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Clutter and Control: A Regional Analysis of the Effect of Decluttering on Women During the Pandemic

Zachary Henry Ellis
DePaul University, zellis1@depaul.edu

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Clutter and Control:

A Regional Analysis of the Effect of Decluttering on Women During the Pandemic

A Thesis Defense

Presented in

Partial Fulfillment of the

Requirements for the Degree of

Master of Arts

By

Zachary H. Ellis

November 10, 2023

Department of Psychology

College of Science and Health

DePaul University

Chicago, Illinois

Thesis Committee

Dn. Joseph R. Ferrari, PhD, Chair

Ansuk Jeong, PHD, Reader

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Biography

Zachary Henry Ellis was born in Birmingham, AL, on January 24th, 2000. Zachary graduated from The University of Alabama in Tuscaloosa, AL, in May 2022 and received a Bachelor of Arts degree in Psychology. Zachary is pursuing his Master's and Doctoral degree in Community Psychology at DePaul University in Chicago, IL.

Table of Contents

Thesis Committee	2
Acknowledgements	3
Biography	4
List of Tables	7
Abstract.....	8
Introduction	10
Emotional and Mental Toll of Covid-19 Pandemic	12
Psychological Impacts of Clutter.....	15
Personal Projects as a Coping Mechanism	18
Clutter and Community Psychology: Personal Project Analysis by US Region	21
Psychological Reactance.....	22
Dividing the United States for Reactance and Clutter	26
Method.....	29
Participants	29
Psychometric Scales	30
Procedure.....	36
Statement of Hypotheses and Research Questions.....	36
Results.....	37
Preliminary Analysis	37
Primary Analysis.....	39
Discussion	47
Implications for Community Psychology	58
Limitations of Current Study	61
Future Research Directions	63
Conclusion	64
References	65
Appendix A.	85
Appendix B.	86
Appendix C.	87
Appendix D.	88

Appendix E90
Appendix F.....92

List of Tables

Table 1. Means, Standard Deviations, and Correlations with Reliability for Psychometric Scales.....38

Table 2. Mean Psychological Reactance score across US region.....39

Table 3. Fixed-Effects ANOVA results using Psychological Reactance as the criterion.....39

Table 4. Regression results using Fear of Covid as the criterion.....41

Table 5. Moderated Regression results using Fear of Covid as the criterion and Mastery Control as moderator.....42

Table 6. Moderated Regression results using Fear of Covid as the criterion with Mastery Control and Action Control Hesitation as moderators.....44

Abstract

The Covid pandemic impacted the whole nation, with 72% of Americans reported disruption in their everyday lives, and 45% of Americans reported negative health impacts in response to the pandemic (Kirzinger et al. 2020). However, there are some populations of citizens that are more vulnerable to the negative mental health effects of the pandemic (Czeisler et al. 2020). Fear and psychological reactance, triggered when individuals feel their freedoms are threatened, surged during the pandemic (Taylor and Asmundson, 2021; Wortman & Brehm, 1975). Yet, little research explores how decluttering projects affect this behavior.

The current study explored the impact of successful decluttering projects as a measure of regaining control to reduce Covid fear for women living in regions experiencing high levels of reactance. To examine the impact of decluttering on fear and reactance, a dataset of 156 women, recruited by the *Institute for Challenging Disorganization (ICD)* was utilized. Five validated psychometric scales were used: Fear of Covid-19 Scale (Ahorsu et al., 2020), *Hong Psychological Reactance Scale* (Hong & Faedda, 1996), *Personal Project Analysis* (Little, B.R. 1983), *Social Desirability* (Crowne & Marlowe, 1960), and *Action Control Scale* (Diefendorff et al. 2000). Results were mixed in support for the current study. However, when including situational control, results highlighted a notable connection: increased control through decluttering related to reduced fear and reactance. This finding holds significance, especially for women navigating societal pressures around household responsibilities.

The study highlights vital implications for community psychology. It emphasizes the need for gender-specific approaches in crisis response and intervention designs, urging attention to women's mental health during crises like the pandemic. Understanding control's impact, acknowledging cultural differences, and promoting decluttering initiatives are key takeaways.

However, the study's limitations include a non-representative sample primarily composed of educated, white women. Additionally, the data collected early in the pandemic might not fully encapsulate evolving concerns or reactions. Future research should aim for more diverse samples and consider evolving societal responses to crises.

