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Address the Mess: the Role of Fear of COVID-19, Indecision, and Reactance in Decluttering Projects

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Address the Mess:
the Role of Fear of COVID-19, Indecision,
and Reactance in Decluttering Projects

A Thesis
Presented in
Partial Fulfillment of the
Requirements for the Degree of
Master of Arts

By
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December 2022

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Biography

Devki Anil Patel was born in Chicago, IL, March 3rd, 1995. Devki graduated from DePaul University in Chicago, IL in June 2020 and received a Bachelor of Arts degree in Psychology.

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Introduction

Human beings, through innovation, industrialization, and globalization, have created a massive infrastructure for consuming material goods (Fine, 2016). Some of the most consumed material goods, such as clothes or furniture, are necessary for survival or to maintain our well-being, while other frequently purchased goods like televisions exist only for our entertainment or enjoyment. The overabundance of personal, material items in one's home is referred to as clutter. When our overabundant personal possessions become disarrayed, they may create more challenges than they resolve. In the United States specifically, a recent poll found that 50 percent of Americans feel overwhelmed by the amount of "stuff" in their homes. The survey conducted by selling app Mercari also reported an average of 42 unused items amounting to an average of \$723 per household, with women holding onto unused items more frequently than men (Mercari, 2019). Some folks may manage household clutter through organization, routine cleaning involving disposal, or by reducing their consumption. For many Americans, women in particular, clutter-related problems require intervention, prompting the organization of groups such as the Institute for Challenging Disorganization, a network of professional organizing coaches. Gaining traction in the world of consumer psychology and social psychology research primarily over the last decade, research on clutter has focused on the problems caused by clutter. The present study will consider the role of cognitive, emotional, and environmental factors as they interact with an individual's engagement with clutter management.

Clutter impacts many aspects of one's life, including decision-making, life satisfaction, and well-being (Ferrari et al., 2018; Crum & Ferrari, 2019; Roster et al., 2016; Roster & Ferrari, 2022). The process of over-accumulating items by varies greatly because of individual personality differences, situational factors, and past disposition and disposal behavior (Ferrari et

al., 2021; Cross et al., 2017). Examples of individual-level factors which may predict the impact of clutter on our lives include the acceptance or rejection of social norms around clutter and one's procrastination tendencies. Situational factors that may affect the impact of clutter on our lives include the composition of one's family and the physical structure of one's home. Although most Americans admit to having issues with the unused items in their homes, research in the area has focused on the initial consumer behavior, or the acquisition of items, rather than the consequences of owning more items than one can manage. Much of the existing research on managing clutter focuses on clinical samples exhibiting symptoms of hoarding. The proposed research will study decluttering behavior in a community-based sample, yielding insights on what influences disposal decisions in individuals who have clutter but do not consider themselves as having a hoarding problem.

The present study will use preexisting, archival data and will explore human motivation, environmental stressors and supports, and behaviors associated with personal projects around clutter since the start of the COVID-19 pandemic. Hanson's (1980) paradigm for consumer product disposition will be discussed to understand why outcomes may vary amongst people with similar goals and motivation to eliminate clutter in their homes in the situational context of the pandemic. The present study is an exploratory, preliminary analysis of some of the self-reported variables measured by Dr. Catherine Roster and Dr. Joseph Ferrari in spring of 2020. The aim of this study is to expand research on cognition, behavior, and motivation around clutter management in the unique context of a pandemic.

Hoarding: Behavior vs. Disorder.

Hoarding behavior, which contributes to the accumulation of clutter, is distinguished from *hoarding disorder* as a non-persistent overaccumulation of possessions and indecision or

delayed decision-making around disposing of these items (American Psychiatric Association, 2013). Hoarding behavior precedes hoarding disorder. In contrast to hoarding behavior, hoarding disorder is the interminable overaccumulation of possessions accompanied by extreme distress at the thought of disposal (American Psychiatric Association, 2013). Previous versions of the Diagnostic Statistical Manual (DSM), used to diagnose psychopathology and mental disorders, include hoarding behavior as a symptom of obsessive-compulsive disorder (OCD). Hoarding disorder was distinguished from OCD in the newest version of the DSM (V) (American Psychiatric Association, 2000), published in 2013.

Diagnostic criteria for hoarding disorder in the DSM-5 includes persistent hoarding behavior, a strong perception that items must be kept regardless of their value, continued inability to engage in disposal, and profound negative consequences of the abundance of items such as impeding the livability of one's home or strained relationships with family members (American Psychiatric Association, 2013). The DSM-5 lists two specifiers for hoarding disorder: *with excessive accumulation* and *with insight*. Excessive accumulation includes excessive attainment of items that one does not need despite not having room for them, over-collecting of free items with little to no utility or value, and less commonly, stealing. The insight specifier describes the individual's perception of hoarding behavior and hoarding-related beliefs as either good or fair, poor, or absent/delusional. Individuals range from recognizing their hoarding behavior as problematic or having significant negative impacts on their lives to thinking it is not problematic at all despite evidence to the contrary.

Hoarding symptoms are three times more prevalent in adults 55 to 94 years of age than adults 33 to 44 years of age (American Psychiatric Association, 2013). Epidemiological studies report higher prevalence of hoarding disorder in males while clinical samples report higher

prevalence of hoarding disorder in females; differences in clutter across gender may be a result of perceived gender norms around home maintenance or biased sampling, such as recruitment of participants from a clinical pool of mostly women (Forste & Fox, 2012). Hoarding disorder may be diagnosed at any age, although it is mostly diagnosed in the adult population as adults are more likely than children or adolescents to seek treatment (Grisham et al., 2006). The age of onset of hoarding symptoms is estimated to be around 13 years old; 60% of patients report the onset at age 12, and 80% report onset at the age of 18 (Grisham et al., 2006). Recent meta-analyses suggest a prevalence rate of 2.5% in the U.S. adult population (Poslethwaite et al., 2019).

The causes of hoarding disorder are unclear, however deficits in social and occupational functioning are known to contribute to hoarding disorder (Archer et al., 2019). In one study of social and occupation function, hoarding severity, and hoarding-related impairment, 61% of participants experienced at least one psychiatric comorbidity. Archer and colleagues measured various types of social and occupational functioning such unemployment rates, solitary living, being divorced or separated, and lifetime suicide attempts, all of which were associated with hoarding disorder. Hoarding severity and impairment as a function of hoarding were related with social and occupational impairments, increased psychiatric burden, and higher suicidality (Archer et al, 2019). Another study examined elderly people and their hoarding behavior. Higher rates of hoarding behavior existed amongst participants who were women, unmarried, and living alone (Mataix-Cols and de la Cruz, 2018). Clutter was associated with impaired livability, interference with hygiene, and according to the authors, posed a very serious threat to older populations who experience increased health-related issues.

As outlined above, not everyone who has problematic amounts of clutter will meet criteria for hoarding disorder, however, certain disordered behaviors will contribute to hoarding behavior over time and are worth examining. Persistent collection of personal possessions and a failure to dispose of them are behavioral antecedents of cluttered home structures and eventual hoarding disorder. While the causes of cluttering behaviors are unknown, comorbidities in physical and mental health in hoarding disorder and emerging research on socio-cognitive implications of clutter suggest that there may be preventative strategies for those struggling to manage their personal possessions. Exploring and measuring factors that may impede the disposal of unused personal items may inform both psychologists and interventionists alike in their treatment of hoarding disorder and chronic disorganization, respectively.

Overconsumption: A Cause for Concern?

Hoarding behavior is well-researched in clinical samples and the link between hoarding and compulsive buying is supported by numerous studies (Frost et al., 1998; Frost and Gross, 1993; Frost and Hartl, 1996). While the focus of the present study is clutter in a non-clinical sample, the symptoms of hoarding disorder and the usually present excessive accumulation behavior is crucial to note.

Purchasing items usually occurs to meet utilitarian needs; humans need to consume some amount of material goods for survival (Koran et al., 2006). More occasionally, shopping is a pastime and may serve a means of managing emotions or to express and establish an identity (Lunt and Livingstone, 1992; Elliot, 1994; Dittmar, 1992). Compulsive buying is characterized as uncontrollable, distressing, and or resulting in difficulties with family, social networks, work, and finances (McElroy et al., 1994). One study of compulsive purchasing behavior and psychiatric diagnoses found that 95% of compulsive buyers had lifetime diagnoses of major

mood disorders; 80% had diagnoses of anxiety disorders, 40% had impulse control disorders, and 35% had eating disorders. Although the sample size was small in this specific study, the link between compulsive buying and other compulsive or impulsive behavior is well-documented in consumer psychology research. Compulsive buying is associated with eating disorders, pathological gambling, and hoarding (Christenson et al., 1994; Frost et al., 2001; Frost et al., 2002). In addition to having deleterious individual-level implications, failure to reduce clutter in one's home may have economic and environmental consequences (Frost et al., 2009). Persistent clutter in one's home may imply a problem with controlling one's consumption.

Psychologists have proposed many ways of aggregating consumption and consumption reduction behaviors to research how these behaviors contribute to environmental concerns like greenhouse emissions. Kempton et al. (1992) describe three categories as investment in material goods, management of the goods, and use. The investment stage is characterized as economic consumption, an interaction with the economy, while the latter two stages are considered environmental consumption, as the maintenance of most physical items comes at some environmental cost such as space or energy (Swim et al., 2011). Much of the psychological research on consumption examines the associations between economic consumption and environmental consumption. In this line of research, consumer psychologists are most concerned about how economic characteristics of an item, such as its cost and change in value over time, are related to the energy and physical space needed to maintain the item in one's possession. These consumer decisions are primarily related to acquisition and inform market research, which arguably dominates consumer psychology as the findings drive profit. In recent decades, research on the consequences of consumption has expanded.

