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Understanding well-being: Clearing personal space for wellness

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A Thesis in the Field of Psychology

for the Degree of Master of Liberal Arts in Extension Studies

Harvard University

November 2020

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Abstract

Increasing distractions in everyday living diminish our attention and turn our focus away from the experiences that truly matter. Past research has offered mindfulness as an effective tool to mitigate the inundation of useless or harmful information. Anecdotal accounts also suggest that decluttering -- or the removal of physical distractions from living spaces – may also help individuals looking for improved well-being. Can decluttering provide improved overall happiness, calmness, and mental clarity in the same way as engaging in mindfulness? Does decluttering provide greater improvements in confidence, productivity and relationship happiness compared to mindfulness meditation? And does decluttering diminish the importance having material possessions and feelings of being overwhelmed by "stuff" compared to mindfulness meditation? To address these questions, adults living in the US were recruited to take part in an online longitudinal study. Participants were assigned to an intervention that either directed them to declutter or to meditate for a period of 14 days. A well-being scale was used to captured baseline and end of treatment functioning. A daily questionnaire for each intervention collected data on the progress of participants and prompted reminders for engagement. Although every effort was made to recruit a large sample of participants only six adult females completed the decluttering intervention; no participants completed the meditation intervention. The unexpectedly small number of study participants precluded formal data analysis. However, an informal inspection of participant responses on the well-being scale as well as a consideration of participant comments did suggest the

potential of decluttering to provide some modest benefits. Future studies should explore this topic in more detail.

Dedication

My deepest gratitude goes to my parents Eugene and Josephine Wicks, and my husband, Jim Hicks. Their extraordinary support gave me the strength and courage to push through this challenging journey.

Acknowledgments

I extend my sincerest appreciation to my academic advisor, Charles Houston and my research advisor Dr. Dante Spetter for their knowledge and encouragement that supported me throughout the program. I also would like to express my sincerest gratitude to my thesis director, Dr. Jill Hooley, who provided invaluable guidance, inspiration, expertise and patience that enabled me to complete this demanding project during an unprecedented time.

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Chapter I

Introduction

Happiness, according to an old Finnish proverb, is a place between too much and too little. This adage is reflected in many cultures across the record of human history and yet, the global economy is driven by material consumption and a definition of individual success built on the acquisition of things. The ease of acquisition and declining overall costs of consumer items have driven consumption, and it has become a deeply ingrained aspect of American culture (Schor, 1998, 2008). The impact of consumerism on the economy is so important that advertisers work to monopolize consumer attention through constant product exposure and conditioning tactics aimed at prompting impulsive and reactive buying behaviors (Rosenberg, 2004; Ruskin & Schor, 2005). While clearly of considerable macroeconomic value, increased material consumption, influenced by a variety of societal factors, has been shown to trap individuals into unsustainable work and spend cycles (Schor, 2008). The work and spend culture necessitates increased time at work to earn higher incomes to enable more consumption, leading to more responsibilities, anxiety, and burn out. (Schor, 2008).

Consumption and Clutter the American Way

Clutter is defined as excessive amounts of irrelevant possessions (Gregg, 1936) or unnecessary items that create disorder in living spaces, leading individuals to feel overwhelmed (Ferrari et al., 2018). Research has shown that living amongst clutter can

result in a variety of consequences for an individual's physical health and well-being beyond the inconvenience or embarrassment that may result from living in a disorganized space (Ferrari et al., 2018; Roster et al., 2016). According to professional organization experts, the average American household stores 300,000 items (Lark, 2020; Macvean, 2014; Springer, 2017). The U.S. has 3.1% of the world's population of children, and yet American children are consuming 40% of the toys in the world (UCLA, 2013). And although the US is comprised of only 4% of the world's population, we produce more than 30% of the planet's total waste (Bradford et al., 2018; Fox, 2007).

In an economy driven by consumption and a society that celebrates the acquisition of material possessions as a definition of success, the accumulation of irrelevant possessions is perhaps inevitable. Yet, despite the data showing increasing consumerism, Americans have also expressed serious concerns over the increasingly materialistic culture that prioritizes affluent lifestyles over building family and community connections (The Harwood Group, 1995). These concerns seem to be supported by economic data establishing U.S. per-capita consumer spending as the highest globally (The World Bank, 2018) while the Sustainable Development Solutions Network's World Happiness Report (2020) found the U.S. to be only 18$_{th}$ on the global rankings of national happiness.

The process of acquiring superfluous material goods is frequently used in an attempt to increase happiness, shape ones' personal identity, or to overcome challenges of social exclusion (Luttmer, 2005; Mead et al., 2011; Zhang et al., 2016), despite research suggesting that purchases favoring an experience over a material item create more happiness (Van Boven, 2005; Van Boven & Gilovich, 2003). American culture reinforces

shopping (particularly for women) as a distraction to feel better, directing attention away from addressing issues they are trying to avoid. Technological advances have given advertisers ubiquitous and targeted access to consumers and provided consumers with platforms by which they can participate in "retail therapy" with the instant gratification afforded by 24/7 access to online retail markets (Csikszentmihalyi, 1999; Sanburn, 2015). Dopamine, a neurotransmitter in the brain, is responsible for behavioral functions such as pain processing, attention, learning and motivation (McNight, 2014; Newton, 2009; Weinschenk, 2015). Functional magnetic resource imaging (fMRI) research has revealed evidence of increased dopamine levels resulting from both the act of shopping and the anticipation of shopping (Kumar et al., 2014; McNight, 2014). This short-term dopamine response can make continually resisting the urge to shop difficult despite its potentially problematic long-term consequences (Springer, 2017; Weinschenk, 2015).

In 1995, The Harwood Group conducted surveys of subject matter experts in the field of consumerism, including Dr. Juliet Schor, to gather their perceptions on consumption, materialism and the impact of these factors on environmental sustainability. For this report, 800 American participants were interviewed over the phone and an estimated 48 Americans participated in moderated focus group discussions. The survey results showed that 89% of participants agreed that consuming is a major part of American culture. Further research shows that Americans will habitually use possessions to reflect their societal status and values (Schor, 1998; Simon-Brown, 2000; The Harwood Group, 1995), while at the same time acknowledging that the focus on consumption in American culture does not promote personal financial security or align with personal values (The Harwood Group, 1995). Because physical environments are

often thought of as an expression of self-identity (Ferraro et al., 2011; Sigmon et al., 2002), people frequently experience difficulty detaching from possessions associated with their self-identity, even when those objects no longer serve a critical function (Ferraro et al., 2011).

Overconsumption and difficulty separating from material possessions are leading factors contributing the expansion of clutter within American homes and personal spaces (Belk et al., 2007; Lee, 2017; Roster et al., 2016; Saxbe & Repetti, 2010; UCLA, 2013). The accumulation of excessive possessions causes disorder and chaos in living spaces (Ferrari et al., 2018), and is a detriment to living a meaningful life (Gregg, 1936). McMains and Kastner (2011) used fMRI and physiologic instrumentation to study how visual stimuli affect focus and productivity with results suggesting that decreasing competition among visual stimuli (i.e., reducing clutter in the environment) can benefit an individuals in both areas (McMains & Kastner, 2011).

Tidying Up with Marie Kondo, a 2019 Netflix series that profiled families addressing their struggles to eliminate clutter from their homes, is one example of a growing cultural awareness around the detrimental effects of consumerism and clutter. American households are working more and buying more, and the result has decreased happiness due to the increased time and expense of managing possessions (Belk et al., 2007; Lee, 2017). Another video series, *A Cluttered Life: Middle Class Abundance* (UCLA, 2013), presents a 10-year ethnoarchaeological investigation by Jeanne Arnold and her ULCA colleagues (2012), of 32 American middle-class families, using interviews and digital photography of their living conditions. About 20,000 digital photos were used

in their analysis, with many images displaying numerous areas of clutter throughout the homes (UCLA, 2013).

Arnold et al. (2012) also revealed that American kitchens are one of the busiest areas in an American household. Kitchens serve a variety critical functions including storage, workspace, communication, and center for meal preparation and consumption. Additional studies have suggested that our surroundings may create vulnerabilities in how we approach food consumption and have proposed methods to counter potentially harmful mindless eating behaviors (Vartanian et al., 2017; Wansink & Chandon, 2014). The identification of clutter as having a negative influence on mindfulness in eating habits is especially relevant. Data from the U.S. Centers for Disease Control (CDC) from 2015-2016 indicate that more than 70% of the U.S. adult population is overweight or obese (Center for Disease Control and Prevention, 2018b; Center for Sustainable Systems University of Michigan, 2019). Further, obesity is associated with a range of negative health and well-being outcomes such as social isolation, depression or heart-disease (Mayo Clinic, n.d.).