Keywords: Decluttering, Reactance, Control, Covid, Regional Analysis

Introduction

Understanding the various processes of how individuals cope with stress is a common goal in psychology. The Covid-19 pandemic offered a unique opportunity to study coping with stress and how individuals and communities reacted to polarizing events. According to the 2021 *APA Stress in America* survey, nearly one third of American adults reported stress levels so high that making simple, everyday decisions was a struggle during the Covid pandemic (Abrams, 2022). On the other hand, individuals experienced the loss of decision making through masking and social distancing mandates. This combination of uncertainty about the future and the loss of autonomy in daily life gave rise to significantly elevated stress levels. Additionally, there were multiple stressors that stemmed from the pandemic but extended beyond fear towards contracting the virus, which will be discussed in more detail in the following sections, but these stressors include stress towards finances, health, stability of the future of not only oneself, but the community and country, and stress and reactance towards pandemic policies.

In addition to being an abnormally stressful time, the Covid-19 pandemic was also a time when Americans became more divided politically than ever before, to the point where the average American has more hate for those belonging to the other political party than they do have love for those in their own party (Baldassarri et al. 2008; Druckman et al. 2021). This trend towards polarization was studied and documented in social sciences for years, but the pandemic has acted as an accelerant in the hostility across political aisles (Hopkins, 2017). One of the driving psychological forces during this volatile and emotional time was the idea of psychological reactance, or the psychological response to regain control when freedom is threatened or lost (Brehm & Brehm, 1966). This phenomenon may have significant impacts on an individual's well-being as well as their response to interventions that may improve their

current situation, such as masks or lockdown policies (Dillard & Shen, 2005; Taylor & Asmundson, 2021).

Another phenomenon that might impact an individual's mental well-being is clutter, or "an overabundance of possessions that create chaotic and disorderly living spaces," (Roster et al. 2016; p.1). Much of the research on this topic explored tendencies that predict clutter amount and the impact of clutter on well-being (see Ferrari et al. 2018; Roster & Ferrari, 2023). Furthermore, decluttering has demonstrated positive impacts on mental well-being (Hicks, 2020). However, there are still gaps in the literature on clutter, especially as a protective factor in exceptionally emotional and stressful times, such as the Covid-19 pandemic. In addition, it is not known how varied regions in the United States reacted to the pandemic and handled their physical home clutter.

This gap in the literature is where the present study was positioned. The current study was an exploratory, preliminary analysis of self-reported variables included in Dr. Catherine Roster's and Dr. Joseph Ferrari's 2020 study on the psychological response to decluttering projects. The present study explored regional differences in psychological reactance and the psychological impacts of decluttering projects on women during the Covid-19 pandemic. The knowledge gained by this project may be important for the field of community psychology to better understand regional differences in the United States based on reactance to the loss of control and autonomy in addition to improving scientific understanding of how women cope with stress in atypical ways.

Emotional and Mental Toll of Covid-19 Pandemic

In March 2020, U.S. states and cities across the United States began shutdowns and lockdowns (Centers for Disease Control and Prevention, 2023). The immediate consequences of these policies included social isolation, disruption of social norms and the collapse of daily structure and activities (Shah et al. 2020). Later research conducted by the World Health Organization further explained the fallout of these isolation policies, as they reported that quarantine increased rates of a multitude of negative psychological outcomes, such as depression, loneliness, suicidal behavior, substance use and abuse, and self-harm (WHO, 2020). While nearly three quarters (72%) of Americans reported at least “some level” of disruption in their everyday lives, and nearly half (45%) of Americans reported negative health impacts in response to the pandemic (Kirzinger et al. 2020), there are some populations of citizens that are more vulnerable to the negative mental health effects of the pandemic. Czeisler et al. (2020) labeled young adults, minorities, essential workers, and unpaid adult caregivers as those populations which reported “disproportionately worse mental health outcomes.”

While social isolation and the fear of contracting Coronavirus are cited influences on the mental health of American citizens (Ahorsu et al. 2022), they are not the only sources of stress from the pandemic. In a systematic review of protective and risk factors of mental health during the pandemic, Lieneck et al. (2021) found five main risk factors: demographics, support and self-care resources, financial stability, health and social status, and general knowledge and mistrust of the government. In their review, demographics occurred in 40% of the literature as a non-protective factor, the largest proportion of any identified theme. Demographics were followed by support systems at 29%, financial stability at 26%, health and social status at 16%, with general knowledge and government distrust being the least occurring theme at 14%. The themes

identified as non-protective factors in Lieneck et al. (2021) provide insight into overarching influences the pandemic had on the mental health of individuals.