A glaring consequence of consumption is experienced at the end of a product's life cycle. When an item is no longer useful, consumers must decide to either manage the item or dispose of it. At this stage, they may make attributions on the disposability of the item, its longevity, their experience with it and more. These reflections may inform future decision-making around consumption and should be considered. If regret or concern about one's consumption habits is common in people who have issues with clutter, consumer behavior should be considered in future research of chronic disorganization. Environmental psychologists may research the consequences of consumption on one's immediate environment, such as a home or office space, and on one's macro-environment, such as the city in which they reside, although this line of research is not profitable and is rarely conducted. In 2009, 6% of the U.S. population was afflicted by compulsive buying (Koran et al., 2009), which is more than the percentage of Americans who experience symptoms of hoarding. The discrepancy suggests that while Americans may be consuming to the extent of experiencing clutter-related problems, they may not perceive their behavior as overconsumption. Furthermore, because researching overconsumption may come at a cost to the global economy, it is overpowered by investment in market research and advertising. In other words, the rate of innovation and the application of psychology to sell products may overshadow efforts to criticize our consumption patterns.

The inclusion of overconsumption as a possible antecedent of clutter-related issues is to criticize social norms around consumption and the systems that perpetuate environmentally exploitative behaviors. The effects of sustained overconsumption should not be used to individualize the issue of climate change. Much of human consumption behavior is no longer rooted in survival and is instead focused on improving quality and ease of everyday life. Regardless, it is possible to consume mindfully, or in an effort to reduce deleterious effects on

oneself, one's home and family, and the environment. Anti-consumption or voluntary simplistic lifestyles are on the rise and are linked to stronger identity formation and authentic expression of oneself (Cherrier, 2009; Zavestoski, 2002). Individuals seeking more sustainable or environmentally considerate lifestyles that are decreasingly dependent on material goods may have to engage in the elimination of clutter, referred to as decluttering. Examining decluttering projects in greater detail may uncover how individuals make the choice to consume less.

Overconsumption contributes to clutter and trouble managing clutter may exacerbate problematic consumption patterns without intervention. Those individuals who accumulated items to the point of overwhelming or overfilling spaces suffer psychological consequences including stress, indecision, and reduced mental health, and the effects of clutter spill into their surroundings. Socially, familial or peer relationships may suffer or become tense because of clutter. Financially, those who over-purchase or impulsively collect items may be overspending or neglecting unpaid bills. And finally, overconsumption may contribute to climate change, implying that overaccumulation of items contributes to environmental issues on a global scale. The next chapter will expand the definition of clutter and summarize findings from recent research on clutter.

Clutter: Attachment to Overabundance

The overaccumulation of physical, personal possessions, usually termed clutter, in homes often becomes disorganized, frequently impacting the utility and livability of one's home, and one's well-being (Roster & Ferrari, 2022). Several studies discussed the impacts of clutter on subjective well-being and demonstrate positive relationships between clutter and lower quality of life, stress, binge eating, and increased work-related tension (Rogers & Hart, 2021; Timpano et al., 2011; Mattos et al. 2018; Ferrari et al., 2021a).

Recent research on clutter in workplaces expands our understanding of how clutter is perceived and evaluated across ecological environments. Office clutter negatively predicted job satisfaction and positively predicted work-related burnout in a sample of on-site workers (Ferrari et al., 2021a). Upper-level employees were more likely to report clutter and were at higher risk for burnout than associate or clerical employees, suggesting clutter may be more salient for those who are responsible for “managing” spaces. Going beyond just recognizing workplace clutter, leaders may consider how clutter affects the utility of a workspace or the decision-making of affected employees more than non-managerial employees.

For those employees working from home, clutter in a home office setting had similar negative consequences. Indecision and procrastination were related to high degrees of office clutter, with indecision positively predicted negative attitudes towards personalizing workspaces (Ferrari et al., 2021b). Previous research conducted by the National Association of Professional Organizers found that over one quarter of adults in the United States feel disorganized in the workplace. Workers also believed that they would recover over one hour of productivity per day in their workspace was more organized.

Much of the research on clutter thus far has considered the impact of clutter on an individual’s well-being, sociability, and more recently, work-related variables. Measurements of the *impact* of clutter such as the Clutter Quality of Scale have been used to predict socioemotional and occupational outcomes. Research around hoarding disorder in the past decade has expanded by considering what environmental and individual factors may contribute to cluttering behavior. However, because the focus of hoarding research has usually been clinical samples in need of intervention, non-clinical persons with clutter have been largely overlooked in the search for precursors of excessive accumulation. This study aims to uncover psychosocial

factors that may facilitate or obstruct decluttering in home settings. Instead of being used to predict outcomes, subjective well-being because of clutter will become the outcome variable. A paradigm for consumer product disposition processes will help to explain how individuals' decisions are influenced when considering product disposal while executing larger decluttering projects.

Personal Projects

Setting and achieving personal goals is a major component of human development. The set of neurocognitive skills required to solve a goal-directed problem are referred to as executive function (Carlson et al., 2013). Variance in executive functions is associated with several long-term social and cognitive outcomes and is influenced by proximal and distal factors such as culture, sleep, socioeconomic status, and language (Tran et al., 2016; Wilckens et al., 2014; Hackman et al., 2015). Executive functioning skills are imperative to the setting, planning, and completion of personal projects (Krasny-Pacini et al., 2014). In a study of university students and community residents, variables from Brian R. Little's personal projects matrix explained variability in reported life satisfaction. High life satisfaction was associated with (a) involvement in highly enjoyable and moderately difficult projects of short-term importance and (b) a social network that offered social support and were involved in the project (Palys & Little, 1983).

Engaging in personal projects may directly influence our well-being, and this relationship may be bolstered by social support. Extant research has considered a wide range of personal projects, including trivial pursuits such as cleaning one's bedroom and lifetime goals such as liberating one's people (Little, 1989). Theorizing the process of disposing of one's possessions specifically, consumer psychologist James R. Hanson outlines a framework for understanding decluttering personal projects.

In his paper, Hanson (1980) asserted consumer behavior research focused primarily on acquisition and occasionally consumption. A third stage, disposition, is presented as a paradigm containing the processes between consumer, product, and situation when the need to dispose emerges. Hanson summarized a few studies from the 1970s to understand when and how we dispose of our personal items. According to Jacoby (1976) three categories emerged when individuals were interviewed about durable goods and how they disposed of the product. The psychological characteristics of the decision-maker, factors related to the product such as its utility or worth, and extrinsic situational factors. In another study of disposition behaviors, Burke and colleagues (1978) attempt to uncover demographic predictors of disposal, and found only weak, significant associations between age and disposal behavior. Young people, by a small margin, were more likely than older people to dispose of an item by throwing it away, while older individuals may seek an alternative disposal option or fail to dispose altogether. Hanson's paper went on to propose a model for understanding consumer disposition processes.

Hanson begins with a problem recognition stage in which the need to dispose arises by some triggering cue. The cue is assumed to stem from either acquisition, consumption, or disposition, otherwise known as the three domains of consumer behavior. For example, single-use products are acquired because they are immediately disposable. In the consumption domain, the active use of a product may prompt disposal decision-making such as with food or other products with a short lifecycle. Finally, obsolescence of any kind (functional, psychological, or design) may trigger the need for disposal. Clothes, furniture, and appliances fall under the latter category as products that are almost never immediately disposed and require deeper consideration for disposal.

In the second stage, an individual sifts through various information sources that affect their disposition behavior. Personal sources include family, friends, and neighbors; commercial sources may include salespeople or traders who repurchase the product, or recycling centers who accept obsolete products for repurposing; public sources include government aids on disposal; experiential sources such as experience with disposal vary by individual and their identity. Information from each of these sources is used to evaluate the attributes of the product and how those attributes are related to disposition decision-making. For example, when disposing of an unused cellphone, a person may first turn to their family for disposal suggestions and be directed to a reseller or to a non-profit organization that refurbishes old cellphones for families in need. A person will weigh the gains and losses of each disposal choice: keep the product, permanently dispose of it, or temporarily dispose of it. After the disposal decision is made, a third stage emerges. Hanson asserts that in this stage, positive feelings may arise after disposal and will reinforce future disposition behaviors, while negative feelings or regret may inhibit or slow future decision-making around disposal. Understanding complex emotions elicited during the disposal stage, such as cognitive dissonance or anxiety, may inform interventions for those struggling to make disposal decisions. According to Hanson, post disposition anxiety is partially explained by cognitive dissonance, an assertion that may be defended by more recent consumer research.

Festinger (1962) theorized cognitive dissonance as the negative feeling that results from conflict between our beliefs and consequent behaviors. In consumer psychology, cognitive dissonance theory is used to explain regret and anxiety post-purchase, when an individual's beliefs do not align with the new product acquired. In one study, consumer traits such as trait anxiety and self-confidence directly affect post-purchase dissonance and these associations are

mediated by the consumer's temporary feelings toward a purchase situation (Keng & Liao, 2013). In another study of post purchase dissonance, a significant association was found between the income of the consumer and their post purchase dissonance (Hasan, 2012). Post purchase dissonance increased when the authority of final decision-making is reduced to one consumer, arguably because they are more likely to be blamed for the product's poor performance. Finally, Hasan's study found impulse purchases were associated with increased dissonance compared to planned purchases because confidence and time spent was higher in planned purchases. Taken together, these studies suggest anxiety and other cognitive and emotional factors play an important role in consumer decision-making. Applied to the disposal stage of consumption, it is theorized that dissonance between one's beliefs about the value or utility of an item and its actual worth or use will override the behavioral urge to dispose of it. Furthermore, individuals who lead the disposal decision-making process may feel they will be blamed if the product is found to have value or is still useful to someone else.

Extant literature on disposal behavior supports the Hanson's notion that individual decisions to dispose of a product are influenced by information about how to dispose and evaluations of the given choices. Factors influencing both the search and evaluation stage and the disposal stage, such as anxiety or available social support, might be examined to understand how individual decluttering projects may be better supported. The first stage, the need to dispose of something, is an everyday occurrence; human beings need to dispose of unusable products almost daily. Disposing of trash or spoiled food does not require much consideration. To declutter a pantry or entire room, however, dozens of decisions must be made within a reasonable time frame so the task is not left unfinished. In the information search and disposal stages, individuals may need to lean on their social network for support to execute larger

decluttering goals. During the pandemic, organizational professionals reported to major news outlets that most people had more “down-time” at home, which should prompt home projects, such as decluttering. Considerations for how additional time may not be enough to motivate decluttering projects are made in the next chapter.

