall, Procrastinators were more buffeted by emergent situations and had more volatile emotional reactions. Thus, while Procrastinators may think they work better under pressure, that doesn’t appear to be the case emotionally.
The research strongly validates the hypothesis that moms who are oriented toward planning lead happier, less stressful lives and feel more respected by those around them. The survey asked mothers to rate how quickly they tended to deal with the list of common situations below and how much stress they felt related to each. Planners are more likely than Procrastinators to report dealing with all of these situations earlier and feel less stress about them as a result.

In the Hive, researchers uncovered even more evidence that Procrastinators would ideally love to plan ahead more and understand the positive benefits of doing so. When presented with hypotheticals where they were completing tasks months or weeks ahead of time, Procrastinators said they felt accomplished, satisfied, and less stressed overall. Most would feel a great deal of relief knowing they got the job done ahead of time. However, Procrastinators find it difficult to imagine doing this level of planning, as they do not know what will happen in a month or what other plans it may interfere with and some do not feel they would be able to stick with the plan if scheduled this far in advance.

### Planning Has Real Benefits…

<table>
<thead>
<tr>
<th>Situations</th>
<th>Planners %</th>
<th>Procrastinators %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paying bills</td>
<td>78%</td>
<td>53%</td>
</tr>
<tr>
<td>Child(ren)’s birthday or other family parties</td>
<td>74%</td>
<td>63%</td>
</tr>
<tr>
<td>Filing taxes</td>
<td>73%</td>
<td>63%</td>
</tr>
<tr>
<td>Holiday gift shopping</td>
<td>73%</td>
<td>65%</td>
</tr>
<tr>
<td>Booking family vacations</td>
<td>71%</td>
<td>50%</td>
</tr>
<tr>
<td>Season shopping (e.g. Back to School, Winter clothing, etc.)</td>
<td>67%</td>
<td>44%</td>
</tr>
<tr>
<td>Child(ren)’s extracurricular activities</td>
<td>66%</td>
<td>48%</td>
</tr>
<tr>
<td>Buying gifts for family members</td>
<td>66%</td>
<td>40%</td>
</tr>
<tr>
<td>Child(ren)’s annual doctor visit</td>
<td>64%</td>
<td>53%</td>
</tr>
<tr>
<td>Deadlines at work</td>
<td>63%</td>
<td>44%</td>
</tr>
<tr>
<td>Grocery shopping/ meal planning</td>
<td>59%</td>
<td>39%</td>
</tr>
<tr>
<td>Organizing activities with friends</td>
<td>50%</td>
<td>31%</td>
</tr>
<tr>
<td>My annual doctor visit</td>
<td>48%</td>
<td>25%</td>
</tr>
<tr>
<td>Planning “date nights” with my spouse or significant other</td>
<td>34%</td>
<td>20%</td>
</tr>
<tr>
<td>Organizing “me” time/ time for hobbies</td>
<td>33%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Q20 % dealing with each task “as early as possible” or “somewhat early”
Q21 % who feel “some” or “a lot” of stress related to each task
Planning Has Real Benefits...

The survey also asked moms how much they agreed with the series of statements below and Planners reported better life outcomes than Procrastinators.

One reason for these better life outcomes is that the ability to plan ahead leads to more head-space for pleasurable pursuits and personal passions. Linguistic coding of our Hive responses enabled researchers to tease out the top words, phrases and topics organically discussed by Planners and Procrastinators and revealed that Planners focused on areas of joy and passion (arts and crafts, travel, cooking, shopping, sports, music and family). Meanwhile, analysis of the words and topics of Procrastinators revealed a tendency towards the sensory and the distractive (eating out, socializing and watching movies), as well as a deep focus on life stresses (work, school, deadlines and money) — topics that did not rate for Planners at all, suggesting again that Planners largely have these areas of life well under control.