Vartanian et al. (2017) investigated eating behaviors within chaotic or cluttered environments, and examined whether those behaviors were moderated by an individual's frame of mind. The researchers predicted that individuals would eat more food in the chaotic environment if they felt "out of control" compared to individuals that felt "in control" (2017, p. 216). Ninety-eight female undergraduates, aged 17 – 27, were observed in two conditions - a loud, disorganized, and disruptive kitchen environment compared to a quiet and organized kitchen without disruption. The researchers requested participant responses regarding their past experiences of feeling in control, past

experiences feeling out of control, and the last lecture they attended (neutral condition). Participants were then given bowls of cookies, crackers and baby carrots for 10 minutes and instructed to sample each type of food and informed to eat any additional food they wanted to consume. To measure each person's food intake, the containers of food were weighed before and after completing the tasting activity. Results from Vartanian et al's (2017) data analysis suggested that people may consume fewer snacks in more organized environments compared to chaotic environments full of clutter and distractions. Their research findings also suggested that an individual's food consumption in a chaotic environment, specifically for the sweet food, could be moderated by the individual's frame of mind (Vartanian et al., 2017).

In 2010, Saxbe and Repetti provided evidence of the detrimental impacts of clutter on an individual's sense of calm and happiness with their examination of how the perception of home environments affects physiological and mood responses. The researchers instructed 30 pairs of dual-income spouses to describe perceptions of their homes over a three-day period using video home tours, self-administered saliva samples, mood reports and questionnaires about neuroticism and marital adjustment. The saliva samples monitored the participants' diurnal cortisol slope to detect changes in stress level and Hierarchal Linear Modeling (HLM) was used to create models for both the mood and cortisol sample analysis. After analyzing data from the multiple sources, Saxbe and Repetti (2010) found that the female spouses were showing higher instances of guilt and negative feelings related to clutter in the home. The participants that expressed more stress or dissatisfaction during home tours also had flatter diurnal slopes of cortisol, an

indication of chronic stress and possibly negative health outcomes (Saxbe & Repetti, 2010).

Further compounding the negative effects of clutter in peoples' lives, research shows that Americans are losing both money and time in the service of cluttered households. Pixie Technology Inc., a software company that uses augmented reality technology to locate lost items for customers, conducted a recent Lost and Found survey that revealed how Americans spend two and a half days searching for misplaced items (i.e. remote control, keys, or glasses) each year (Pixie Technology Inc., 2017). Nearly 25% of the survey respondents expressed that they were late to school or work at least twice a week as a result of searching for lost items and attempted multitasking was most often cited as the reason respondents lost their possessions. The same survey also reported that American households spent more than $2.7 billion each year replacing lost items (Pixie Technology Inc., 2017).

An ongoing commitment to owning more things also creates a need for storage. Home and Gardening Television (HGTV) and related real-estate focused programming routinely features home buyers, renovators or designers that are tasked with finding more storage possessions during the renovation or home search followed in each episode; implying that it is better to acquire more square footage for storage rather than to scrutinize whether the possessions are crucial in an overcrowded American home. With 48,500 storage facilities, the U.S. has nearly five times the storage facilities as the rest of the world. Although this figure accounts for people living in urban settings where space is limited, it warrants mention that a third of storage customers already have a basement, two-thirds own a garage, and almost half have an attic (Sanburn, 2015). In summary, the

national economy with the worlds' largest per-capita consumer spending also has the worlds' largest supply of storage capacity for goods consumed.

Well-being and Behaviors for Improvement

Well-being is a topic explored by many philosophers and researchers to better explain how individuals experience and internalize the world around them. Subjective well-being (SWB) is a multidimensional, self-reported assessment of internal cognitive judgments and emotional responses that reflects how a person perceives their life (Center for Disease Control and Prevention, 2018a; Diener, 1984; Diener et al., 2009). It involves engagement in high levels of pleasant emotions and moods, low levels of negative moods and emotions, and a focus on increasing life satisfaction (Diener et al., 2012). Diverse perspectives on the understanding of well-being have resulted in numerous instruments being created to investigate this critical element of the human experience and more psychological research is being dedicated to understanding contributors to optimal life satisfaction.

Mindfulness is the practice of exercising awareness in the moment without attaching judgement to emotions or thoughts (Davis & Hayes, 2011). Practitioners work to focus on the present and to recalibrate their attention when it wanders (Teper et al., 2013). Past psychological research has identified mindfulness as a practice supportive of skilled responses to maladaptive behaviors and improved well-being. Successful engagement with the practice is defined by regulating attention, approached with curiosity and acceptance, to one's own present experience (Bishop et al., 2004). Based on these tenets of awareness and acceptance, Teper, et al. (2013) created a model that

supports the connection between mindfulness and executive control. Rosenberg (2004) further explains that mindfulness may be used to identify and reduce the manipulative communication from advertisers, to connect more with people as a source of happiness and to focus attention on the global impacts of consumerism.

Although there are many approaches to the practice, meditation in particular has become a popular method for individuals seeking the benefits of mindfulness. Meditation is also an approach frequently referenced in research literature (Davis & Hayes, 2011). The practice of meditation has been shown to increase mindfulness and provide a valuable method for improving well-being (Cardaciotto et al., 2008; Davis & Hayes, 2011; Teper et al., 2013). Some studies suggest that practicing meditation can support improved focus (Davis & Hayes, 2011; George et al., 2012), as well as better working memory (Davis & Hayes, 2011; Jha et al., 2010) and may serve to reduce manipulation from external sources.

Simplifying Motivations & Behaviors

More Americans are showing interest in alternatives to lifestyles of overconsumption and clutter in favor of more intentional ways of living. Though popularly referred to as minimalism now, social philosopher, Richard Gregg, introduced the term *voluntary simplicity* (VS) in 1936 to describe a lifestyle that focuses on deliberate consumption and prioritizes personal values. Past investigation of simplifiers primarily concentrated on their motivations, actions and beliefs behind practicing this lifestyle (e.g. Ballantine & Creery, 2010; Huneke, 2005; Nelson et al., 2007; Pravet & Holmlund, 2018). VS studies have also established behaviors and motivations for

different types of simplifiers or provided comparisons in behavioral responses between simplifiers and non-simplifiers (e.g. Ballantine & Creery, 2010; Craig-Lees & Hill, 2002; Livingston, 2016; Walther et al., 2016).

The increased attention to minimalism in mainstream American society has introduced numerous websites, documentaries, blogs and even professional careers that provide an abundance of information on ways to engage in a simplified lifestyle. One review of past studies noted that happiness or life satisfaction have been investigated as outcomes from engaging in the VS lifestyle by researchers of economics, sociology, and psychology (Rich et al., 2017). Expert simplifiers explain that decluttering serves as one of the key tenets of minimalism, for initiating and successfully maintaining this self-regulated lifestyle.

Minimalism focuses on deliberate consumption of material goods and prioritization of personal values related to relationships, health, environmental sustainability and building more spiritual or meaningful life experiences (Gregg, 1936; Walther et al., 2016). This lifestyle of self-organization requires the removal of clutter and distractions to focus on the things of greater personal value (Elgin, 2010). Minimalism practitioners commonly assert that simplifying behaviors, like decluttering, provide improved clarity and the confidence to focus on more meaningful things (Becker, n.d.; Carver, 2010; Fields Millburn, n.d.; Livingston, 2016). Voluntary simplicity prioritizes personal values. It also encourages the development of behaviors that eliminate the mental and physical clutter that undermines goal attainment (Gregg, 1936). This practice can be effective for a variety of people because the application can be applied based on personal lifestyle preferences or individual circumstances (Elgin &

Mitchell, 1977; Gregg, 1936). Elgin (2010) identifies eight categories of expressing voluntary simplicity, recognizing overlap in practice. Two categories of interest are uncluttered simplicity and frugal simplicity. Uncluttered simplicity is the active removal of both material and nonmaterial distractions to focus more on personal values and goals (Elgin, 2010). Frugal simplicity includes mindful consumption, deliberate spending, and management of financial resources to support goals or opportunities that lead toward financial freedom (Elgin, 2010). Voluntary simplicity does not propose living an impoverished existence or the rejection of all modern conveniences but demands deliberate and freely exercised behavior to improve the perceived quality of life with fewer material possessions (Alexander, 2011; Elgin & Mitchell, 1977; Gregg, 1936; Huneke, 2005).

Decluttering is a difficult but necessary element of practicing minimalism (Ballantine & Creery, 2010; Elgin, 2010; Huneke, 2005; Nelson et al., 2007). It is not simply about having a clean home, office or personal space, but about embracing behaviors that oppose a consumerist culture in favor of living in a meaningful way (Csikszentmihalyi, 1999; Fields Millburn, n.d.). The Harwood Group (1995) investigation revealed Americans are concerned that the cultural pursuit of the material expression of wealth in the U.S. does not align with their personal financial security. Practitioners of minimalism commonly associate the adoption of simplifying behaviors with helping them to better manage financial challenges as they seek financial independence (Elgin & Mitchell, 1977; Gregg, 1936).