COVID-19 Pandemic: A Time to Declutter

In March 2020, the onset of the COVID-19 pandemic prompted state-level governance to issue stay-at-home executive orders (Exec. Order No. 10, 2020). Americans who did not work in essential sectors such as sanitation, healthcare, and food industries were required to remain in their homes unless necessary. A quick Google search of the term “covid declutter” loads over 4 million website hits, guiding curious folks to articles, tip guides, and products to aid decluttering during the pandemic. The first few results include top news and health information outlets such as the New York Times, the Washington Post, and the Mayo Clinic. Across the board, authors review the potential harms of cluttered spaces and the benefits of decluttering, and then suggest that a pandemic is an optimal time to declutter, making the argument that additional time at home should prompt us to organize and refresh cluttered rooms (Kaufman, 2021; Konklus, 2020). The articles go on to list benefits of decluttering, occasionally citing the minimalism movement, popular professional organizer Marie Kondo and her approach to disposing of an abundance of personal possessions, and other mainstream organizing movements (Clark, 2021; Sandlin & Wallin, 2021). While some Americans may have been able to use the mandated time at home to declutter and organize, restrictions imposed by the pandemic had physical, social, and occupational implications that may have influenced individual motivations and abilities to execute such personal projects.

For most, the early weeks of the stay-at-home order consisted of a sedentary lifestyle. Venues for socializing, such as restaurants, concert halls, sporting arenas and even parks remained closed, confining many Americans to their homes. A meta-analysis of dietary behaviors and weight loss/gain synthesized findings from 23 papers. Interestingly, ten studies showed an increase in number of snacks consumed, and another eleven studies reported desired changes in eating habits with the increased ability to cook at home (Bennet et al., 2021). In contrast, nine studies found a reduction in fresh produce, suggesting that access to food and food choices may vary depending on the sample observed. Considering clutter's association with binge eating, examining food choices or other health-related variables, such as health anxiety, may explain why some individuals were able to improve their health during the pandemic, while others may not have had the resources to strive for and attain the same goals. In the context of a pandemic, a dual-income household where both parents can work from home will have very different health outcomes from a household where one parent works on-site, in customer service and another parent becomes unemployed. While these families may have had a similar composition before the pandemic, inequities in work flexibility and opportunities to work will create vastly different socioeconomic outcomes as the pandemic progresses.

In a policy brief of women and care burden in family units, researchers examined how unpaid care and domestic work was affected by the pandemic. The United Nations released a report in April 2020 confirming that unpaid care work increased, specifically citing increased care needs of elderly persons, schools closed leaving children at home, and overwhelmed health systems (Power, 2020). In the United States, 32% of fathers reported worse mental health because of the pandemic, compared to 57% of mothers, implying a heavier care burden as a function of gender role endorsement and consequent assumption of home-management roles

(Hamel & Salganicoff, 2020). In addition to having more care-related responsibilities, women are the victims of domestic abuse more frequently than men (Macmillan & Kruttschnitt, 2004). In Malaysia, public health researchers observed a 57% increase in calls to domestic-abuse helplines in the last week of March, 2020 (Wenham et al., 2020). This brief overview of how women's lives are affected by an infectious-disease outbreak illustrates that there may be insidious social and economic impacts of a pandemic that go unnoticed to most, and that more time at home does not necessarily imply more time for oneself and achieving personal goals.

Mental health research in the past two years confirms decreased well-being on a global scale. A study with an internationally representative sample found that COVID-19 home confinement was associated with reduced mental well-being and worsened overall mood (Ammar et al., 2020). Another study of physiological health found that only a few days of sedentarism are enough to induce muscle loss, joint issues, insulin resistance, reduced aerobic capacity, increased fat deposition, and minor systemic inflammation (Narici et al., 2020). Regardless of gender, race, and other markers of our identity, a pandemic poses a threat to our physical and mental health. However, it is important to note that hundreds of studies confirm that adverse impacts of the pandemic continue to disproportionately affect marginalized communities, such as Black Americans and immigrants (Figueroa et al., 2020)

Loss of employment, increased care burdens at home, and other individual-level factors created barriers to self-improvement for many. For example, women may assume the role of “declutterer” in their home while simultaneously taking on more care-related responsibilities. Despite having the motivation to declutter their homes, women who assume gendered roles may face significant barriers to executing such projects. Similarly, people who became unemployed may have had the time to engage in a decluttering project, but they may not have the motivation.

While some gained additional time for leisure or self-improvement during mandated shelter-in-place periods, not everyone will be able to use this time for decluttering. An individual-level factor considered in the execution of decluttering projects recently is psychological reactance, a motivational state induced by the enforcement of rules or regulations, or the reception of advice.

Psychological Reactance

Introduced in the 1960s by psychologists Jack and Sharon Brehm, the theory of psychological reactance explains how our motivation changes when freedoms are threatened or lost (Brehm & Brehm, 1966). The theory asserts that individuals will sometimes be motivated to act against a social influence or resist having their personal space or privacy violated. In an individualist, democratic country, our freedom to make decisions entirely independently is highly valued. When our autonomy is threatened, we may be motivated to act against the expectation. According to Brehm and Brehm, four cognitive principles guide the experience of reactance. If individual responses to perceived or real restrictions of freedom are strong enough, humans may exhibit a negative behavior to resolve the reactance.

Firstly, freedom is considered an expectancy and may be held with a spectrum of certainty. On this basis, reactance may only be aroused if an individual feels they have control over a specific outcome. For example, a child who is required to clean their room before the weekend to spend time with friends and a child who is never required to clean their room will experience different strengths of reactance if asked to clean their room on a Friday afternoon. The first child understands the choice of cleaning is not a freedom, so they will not experience reactance as intensely as the child who is not accustomed to cleaning every week and considers the lack of requirement a freedom of choice.

The second principle considers the importance of the freedom in question. In the 1980s, when wearing a seatbelt in motor vehicles became federally regulated for the safety of drivers, many Americans felt the policy was an infringement of their freedom (Roos, 2020). Three decades later, when Illinois made wearing a seatbelt a requirement for all passengers, the reaction was not as overwhelmingly negative. The same social expectation elicited different levels of reactance depending on the importance of the freedom in question. Since drivers are already required to wear seatbelts, the restriction imposed on passengers did not feel as important. In the context of clutter, deciding between throwing out or keeping old magazines is a trivial decision that will likely not elicit reactance in non-hoarding individuals. On the other hand, a more important disposal decision, like deciding how to dispose of or store an outdated piece of furniture, may elicit feelings of reactance. As the value or importance of the freedom increases, it is hypothesized that likelihood of experiencing increases. Similarly, if there is little importance attached to the freedom, there is less of a chance that reactance will occur.

The third principle concerns the number of freedoms threatened by an external influence or demand. The more freedoms threatened, the greater the experience of reactance. An individual facing pressure to declutter an entire room by another household member, for example, will experience restrictions of freedom as often as they must make a disposal choice because they may feel like they did not choose to get rid of multiple types of possessions. In comparison, pressure to declutter a single drawer will likely elicit less reactance. Finally, contingent on the previous principle, restrictions of freedom may be implied, increasing the likelihood and magnitude of reactance. An example of this in the context of clutter may be seen in a situation where someone is asked to clean their room as opposed to being assigned one cleaning task. The

implication of cleaning multiple bedroom areas and a closet or bathroom is likely to increase reactance.

A final, non-cognitive component of the theory deals with the individual's behavioral reaction to a threat to freedom. After experiencing a threat or loss of freedom, individuals who experience reactance will work to restore the freedom. This component of psychological reactance theory explains why highly reactant people will go against social norms and interpersonal expectations even when it is in their best interest to comply.

Reactance is well-researched and applied to a wide range of contexts such as underage drinking, health education, advertising, and littering (Jung et al., 2010; Dowd, 2002; Edwards et al., 2002; Reich & Robertson, 1979). Several studies suggest reactance may increase with age and that men are more likely to experience reactance than women (Hong et al., 2010; Woller et al., 2007). Autonomy is inarguably connected to oppression, so it is unsurprising that men may be more reactant to a loss of a freedom, especially considering patriarchal structures of governance existing globally (Veltman & Piper, 2014). Autonomy increases with age, with the greatest change in autonomy occurring in the transition from adolescence and adulthood. Most recently, reactance theory helped to explain why efforts to prevent the spread of COVID-19 vary from individual to individual. In a study of restaurant customers and their reactions to COVID-19 prevention measures, researchers found that individuals perceive normative appeals of COVID-19 prevention differently and that reactance played a role in how these prevention efforts were accepted or rejected. Consumers in this study were more concerned about the content of COVID-19 prevention messages than they were about the tone of the message itself, and they were more likely to experience reactance to injunctive normative appeals over descriptive normative appeals (Kang et al., 2021).

In the context of clutter, reactance may explain why external pressures to declutter lead to undesirable outcomes. Despite having good intentions, family members who pressure individuals to declutter may be eliciting reactance by removing the freedom of the individual to choose. Furthermore, forcing individuals to declutter entire spaces when they are not autonomously deciding to do so may extrapolate the experience of reactance. The present study investigated the role of reactance in decluttering projects and considered the role of interpersonal facilitators and obstacles in the relationship between reactance and decluttering project outcomes.

Method

Participants.

Data for the present study was extracted from archival data collected by Dr. Catherine Roster (University of New Mexico School of Marketing) for a larger study on affective and cognitive responses to decluttering projects. Participants were recruited by the Institute for Challenging Disorganization (ICD), an organization that provides education, research, and decluttering strategies to benefit those affected by chronic disorganization and the professionals that help them. Participants included in this study were 18 years of age or older, English-speaking, and residing in the United States. Participants indicated that they either engaged in a decluttering project since the onset of the pandemic ($n = 156$) or they considered a decluttering project ($n = 54$).