Planners also report feeling more respected by family, friends, and colleagues.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Planners</th>
<th>Procrastinators</th>
</tr>
</thead>
<tbody>
<tr>
<td>My family relationships are strong</td>
<td>79%</td>
<td>65%</td>
</tr>
<tr>
<td>I am a happy person</td>
<td>76%</td>
<td>59%</td>
</tr>
<tr>
<td>My health is good</td>
<td>72%</td>
<td>56%</td>
</tr>
<tr>
<td>I am a confident person</td>
<td>68%</td>
<td>49%</td>
</tr>
<tr>
<td>I feel that I am in control of my life</td>
<td>67%</td>
<td>43%</td>
</tr>
<tr>
<td>I have time for a social life/friends</td>
<td>52%</td>
<td>39%</td>
</tr>
<tr>
<td>I am financially secure</td>
<td>49%</td>
<td>33%</td>
</tr>
<tr>
<td>I have enough time for myself</td>
<td>44%</td>
<td>31%</td>
</tr>
<tr>
<td>I don’t revisit decisions once I have made them</td>
<td>29%</td>
<td>19%</td>
</tr>
</tbody>
</table>

One reason for these better life outcomes is that the ability to plan ahead leads to more head-space for pleasurable pursuits and personal passions. Linguistic coding of our Hive responses enabled researchers to tease out the top words, phrases and topics organically discussed by Planners and Procrastinators and revealed that Planners focused on areas of joy and passion (arts and crafts, travel, cooking, shopping, sports, music and family). Meanwhile, analysis of the words and topics of Procrastinators revealed a tendency towards the sensory and the distractive (eating out, socializing and watching movies), as well as a deep focus on life stresses (work, school, deadlines and money) — topics that did not rate for Planners at all, suggesting again that Planners largely have these areas of life well under control.

Planners also report feeling more respected by family, friends, and colleagues.

<table>
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<tr>
<th>Statements</th>
<th>Planners</th>
<th>Procrastinators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends</td>
<td>93%</td>
<td>81%</td>
</tr>
<tr>
<td>Colleagues</td>
<td>92%</td>
<td>78%</td>
</tr>
<tr>
<td>Child(ren)</td>
<td>91%</td>
<td>81%</td>
</tr>
<tr>
<td>Spouse/Significant Other</td>
<td>85%</td>
<td>74%</td>
</tr>
</tbody>
</table>
Planning Can Be Learned

In findings from both the quant and Digital Hive, researchers learned that both Planners and Procrastinators believe procrastination behaviors can change – and do. The most common reason given by those who said they became more of a Planner over time is the same as the one given by those who said they shifted towards procrastination: their behaviors changed in response to new responsibilities.

Additionally, planning behaviors among Procrastinators can also be stimulated by the idea of rewards. In particular, rewards with an expiration date that create an artificial deadline can vault Procrastinators over their tendencies to postpone decision-making.

Researchers presented 55 Planners and 65 Procrastinators with a three-day mission, where each day they were asked if they would “carpe diem” on buying a holiday gift for their spouse, friend or child now (in June, six months ahead of the holidays, creating a planning scenario). Half of participants saw a descending level of discount (70% off on Day 1, 35% off on Day 2 if they didn’t purchase on Day 1, and zero percent off on Day 3, if they didn’t purchase on Days 1 or 2). This exercise was designed to create a sense of urgency and reward for planning. The other half of participants saw no discount but were presented with the same scenario (e.g. deciding to buy a holiday gift in June with no discount) each day that they delayed making the purchase. Overall, both Procrastinators and Planners tended to buy right away with a discount. An incentive and sense of urgency helped both groups make a decision sooner. However, Procrastinators were much more likely to hold off making a decision when no discount was involved. When asked to make the same decision day after day with no added incentive, they chose not to act. Planners, on the other hand, were more likely to make a decision and purchase right away, even when the mission did not have a discount.

Behaviors around planning/procrastinating over course of life... Over time have become more of a...

<table>
<thead>
<tr>
<th>Have changed</th>
<th>61%</th>
<th>Planner</th>
<th>77%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have remained consistent</td>
<td>39%</td>
<td>Procrastinator</td>
<td>23%</td>
</tr>
</tbody>
</table>
Why Planning Matters

Academic, medical and self-help literature suggest that there are seemingly key benefits to a planful mindset on society and culture at large, primarily in the reduction of generalized anxiety, which is overly indexed in Procrastinators.

The economic impacts of anxiety are well known and significant – anxiety and depression cost the global economy US$1 trillion each year, and it's estimated that the cost will rise to $6 trillion by 2030.

“According to a meta-analysis co-authored by Julianne Holt-Lunstad, PhD, a professor of psychology and neuroscience at Brigham Young University, lack of social connection heightens health risks as much as smoking 15 cigarettes a day or having alcohol use disorder. She's also found that loneliness and social isolation are twice as harmful to physical and mental health as obesity.”

