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Happiness is a Plant Away

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Mental health has become an increasingly important issue in society. It's defined as "the degree to which one's behavior and personality are centered on hope and motivated by positive goals."

Globally, there's been a dramatic rise in anxiety due to the COVID-19 pandemic. With the prevalence of mental illness, the opposite of mental health, it's not surprising that mental health has come to the forefront of people's minds and more individuals are seeking corrective actions, which include plant therapy and nature walks.

Another interesting component of mental health is that it's positively correlated with envisioning future possibilities and actions. In fact, the actions people take (or fail to take) in the present determine the outcome of their future.

Plants & Mental Health

We have clear evidence indicating there's a positive relationship between interacting with plants and improved mental health. Recent review articles by Hall and Knuth (2019a, 2019b, 2019c, 2020) and Hall and Dickson (2011) summarized the research documenting the emotional, mental and physiological benefits associated with plants.

Potential emotional and mental benefits include reduced anxiety and stress, recovery from attention deficit, fractals and visual responses, decreased depression, enhanced memory retention, improved happiness and life satisfaction, mitigation of PTSD, increased creativity, enhanced productivity and attention, reduced effects of dementia and improved self-esteem (Hall & Knuth, 2018a). Physiological benefits include better sleep, increased birthweights, decreased incidence of diabetes, decreased ocular discomfort, enhanced immunity, improved circadian functioning, improved rehabilitation from illnesses, decreased likelihood of cardiovascular and respiratory disease, decreased mortality, improved digestive functioning, decreased susceptibility to allergies and improved cognitive development (Hall & Knuth, 2018b; Hall & Dickson, 2011).

Interestingly, the medical community has started to prescribe interactions with nature to improve mental health (Mock, 2022). Together, these studies demonstrate the positive influence of plants on human well-being both physically and mentally. These benefits can arguably improve the perception of value some consumers may have for purchasing live plants.

A New Study

The primary objective of this research study was to assess the relationship between participants' mental health, plant purchasing behavior, physical activity and how future consequences may influence these factors. Given that mental health is positively correlated with future possibilities (Lombardo, pg. 48) and that actions taken can determine future outcomes (Wilkins, 2001), one would anticipate that people who are engaging more with plants

would have a more positive present mental health and greater futuristic outlook. To investigate this, an online survey was conducted where participants were asked about their mental health, plant purchasing, physical activity and considerations of future consequences.

We found that self-reported mental health was positively influenced by consideration of future consequences of the person's actions, as well as their optimism about the year to come. In other words, participants who were optimistic about their next year, and beyond into the future, reported having a more positive mental health. Additionally, participants who had a higher (more positive) mental health score spent slightly more money on plants and purchased more types of plants than participants who had a lower (more negative) mental health score.

We would conclude that the more plant types that a consumer purchases, the more likely they are to have better mental health. These questions were adopted from Watson and Clark's PANAS-X Scales Manual for Positive and Negative Affects. Basically, what this set of questions does is determine how positive (and negative) a person's mindset is through answering a series of mental health-related questions. We also asked questions to gauge futuristic optimism or lack thereof.

You can see from Figure 1 that overall there's a right skew (lean) in the graph towards more positive mindsets for plant purchasers. This result is backed up from previous data we've collected where, on average, plant purchasers have a more positive mindset and have more optimism for the future.

We also focused this study on current and future consequences. What this series of questions assessed was if a person viewed their life more in the present or in the future. If a person is more future focused, they're thinking about the possible consequences their actions can have for their future self, and conversely, if they're more current focused, they focus on the consequences of their actions now and aren't necessarily thinking about the future.

As you can see in Figure 2, the data doesn't really skew (lean) either direction and most subjects' responses are right along the mean (which happens to be 3.5). This means that some are very current focused, other are very future focused, but most consider the current and future consequences equally.

We found through regression that those individuals who have a more positive mindset are significantly more likely to be considering future consequences into their decisions. In fact, 26% more likely. They also are significantly more likely to have optimism for the future.

Additionally, involvement in physical health activities influenced mental health ratings positively, with improved self-esteem, improved health, reduced risk of disease, doing better at their job, gaining muscle, feeling better about their body and increased energy levels positively impacting mental health. These activities are more geared toward improving one's wellbeing and paired with the negative impact on mental health may indicate the people who were more involved with them are trying to improve their wellbeing.

There's also a positive relationship between the number of plant categories purchased (more types of plants) and the physical activities improving mental health scores. Some physical activity, including plant therapy and nature walks, are directly linked to physical and mental treatments with plants.

Plants, Physical Activity & The Future

The present study sought to relate consumers' concern for future consequences of their actions combined with physical activity on their current mental health perceptions. Results show that physical activity and a focus on future consequences are related to better mental health. Additionally, more positive mental health was related to both greater plant expenditures and number of types of plants purchased.

Plant marketers should incorporate these findings in their marketing and sales communication efforts. Text and imagery of physically active individuals should be more relatable to plant purchasers and potential purchasers.

Consumers concerned about improving their mental health can turn to live plants as part of their strategy to improve their own mental well-being. Marketers might use imagery of happy individuals interacting with plants, as well as pointing to the research results, to help spur consumers into more plant purchases than planned. **GP**

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> **This Article Series**
> This story is one of three this winter from these excellent researchers. Here's what you may have missed and what's next:
> **January:** The value of a plant depends on whether the buyer is a novice or expert gardener (GO HERE to read this story)
> **March:** Research highlights differences in purchasing certain types of plants (annuals, perennials, woody ornamentals and indoor foliage) and how that can impact marketing messages to consumers.

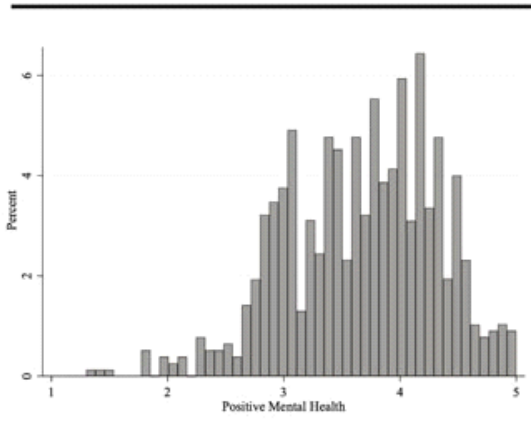


Figure 1. Average positive mental health values across the sample pool (1 = Very Slightly; 5 = Extremely).

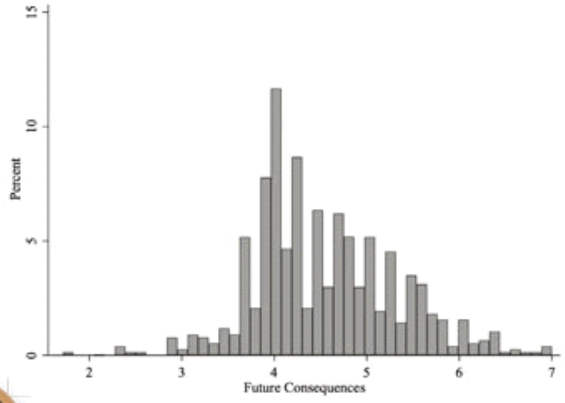


Figure 2. Average future consequence values across the sample pool (1 = Extremely Uncharacteristic; 7 = Extremely Characteristic).