Over a 10-day period, Huneke gathered data from self-identified simplifiers about their motivations, as well as the perceived benefits and the challenges of practicing

minimalism (Huneke, 2005). The 113 participants in the study reported that American culture is not supportive of clutter reduction and identified decluttering as one of the hardest habits to maintain. Female respondents made up 73.5% of study responses and a half (50.5%) of the total respondents identified themselves as simplifiers of five or more years. In addition to initial decluttering, practitioners also shared that avoiding impulse purchases and recycling possessions are habits critical to the ongoing maintenance of a simplified lifestyle (Huneke, 2005).

Pravet and Holmlund (2018) studied the motives and effects of adopting minimalism by collecting email inquiries and daily diary responses from people interested in simplifying. Participants reported that reflection on their changed behavior was an important part of the awareness process and was helpful when assessing their ongoing consumption behaviors (Pravet & Holmlund, 2018). Using the phenomenology research approach to investigate decluttering experiences, Lee (2017) interviewed a small group of 11 adult women, ages 26 to 47, who reported using the KonMari decluttering method (Kondo, 2014). Participants provided responses to interview questions and chronicled their experience through videos, blog posts, diaries, and pictures. Interview responses included respondents expressing guilt about throwing items away with the guilt serving as an emotional reminder to avoid the purchase of frivolous items in the future (Lee, 2017). Respondents reported overcoming worry or dread after engaging in the KonMari process within one week of initiation and participants also described the process of disposing of extraneous items as “uplifting and refreshing" (Lee, 2017).

Self-image and acceptance socially or professionally, may also have significant influence on consumption habits (Csikszentmihalyi, 1999; Ruskin & Schor, 2005; Schor,

1998, 2008). Simplifiers adopt mitigation behaviors in response to their desire to consume by prioritizing their limited time and resources against these external pressures (Elgin, 2010; Nelson et al., 2007; Schor, 1998). A variety of methods can be used for systematically removing clutter from living spaces. Project 333, for example, is a simplifying method of dressing with a restricted capsule wardrobe; thirty-three pieces of clothing, shoes, outerwear, and accessories to be worn over three months (Carver, 2010). The popular KonMari method (Kondo, 2014) gives attention to all possessions in a living space and requires focused assessments on whether each possession "sparks joy" as a means for deciding to save or discard the items. Practitioners are directed to acknowledge gratitude for each item to be given away or to be organized in a designated area. Both Project 333 and KonMari methods require evaluating possessions based on personal preferences and lifestyle aspirations.

The Minimalism Game (Fields Millburn & Nicodemus, 2018) is the gamification of initiating simplifier habits by asking participants to compete with friends and family in eliminating clutter within personal spaces each day throughout a month-long period. Participants work towards eliminating 496 superfluous items throughout the month while steadily adopting a habit of critically assessing the real benefit or value of owning each possession. Fields, Millburn and Nicodemus (2018) directly acknowledge the difficulty in finding 496 items to eliminate and don't provide strict rules about managing the process other than eliminating as many items as possible. The primary lessons from the challenge are learning to identify the appropriate value of things in personal spaces and removing material distractions in favor of spending more attention on important personal goals (Fields Millburn & Nicodemus, 2018).

The Current Study

The current study examines the effects of the act of decluttering on an individual's well-being to further substantiate possible benefits to individual well-being resulting from the decluttering of homes and workspaces. Americans are inundated with messaging that to have more of everything is better and that excess signifies success. This research will further educate individuals on the importance of managing personal spaces to prioritize what is truly valuable to them. Decluttering may offer people a better sense of control with their emotions, time, habits, and even finances.

Popular culture continues to endorse the benefits of decluttering based on anecdotal evidence and limited research. Although numerous psychological examinations of individual perception and responses to clutter have been presented, more research is needed to show how actively decluttering personal spaces can support improvements in well-being within a short period of time. This investigation will focus on how specific areas of well-being may change after 14 days of active decluttering. Just as in mindfulness meditation is often recommended as a method of stress reduction, this study introduces decluttering as a meaningful method to improve well-being. Past research on clutter has been a more passive experience that simply exposes participants to cluttered environments and examines their responses. This study gives individuals an active role in changing their personal environment to examine how decluttering impacts their well-being in areas such as satisfaction with relationships, productivity, and empowerment in managing living spaces.

Study Aims and Specific Hypotheses

The purpose of the current study is to provide empirical evidence on the efficacy of decluttering as a means to improve well-being outcomes in the following ways:

Aim 1

This study compares overall happiness, calmness, and mental clarity for individuals engaged in decluttering and practicing mindfulness. Past research has established beneficial outcomes from using mindfulness meditation to reduce stress, reduce emotional reactivity and cultivate well-being or happiness. Substantial data also demonstrates how clutter operates as a distraction, triggers stress and impedes happiness. It was predicted that both meditation and decluttering would be associated with improved well-being at the end of a 14-day intervention period.

Aim 2

Additionally, this study explores changes in confidence, productivity and happiness with relationships after engagement with the process of decluttering. Past research is mainly focused on the negative outcomes of clutter as it creates feeling of guilt, embarrassment and hinders social interactions. Compared to people that practiced mindfulness meditation over a 14-day period, it was hypothesized that participants that engaged in decluttering would show greater improvement in confidence, productivity and happiness with their relationships.

Aim 3

Given past research on lifestyle behaviors and motivation of simplifiers, it was anticipated that people would experience a significant change in attitude towards possessions. Compared to participants that practiced mindfulness, participants from the decluttering group were expected to show a greater change in perceived importance of having material possessions. In addition, it was predicted that they would feel less overwhelmed by their possessions at the end of the 14-day treatment.

Chapter II

Method

The longitudinal study, titled Understanding Well-being, was a series of online surveys with a sample goal of 160 participants - 80 assigned to a 14-day decluttering intervention and 80 assigned to a 14-day meditation intervention. A variety of social media or academic research platforms were used to recruit nonclinical adult participants in the US.

Study Participants

The Harvard University Institutional Review Board approved this study and informed consent was obtained from each respondent prior to initiating the study. Using social media and research-oriented platforms, participants were invited to participate in a study of well-being using a recruitment advertisement (see Appendix A) or short descriptive postings directing potential volunteers to the study.

The population of interest was adults, aged 18 and older, who have resided in the US within the last five years. Screen-out management was enforced through the validation questions accessed by the Qualtrics survey link listed in online recruitment postings. To establish eligibility, respondents confirmed their age, their residence in the United States within the last five years and their email address. There were no other exclusion restrictions prior to respondents consenting to participate. Upon completion of the 14-day study, participants also provided additional demographic information of gender and race.

Measures

Data were collected online using self-report questionnaires (explicit measures) to capture the execution of decluttering and mindfulness activities, and to better understand possible changes in well-being from simplifying behavior.

Well-being Scale: This 20-item instrument (see Table 1) was developed to measure the dependent variable, subjective well-being, by recording how strongly respondents agree with each statement based on their current experiences. Data were collected from eligible and consenting participants before the decluttering or meditation interventions on Day 1 and again on Day 14, using a Likert-style scale to provide their perspectives in areas such as stress, productivity, sense of purpose, mental clarity and confidence. Participant responses were based on a 7-point rating system ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) to address positive affect such as, “I feel happy” or “I feel productive.” Reverse scoring was used for statements referencing negative affect, such as, “I feel disappointed in myself” or “I feel overwhelmed by my possessions.” The response scoring, ranging from 20 points (lowest level of subjective well-being) to 140 points (highest level of subjective well-being), assessed the participants’ perception of their well-being based on the 20 statements.

Table 1. Well-being Scale.

Using the scale below, please indicate the response that best characterizes how you feel TODAY.							
	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
I feel stressed.	7	6	5	4	3	2	1
I feel I have control of my life.	1	2	3	4	5	6	7
I am disappointed in myself.	7	6	5	4	3	2	1
I feel generally well rested.	1	2	3	4	5	6	7
I feel empowered.	1	2	3	4	5	6	7
Having material possessions is not important to me.	1	2	3	4	5	6	7
I feel that I have a sense of purpose.	1	2	3	4	5	6	7
I feel happy.	1	2	3	4	5	6	7
I feel productive.	1	2	3	4	5	6	7
I feel attentive to my surroundings.	1	2	3	4	5	6	7
I feel calm.	1	2	3	4	5	6	7
I have a sense of mental clarity.	1	2	3	4	5	6	7
I feel able to deal with life's challenges.	1	2	3	4	5	6	7
I feel that I have enough time to do the things I want.	1	2	3	4	5	6	7
I feel confident in myself.	1	2	3	4	5	6	7
I feel overwhelmed by my possessions.	7	6	5	4	3	2	1
I feel I make good decisions with my life.	1	2	3	4	5	6	7
I am happy in my relationships.	1	2	3	4	5	6	7
I enjoy my home environment	1	2	3	4	5	6	7
I feel competent when it comes to managing my finances.	1	2	3	4	5	6	7

Note: Highlighted statements represent the specific hypotheses of interest.