A total of 227 participants completed the study, self-identifying as female (92.5%, $n = 210$), male ($n = 13$) or non-binary ($n = 4$). The median age of respondents was 49.9 years old ($SD = 12.4$). Most participants self-identified as White ($n = 198$, 86.5%), Black or African American ($n = 5$, 2.2%), Asian or Pacific Islander ($n = 3$, 1.3%), Hispanic or Latinx ($n = 18$,

7.9%), American Indian or Alaskan Native ($n = 2$, 0.9%), Middle Eastern or North African ($n = 0$, 0%), and other ($n = 6$, 2.6%). The majority of participants earned at least a high school diploma ($n = 222$, 99.5%), and well over half of participants earned at least a bachelor's degree ($n = 157$, 68.4%), had a mean personal income of \$147,786. Of the 227 participants, 156 persons engaged in decluttering projects and 54 persons considered but did not execute a decluttering project.

Psychometric Scales

Participants responded to 13 validated and reliable self-reported scales in the archival data. The present study, however, examined the relationship between only 5 measures (see Appendices A – E). Each of the target scales for the present study are explained below.

Fear of COVID-19. Participants completed the unidimensional, 7-item *Fear of COVID-19 Scale* (FCV-19S; Ahorsu et al, 2020). In the present study, participants responded to each item on a 5-point Likert scale (1 = *Strongly disagree*; 5 = *Strongly agree*). Sample items for this scale include the following: *My heart races or palpitates when I think about getting coronavirus*, and *When watching news and stories about coronavirus on social media, I become nervous or anxious*. The FCV-19 Scale was developed using test theory and Rasch analysis.

Originally written in Farsi, the FCV-19 Scale was validated by an Iranian sample with acceptable internal consistency ($\alpha = 0.82$) and test-retest reliability (ICC = 0.71). Concurrent validity was demonstrated by the Hospital Anxiety and Depression Scale (with depression, $r = 0.425$ and anxiety, $r = 0.511$) and Perceived Vulnerability to Disease Scale ($r = 0.483$). Translated versions of FCV-19S had high internal consistency reliability (Cronbach's $\alpha = 0.80$) in samples from Italy, Bangladesh and recently, English (Soraci, P. et al, 2020; Sakib, N. et al., 2020). The English-language scale was validated in a recent study of the impact of COVID-

19 on U.S. college students ($M = 18.1$, $SD = 7.1$), and showed excellent internal reliability (Cronbach's $\alpha = 0.91$) and demonstrating construct validity with a positive relationship between FCV-19S and a measure of generalized anxiety (Perz et al., 2020). Perz and colleagues assert the FCV-19 scale is a better indicator of anxiety rather than fear.

Psychological reactance. The *Hong Psychological Reactance Scale* (HPRS; Hong & Faedda, 1996) is a 14-item scale that measures trait propensity to experience psychological reactance. Participants reported the degree to which they agree with each item on a 5-point scale ((1 = *Strongly disagree*; 5 = *Strongly agree*). In a study with an American sample (Shen & Dillard, 2005), the 14-item version of the scale maintained acceptable reliability (Cronbach's $\alpha = 0.77$). Psychological reactance was strongly correlated to several converging constructs such as trait-anger (.38) and depression (.15). The scale maintained strong test-retest reliability in a 2-week (.89) and 6-week (.73) retest in an Australian sample.

The scale has four subscales which have been demonstrated in two principal components analyses: *emotional response toward restricted choice*, *reactance to compliance*, *resisting influence from others*, and *reactance toward advice and recommendations* (Hong, 1992; Hong et al., 1996). In a more recent confirmatory factor analysis, the subscale mean scores, standard deviations, and Cronbach's α were reported to be the following: emotional response toward restricted choice ($M = 11.4$, $SD = 2.5$, $\alpha = .63$), reactance to compliance ($M = 8.0$, $SD = 2.4$, $\alpha = .57$), resisting influence from others ($M = 9.4$, $SD = 2.3$, $\alpha = .53$), and reactance toward advice and recommendations ($M = 4.3$, $SD = 1.4$, $\alpha = .48$) (Thomas et al., 2001). The emotional response toward restricted choice subscale includes items such as *The thought of being dependent on others aggravates me* and *I become frustrated when I am unable to make free and independent decisions*. The reactance to compliance subscale includes items such as *Regulations*

trigger a sense of resistance in me and I find contradicting others stimulating. The resisting influence from others scale includes items such as *I am content only when I am acting of my own free will* and *When someone forces me to do something, I feel like doing the opposite.* The reactance to advice and recommendations subscale includes the items *I consider advice from others to be an intrusion* and *Advice and recommendations induce me to do just the opposite.* In the present study, emotional response toward restricted choice (E-HPRS) scores were used.

Decisional procrastination. All participants completed the 5-item *Decisional Procrastination* (DP; printed in Ferrari et al. 1995). Participants indicated the extent to which they engaged in various forms of indecision. Sample items include *I delay making decisions until it's too late,* and *I don't make decisions unless I really have to.* In a study of indecision and self-esteem, DP maintained a good reliability (Cronbach's $\alpha = 0.80$) for the total scale score.

The Decisional Procrastination scale was validated in a study of university students, demonstrating acceptable reliability in this sample (Cronbach's $\alpha = 0.87$) (Ling et al., 2012). In testing of the latent root criterion, DP loaded onto a single factor model (2.378, $\lambda > 1$), explaining only 47.65% of variance. However, based on the variance explained criterion, two factors had a cumulative percentage value of 65.25%, so a two-factor model is advised. DP correlated positively with at least three other measures of procrastination and correlated negatively with a measure of conscientiousness.

Clutter quality of life. All participants completed the 18-item *Clutter Quality of Life Scale* (CQLS; Roster et al. 2016) assessing the negative impact of clutter on one's life. Participants reported the extent to which they agree with each statement on a 7-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*). Sample items include the following: *I feel guilty when I*

think about the clutter in my home, my family has suffered as a result of the clutter in my home, and I can't find things when I need them because of the clutter.

The index has four dimensions measuring the livability of one's home, and emotional, social, and financial implications of clutter. The livability of one's home dimension of CQLS includes items such as *I have to move things in order to accomplish tasks in my home* and *I have to be careful when walking through my home in order to avoid tripping over objects*. The emotional dimension of CQLS includes items such as *I feel depressed by the clutter in my home* and *I'm worried about the amount of clutter in my home*. The social dimension of CQLS includes items such as *I avoid having people come to my home because of clutter* and *I don't have family members over as much as I would like because of the clutter in my home*. The financial dimension of CQLS includes items such as *I often buy things I already have because I don't know where things are in my home* and *I have incurred debt I can't really afford as a result of having too many possessions*. The four dimensions discussed above may capture the broad constructs measured, but they have not been validated as subscales and therefore cannot be used for analytic purposes. Roster and colleagues (2016) reported a coefficient alpha of 0.96 for the entire scale.

The Clutter Quality of Life scale is used as a subjective measure of clutter and is distinct from clinical measures of hoarding, which use more objective assessments of accumulation and failure to dispose. In a study of scale correlates, objective clutter was strongly correlated with the subjective clutter (CQLS) (Rogers et al., 2021).

Social desirability. All participants completed the unidimensional 13-item Social Desirability scale by Reynolds (1982), shortened from the Crowne and Marlowe (1960) measure. The Social Desirability scale measures a respondent's tendency to provide socially acceptable

responses by using a forced-choice True-False scale anchoring. This scale is used to “control” response bias and to assess whether our survey included respondents with such tendencies. Items containing obsolete and socially acceptable behaviors such as *I am always a good listener* or *I have never deliberately said something that hurt someone’s feeling* are given a weight of 1 if marked ‘True’. Items that contain occasional but socially unacceptable behaviors such as *I sometimes feel resentful when I don’t get my own way* and *I am sometimes irritated by people who ask favors of me* are given a weight of 1 if marked ‘False’. Higher scores indicate higher tendency to provide socially acceptable responses.

Qualitative Measurements

Participants also responded to several open-ended questions regarding the decluttering projects they considered. More specifically, participants answered one question about what their decluttering goals were and two questions asked participants to consider and then list any factors that facilitated or obstructed their goals.

Facilitators and obstacles. Participants listed up to three facilitators and three obstacles that may have affected their ability to accomplish decluttering goals. Participants provided open-response answers, which were coded for analytic purposes. Responses included a wide range of factors and included environmental factors, such as having the space, temporal factors, such as having more or less time, or interpersonal factors, such as having support from one’s spouse or needing to take care of one’s children.

Because interpersonal elements are of special interest in this study, only social or interpersonal factors were coded. Participants were categorized into mutually exclusive groups across interpersonal facilitators and obstacles. For example, if a participant listed a facilitator that is interpersonal or social in nature, they were assigned a facilitator score of 1. Participants who

do not list an interpersonal facilitator were assigned a facilitator score of 0. Similarly, if a participant lists an obstacle that is social in nature, they were assigned an obstacle score of 1. If participants do not list a specifically interpersonal obstacle, they were assigned an obstacle score of 0.

Demographic variables. Participants reported various demographics including gender, age, relationship status, personal income, and education level. Participants were able to select multiple races and ethnicities and were given the following selections: Black or African American, Asian or Pacific Islander, White, Hispanic or Latinx, American Indian or Alaskan Native, Middle Eastern or North African, and Other. Participants reported their state of residence, and whether they own their home, rent their home, or occupy their home without payment of rent. Additionally, participants indicated their household size and the number of individuals in their household that fall within the following age groups (0-10, 11-20, 21-30, 31-40, 41-50, 51-60, 61-70, 71-80, 81+). Relationship status and household composition determined participants' home composition. Participants reported the type of home in which they reside, the square footage of their home, the number of bedrooms and bathrooms. Finally, participants reported attic, garage, and storage spaces that their home includes, if any.

Procedure.

The survey was administered from March to September of 2020 to members and affiliates of the Institute for Challenging Disorganization. The participant sourcing methodology for this study provided a convenient sample. Individuals who use or provide services offered by a professional organizing institution are more likely to be aware of clutter and possibly impacted by an overabundance of personal possessions in their homes. Participants were informed of the study's research objectives, which were to better understand decluttering projects that took place

during the pandemic and the factors that hinder or facilitate personal projects. Participants were assured that their responses would remain anonymous and provided informed consent before proceeding to complete the survey. The survey took approximately 20 minutes to complete. Participants were not compensated for their time.