Planning, therefore, may help mitigate the effects on health, economics and the social order. The Brain of the Planner research indicated that Procrastinators felt much higher levels of anxiety overall, whereas Planners were much more in control of their emotions and thus able to find the mental space to indulge in their creative passions and social connections.

Therefore, encouraging better and more frequent planning could lead to greater health, happiness and longevity - for individuals, as well as society at large.
Researchers found that Procrastinators could adopt planning behaviors through artful strategies – and expressed interest in wanting to learn how to more frequently plan ahead. The article “Getting and Staying Organized—the effort pays off in many ways” explains that “getting organized means changing the way you think about things as well as how you do them.” The following is a basic strategy for getting started on the road to organization from the same article:

- **List the things that trigger stress.** Think about all aspects of your daily life—home, work, school, doctor visits, social activities, shopping and what have you. This step helps you see where trouble lies.
- **For each stress factor, list ways you could be better organized.** Some solutions may be quick and easy to implement, while others will be more complicated and take more time. If you have no idea what to do for some items on your list, brainstorm with family members, friends and others who can offer suggestions. This step helps you see the possible solutions.
- **Prioritize your solutions and begin to make changes in your life.** Put the quick and easy things into practice immediately. Break out the more complicated ones into more manageable tasks and set deadlines for implementing them. Having a written plan helps motivate you to get things done.

In terms of overcoming stress and procrastinating effectively, an often-suggested strategy to help with avoidance and time management is the breaking up of large tasks into smaller component pieces and setting deadlines for each piece. The authors of the paper “On the Behavioral Side of Procrastination: Exploring Behavioral Delay in Real-Life Settings” (2018) wrote that focusing on the initial delay of a planned action, rather than on timeliness and lateness, may be important in understanding more problematic procrastination behaviors and the unnecessary delay it imposes on the Procrastinator. Further:

- **Early onset of implemental action may also have beneficial psychological consequences, even if implementation is not completed.** For example, having started the implementation of some planned project (e.g., reading a book, writing an essay, painting the house) turns an abstract intention into something concrete, thereby facilitating execution of planned action (e.g., McCrea et al., 2008). Even if the task is not finished, having started it may increase rather than decrease motivation to re-engage (Reeve et al., 1986). Finally, getting an early start on some project may change motivation, with self-perceptions shifting from “not doing = not interested” to “doing = interested” (Bem, 1972). In sum, instigating rapid implementation of intentions may prevent many of the negative behavior inclinations that can be observed in procrastination. Therefore, techniques that help people in formulating and realizing their intentions (e.g., Gollwitzer and Sheeran, 2006; Sheeran and Webb, 2016), may be of prime importance in reducing and preventing procrastination.

**Getting people to take that first step and begin a task can not only help them accomplish the entire task, but also start to alleviate the anxiety that leads to poor outcomes.** Planners concur with this assessment. At the conclusion of the week-long Hive, researchers went to the source for tips on good planning. In a discussion post, Planners were asked to give their best tips and tricks for being an effective Planner and combatting anxiety, which included:

- **Make lists**
- **Use phone calendar apps and paper calendars -- yes, both!** Write out what needs to be done AND digitally slot it in.
- **Set reminders**
- **Periodically look ahead on the calendar to be prepared for things like birthdays and special events**
- **Get others involved to help you stay motivated to get the job done; delegate and assign tasks**
- **If the task is too large or overwhelming, make smaller tasks that lead up to accomplishing the big task**
- **Use your words.** Problem-solve the issue with “if I, then I, and that’s how” statements
- **Take a breath and a break as needed, but not too long.** Set your markers of break and end break to avoid feeling overwhelmed
- **Give yourself an artificial deadline ahead of the real deadline**
- **Give yourself rewards along the way**
This study categorized moms as either “Planners” or “Procrastinators” for the purposes of this research, but the self-reported data indicates that the lines are likely blurrier, and that people can and do exhibit both Planner and Procrastinator tendencies throughout life.