Decluttering intervention and questionnaire: Respondents randomly assigned to the decluttering intervention were instructed to eliminate items from their personal spaces for period of 14 days, based on an adaptation of the 30-Day Minimalism Game (Fields Millburn & Nicodemus, 2018b). For this treatment, participants were given a one-page document of comprehensive instructions (see Appendix B) directing them to permanently remove at least one item each day from their personal spaces over the 14-day period. They were challenged, but not required, to increase the number of items (i.e., two items for Day 2, 10 items for Day 10) as the study progressed. To promote engagement in the decluttering process and to capture detailed records of their study experiences, participants were instructed to record their daily progress using an online questionnaire after completing each intervention. The questionnaire reported on the length of time spent on the activity, a short description of the items removed from their space and general comments related to their performance of the activity for each day. Participants were also given a list of suggestions regarding possible items for consideration such as office supplies, holiday decorations, or unwanted possessions that will not be used.

Meditation intervention and questionnaire: Respondents randomly assigned to engage in mindfulness meditation were instructed to complete five different guided exercises sourced from the UCLA Mindful Awareness Research Center (MARC) website (https://www.uclahealth.org/marc/ucla-mindful-app). MARC provides mindfulness educational programing and resources through UCLA's Jane and Terry Semel Institute for Neuroscience and Human Behavior. The guided mindfulness meditation exercises recorded by MARC's Director for Mindfulness Education, Diana Winston, range from three to 12 minutes and were available to download directly from the MARC website or

the software application using a smartphone, personal computer, laptop or tablet. Participants were then asked to follow the intervention instructions, as shown in Appendix C, to report on their experience by confirming if the meditations were performed as instructed, the length of time spent performing the meditations, and any additional comments the participants wanted to share about their experience. The guided exercises included a 3-minute Body and Sound Meditation, 3-minute Body Scan Meditation, 5-minute Breathing Meditation, 9-minute Loving-Kindness Meditation and 12-minute Breath, Sound, Body Meditation. A short description of each mindfulness exercise is presented in Appendix D.

Procedure

Data collection, study protocol and a data cleaning protocol were all executed for the current investigation.

Data Collection

The SurveyMonkey online platform was initially proposed for hosting the study survey and data collection. Due to the complex nature of the longitudinal survey and limitations identified with SurveyMonkey software, the Understanding Well-being study was moved to the Qualtrics XM services platform, a data collection tool that is widely used across US academic institutions and was accessed through Harvard University Information Technology. All participants were directed to the study using a direct link to the Qualtrics survey, accessible from any personal electronic device. The Understanding Well-being study was open for participant data collection from March 13, 2020 to May 17, 2020.

Study Protocol

Targeting nonclinical adult populations, the proposed recruitment plan included posting short advertisements to community platforms that attracted adults interested in well-being content including Reddit community pages r/wellbeing, r/todayilearned, r/health, r/askreddit, r/nutrition, r/lifeprotips, and r/shopping, Craigslist volunteer pages and the Buzzfeed Community page. After many of the platforms rejected initial recruitment postings, it became clear that advertising the research project on the sites would not adhere to the community use rules and would be taken down. After identifying additional social media or academic research resources, including Reddit community sites (r/psychologyresearch, r/well-being, r/samplesize and r/studies), LinkedIn, Facebook, Instagram, Twitter, SurveyCircle and the Psychological Research on the Net website, a modification to the study was submitted to the IRB for approval and more respondents were reached without violating platform community posting rules.

Access to the Understanding Well-being study was granted through a Qualtrics survey link that was included within the online recruitment posts on social media and academic research platforms. Respondents were first directed to answer the eligibility questions regarding age and residency in the U.S. Any responses that did not adhere to the screening requirements were recorded and the survey was terminated. All eligible respondents were randomly assigned to a treatment group and provided with a consent form with detailed instructions and incentive information for completing the study including: the study purpose, time commitment for study completion, confidentiality statement, gift card drawing information, and a consent statement to authorize using their submitted data.

Next, the well-being scale and treatment questionnaires were administered once the participants provided consent on Qualtrics. Respondents were asked to complete the decluttering and meditation activities and then immediately answer daily questionnaires to serve as reminders and engagement from Day 2 to Day 13 of the protocol. Anonymous Links were created in Qualtrics for participants to access to the daily questionnaires for the study. Automated emails were sent to participants based on their Login ID (an email address) within 12 hours after their last response was submitted in Qualtrics each day. As they performed on Day 1, participants were instructed to complete the 20-item well-being scale and the three daily questionnaires to fulfill all tasks for completing this study on Day 14. They were also offered an opportunity to enter a raffle to win one of eight $25 Amazon gift cards for completing the study. Due to the low number of participants that finished the entire study protocol, all respondents who completed the full 14-day study were emailed an electronic gift card on June 1, 2020.

Data Cleaning Protocol

Data collection began on March 13, 2020 and ended on May 17, 2020. Once the data collection period concluded, the data were reviewed using the Data and Analysis and Reports sections within the Qualtrics platform. Data entries that were logged during the pre-testing of the survey were immediately removed from the database, along with data that were identified as spam by the Qualtrics system. Respondent entries that were recorded from logging into the same survey multiple times were also removed. One respondent's information was removed because the individual provided incoherent responses for both treatment groups by logging into the study with similar email addresses from different webmail providers. These instances are reflected in "other

reasons" participant count listed in the Understanding Wellbeing CONSORT flow diagram (see Appendix E).

After completion of the data cleaning protocol, a total count of 211 entries were logged for the Day 1 survey from March 13, 2020 to May 12, 2020. Of those entries, 35% of individuals had confirmed their eligibility, but did not go further than the consent form. While 15% were screened out for failing to meet study eligibility requirements, 6% of ineligible participants were under 18, 76% did not reside in the US, and 18% had not resided in the US during the preceding five years.

Forty-three participants (29 decluttering, 14 meditation) completed the full Day 1 treatment. However, only 21 participants (13 decluttering, 8 meditation) returned to complete the protocol for Day 2. Participation was further reduced on Day 3 when only 12 respondents (9 decluttering, 3 meditation) completed the entire protocol. By Day 4, there were only 7 decluttering respondents and 2 meditation respondents. Although the two remaining meditation participants did not continue on to Day 5, the decluttering participant count remained the same until Day 7, when it was further reduced to the six individuals (all within the decluttering treatment) that completed the entire study protocol through to Day 14.

Data Analysis

To examine all three of the presented study aims, respondent self-assessments were collected from the 20-item well-being questionnaire for both the decluttering and meditation interventions. However, the early withdrawal of respondents assigned to the meditation intervention was a detriment to providing a suitable comparison for producing substantive inferential statistics related to presented hypotheses, enhancing the

understanding of proposed relationships between decluttering and improved well-being. In the following chapter, I provide a descriptive analysis of the available data as well as a selection of participant feedback that was collected from March 13 to May 17, 2020.

Chapter III

Results

The final sample for the current study included six participants that were all assigned to the decluttering intervention. Consistent with the inclusion criteria for the current study, all of the participants that completed the 14-day protocol were at least 18 years old and had been living in the US within the last five years. The associated demographic information displayed in Table 2 below, represents the small sample comprising of six females, with racial backgrounds split among three groups (Black, White and Multiracial), and representation from three generations - Baby Boomer (one participant at age 69), Generation X (one participant age at 43 and two participants at age 46), and Generation Z (one participants at age 22 and one participant at age 24). All six respondents successfully completed the entire study protocol; however, one respondent performed the 14 decluttering sessions over a shorter period by reporting two sessions per day for five of the nine days participated. This person did not provide additional information as to why she performed the protocol in this manner.

The descriptive analysis was performed on the well-being scale data collected from the six women on Day 1 and Day 14. Table 3 is a presentation of the mean scores from each element included in the 20-item Well-being Scale. Six well-being indicators (stress, productivity, calm, confidence, overwhelm and finance) revealed a decline in mean scores from Day 1 to Day 14, suggesting diminished well-being in these areas for the sample. Three of the well-being criteria that included feeling happy, being attentive to

surroundings, and feeling able to deal with life challenges, did not record a difference in mean score, suggesting that decluttering had no effect for these aspects of well-being. Finally, the mean scores rose between Day 1 and Day 14 for the remaining eleven well-being indicators referencing the following: feeling control, disappointment, well-rested, empowered, a sense of purpose, clarity, having time to do things they want to do, good at decision making, happiness with relationships, enjoying the home environment and not prioritizing material possessions. These results suggest that decluttering may have supported improved well-being for more than half of the measures examined in this study.

For both groups, the daily intervention questionnaires solicited general comments from participants that wanted to volunteer additional feedback regarding their experiences. Seventy-nine general comments were collected in the daily intervention questionnaire section of the study. Fifteen of those remarks were expressed by individuals assigned to the mindfulness intervention. Common themes related to productivity, decision making, and confidence were identified in the feedback from both interventions (see Table 4). On Day 1, the decluttering and meditation participants communicated their enthusiasm immediately following engagement in the activities by describing it as “fun, “felt great,” and “simple.” As expected, there were individuals assigned to the meditation intervention that disclosed immediate changes in mental and physical state.