Further research focused on the impacts of the pandemic identified additional relationships between pandemic related stressors. Wang et al. (2020), for instance, found that economic stressors were more impactful than stressors related to the virus itself. Valdez et al. (2022) discovered that increased interaction with social media predicted increased distress. Additionally, the perceived degree of impact of Covid-19 on everyday life was a significant predictor of distress (Thomaier et al. 2020). Finally, those living in states with stricter social distancing policies and higher Covid burdens reported increased psychological distress (Fitzpatrick et al., 2020).

While it is important to understand the consistent themes and impacts of Covid-19, it is also important to understand how these impacts fluctuated through the different stages of the pandemic. The stress and resilience of Americans in the early stages of the pandemic, from April to July of 2020, were studied by Park et al. (2021). This study found that in the early stages of the pandemic, exposure to the virus was the major stressor, in addition to heightened levels of general distress. However, as policy and infrastructure in their states were developed, these levels diminished over time, with general distress diminishing at a slower rate and smaller degree than Covid exposure related stress. Park et al. (2021) identified plausible explanations for these decreases; reassurance from public health and an adjustment to the “new normal.” Therefore, in the beginning of the pandemic, American citizens were most worried about contracting the virus, but like other research findings (Lieneck et al. 2021; Blanchflower & Bryson, 2022), as support and stability increased, distress decreased.

A common theme in the literature on the emotional and mental toll of the pandemic is that negative mental health outcomes were highest when the nation was unstable and personal control was lost during the earlier stages of the pandemic. Blanchflower and Bryson (2022) highlighted the impact of stability and control on mental health during the pandemic in that they found mental health improved for those who are vaccinated and in states that better controlled the Covid spikes. As individual's situations settled due to pandemic policy or vaccination status, their mental health significantly improved. In another study on the impact of losing control over one's life during the pandemic, Statz et al. (2022) identified themes related to loss and grief for individuals. They found that people felt loss not only for friends or family that may have passed due to Covid, but also for the loss of their plans, social life, and loss of agency.

Furthermore, there is extensive research focused on community level determinants of Covid's impact. Morgado et al. (2021), for instance, found that women had significantly lower levels of quality of life during the pandemic, despite no significant differences in perceived exposure to the pandemic. It was hypothesized that this difference in quality of life following the first wave of the pandemic may be explained by the social pressure placed on women to own more of the housekeeping and caretaking responsibilities. Additionally, the same study found that individuals with less social support systems, including single parents and divorced individuals, reported lower levels of quality of life following the first wave of the Covid pandemic (Morgado et al. 2021). According to a study exploring the psychological impact of the pandemic on women, 85% women experienced significant mental health issues such as anxiety, depression, and distress during the pandemic, in addition to other significant impacts because of the pandemic (Sediri et al., 2020). In their study, women reported a 10% increase in violence against women, either psychologically, economically, or physically.

The claim that social support is important in dealing with stress is supported by Di Napoli et al. (2021). This study found that citizens perceived a sense of unity and connectedness to their community through the shared experience of enduring the pandemic. In turn, participants felt a stronger belief to better cope with the emergency. Additionally, Mannarini et al. (2021) found that sense of community may be a significant protective factor against the impacts of difficult periods, specifically the Covid pandemic. This study reports that a new community formed through the shared experience of surviving Covid, and that sense of community was not dependent on a rigid community structure, rather as a broader collection of individuals who have shared life experiences. Furthermore, this study found the relationship between sense of community as a mitigating factor on the impact of Covid on well-being was consistent across most demographic differences, except gender. Mannarini et al. (2021) found that women reported higher psychological impacts, even controlling for caregiving responsibilities. Finally, this study employs future research to continue to explore gender disparities in the perceived impact of stressors.

Psychological Impacts of Clutter

Clutter, defined in Roster and Ferrari (2016) as “an overabundance of possessions that collectively create chaotic and disorderly living spaces,” may be a product of psychological factors (Ferrari et al., 2018). One factor that may influence cluttering behavior in an individual is their personality traits. Tolin et al. (2008) found that people who report high levels of perfectionism are more likely to experience cluttering behaviors in addition to experiencing negative emotions when working to declutter. Perfectionism was also linked to greater difficulty in discarding possessions, which contributed to greater levels of clutter (Frost et al., 2011).