Statement of Hypotheses and Research Questions

Hypothesis I: *Emotional response toward restricted choice scores predict clutter impact on quality of life scores.*

Hypothesis II: *Social obstacles (e.g. obligation to children, or lack of support from spouse) scores predict emotional response towards restricted choice scores.*

Hypothesis III: *Social obstacles (e.g. “doing it for my children”, inability to see friends, spouse support) scores predict decisional procrastination scores.*

Hypothesis IV: *Social facilitator scores predict lower clutter impact on quality of life scores.*

Hypothesis V: *Indecision moderates the relationship between interpersonal obstacles and clutter impact on quality of life scores.*

Research Question 1: What role will fear of COVID-19 play in the relationship between psychological reactance scores and clutter impact on quality of life scores?

Research Question II: What role will family composition play in the relationship between psychological reactance scores and clutter impact on quality of life scores?

Results

The present study consists of five hypotheses and two research questions. Each hypothesis examined the relationship between individual-level factor (e.g. interpersonal support, psychological reactance, decisional procrastination) and quality of life as a result of clutter. The

purpose of examining multiple predictor variables was to evaluate the degree to which a variety of individual and interpersonal factors contribute to decluttering outcomes.

Preliminary Analysis

Post hoc sensitivity power analyses assessed if the sample size is large enough for statistical relevancy. A Pearson's correlation coefficient with 227 participants would be sensitive to effects of $r = 0.16$ with 80% power ($\alpha = .05$, two-tailed). This means the study would not be able to reliably detect correlations smaller than $r = 0.16$. Post hoc analyses for each test are presented with primary analyses test summaries below. Cronbach's alpha was calculated for each variable and is presented in Table 1 on the diagonal. For scales that were scored by their subscales, the Cronbach's alpha for each subscale is presented. The mean and standard deviation for each psychometric variable are also presented in Table 1.

Zero-order correlations between social desirability scores and all psychometric variables were calculated to ascertain whether the tendency to provide socially desirable responses might be affecting respondents' ratings. Social desirability scores were significantly correlated with fear of COVID-19, indecision, all four subscales of psychological reactance, and all four subscales of clutter quality of life. Consequently, all primary analysis controlled for social desirability responding in the analyses of hypotheses and research questions. Zero order correlations are below the diagonal and partial correlations, controlling for social desirability, are above the diagonal in brackets on Table 1.

Table 1. Mean, Standard Deviations, Reliability, Zero-Order Correlations, and Partial Correlations for Psychometric Scales

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Social Desirability	.50	(.22)	[.70]	.15	.27	.29	.30	.28	.31	.21	.25	.17	.24
2. Fear of COVID-19	2.41	(.86)	.15	[.87]	.02	.04	.10	.09	.16*	.31***	.35***	.33***	.23***
3. Emotional Response Toward Restricted Choice	3.76	(.76)	.27	.07	[.69]	.46***	.64***	.47***	.13	.15*	.22**	.15*	.11
4. Reactance to Compliance	2.54	(.85)	.30**	.09	.51**	[.71]	.50***	.37**	.11	.06	.03	.09	.09
5. Resisting Influence from Others	3.04	(.84)	.28**	.15*	.68**	.55**	[.70]	.63***	.19**	.22***	.24***	.24***	.18**
6. Reactance Toward Advice and Recommendations	2.37	(.94)	.29**	.14*	.51**	.63**	.67**	[.68]	.22**	.22**	.25***	.23**	.19**
7. Decisional Procrastination	1.86	(1.05)	.31**	.21**	.22**	.19**	.22**	.30**	[.91]	.57***	.58***	.58***	.38***
8. Livability Clutter Quality of Life	3.92	(1.92)	.21**	.33**	.21**	.22**	.22**	.27**	.59**	[.92]	.88***	.86***	.68***
9. Emotional Clutter Quality of Life	4.44	(2.02)	.25**	.38**	.29**	.24**	.25**	.31**	.61**	.89**	[.95]	.86***	.63***
10. Social Clutter Quality of Life	3.75	(2.17)	.17*	.35**	.19**	.24**	.23**	.27**	.59**	.86**	.87**	[.93]	.63***
11. Financial Clutter Quality of Life	2.82	(1.64)	.24**	.26**	.17*	.18**	.19**	.24**	.43**	.70**	.65**	.64**	[.73]
Overall Clutter Quality of Life	3.87	(1.82)											

$n = 223$, * $p < .05$, ** $P < .01$, *** $p < .001$

Note. Value in parenthesis is standard deviation. Value along the diagonal in brackets is Coefficient alpha with the current sample

Primary Analysis

Hypothesis 1: *Emotional response toward restricted choice scores positively predicts emotional clutter impact on quality of life scores.*

To evaluate the first hypothesis, a two-stage hierarchical regression analysis controlling for social desirability was conducted using SPSS. Social desirability scores were inputted in block 1 of the predictor variables, and emotional response toward restricted choice scores were inputted as in block 2 of the predictor variables. Subscores of the emotional impact of clutter on quality of life were inputted as the dependent variable. The method 'enter' was used to control for the effect of social desirability on the regression model. The hierarchical multiple regression revealed that social desirability contributed significantly to the regression model, $F(1, 223) = 15.187, p < .001, R^2 = .253$. Adding emotional response towards restricted choice scores explained an additional 8.5% of variance in scores measuring the emotional quality of life because of clutter. The overall model explained a significant amount of variance in emotional clutter quality of life scores, $F(1, 223) = 15.19, p < .001, R^2 = .338$.

A post hoc power analysis confirmed the sample size was adequate for statistical relevancy using a linear multiple regression. Given a computed effect size (f^2) of .13, alpha = 0.05, two predictor variables, and our sample size of 224 participants, the calculated power is .99 with a critical F value of 3.04.

Hypothesis 2: Social obstacles are positively associated with emotional response toward restricted choice scores.

To evaluate the second hypothesis, a one-way, between-subjects analysis of covariance (ANCOVA), controlling for social desirability, was conducted on SPSS. The inputs were social obstacles scores (either present or not present) as the grouping variable (fixed factor), emotional response towards restricted choice scores as the dependent variable. The ANCOVA revealed there was no statistically significant difference in emotional response to restricted choice scores ($M = 3.76, SD = .76$) between the two social obstacle groups, $F(1, 165) = 3.38, p = 0.068$.

A post hoc power analysis confirmed the sample size was adequate for statistical relevancy using ANCOVA. Given a computed effect size (d) of .33, $\alpha = 0.05$, two groups (social obstacle present or not) and our sample size 166 participants, the calculated power is .99 with a critical F value of 3.9. The critical F is above the F value calculated in the ANCOVA, confirming a nonsignificant result.

Hypothesis 3: *Social obstacles are associated with decisional procrastination.*

To evaluate the third hypotheses, a one-way, between subjects ANCOVA, controlling for social desirability was conducted on SPSS. The inputs were social obstacles scores as the grouping variable (fixed factor), decisional procrastination scores as the dependent variable, and social desirability scores as a covariate. The ANCOVA revealed that there was no statistically significant difference in decisional procrastination scores ($M = 1.86$, $SD = 1.05$) between participants that listed a social obstacle ($n = 41$) and participants that did not list a social obstacle ($n = 125$), $F(1, 165) = 1.69$ $p = 0.20$.

A post hoc power analysis confirmed the sample size was adequate for statistical relevancy using ANCOVA. Given a computed effect size (d) of .24, $\alpha = 0.05$, two groups (social obstacle present or not) and our sample size of 166 participants, the calculated power is .87 with a critical F value of 3.9. The critical F is well above the F value calculated in the ANCOVA, confirming a nonsignificant result.

Hypothesis 4: *It is expected that higher social facilitator scores will be associated with lower clutter impact on quality of life scores across all four dimensions.*

To evaluate the fourth hypotheses, a one-way, multivariate analysis of covariance (MANCOVA) controlling for social desirability was conducted on SPSS. The inputs were social facilitator scores (either present or not present) as the fixed factor, the four-clutter impact on

quality of life sub scores as the dependent variables. The multivariate result was not significant. There was no significant difference in clutter impact on quality of life scores across all four dimensions, livability ($M = 3.92, SD = 1.92$), emotional ($M = 4.44, SD = 2.02$), social, ($M = 3.75, SD = 2.17$), and financial ($M = 2.82, SD = 1.64$) after controlling for social desirability between the social facilitator groups.

A post hoc power analysis confirmed the sample size was adequate for statistical relevancy using MANCOVA. Given a computed effect size (d) of .28 for the highest acquired F -statistic for emotional impact of clutter on quality of life ($F(1, 165) = 3.10, p = 0.08$), $\alpha = 0.05$, two groups (social facilitator present or not), four outcome variables, and our sample size of 166 participants, the calculated power is 1 with a critical F value of 3.9. The critical F is well above all F values calculated in the MANCOVA, confirming nonsignificant results.

Hypothesis 5: Decisional procrastination moderates the relationship between social obstacles and clutter impact on quality of life.

To evaluate the fifth hypothesis, a moderated regression analysis would have been conducted on SPSS. The inputs would have been social obstacle scores as the grouping variable (factor) and the four clutter impact on quality of life sub scores as the dependent variable. Prior to developing a regression model, the relationship between social obstacles and clutter quality of life was assessed with a MANCOVA. The multivariate result was not significant. There was no significant difference in clutter quality of life scores across all four dimensions, livability ($M = 3.92, SD = 1.92$), emotional ($M = 4.44, SD = 2.02$), social, ($M = 3.75, SD = 2.17$), and financial ($M = 2.82, SD = 1.64$) after controlling for social desirability between the social obstacle groups.

Because there was no relationship between social obstacle scores and clutter quality of life scores revealed in the MANCOVA, the fifth hypothesis was not evaluated, as assumptions

about an existing relationship between social obstacle scores and clutter quality of life scores are not met.