Although most of the respondents expressed positive observations, there were a handful of negative responses that referenced respondents feeling out of control due to persistent body pain they were experiencing during meditation exercises. Participants

also encountered distractions during meditation exercises such as pets or other obligations that detracted attention from decluttering. Additionally, there were instances where participants admitted to almost overlooking the decluttering intervention all together. Although the intervention instructions specifically informed participants to set aside time to complete the intervention, some were challenged in scheduling the activity into their day, which most likely was impacted by COVID-19. Respondents also admitted to the delayed execution of discarding of objects they considered junk or useless for their needs; spending days to weeks not addressing the unwanted items in their spaces. Although the study did not require the participants to strictly follow the number of items to be removed each day, several participants expressed wanting to get rid of additional possessions once the process of decluttering was initiated. Two respondents expressed that decluttering their mismatched or unwanted possessions was "upgrading" their space or transforming their environments. There was only a single comment that referenced the ongoing COVID-19 pandemic and acknowledged the challenge of removing superfluous items from their homes. Due to the imposed shutdowns within most communities across the country, some participants may have experienced unusual challenges in donating reusable items to nonprofits that normally offer those services. Consignment shops, thrift stores and other organizations committed to recycling had to suspend accepting non-monetary donations due to being understaffed or limitations in resources to safely accommodate services.

Table 2.

Respondent Demographics

N = 6	Range	Minimum	**Maximum**	**Mean**	SD
Respondent Age	47	22	69	41.66	17.23

Gender Identity	%	Count
Female	100	6
Male	0	0
Other	0	0

Racial Identity	%	Count
Black or African American	16.67%	1
Multiracial (Asian, Black, White)	16.67%	1
White	66.67%	4
American Indian or Alaska Native	0.00%	0
Asian	0.00%	0
Native Hawaiian or Pacific Islander	0.00%	0
Spanish, Hispanic, or Latino	0.00%	0
Total	100%	6

Table 3.

Well-being Scale Responses

N = 6	Day 1 Mean	Day 1 SD	Change	Day 14 Mean	Day 14 SD	N = 6
stress	4.83	1.72	▼	3.67	2.34	stress
control	4.67	1.37	▲	5.50	1.38	control
disappoint	5.67	1.51	▲	6.00	1.10	disappoint
rested	3.17	1.60	▲	4.33	1.51	rested
empowered	5.00	1.79	▲	5.50	0.55	empowered
possessions	4.33	1.97	▲	4.67	1.51	possessions
purpose	5.83	1.17	▲	6.17	0.75	purpose
happy	5.50	1.22	NC	5.50	1.38	happy
productive	5.83	1.17	▼	5.50	1.52	productive
attentive	5.67	0.82	NC	5.67	0.82	attentive
calm	5.33	1.75	▼	5.17	1.60	calm
clarity	5.17	1.60	▲	5.33	1.75	clarity
life challenges	5.50	1.05	NC	5.50	1.76	life challenges
time	4.33	1.51	▲	4.67	1.03	time
confident	5.83	0.75	▼	5.50	1.38	confident
overwhelm	5.17	2.14	▼	5.00	2.00	overwhelm
decisions	5.83	0.75	▲	6.00	0.89	decisions
relationships	6.17	0.98	▲	6.33	0.82	relationships
home	6.17	0.98	▲	6.50	0.84	home
finance	5.83	0.41	▼	5.67	0.82	finance

Note: Bolded items reference the three hypotheses presented

Table 4.

Daily Journal Comments

Participant Comments	Declutter	Meditation
Very simple and easy to do		Day 1
Very nice. The woman's voice is relaxing. I like that she pointed out that we will try to tell the story, but she also didn't explicitly chastise you for doing it.		Day 1
Short but restful.		Day 1
I have a new understanding of my state, I am very confident.		Day 1
I enjoyed the brief body scan and mindfulness of sound.		Day 1
We have been cleaning out the basement and I needed to make some decisions about things I have held onto for too long. Knowing I had to pick one item made it easier to make a decision, which prompted me to decide on more things I can live without.	Day 1	
Upgrading. It feels good to get rid of mis-matching silverware. I am proud of myself for being honest with myself about the fact I would not wear that shirt in the future.	Day 1	
Threw away junk mail.	Day 1	
Mission accomplished. That was easy!	Day 1	
It was a good experience.	Day 1	
I threw away a wrapper that I have been staring at on my side table for the past three days.	Day 1	
I removed a pair of old tennis shoes I no longer wear. They have been sitting by the doorstep of my garage for 2 weeks.	Day 1	
I needed to get rid of some old electronic items for a while. After doing this survey and reading the instructions, I felt like I had permission to go ahead and toss them out, so I did.	Day 1	
I felt good about freeing up space.	Day 1	
Got rid of old mail and unused bags	Day 1	
Excited to conquer my bedside table.	Day 1	
Harder for me to be present than yesterday.		Day 2
Very restful even though I live on a busy street.		Day 2
Made difficult by my cat.		Day 2
I have to resist the temptation to remove everything at once! I also think about decluttering constantly now.	Day 2	
I kept being tempted to get rid of more but know I'll be doing more each day.	Day 2	
I removed a shirt with a hole and pair of pants too small.	Day 2	
I was prepared for this and pitched some old papers I no longer need.	Day 2	

Procrastinated on decluttering today.	Day 2	
Today's processing is very smooth without too much difficulty.	Day 2	
I'm familiar with meditation exercises. As I'm getting more familiar with the guidance of this one it becomes easier and easier to use. Hopefully, someday soon, I will be able to carve fifteen minutes or half an hour to devote to a more prolonged session.		Day 3
I'm throwing away unneeded mail, magazines, and newspaper	Day 3	
Procrastinating and planning on tackling a highly cluttered area.	Day 3	
Today it took me a lot longer to select which item I wanted to remove.	Day 3	
I almost forgot to do this. Had a very busy day!	Day 3	
Desk is taking on a new and different appearance.	Day 3	
Today's treatment is very smooth, sorted out some old clothes.	Day 3	
This was a large broken chair I needed to haul out to the road. It'll be gone tomorrow given the habits of the junk collectors where I live. I anticipated this and was ready to remove the chair.	Day 3	
It was difficult to find any relaxation while trying to ignore the screaming raging pain coursing through my legs and back.		Day 4
I removed an item from my designated area but then it inspired me to extend my decluttering to another area.	Day 5	
I started and just kept on going until area was clean.	Day 6	
I am running out of items in my personal space, so I decided to declutter my son's art area.	Day 6	
Found lots of stuff to get rid of.	Day 9	
Cleaned a section of the kitchen.	Day 10	
Easily distracted today.	Day 11	
I traded out my winter clothes for summer wardrobe. It took time but I found things I could get rid of. I've enjoyed getting rid of some things daily. The only downside is that no charities seem to be accepting donated items during COVID 19. Hoping I can give away some of these soon! In the meantime, I have them all together and items listed, so I'm prepared for pickup.	Day 14	
I lost something and in looking for it prompted me to remove clutter.	Day 14	
I really enjoyed this experience and it was easy to do.	Day 14	

Note: This table represents a portion of the comments volunteered from Understanding Well-being survey. Highlighted comments are from participants that completed entire 14-Day protocol.

Chapter IV

Discussion

The aim of the current study was to examine whether the subjective well-being of an individual can be significantly modified after a 14-day intervention of decluttering. This investigation expected to find significant changes in well-being in three important ways. First, both decluttering and mindfulness were predicted to be associated with an improvement in overall happiness, calmness, and mental clarity at the end of the intervention period. Second, the study aimed to demonstrate that participants engaging in decluttering behaviors would show greater improvement in confidence, productivity and happiness with their relationships as compared to people practicing in the concurrent mindfulness meditation intervention over a 14-day period. Finally, this investigation expected to show that decluttering respondents would exhibit a greater change in feeling less overwhelmed by their material possessions, as well as, showing a greater change in the importance of having material possessions, compared to the meditation participants at the end of the treatment.

Unfortunately, a number of unexpected issues compromised the study. These issues, discussed in more detail below, included participant recruitment, participant retention, and the global COVID-19 pandemic. Only six participants from the decluttering group provided useable data. In the meditation intervention, only two participants provided any data and no participant remained in the study long enough for post-treatment information to be collected. The small size of the two intervention groups precluded formal data analysis. However, examination of the comments that participants wrote about the study, together with an inspection of the pre- and post-treatment mean

scores on the Well-being Questionnaire provide some insights into the potential benefits of both decluttering and meditation.