Another personality trait that has been linked to cluttering and clutter impact is indecision. Patel et al. (2023) found that hesitant and indecisive individuals experienced worse psychological impacts due to clutter than individuals who were more decisive.

However, personality traits are not the sole determinant of clutter, as it has been found that traumatic experiences might influence cluttering tendencies (Timpano et al., 2011; Tolin et al., 2010). Research by Shaw et al. (2016) discovered that individuals who experienced traumatic events, such as physical trauma, significantly contributed to engaging with cluttering behavior as a coping mechanism. The connection between clutter and trauma is also supported by Hartl et al., (2005). Their study explored the connection between stressful life events and cluttering behavior and found that those who experienced significant life stress were more likely to engage in clutter behavior later in life.

There is also substantive literature capturing the relationship clutter has with an individual's psychological well-being. In a study exploring the relationship between clutter, psychological home, and perceived well-being, it was found that clutter had a strong negative impact on both concepts (Roster et al., 2016). Similarly, in a study assessing the impact of clutter on negative emotion, Rogers and Hart (2021) found that individuals who described their home as more cluttered reported higher levels of negative emotions, and that when clutter is better managed, sense of accomplishment and positive emotions may be increased.

Clutter may also impact an individual's psychological sense of control in their lives. Dozier et al. (2022) discovered that people who perceived their home as cluttered also reported that they felt they had less control over their own lives. This relationship is supported by Kalina et al. (2013), which explored the impact of decluttering on control. They found that individuals

felt a greater sense of control over their environment following successful decluttering interventions.

Additionally, in a study that focused on the psychological impact of clutter for women, it was reported that women who perceived their homes as more cluttered had higher levels of anxiety and depressed mood than women with less cluttered home spaces (Tolin et al., 2012). Furthermore, for women of color, the perception of clutter plays a mediating role between psychological home and life satisfaction (Crum & Ferrari, 2019). Their study found that the perception of clutter for women of color might be helpful in explaining life satisfaction through place attachment, hypothesizing that an increased level of psychological home might lead to a more favorable perception of clutter, in turn leading to higher levels of life satisfaction. Despite existing research on the impacts of clutter on an individual's mental well-being, there are still gaps in the literature regarding decluttering projects as a buffer for well-being, especially in times of significant stress. Additionally, there is demonstrated value in exploring regional differences in psychological behavior (Rentfrow & Jokela 2017).

It should be noted that there is existing literature exploring regional differences in stress (Lu et al., 2003), performance management (Williams, 2019) and perceptions towards policy (Fudge, 2020). However, there seems to be no published study exploring regional differences in cluttering behavior and impact. The present study explored decluttering as it related to regional variations in reactance levels and Covid fear during the pandemic. Understanding the impact of decluttering may be helpful for psychologists and more broadly the field of community psychology in understanding how interacting with one's environment can breed positive mental health outcomes (Roster et al., 2016).

Personal Projects as a Coping Mechanism

Personal project analysis was originally developed in Little (1983) as a unit of analysis for studying personality through social, physical, and temporal contexts. A personal project, as described in Little (1983), is conceptualized as “a set of interrelated acts extending over time, which is intended to maintain or attain a state of affairs foreseen by the individual” (p.276). In his conception of personal projects as a unit of analysis for personality, Little (1983) posits that specialization, or “the selective channeling of orientation and abilities in the course of an individual's progressive adaptations to the environment,” (p.275) is central to the development of this theory. However, personal project analysis may have broader implications than strictly in personality analysis.

Little (1983) argued that personal project analysis has potential for application in environmental and larger contextual frameworks. There are three paths for personal projects to be applied to environmental analysis, as laid out by Little (1983). The first path being place identity: the subjective attachments to an individual’s emotional anchors of their environment. Personal projects therefore serve as the tool to quantify self-reflective aspects of an individual’s environment that have subjective value. The second path is through the analysis of environmental settings and health and wellness. Physical distance and group application of aggregate settings of stress are the operationalized avenues for personal projects to act as the unit of analysis for health and wellness in environmental settings. Finally, the third avenue for personal projects to be used as an environmental unit of analysis is in connection to its ability to measure personality. Little (1983) describes personal projects as relevant in environmental analysis in observing the relationships between an individual and their social environment, and how different environments promote or inhibit projects. **The current study expanded the line of**

research by Little (1983), focusing on the third path for utilizing personal project analysis as a tool for understanding personalities in environmental settings through exploring the impact of control and successful decluttering projects as a mental buffer between psychological reactance and fear of Covid across different regions in the United States.