Research Question 1: *What role will fear of COVID-19 status play in the relationship between psychological reactance scores and clutter impact on quality of life scores?*

Prior to conducting a multiple regression, the relevant assumptions of this statistical analysis were tested. The sample size was adequate, given 2 independent variables are to be included in the analysis. To evaluate the first research question, *partial correlation analyses* were conducted on SPSS to check for associations between fear of COVID-19 and reactance, and fear of COVID-19 and clutter quality of life. Fear of COVID-19 scores were not correlated with any of the psychological reactance subscales, meeting the assumption that no independent variable should be highly correlated. Fear of COVID-19 scores were significantly correlated with the livability subscale scores ($r = .306, p < .001$), emotional subscale scores ($r = .353, p < .001$), social subscale scores ($r = .330, p < .001$), and financial subscale scores ($r = .231, p < .001$) of the clutter impact on quality of life scale.

A three-stage hierarchical linear regression analysis was conducted with the emotional subscale of clutter impact on quality of life scale as the dependent variable. Social desirability was entered at stage one of the regression as a control variable. Fear of COVID-19 scores were entered at stage two, and emotional response to restricted choice scores were entered at stage three. The variables were entered in this order because fear of COVID-19 as it seems more chronically plausible that fear of COVID-19 is a more consistent variable than psychological reactance, and therefore must be experienced longitudinally. Psychological reactance, on the other hand, may be elicited through social interaction in the home and is thus not experienced as a consistent emotion.

Table 2. Summary of Hierarchical Regression Analysis for Variables predicting Emotional CQLS

Variable	β	t	sr ²	R	R ²	ΔR^2
Step 1				.25	.06	.07
Social Desirability	.25	3.90***	.06			
Step 2				.43	.18	.06
Social Desirability	.20	3.23***	.05			
Fear of COVID-19	.35	5.71***	.13			
Step 3				.48	.23	.05
Social Desirability	.14	2.26*	.02			
Fear of COVID-19	.34	5.72***	.11			
Emotional Response to Restricted Choice	.22	3.59***	.05			
<hr/>						
<i>n</i> = 223	* <i>p</i> < .05, ** <i>P</i> < .01, *** <i>p</i> < .001					

The overall model explained a significant amount of variance in emotional clutter quality of life scores, $F(3, 221) = 21.82, p < .001, R^2 = .478$, confirming a moderating effect of fear of COVID-19 on the relationship between psychological reactance and clutter quality of life. Table 3 shows the full multivariate result. A post hoc power analysis confirmed the sample size was adequate for statistical relevancy using a linear multiple regression. Given a computed effect size (f^2) of .92, alpha = 0.05, two predictor variables, and our sample size of 223 participants, the calculated power is .99 with a critical F value of 2.64. calculated power is .99 with a critical F value of 2.64.

Question 2: *What role will home composition play in the relationship between psychological reactance scores and clutter quality of life scores?*

To evaluate the second research question, participants were aggregated into groups based on family composition. Married and partnered or cohabiting participants without children living in their home were assigned to a relationship-only group ($n = 55$). Married and partnered or cohabiting participants with children were assigned to a relationship-children group ($N = 73$). Single, divorced, separated, and widowed participants who reported at least one other adult living in their home and will be referred to as a no relationship-roommate group ($N = 11$). Single, divorced, separated, and widowed participants with at least one child living in their home were assigned to a fourth no relationship-children group ($N = 17$). Single, divorced, separated, and widowed participants with no other inhabitants in their home will remain isolated in a no relationship-no children group ($N = 53$). Single, divorced, separated, and widowed participants with at least one child and one other adult living in their home were assigned to an no relationship-roommate group ($N = 13$).

A one-way, multivariate analysis of variance (MANCOVA), controlling for social desirability, examined for differences in psychological reactance scores and clutter quality of life scores across the family composition groups. The inputs were family composition scores as the fixed factor, the four psychological reactance sub scores and the four clutter quality of life sub scores as the dependent variables. There were no significant effects of family composition on emotional response to restricted choice scores $F(5, 216) = .87, p = .5, partial eta squared = .02$, reactance to compliance scores, $F(5, 216) = .87, p = .74, partial eta squared = .01$, resisting influence from others scores, $F(5, 216) = 1.6, p = .16, partial eta squared = .04$, and reactance

toward advice and recommendations scores, $F(5, 216) = .215$, $p = .96$, *partial eta squared* = .005.

There also was no significant effect of family composition on the livability subscale of clutter quality of life, $F(5, 214) = 2.13$, $p = .06$, *partial eta squared* = .047. There was no significant effect of family composition on the emotional subscale of clutter quality of life, $F(5, 214) = 2.42$, $p = .037$, *partial eta squared* = .053. There was a significant effect of family composition on the social subscale of clutter quality of life, $F(5, 214) = 2.38$, $p = .04$, *partial eta squared* = .053. Post-hoc tests (Bonferroni and Scheffe) showed no significant differences in social clutter quality of life based on family composition. There was no significant effect of family composition on the financial subscale of clutter quality of life, $F(5, 214) = 1.05$, $p = .39$, *partial eta squared* = .024. Taken together, it seems there was no significant differences on self-reported scales comparing family composition as a “dummy” variable. No post hoc power analysis was conducted as the result was insignificant.

Discussion

The present study examined associations between individual-level cognitive factors and broader environmental factors in decluttering projects proposed during the pandemic. Specifically, the study explored the role of indecision, psychological reactance, fear of COVID-19, and social factors on the outcomes of decluttering projects. Previous research found that indecision was related to one’s perceptions of clutter and that indecision was associated with high levels of clutter in office spaces (Ferrari et al., 2018; Ferrari et al., 2021). Government-imposed behavioral restrictions, which were enacted to reduce transmission of COVID-19, may have increased the experience of psychological reactance in Americans. Fear of COVID-19 and

individual reactions to reduced or terminated behavioral freedoms were considered as factors affecting one's ability to engage in decluttering.

The first hypothesis expected emotional reaction to restricted choice, a subscale of psychological reactance, would predict the impact of clutter on emotional well-being. This hypothesis was significant, confirming a relationship between psychological reactance and clutter quality of life. Previous research identified associations between restricted choice, negative affect, and consequential negative motivational state (Brick et al., 2014). For example, in a study of organ donation registration, loss-frame narratives about not registering as an organ donor were associated with increased guilt, greater freedom threat perceptions, and psychological reactance (Brick et al., 2014). Loss-frame messages were also negatively associated with happiness.

Focusing on the costs or losses of a decision has been demonstrated to reduce the persuasiveness of advertisements and health messages in many studies. A recent example of how gain-frame messages are used for public health campaigns may be seen in COVID-19 vaccine advertisements where the advantages of being vaccinated are highlighted to persuade Illinois residents to receive a vaccine or boosters, as necessary. In another study, researchers measured autonomy and reactance as predictors of motivation following the provision of either anonymous or source-identified health-risk information (Pavey & Sparks, 2009). The results shows that autonomy was positively associated with motivation and that reactance was negatively associated with motivation with regards to alcohol consumption. The researchers predicted that highly autonomous people and highly reactant people would react very differently to health-risk information depending on the source. A perceived threat to decision-making mediated the relationship between reactance and attitudes, suggesting that a defensive or adaptive response

may be dependent on one's proneness to reactance, and may be ultimately responsible for how we process messages of persuasion (Pavey & Sparks, 2009). The theory of reactance may be similarly applied to decluttering projects with considerations for how threats to individual decision-making cause negative motivational states and ultimately impede decluttering behavior.

The second hypothesis expected social obstacles would be associated with higher emotional response to restricted choice scores. The relationship was not significant, indicating there was no association between social or social obstacles and one's emotional disposition when considering a decluttering project in this study. It was hypothesized that social obstacles, such as lack of support from a spouse or disagreement between family members, may cause reactance as they may be perceived as threats to the self. It is possible that social obstacles alone do not explain the experience of psychological reactance. The category of social obstacles may include unsolicited advice or recommendations, but the range of stimuli that cause reactance are not fully represented by "obstacles". Thus, it is plausible not all stimuli that cause reactance are captured by a question about project obstacles. Furthermore, obstacles may not have to be social or interpersonal in nature to elicit reactance. Although another person living in the home has, arguably, the strongest ability to impact a decluttering project, it is plausible that an environmental barrier such as lack of organizational tools (i.e. storage bins) may have a similar or stronger impact on reactance and consequentially, decluttering behavior.

In preliminary analyses, psychological reactance was positively associated with clutter quality of life scores across all dimensions, suggesting that individuals' reactions to rules, recommendations, or advice may hinder the ability to execute decluttering projects and improve one's quality of life as it relates to household clutter. Referencing Pavey and Sparks' (2009) study of reactance and autonomy, there is substantial evidence in their path modeling that

autonomy and reactance are discrete and are associated with distinct cognitive responses to health-related information. Previous research supports this finding, revealing a positive effect of autonomy on responses to threatening stimuli and a negative effect of trait reactance on the acceptance of threatening advice and advice (Knee & Zuckerman, 1998; Dillard & Shen, 2005). These findings are in alignment with our failure to reject the null hypothesis. If autonomy and psychological reactance are treated as separate constructs, it is possible that some social obstacles may reduce autonomy without eliciting reactance (i.e. a communication received from a spouse), while other social obstacles may not reduce autonomy, but may induce temporary psychological reactance as behavioral restrictions are imposed (i.e. outbursts from children if their possessions are moved). Although the hypothesis was not supported by statistical analyses, there may be a connection between the obstacles listed by participants and their experience of psychological reactance. Further analyses should consider all types of obstacles listed by participants and should consider how responses within each category may have differing levels of impact on clutter variables of interest.