The participant data reported in the Well-being Scale on Day 1 to Day 14 revealed increases in mean scores (meaning improved well-being) for 11 out of the 20 inventory items assessed by the study. The participant responses to the happiness, calmness and clarity statements revealed unexpected outcomes in different directions. Multiple participants expressed happiness and satisfaction with the decluttering process through their daily feedback entries, yet the mean scores for happiness did not change between Day 1 and Day 14. Additionally, decreased mean scores that referenced feeling calm, confident, and productive were observed for the six participants. The observed decrease in mean scores is at odds with expressions of ease and excitement from multiple respondents that identified conquering their procrastination in disposing things that no longer hold value to them, which is a reflection of past studies (Ferrari et al., 2018; Ferrari & Roster, 2018) suggesting that procrastination may significantly contribute to the growth of clutter.

Although the participants were permitted to remove any number of items throughout protocol, a few of the respondents that completed the 14-Day protocol reported exercising restraint for removing more items than was asked on particular days. The participants in this group also reported decluttering spaces until they were cleared instead of focusing on the number of items they removed. These reports suggest that the respondents were motivated to go beyond their initial goals and were inclined to clear entire areas of their homes once they initiated the decluttering process for that day. However, the statement, “I feel overwhelmed by my possessions,” revealed a decline in

the mean score, in opposition to the initial prediction that participants would feel less overwhelmed from decluttering. This outcome may be indicative of the panic and frustration experienced as individuals attempt to manage too many things that are consuming spaces within the household (Belk et al., 2007). As one participant submitted in their daily feedback response, the distress may have been experienced due to trying to detach from particular things that were tied to particular experiences and people from the past or signaled aspirational goals for the future. Additionally, the events associated with the COVID-19 pandemic may have contributed to the drop in the overwhelm mean score, also in line with Belk et al.'s (2007, p. 136) investigation that revealed that major life events (i.e. birth, death, retirement) tend to intensify those same negative responses associated with owning too many possession. This finding could have contributed to decreases in the mean score for stress. Not surprisingly, individuals that were assigned to the mindfulness intervention had specifically referenced their feelings of calm and confidence after completing the meditation exercise.

The three inventory items that referenced feeling in control, empowered, and having purpose, all showed increased mean scores. These results may offer some hope in using decluttering as a practical coping response to the uncertainty that is currently being experienced in the US. Further data analysis revealed that the mean scores did not show any changes for the two statements that addressed the ability to deal with life challenges and being attentive to surroundings. The mean score for mental clarity may suggest that decluttering supports more efficient use of mental energy or diminish decision fatigue caused by disorganized or chaotic environments. Participants expressed that this process

gave them “permission” to let things go and implied their decision-making improved through the decluttering process.

Finally, the participant responses expressed increased enjoyment in their home environment. One of the most important outcomes from decluttering is to feel good about the environment you are spending most of your time in. This may be a supportive outcome in addressing well-being for women based on Saxbe and Repetti’s (2010) examination highlighting the importance for women to feel good about their home environments to mitigate negative health outcomes.

Issues with Recruitment and Retention

The recruitment process gained momentum a month after it was initiated. Using SurveyCircle as a recruitment tool was essential in reaching more participants across multiple platforms. Despite successful efforts to recruit over 200 participants to log into the study, 52% of the respondents (after the data cleanup protocol) did not continue with the study beyond reading the initial participation instructions. The current study competed with hundreds of other research participation opportunities that took less time to complete or many offered more lucrative financial incentives.

A major impediment to participant recruitment may have resulted from the timing of the study. On March 11, 2020, the World Health Organization (WHO) declared the 2019 Novel Coronavirus disease (COVID-19 a pandemic (World Health Organization, 2020b). Two days later, on March 13, the U.S. Centers for Disease Control and Prevention (CDC) declared a national emergency following a substantial outbreak in densely populated communities across the country (Center for Disease Control and Prevention, 2020a). Data collection was initiated on the same day, also coinciding with

lockdown orders imposed in many jurisdictions throughout the country restricting residents, with the exclusion of those deemed to be essential workers, from a substantial portion of their otherwise normal daily activities. The pandemic exposed the ongoing systemic weaknesses of employment, education, and healthcare in the U.S.

The extenuating circumstances resulting from the global pandemic likely had considerable influence on the participants in this study though the unexpected nature of the pandemic precluded this research from compensating for or collecting data about potential effects. Potential ways in which the current study may have been affected are participants' willingness to start or continue their participation in the study, participant baseline stress levels throughout the duration of their participation, and logistical ability to participate when presented with unforeseen challenges such as increased childcare and decreased ability to physically remove items from their space. In addition to impacts on overall follow-through with the study protocol, participant score data may also have been influenced by pandemic-related factors, making any benefits of decluttering difficult to isolate. This may at least partially explain the unanticipated expected changes in some of the mean scores observed in study data (e.g., declining scores associated with productivity, calm, and feeling overwhelm).

Job and housing instability may also have had a role in participants' evaluation of the financial benefit of the study against the time invested in participation. In April, the apartment industry reporting organization, National Multifamily Housing Council (NMHC), reported that the percentage of apartment households that paid rent by April 5 went down 12% compared to payments paid by March 5, based on their survey of 11.4 million professionally managed units across the U.S. On April 30, it was reported that

about 3.8 million people had filed for unemployment aid since the previous week and approximately 30.3 million people had filed for assistance since the shutdowns began to impact jobs across the country over the prior six weeks (Associated Press, 2020). It is also important to recognize the stress and financial implications from this dramatic change in employment, which again may have contributed the decrease in related mean scores from the questionnaire. Initially, participants may have been more incentivized by monetary compensation especially if there was any loss in their primary income. Although budget constraints did not allow for paying participants large sums of money for their time, offering $2 - $3 gift cards to all volunteers instead of offering a chance to win a $25 gift card may have incentivized more people to continue with the entire study. As the study progressed, time constraints may have precluded their ability to successfully complete the daily exercises.

The sample responses revealed that more participants progressed and completed the decluttering intervention compared to those assigned to the meditation intervention, despite the comparable time commitment and less physical effort needed to complete the mindfulness intervention. There may be a few practical explanations as to why the decluttering intervention motivated more people to complete the entire 14-day protocol. Tidying one's home is socialized as responsible adult behavior and decluttering is easily implemented as part of that routine process. Women tend to consider themselves the primary caretakers of the home and have physiological responses to cluttered or disorganized home environments (Belk et al., 2007; Saxbe & Repetti, 2010). Therefore, it is not an unexpected observation that the entire cohort that completed the 14-day protocol were all women.

There was slight improvement in mean score for statements regarding relationships, suggesting that decluttering potentially enhances relationships. Given that people were spending more time at home with others, the study expected to collect more questionnaire feedback concerning the relationships indicator. However, none of the participants disclosed any specific comments that addressed their perspective in this area. One person, that appears to be the female head of household, mentioned decluttering spaces that were primarily occupied by others within the home. Submitted entries reference decluttering common spaces, such as kitchens and bedrooms. There are two clear examples of the organizational responsibilities that women take on to care for the different areas of the home as one participant describes decluttering her child's bedroom and, on another occasion, clearing out boxes that her husband left in the garage. Half of the decluttering participants fell within the Sandwich Generation, individuals between the ages of 35-54, a period when many adults are dividing their time to care for their children and their elderly parents. There may be significant implications for women that are taking on the responsibility of managing multigenerational households that are filled with possessions. Further investigation of decluttering interventions for caretakers and household members could offer valuable insight into health-related outcomes for these common living arrangements. Removing the burden off of women as sole caretakers and organizers of homes will require a significant culture shift. And the ideal scenario for any home would be to invite all members to actively contribute to decluttering the household. The design of the current study could have been further enhanced by collecting demographic information on Day 1 instead of Day 14. Directing participants to provide

more specific information regarding their attitudes towards cleanliness or level of responsibility within their household would have provided some meaningful data.

Prior to the COVID-19 crisis, 78% of US workers reported that they are living paycheck to paycheck just to be able to cover their expenses (CareerBuilder, 2017). A number of American traditions imply that gift giving is the proper approach to showing affection. Additionally, the CareerBuilder report revealed that 13% of the workers stated that they would not be willing to give up buying gifts for other people even with instability with their financial well-being. Not only is this troubling because the giver could be using more money towards basic needs, but this habit also contributes to the accumulation of clutter for the receivers that may keep gifts out of obligation without adding real value into their lives.

Although one could argue that there are many ways to easily incorporate mindful behavior using a variety of techniques, many Americans may struggle with practicing meditation specifically. It is possible that the meditation treatment was perceived as too complicated or not interesting enough for some of the volunteers. If this study was to be redone, a consideration would be to identify different types of mindfulness activities to possibly support better participant retention for the mindfulness intervention. Another possible hurdle may be related to the religious origins of meditation, as some individuals may associate as a specific way to pray and may not feel comfortable participating. Finally, “being busy” or the appearance of constant hustle or productivity is a persistent trait of American culture, wherein some individuals may not see the value in being still for short periods of time and do not value the established benefits of meditation.