Understanding coping mechanisms for stress has been a focus for psychologists since Hans Selye defined stress as “the nonspecific response of the body to any demand made upon it.” (Selye, 1973). Today, there is a strong understanding of the relationship between stress and an individual’s well-being (Gifford et al. 2021; Zhang et al. 2022). Stress is something that every person deals with in their life, and people consistently search for ways to deal with their stress. One such mechanism for coping with stress is engaging in personal projects. Personal projects may take the role of a coping mechanism through factors such as project success and control (Helgeson, 2019; Pychyl & Little, 1998)

Helgeson (2019) examined the relationship between personal projects and psychological well-being in emerging adults. This study found that project progress, importance and completion were all positively related to higher levels of psychological well-being. The relationship between stress and project completion was supported by Nurmi et al. (2009), where stress was negatively related to project completion and meaning. However, this same study also discovered the importance of the sense of control an individual experiences in their project and its protective capabilities towards stress and depression. The importance of project success as a coping mechanism is supported in Bedford-Peterson, et al. (2019). In their study, success of current projects was positively predicted for most kinds of subjective well-being. Success was positively predictive of life satisfaction, lack of negative affect, subjective sense of flourishing,

meaning in life and purpose in life (Bedford-Peterson, et al. 2019). The only measure of subjective well-being project success was not positively predictive of was positive affect, and the study suggested that this relationship is demonstrative of a stronger trait effect for positive affect than for other well-being measures, which are linked to the current state of their project.

Since project completion is a demonstrated significant predictor of well-being, it is important to understand facilitators of project completion. One factor that contributes to project completion is project control (Salmela-Aro et al. 2007). In their work, it is highlighted that projects that provide a stronger sense of control lead to higher levels of satisfaction and motivation. The path from control to motivation and completion is supported by the self-determination theory, where individuals who experience increased control perceive higher levels of autonomy, driving motivation to engage in behaviors that lead to positive outcomes, such as completion of a personal project (Ryan & Deci, 2000). In the context of personal projects, control refers to an individual's ability to direct and manage the project, as well as making decisions about the project direction and outcome (Little, 1983).

Makinen and Pychyl (2001) examined the relationship between personal projects and life satisfaction for college and graduate students, where the older students' perceived project challenge was a significant predictor of life satisfaction. This study supports the concept of personal projects as coping mechanisms through which challenging projects decreased life satisfaction. Furthermore, perceptions of control, as it relates to personal projects, is demonstrated to be a buffer to stress in Pychyl and Little (1998). In their study, control over one's project was negatively predictive of stress. Control as a broader psychosocial variable has been demonstrated to be a moderating influence on the relationship between health and well-being in social class differences (Lachman & Weaver, 1998). In this study, participants in the

lowest income group with the highest sense of control displayed similar health and well-being levels to those of higher income groups, further highlighting the importance of control in one's life.

Furthermore, there is previous literature directly relevant to the current study, connecting personal project analysis and clutter (Roster & Ferrari, 2023). In their study, differences in orientation and engagement towards decluttering projects were explored. Personal project analysis was employed to identify differentiating factors in individuals who declutter and in exploring the dimensions of the projects. The results from this study indicate that decluttering is most successful and is easiest when there is enthusiasm and an association to identity in the project. Additionally, they found that control and time considerations were associated with stress and success, with circumstances being the main driving force behind these relationships.

Clutter and Community Psychology: Personal Project Analysis by US Region

The analysis of an individual's personal project has demonstrated value within a contextual or community psychology viewpoint. For instance, it was employed as a tool for understanding personality traits and environmental dimensions that contribute to projects (Little 1983; Roster & Ferrari, 2023). In the context of cultural differences in personal project success, more individualistic communities place greater importance on control in a project as a determinant of success, whereas collectivist communities place greater importance on team goal management as a determinant of success (Chipulu et al. 2014). Additionally, in Reiss et al. (2020), individuals who were experiencing reactance during the Covid pandemic were more inclined to pursue personal projects than more traditional security-related actions. However, employing the analysis of personal projects to understand the relationship between psychological

responses to loss of control and fear is an important question that has yet to be identified in research. The present study, then, operationalized personal projects as a psychological buffer through regaining a perception of individual control in the context of the pandemic.