The third hypothesis expected social obstacles to be associated with decisional procrastination. This hypothesis was not significant. A possible explanation for the lack of difference in decisional procrastination is the predisposition of the sample used. In a previous survey disseminated to the same listserv of ICD subscribers and affiliates as the present study, most of the participant pool indicated that they were considering or already planning a decluttering project. In the present study, most participants (68.7%) already completed a decluttering project, and the second majority considered a decluttering project (23.8%). Thus, indecision around decluttering projects may not have been a variable influencing clutter impact on quality of life. Another explanation is that individual-level factors may be better predictors of

indecision than environmental or situational factors, such as social obstacles. In one study of the characterological and contextual variables around indecision in a student sample, indecision was related to personality structure variables, such as need for cognition, but was not related to contextual variables like sense of community (Ferrari et al., 2018). The results suggest that indecision may be more rooted in our personalities rather than a contextual tendency. Social obstacles may be considered an ecological or setting-related factor and are more fluid than individual factors such as our self-identity with possessions.

The fourth hypothesis expected social facilitator scores to be negatively associated with clutter quality of life subscale scores. This hypothesis was not significant. Considering the non-significance of the previous hypothesis, social facilitator scores may not be a robust predictor of clutter-related variables such as indecision and quality of life. Social facilitators may not provide a statistically significant explanation for the variance in clutter-related well-being, but social support is related to quality of life in previous research.

Social support mediated the relationship between functional status and quality of life in a study with older adults (Newson & Schulz, 1996). A study of parenting styles and quality of life in adolescence found that perceived controlling parenting led to more positive outcomes than unengaged parenting, suggesting social support from parents is imperative to well-being (Petito & Cummins, 2000). While social support is usually associated with more positive outcomes, facilitation from housemates may not be directly associated with clutter-related outcomes as tested by this hypothesis. In one study, optimism mediated the association between self-efficacy and social support to well-being, implying an important role of attitudes (Karademas, 2006). Despite having more social support, participants who listed a social facilitator did not have better clutter-related outcomes. Attitudes and orientations towards goals may dilute the effects of social

facilitation, especially in a sample with inordinate clutter-related problems.

The fifth hypothesis was not tested as prior hypothesis confirmed indecision was unrelated to social obstacles, therefore indecision would not mediate or moderate the relationship between social obstacles and clutter impact on quality of life. Indecision is related to clutter quality of life as demonstrated in previous research (Roster & Ferrari, 2020; Ferrari et al., 2018; Ferrari & Roster, 2018). Like explanations given for why social obstacles were not related to indecision or reactance, it is possible that social obstacles alone do not have a significant effect on clutter related outcomes. The lack of direct associations between social obstacles and indecision, reactance, and clutter impact on quality of life provide preliminary evidence for a more comprehensive view of decluttering projects. In other words, because participants did not significantly vary in indecision, reactance, and clutter quality of life because of social obstacles or facilitators, clutter researchers may explore other explanations for varied clutter outcomes.

The first research question investigated the role of fear of COVID-19 on the relationship between reactance and clutter impact on quality of life. The results showed a small moderating role of fear of COVID-19 on the relationship between emotional response toward restricted choice and emotional quality of life from clutter. Reactance was associated with individual limitations on freedom during the pandemic (Hajek & Hafner, 2021). COVID-19 restrictions were associated with autonomy need frustration in a consumer study, which induced reactance and increased stress (Gupta & Mukherjee, 2022). Thus, a relationship between reactance and great impact of clutter of quality of life is plausible. The associations between reactance and fear of COVID-19 are still unclear.

While fear is an adaptive mechanism fundamental to survival, it becomes harmful when disproportionate or chronic (Ornell et al., 2020). A path analysis showed fear of COVID-19 had

a direct impact on well-being and quality of life in a study of Saudi adults (Alyami et al., 2021). Researchers in India found that stress mediated the relationship between fear of COVID-19 and well-being (Lathabhavan & Vispute, 2022). Fear of COVID-19 was weakly associated with two dimensions reactance and was strongly correlated with clutter impact on quality of life across all four dimensions. The association between fear of COVID-19 and reactance, although weak, may not be direct and may involve another variable, such as perceived threat or stress.

The second research question examined the role of family composition on reactance and clutter quality of life. No significant differences were found across the four dimensions of reactance based on family composition. In previous studies, family dimensions such as cohesion, conflict, and independence, and measures of differentiation were predictors of psychological reactance (Buboltz et al., 2003; Johnson & Buboltz, 2000). One explanation for the lack of differences in reactance by family composition is family composition is not a measure of interpersonal behavior in households. Reactance is a motivational phenomenon requiring a threat to self in the form of a behavioral restriction or advice (Graupmann, 2017). Measures of behaviors and attitudes towards family members may be related to reactance, but dummy coding family type does not capture these more complex interpersonal phenomena.

Differences in clutter impact on quality of life based on family composition were also considered across the four dimensions of the scale. There were no differences in emotional, financial, and livability measures of clutter impact on quality of life based on family composition. Social quality of life from clutter, however, was significantly different across family composition types according to the ANOVA. Post hoc tests showed no statistically significant differences in group means, contradicting the ANOVA. The most plausible explanation for this result is that multiple comparisons assume standard error is the same in each

of the sample means and equal sample size (Ruxton & Beauchamp, 2008). A simulation study of Type I error rates when testing under conditions of equal and unequal samples found that overall power of equivalence testing is influenced strongly by the size of the sample (Rusticus & Lovato, 2014). Thus, the variation in sample sizes of family composition types caused a significant ANOVA but yielded insignificant post-hoc multiple comparisons.

Limitations of the Present Study

There are several limitations to this study. From a surveying perspective, the use of a convenient sample limits the application of the findings to a broader population. Future research should gather data from a more nationally representative source in addition to surveying community-based samples like the one used in the present study. The demographic composition of the sample may also be considered a limitation to applications. Most participants were White women in middle to late adulthood. Thus, the phenomenon observed may not be generalizable to broader populations.

Methodologically, the operationalization of several variables may be improved to study the expected relationships. Specifically, social facilitators and obstacles may be measured differently to capture how family members help and hinder decluttering projects. Obstacles and facilitators were coded after data was collected, which kept the qualitative prompts simple. If participants were asked to name social obstacles and facilitators specifically, they may provide more information about how they are receiving social restrictions or support. Alternatively, a measure of social support may be used or revised depending on the population of interest. The present study opted for a comprehensive question for simplicity, but future studies may consider specifying qualitative items to measure social influences.

From a theoretical perspective, the application of Hanson's paradigm of product disposal

was limited. The present study considered four specific factors from the dozen or so variables proposed by Hanson. Reactance, indecision, fear of COVID-19, home composition, and social obstacles and facilitators capture a narrow range of factors that may affect decluttering projects. For example, while there was representation of situational factors (fear of COVID-19 and family composition) and person factors (reactance, indecision, obstacles, and facilitators), object factors like storage capability, convertibility, and value were not considered. During a pandemic, selling or donating items may have been avoided because of mandates to social distance and refrain from interactions and sharing of personal items with non-household members. This data was collected in March and April of 2020 when uncertainty about transmission of the virus was high. Thus, options to reduce clutter may have been limited.

Future Research Directions

Future research should continue to explore social influences in decluttering projects. The present study began to research the relationship between indecision, reactance, and interpersonal variables, such as obstacles and facilitators, and clutter quality of life. Reactance explained a considerable amount of variance in clutter quality of life, emerging as a potential variable of interest to clutter researchers and interventionists. The role of reactance in decluttering projects may be greater than previously theorized, especially at a time where reactance is higher than normal from social behavioral restrictions (Hajek & Hafner, 2021).

While there were no differences in reactance and clutter quality of life by family composition, relationships between housemates should be considered in clutter research. Our attitudes and behaviors are influenced by the people we are around the most, so studying interpersonal variables in decluttering projects may provide additional insight (Bales & Parsons, 2014). Those who struggle with clutter may not only be indecisive or reactant but may also

experience more negative social influences than social support in the context of decluttering.

Furthermore, future research should consider how gender roles and socialization affect clutter-related outcomes. From the sample obtained, women appear to struggle with clutter more often than men. This is not because men do not have clutter-related problems, but because the task of decluttering is assumed to the woman of the household (Fortse & Fox, 2012). In a study of office clutter with mostly men (61%), indecision was related to clutter impact, confirming decluttering-related issues across gender (Ferrari et al., 2021). Clutter researchers should expand their sampling practices to include more racially diverse participants. A study conducted with primarily women of color found clutter mediated the relationship between home satisfaction and life satisfaction, extending clutter findings to a non-White sample (Crum & Ferrari, 2019).

Clutter is a problem that plagues almost everyone. Future research should continue to explore clutter outcomes from a comprehensive perspective. While individual-level variables are known to affect clutter outcomes, the present study suggests social influences may contribute to clutter outcomes as well. Over-individualization of any problem reduces the burden of community members to intervene or provide support. Instead, psychologists and clutter researchers should aim to view clutter-related problems more holistically, including interpersonal factors like social support.