There are a few protocol changes or process considerations that could have mitigated the data collection challenges that were experienced, but also significant adaptation in timing appears to be one of the biggest considerations. Extending the data collection window for at least another two months may have enabled a usable population sample for both meditation and decluttering groups over a 14-day period could have been an effective adaptation to the current study. Qualtrics provided some advanced technological support with data collection and management for the complex process of an online longitudinal study. Immediately following the eligibility requirement, the online survey used a randomization process for respondents, which introduced the common issue of failing to adjust treatment assignments (Economides et al., 2018). For the current study, a minimum of two to three weeks would have been needed to identify the unbalanced results skewed toward more decluttering interventions being completed in comparison to the mindfulness interventions. Unfortunately, the randomization process used in the Day 1 survey flow protocol did not allow enough time to make the necessary adjustments to compensate for the lack of completed meditation responses within the two-month data collection window used in this study.

On March 23, a respondent reported not receiving a follow-up email for the Day 2. The study immediately contacted Qualtrics to identify a potential problem with the email trigger function. After further investigation, the respondent confirmed that the email from the study had been sorted into a spam or promotion folder instead of the inbox. To avoid future concerns with this issue, the study updated participants by adding the following detailed message adapted from Rudder Realty website (2020):

> Some email providers filter messages based on content, subject line, or the sender's address and may put your email into a bulk or junk mail folder. Please make sure Understanding Well-being Research Team (noreply@qemailserver.com) is on your "approved sender" list or "whitelist" and/or in your "address book." Occasionally an ISP will institute mail controls that block your email completely without your knowledge. We often do not even receive notice of such a block. The only solution to this problem is for you to be aware what triggers your ISPs blockage and make sure they understand you want to receive our email.

A review of the collected data also determined that a small portion of individuals assigned to the meditation treatment only completed four days out the two-week study protocol. Thirteen meditation respondents completed Day 1 and only two of those finished through to Day 4. Technical problems were considered throughout the study despite thorough pre-tests to ensure the entire study could be accessed and collected data as intended. Qualtrics customer support was contacted to re-test and confirmed that there were no technical issues preventing participants from completing the entire study protocol.

The challenge of retaining participants in panel examinations, as experienced in the current study, is a commonly faced by researchers. Producing an online longitudinal survey with platforms such as Qualtrics and SurveyMonkey required advanced technological knowledge and access for adaptive functionality that could enhance the front-end user experience (i.e. offering notifications that do not require email

communications). There is also room for improved resources for future student researchers looking to create more complex studies by offering more technical support and resources specifically focused on academic research.

Future Directions

COVID-19 will have long term implications for how we live, making many individuals feel anxious and powerless. The impact of the ongoing pandemic is a significant consideration for the current study and for future investigations. The mental and physical changes in daily behavior has created ripple effects in how people perceive and utilize their personal spaces and resources. Across the globe, COVID-19 has created a seismic shift in society, forcing many individuals to function completely within the confines of their home, making it a formidable challenge to compete and sustain the attention of participants for a two-week period. If there had more time to properly make adjustments to the daily questionnaire, the current study may have benefited from inquiring specifically about how COVID-19 affected the decision making of participants while addressing the clutter within their home. Regular decluttering may build skills in eliminating the distractions, creating more mental space for better prioritization and mitigate some negative experiences due to the pandemic. Education, goal setting, technology and relationships are areas where the practice of decluttering could be significantly expanded into address daily living with COVID-19.

The safety precautions advised by the CDC and WHO require rigorous attention to cleanliness and order in physical spaces, as they are paramount for diminishing the spread of the virus within homes and for businesses that serve the general public. All

individuals were asked to increase handwashing, to stay at home as much as possible and to physically separate from others in public areas as essential behaviors to mitigating the spread of the COVID-19 (Center for Disease Control and Prevention, 2020b; World Health Organization, 2020a). Vulnerable populations, such as older adults or individuals with underlying health conditions, were strongly advised to restrict outdoor activities and to be hypervigilant precautions while out in the general population (Centers for Disease Control and Prevention, 2020). Decluttering and removing items that are not critical in supporting the services to the general public (i.e., public computers, magazines or water machines in waiting rooms) are immediate, measurable and sustainable solutions to ensure higher levels of cleanliness, supports more efficient disinfecting protocols, while optimizing available space to physically distance individuals. Future investigations could identify behavioral changes with customers and employees to simplified spaces. Will new and more stringent habits emerge to declutter handbags or wallets (or even the complete elimination of large bags) for those tasked with running household errands? Will employees be more vigilant with decluttering areas and are they experiencing more or less anxiety in managing these spaces?

As news of the pandemic unfolded in the US, there were many reports of individuals starting to hoard items such as hand sanitizer, surface disinfectant, and even toilet paper. Hoarding is the excessive consumption with difficulty in discarding of possessions, regardless of their value (Substance Abuse and Mental Health Services Administration, 2016). Researchers are already narrowing their investigation to the stockpiling of items such as toilet paper, specifically from this crisis (Garbe et al., 2020). A Google search of COVID toilet paper hoard produced over 1.6 million results related

to this particular topic on July 4, 2020. An extension of this research could be future investigations related to the decluttering of high-traffic areas, such as kitchens or bathrooms, to examine identify changes in buying decisions, specifically focused on food or other personal care items.

The COVID-19 pandemic has forced many American companies and educational institutions to function entirely online, pushing households to repurpose areas that may accommodate focused work for long periods of time. For example, a decorated corner in the bedroom may be used as an office for online conference conversations with colleagues; or the kitchen table where the family shares meals must also serve as a space where small children engage in online learning. Expanding on the findings of Arnold et al. (2012) regarding the use of space in the home environment, future investigations may provide insight on whether families eliminated or redistributed their possessions to support more efficient use of household spaces. Would the examination reveal decrease in consumption and increase in decluttering of superfluous possessions to support better functionality and safety measures within home?

American classrooms are scheduled to reopen online and in person starting in August 2020; creating more challenges to navigate physical spaces, processes and budgets that have already been stretched beyond a reasonable capacity. For school educators, parents and children, the daunting task of identifying practical resources that will address their concerns is critical for all community stakeholders. Recent research on decluttering educational environments has suggested that visual displays, that are not contributing to the current learning experience, serve as additional distractions for young student, and hinders critical learning in those settings (Fisher et al., 2014). An application

of decluttering to pedagogy was featured in a *Harvard Gazette* article where the educational challenges classroom caused by the COVID-19 pandemic are addressed. Walsh (2020) reported on the collaboration between Harvard and MIT that offers support to educators that are feeling overwhelmed and looking for effective tools to navigate modified educational environments. Mehta and Reich's (2020) report suggests decluttering curriculums to ensure optimizing student engagement and reduce some of the pandemic-related challenges educators will face in the coming school year. Educators, parents and students may all benefit from these guidelines to apply in their own learning spaces within their households or elsewhere. It will be imperative to formally investigate how implementing these changes will affect students in the short term and years from now.

Visual clutter and increased use of electronic devices contribute to the fragmented attention that has become common in American culture. Decluttering is an adaptable and practical habit to focus our time, attention, and actions in a number of areas. While the current study may prompt further examination of decluttering physical things in personal spaces, there are also opportunities in challenging individuals to declutter their electronic devices by removing unnecessary games or applications for supporting better psychological well-being. In his popular book, *Deep Work*, Newport (2016) suggests strategically decluttering personal calendars, trivial tasks and technology will be more effective with learning, time prioritization for goal achievement and building expertise. Some participants in the decluttering group expressed their challenges in remembering to complete the activity, referencing their feelings of distraction or procrastination in completing the short task. This suggests that decluttering was not a daily habit for many

of the participants and may require other sources of motivation for people to adopt it as a more frequent routine. Newport (2016) proposes scheduling time to support habitual engagement in deep work; an issue that challenged participants during this study. Technology could be the seen as the cause and the cure to diminishing these negative feelings. Decluttering social media or game applications from mobile devices and removing email or text notifications are just a couple of examples of how individuals may enhance their concentration and distractions or reduce attention residue (Newport, 2016). As a person switches from one task to another but the persistent cognition of the first task continues even after switching to a new task is considered attention residue (Leroy, 2009).

Aside from improvements in physical safety measures and mental well-being, decluttering may identify opportunities to accumulate financial resources. As mentioned earlier, an important way to improve financial competence is to clear spaces to assess resources and avoid duplicating unnecessary purchases. Prior to COVID-19, a number of decluttering advocates promoted selling unwanted possessions for money. Established online marketplaces, such as Craigslist, Etsy, and eBay, may be a motivating factor for individuals to clear their homes. There may have been some improvements in feelings of financial competence if participants showed more interest in selling unwanted things of value and took advantage of the variety of online shopping communities to make money from decluttering their space. However, it is important to also recognize that improved well-being may also be experienced by giving things away to people in need.