While the intentions behind planning and procrastination are both positive and are a means to stave off anxiety, the research shows that planning behaviors are more effective at doing so and can lead to more positive emotional, health and life outcomes, including:

- Reduced stress and anxiety
- Feelings of joy and accomplishment
- More time for leisure and socializing

Procrastinators expressed feelings of joy and accomplishment when faced with planning scenarios, and even exhibited planning behaviors when given an incentive to do so. This suggests that with the right tools, incentives and understanding of the causes and effects of both planning and procrastinating, more people, and society as a whole, could benefit from adopting elements of planning behaviors.
ABOUT ZULILY®

Online retailer Zulily helps moms around the world discover incredible deals and fresh style for themselves, their families and their homes. Zulily launches thousands of products at amazing values each day, curating personalized shopping experiences that include apparel and footwear for the whole family, toys, home décor, and so much more. Zulily's app uses compelling video and imagery to bring more than 15,000 big name brands and boutique finds to life on mobile.

Zulily is headquartered in Seattle, Washington, with locations in Nevada, Ohio, Pennsylvania, and China. With expertise in technology, merchandising, creative production, logistics, marketing, customer service, and more, Zulily team members work together to deliver a fun and engaging shopping experience that sparks discovery, connection and entertainment. Zulily has passed millions in savings onto its customers since its first sale in 2010. For more information visit www.zulily.com.

Zulily, LLC is a wholly owned subsidiary of Qurate Retail, Inc. (NASDAQ: QRTEA, QRTEB, QRTEP), which includes QVC®, HSN®, Zulily and the Cornerstone brands (collectively, “Qurate Retail GroupSM”), as well as other minority interests and green energy investments. Qurate Retail Group believes in a Third Way to Shop® – beyond transactional ecommerce or traditional brick-and-mortar stores. In addition to being a world leader in video commerce, Zulily Group is among the top ecommerce retailers in North America (according to Digital Commerce 360) and is a leader in mobile commerce and social commerce. For more information, visit www.qurateretailgroup.com, or follow @QurateRetailGrp on Facebook, Instagram or Twitter, or follow Zulily Group on YouTube or LinkedIn.

ABOUT ENGINE

ENGINE is a global, full-service media and marketing services company that unites culture and commerce to move brands forward faster. We are: Driven by data. Fueled by imagination. Powered by technology. Founded in 2005, ENGINE has global headquarters in New York and 16 offices across North America, the UK, Europe, and Asia-Pacific. ENGINE empowers clients to outperform in the present and win in the future with its vast range of marketing solutions including – insights, creative, media, data and technology. Find out more at enginegroup.com and follow @engineworldwide.

ABOUT RELATIVE INSIGHT

Relative Insight is a text analysis platform that extracts value from words. Through comparison, Relative Insight’s technology helps insights and research professionals, and marketers and brand specialists discover more value out of the language data they’ve already got - from primary research, to insights tools and anything online. Relative believes that language and text data represents one of the biggest and most valuable – but often, most under-used sources of business value. It tells us why things happen, how people feel, and how best to engage with them. Coupled with a rich understanding of audience, Relative Insight’s platform saves time and supports the science in analysis, which leads to sharper communications, better brand positioning and more resonant campaigns. Relative Insight’s HQ is in Lancaster, UK but has commercial offices in London and New York.

ABOUT IMOTIONS

iMotions is a software company who provide tools for the next generation of behavioral research. With our products and services, we enable a clearer and more incisive understanding of human behavior, allowing for advances to be made in any human-centric field. Our best-in-class product, the iMotions software platform, is used worldwide to unpack human behavior and scale research in academia, business, healthcare, and government.

iMotions integrates multiple biosensors to uncover real human responses. The software works with any kind of biosensor, integrating eye tracking, facial expression analysis, EEG, EDA / GSR, EMG, ECG, surveys, and more in one unified platform. This provides the flexibility to extend your multimodal research whenever you are ready. Data is seamlessly synchronized and presented in real time and is accompanied by analysis and export tools.

With our modular platform and suite of support and services, iMotions facilitates a smarter and faster way to achieve results for business and scientific advancement in accordance with human needs. The software is used worldwide, by Ivy-league universities, and some of the world's biggest companies, including Unilever, GSK, and P&G and other 1300+ global clients setting up cutting-edge labs and executing multimodal human behavioral research with greater ease and efficiency.

iMotions is headquartered in Copenhagen, Denmark with local HQ in Boston, Massachusetts and offices in Singapore, Sydney and Berlin. For more information, visit https://imotions.com/ or follow @imotionsglobal on Twitter, Facebook, YouTube and LinkedIn.