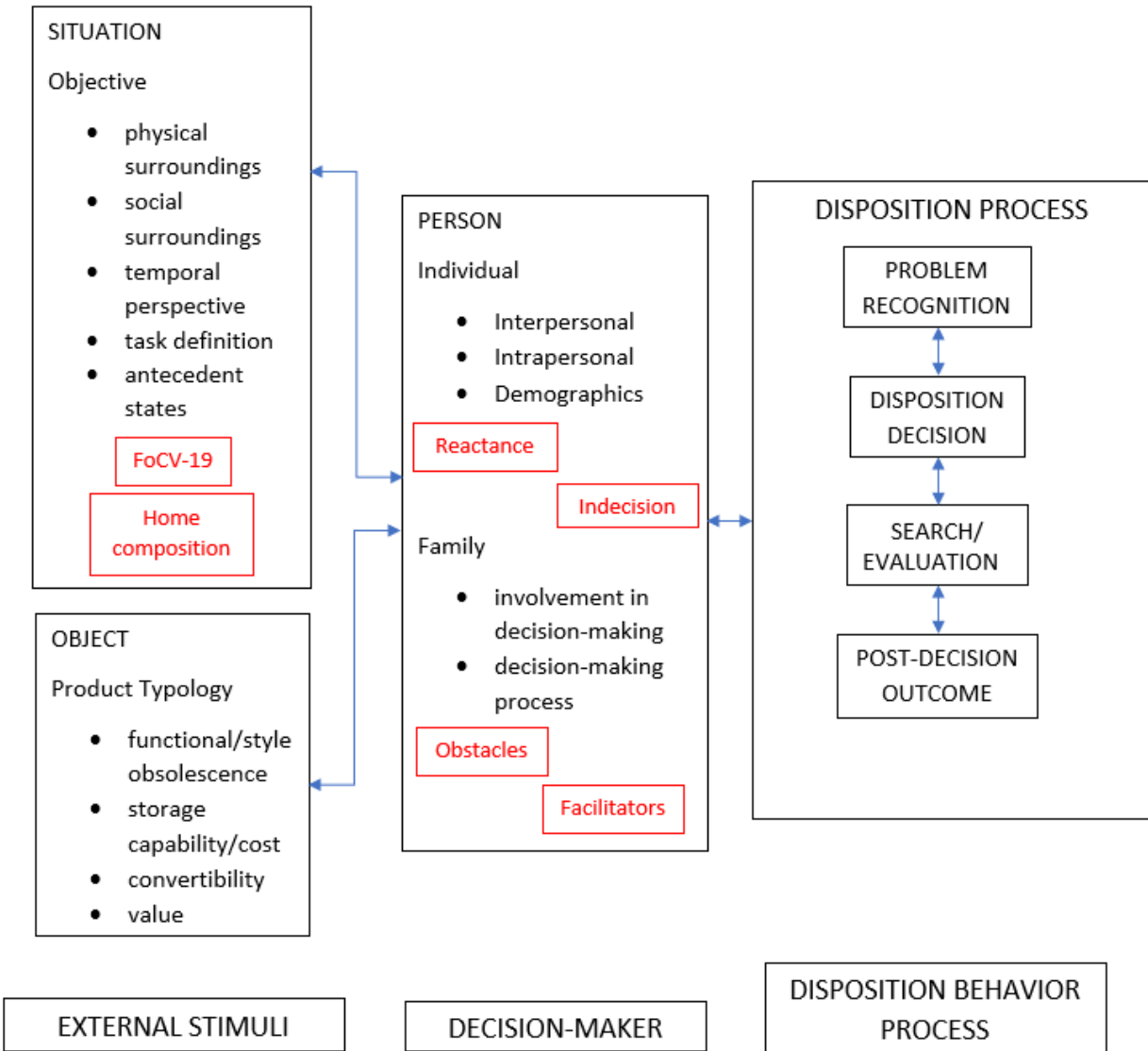
Conclusion

The present study examined the role of indecision, reactance, family composition, and fear of COVID-19 in decluttering outcomes, measured by clutter quality of life. Data collected in March 2020 from a community sample yielded valuable insights on why clutter outcomes vary amongst people who want to declutter. First, there are individual-level explanations for why

clutter outcomes vary. Reactance was associated with higher clutter impact, suggesting those who struggle with clutter are not only indecisive, but may prefer to decide for themselves. Second, while social obstacles and facilitators were not robust predictors of clutter related outcomes, the theoretical basis for increasing social support to help decluttering projects should not be dismissed. Arguably, decluttering professionals provide a type of social support, along with interventive expertise, to help people manage their personal possessions. If social support can somehow be provided by housemates and reciprocated, decluttering behavior may transform into a shared task between household members rather than falling on any one person.

The goal of research in psychology is to provide explanations for behaviors and to provide solutions for people who are struggling to change unwanted or harmful behaviors. In decluttering projects, individuals may need help carrying out tasks that may be too difficult. The present study introduces new concepts to clutter research and hopes to inform researchers and decluttering professionals about social influences in decluttering projects.

Figure 1. Hanson's (1980) Paradigm for Product Disposal: Applications in Decluttering



Appendix A.

Fear of Covid-19 Scale

Instructions: Please indicate the extent to which you agree or disagree with the following statements using the scale below.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
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1. I am most afraid of coronavirus.
2. It makes me uncomfortable to think about coronavirus.
3. My hands become clammy when I think about coronavirus.
4. I am afraid of losing my life because of coronavirus.
5. When watching news and stories about coronavirus on social media, I become nervous or anxious.
6. I cannot sleep because I'm worrying about getting coronavirus.
7. My heart races or palpitates when I think about getting coronavirus.

Scoring: A total score is calculated by adding up each item score (ranging from 7 to 35).

Ahorsu, D. K., Lin, C., Imani, V., Saffari, M., Griffiths, M.D., & Pakpour, A.H. (2020). The Fear of COVID-19 Scale: Development and Initial Validation. *International Journal of Mental Health and Addiction*. Doi: 10.1007/s11469-020-00270-8

Appendix B.

Hong's Psychological Reactance Scale

Instructions: Please indicate your agreement to the statements below.

Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
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1. Regulations trigger a sense of resistance in me.
2. I find contradicting others stimulating.
3. When something is prohibited, I usually think, "that's exactly what I am going to do."
4. The thought of being dependent on others aggravates me.
5. I consider advice from others to be an intrusion.
6. I become frustrated when I am unable to make free and independent decisions.
7. It irritates me when someone points out things which are obvious to me.
8. I become angry when my freedom of choice is restricted.
9. Advice and recommendations induce me to do just the opposite.
10. I am content only when I am acting of my own free will.
11. I resist the attempts of others to influence me.
12. It makes me angry when another person is held up as a model for me to follow.
13. When someone forces me to do something, I feel like doing the opposite.
14. It disappoints me to see others submitting to society's standards and rules.

Scoring: A total score is calculated by adding up each item score (ranging from 14 to 60). Higher scores indicate higher psychological reactance.

- i. Emotional Response Toward Restricted Choice: 4, 6, 7, 8
- ii. Reactance to Compliance: 1, 2, 3, 14
- iii. Resisting Influence from Others: 10, 11, 12, 13
- iv. Reactance to Advice and Recommendations: 5, 9

Hong, S.-M., & Faedda, S. (1996). Refinement of the Hong Psychological Reactance Scale. *Educational and Psychological Measurement*, 56(1), 173–182.

<https://doi.org/10.1177/0013164496056001014>

Appendix C.

Decisional Procrastination Scale

Instructions. People may use the following statements to describe themselves. Decide how well each of the statements characterizes you:

Not true for me	Often untrue for me	Sometimes true for me	Often true for me	True for me
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1. I waste a lot of time on trivial matters before getting to the final decision.
2. Even after I make a decision I delay acting on it.
3. I don't make decisions unless I really have to.
4. I delay making decisions until it's too late.
5. I put off making my decisions.

Scoring: Sum all items to get a final score. Note: there are no reverse scored items.

Mann, L. (1982). Decision-making questionnaire. Printed in Ferrari (1995).

Ferrari, J. R., Johnson, J., & McCown, W. (1995). Procrastination and task avoidance: Theory, research, and treatment. New York: Plenum Press.

Appendix D.

Clutter Quality of Life Scale

Instructions: To what extent does clutter, defined as “an overabundance of possessions,” impact your current life and well-being? Please read each statement below and indicate your extent of agreement to each statement.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly Agree
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1. I'm concerned about what others might think of me if they knew about the clutter in my home.
2. I have to move things in order to accomplish tasks in my home.
3. I often buy things I already have because I don't know where things are in my home.
4. The clutter in my home upsets me.
5. I avoid having people come to my home because of clutter.
6. I try to avoid thinking about the clutter in my home.
7. I don't get to use spaces in my home the way I would like to because of clutter.
8. My family life has suffered as a result of the clutter in my home.
9. I feel overwhelmed by the clutter in my home.
10. I'm worried about the amount of clutter in my home.
11. I can't find things when I need them because of the clutter.
12. I have incurred debt I can't really afford as a result of having too many possessions.
13. I feel guilty when I think about the clutter in my home.
14. I have to be careful when walking through my home in order to avoid tripping over objects.
15. I have neglected taking care of things that need to be done in my home because of the clutter.
16. I don't have family members over as much as I would like because of the clutter in my home.
17. I have been late paying bills more than once in the past 3 months because they got lost in the clutter.

18. I feel depressed by the clutter in my home.

Subscales:

- i. Livability of space: 2, 7, 11, 14, 15
- ii. Emotional: 4, 6, 9, 10, 13, 18
- iii. Social: 1, 5, 8, 16
- iv. Financial: 3, 12, 17

Scoring: a total score is calculated by adding up each item score.

Roster, Catherine A., Joseph R. Ferrari, and M. Peter Jurkat. 2016. The Dark Side of Home: Assessing Possession 'Clutter' on Subjective Well-Being. *Journal of Environmental Psychology*, 46: 32-41.

<https://www.challengingdisorganization.org>

Appendix E.

Social Desirability Scale.

Instructions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

- | | | |
|---|------|-------|
| 1. It is sometimes hard for me to go on with my work if I am not encouraged. | True | False |
| 2. I sometimes feel resentful when I don't get my own way. | True | False |
| 3. On a few occasions, I have given up doing something because I thought too little of my ability. | True | False |
| 4. There have been times when I felt like rebelling against people in authority even though I knew they were right. | True | False |
| 5. No matter who I'm talking to, I'm always a good listener. | True | False |
| 6. There have been occasions when I took advantage of someone. | True | False |
| 7. I'm always willing to admit it when I make a mistake. | True | False |
| 8. I sometimes try to get even, rather than forgive and forget. | True | False |
| 9. I am always courteous, even to people who are disagreeable. | True | False |
| 10. I have never been irked when people expressed ideas very different from my own. | True | False |
| 11. There have been times when I was quite jealous of the good fortune of others. | True | False |
| 12. I am sometimes irritated by people who ask favors of me. | True | False |
| 13. I have never deliberately said something that hurt someone's feelings. | True | False |

Scoring: Add 1 point to the scores for each "True" response to statements 5, 7, 9, 10, 13. Add 0 points to the score for each "False" response to these statements.

Add 1 point to the score for each "False" response to statements 1, 2, 3, 4, 6, 8, 11, 12. Add 0 points to the score for each "True" response to these statements.

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology, 38*, 119–125

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Add paragraph on Hanson in Discussion