It is inevitable that people will consume things that they desire, in addition to things they need, but making more thoughtful or deliberate choices (e.g., supporting

small businesses, considering ecologic or financial effects) when making future purchases may support better well-being for both individuals and the community at large. In the US, it is common for national holidays to coincide as peak buying times for consumers. Again, these cultural norms are contributing to more consumption that potentially leads into clutter. A cultural movement in favor of recycling, reusing and decluttering households at these times instead of spending money on new items for may offer more positive long-term changes to build better financial wellness. Further investigation could be helpful in understanding immediate relationship or community outcomes from decluttering.

Prior to the pandemic, there was a growing a trend of people that were willing to drastically change their lifestyle in favor of living simply in a tiny house community. These popular communities offer more affordable options for potential homebuyers in the US. The tiny house movement appeals to individuals that commit to living with mostly the essentials as these homes are typically between 100 to 400 square feet of space (iPropertyManagement, n.d.). This lifestyle challenges individuals to purge most of their belongings and live with much less than the average American; and it also requires fastidious decluttering habits to ensure the space is not overwhelmed with disorder. Sixty-eight percent of the people that owned tiny houses do not have a mortgage payment, significantly higher than the 29.3% of US homeowners (Mitchell, 2013). And even more compelling, 89% of tiny house owners carry less credit card debt than the average American, and 60% of tiny house owners do not have any credit card debt (Mitchell, 2013). Although the transitioning to this lifestyle can be more complex than seeking traditional homes, the tradeoffs for owning tiny homes may offer more

opportunities for people to remove themselves from the pressures of maintaining more material distractions to gain more meaningful living experiences that may carry less financial burden.

As previously discussed, there are variety of ways to approach decluttering. For this study, adapting the 30-Day Minimalism Challenge (Fields Millburn & Nicodemus, 2018) was perceived as the least daunting process for novice simplifiers, in comparison with the KonMari Method (Kondo, 2014) or Project 333 (Carver, 2010). Hiring a certified organizer to help with the process would require additional research to assess advantages to the certification and may not be financially feasible. Although all decluttering processes require deliberate execution, the major difference is how time is divided for each approach. The Minimalists' challenge proposes a popular process in adopting new habits in that it supports small, incremental changes that is practiced daily and allows individuals to easily sustain the practice or recover if they lose momentum at any point (Clear, 2018). Future investigations may identify which processes (or combination of approaches) encourages a long-term commitment to habitual decluttering.

Simplicity is not necessarily easy, but it could be beneficial to educate children on the value of being intentional in their interactions with the environments in which they live. The world will depend on significant behavioral changes that to navigate the pandemic safety measures for the variety of environments we encounter. The current COVID-19 crisis may qualify as "a worst-case scenario" to justify holding on to unnecessary possessions, but it may also challenge some to approach decluttering as though their lives depended on it. As the priorities of our physical environments require

new approaches for coexisting safely with others, decluttering may be a useful tool to support better well-being in a number of ways.

Over 80 years ago, Gregg introduced voluntary simplicity to describe a lifestyle focused on deliberate consumption and prioritizing personal values. And today, many individuals are continuing to adopt simplifying behaviors to prioritize current needs within their environment. Further investigations into decluttering may offer measurable support for health and wellness programs for broad audience reach. Similar to practicing mindfulness, decluttering requires being intentional and addressing the current necessities, giving that attention to the things we bring in and acknowledging when something no longer serves a purpose for us. More rigorous quantitative research may productively expand current knowledge and clearly define how to best use simplifying behaviors for a world undergoing dramatic changes in the global response to the COVID-19 pandemic.

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Appendix A

Recruitment advertisement for social media postings



Appendix B

Declutter Intervention Instructions

This 14-Day decluttering activity is adapted from the Minimalism Game (Fields Millburn & Nicodemus, 2018). Procedure: Remove unnecessary or unwanted items from your personal space as instructed below. There is a suggestion list you may reference at the bottom of this page. If you are unable to identify the requested number of items for removal, then eliminate at least one object per day throughout the 14-day period. Note: the number of items to remove from personal spaces is based on the individual thing, not the category. For example, eliminating 7 books on Day 7 would be considered successful execution of the task.

In Qualtrics, we also ask for you to respond to the below Daily Check-In Survey after completing each decluttering exercise.

Daily Check-in Survey

1. How many items did you remove today?
2. How many minutes did it take for you to complete the decluttering exercise today?
3. Provide any general comments about today's experience.

Decluttering Tasks

Day 1: Complete Day 1 Well-being Scale before decluttering; remove one unwanted item from your personal space; complete Daily Check-in Survey

Day 2: Remove two items; complete Daily Check-in Survey

Day 3: Remove three items; complete Daily Check-in Survey

Day 4: Remove four items; complete Daily Check-in Survey

Day 5: Remove five items; complete Daily Check-in Survey

Day 6: Remove six items complete Daily Check-in Survey

Day 7: Remove seven items; complete Daily Check-in Survey

Day 8: Remove eight items complete Daily Check-in Survey

Day 9: Remove nine items; complete Daily Check-in Survey

Day 10: Remove ten items; complete Daily Check-in Survey

Day 11: Remove eleven items; complete Daily Check-in Survey

Day 12: Remove twelve items; complete Daily Check-in Survey

Day 13: Remove thirteen items; complete Daily Check-in Survey

Day 14: Submit response the for Day 14 Well-being Scale before completing the final decluttering activity; remove the final fourteen unwanted items from your personal space and submit final response for the Daily Check-in Survey; complete opt-in (or out) of drawing for $25 Amazon gift card.

Suggested Items for removal:

Clothing, footwear, old electronic devices or media, kitchen gadgets, dishware, books, furniture, office supplies, holiday decorations, unused gifts, anything broken, ripped or unwanted possessions that you will not use.

Appendix C

Mindfulness Meditation Intervention Instructions

Procedure: On Day 1 and Day 14 of the study, please complete the Well-being Scale, using Qualtrics. For this daily activity, listen to the guided meditations provided in the links below. Be sure to pick a time and space where you will not be interrupted. Meditations may be accessed through the links provided below or through downloading the free UCLA Mindful App.

In Qualtrics, we also ask for you to respond to the below Daily Check-In Survey after completing each meditation exercise.

Daily Check-in Survey

1. Did you do the meditation as instructed?

2. How many minutes did it take for you to complete your meditation?

3. Provide any general comments about today's experience.

Meditation Tasks

Day 1: Complete Day 1 Well-being Scale before starting meditation; listen to Body and Sound Meditation (3 mins) Play; complete Daily Check-in questions

Day 2: Listen to Body and Sound Meditation (3 mins) Play; submit response to Daily Check-in Survey.

Day 3: Listen to Body and Sound Meditation (3 mins) Play; complete Daily Check-in questions

Day 4: Listen to Body Scan Meditation (3 mins) Play; complete Daily Check-in questions

Day 5: Listen to Body Scan Meditation (3 mins) Play; complete Daily Check-in questions

Day 6: Listen to Body Scan Meditation (3 mins) Play; complete Daily Check-in questions

Day 7: Listen to Breathing Meditation (5 mins) Play; complete Daily Check-in questions

Day 8: Listen to Breathing Meditation (5 mins) Play; complete Daily Check-in questions

Day 9: Listen to Breathing Meditation (5 mins) Play; complete Daily Check-in questions

Day 10: Listen to Loving Kindness Meditation (9 mins) Play; complete Daily Check-in questions

Day 11: Listen to Loving Kindness Meditation (9 mins) Play; complete Daily Check-in questions

Day 12: Listen to Loving Kindness Meditation (9 mins) Play; complete Daily Check-in questions

Day 13: Listen to Breath, Sound, Body Meditation (12 mins) Play; complete Daily Check-in questions

Day 14: Complete the Day 14 Well-being Scale before completing the final meditation; listen to Breath, Sound, Body Meditation (12 mins) Play; opt-in (or out) of drawing for $25 Amazon gift card.

Appendix D

Descriptions for Mindfulness Treatment

- Body and Sound Meditation (total Time 3:06) - guidance is focused on slow breathing, body posture and sensations, and environment sounds within the present moment.

- Body Scan Meditation (total time 2:44) - guidance is focused first on deep breathing, then participants bring their awareness to parts of the body from the toes to the face.

- Breathing Meditation (total time 5:31) - To support relaxation in the present moment, this guided exercise instructs participants to focus on deep breathing and to pay attention to how the body responds the act of deep breathing.

- Loving Kindness Meditation (total time 9:31) - the participant is asked to focus on a living being (i.e. a person or a pet) that provides positive emotions to the individual. This time is focused on showing gratitude for knowing this living being that brings happiness; and it is a moment to wish good things for the living being and acknowledge positive emotions.

- Breath, Sound, Body Meditation (total time 12:00) - the primary goal for this guided exercise is to support peace and relaxation of practitioners by engaging in deep breathing, awareness of sounds or silence within the environment and addressing body sensations in the present moment.

Appendix E

Understanding Well-being CONSORT flow diagram