Furthermore, by understanding the role of geographic regions on personal projects, the current study contributed to the growing body of literature on psycho-behavioral variations by region through a new lens of clutter, control gained from projects and fear during the pandemic. The present study may add to the scientific understanding of alternative ways individuals regain control when their freedoms are limited. Understanding how regions value control and emotionally respond to the Covid pandemic are well researched constructs (Fitzpatrick et al., 2020; Yang et al., 2022), but examining decluttering projects as a means of regaining control is an understudied concept.

Psychological Reactance

The theory of psychological reactance introduced by Brehm and Brehm (1966) and was intended to “outline a set of motivational consequences that may be expected to occur whenever freedoms are threatened or lost,” (Brehm & Brehm, 2013; p.3). Generally, the theory posits that when a freedom is lost or threatened to be taken away, an individual will be motivated to restore that freedom. Psychological reactance has many uses for understanding behavior (Brehm & Brehm, 2013). One frame to understand reactance and behavior is through social influence. The theory suggests that an individual may feel motivated to act in resistance or in direct opposition towards attempted social influence such as mass persuasion. Another implication for reactance theory in understanding behavior is the importance of privacy and personal space, in that interfering with an individual’s privacy may elicit a strong resistance. Additionally, as Brehm and Brehm (2013) suggest, individuals may be reluctant to accept favors that have the possibility

of obliging them and restricting their later control of choice. Furthermore, individuals may go as far as to eliminate their own freedoms when it is perceived that there is no way to restore their freedom in the face of alternative choices.

The theory of psychological reactance consists of four main principles regarding the magnitude of arousal. The first principle is that freedom is an expectation and may be held by an individual where arousal of reactance is only elicited to the extent that an individual perceives control over retaining freedom. In the context of clutter, reactance may be triggered through the physical and mental restrictions of freedom via limiting physical space and organization. The loss of control over one's space may trigger reactance. However, exploring regional differences in reactance may help explain cultural value on freedom, control and perceptions of clutter. The second principle is that arousal will only be as intense as the importance of the choices an individual perceives. Brehm and Brehm (2013) conceptualize this principle as the difference in choosing between apples and oranges and choosing between a Ford or Toyota. The former choice is more trivial than the latter choice, therefore, will elicit a lessened reactance from the individual. In the context of regions in the United States and differences in clutter, this principle may help to explain differences in the value placed on cleanliness and disposal tendencies. Individuals in the Western United States create significantly more waste than any other region (Thyberg et al., 2015), so an impact on their ability to declutter may result in less arousal of reactance than individuals from other regions.

The third principle states that the level of arousal in response to a threat is a "direct function of the number of freedoms threatened" (Brehm & Brehm, 2013; p.5). Finally, there is a fourth principle of psychological reactance as Brehm and Brehm (2013) conceptualize it.

However, this final principle is contingent on the third principle. This principle posits that freedoms may be threatened by implication; therefore, the level of arousal is increased when implied threats occur. For example, as Brehm and Brehm (2013) state, when a newlywed wife is informed by her husband that he will be spending a night with his male friends, her reactance may not be in direct response to the loss of time with her husband, but more so to the implication that the husband will be leaving her alone frequently going forward. Together, these principles contribute to the understanding of the relationship between clutter tendencies and regional differences in values. An over cluttered space may trigger higher reactance in a region that places greater value on freedom through limitation of choices in organization and usage.

The perception of control plays an important role in the manifestation of psychological reactance (Brehm, 1993). Wortman and Brehm (1975) originally translated psychological reactance into the “language of control,” when they proposed that when an individual feels that their control over a situation is threatened or removed, reactance is aroused. They add that if control is restored for the individual, or if the individual is able to accept the situation as uncontrollable, the response would cease. Miller (1980) builds on this framework that freedoms may be conceptualized as events and actions where individuals might control the outcome, and therefore, when freedom is threatened, reactance is aroused due to the loss of control.

This pathway between control, freedom, and reactance is further supported by Wang and Sundar (2022). In exploring the relationship between these variables in the context of online health messaging, they found that sense of control is positively associated with threat to freedom of action, leading to increased effective reactance. When individuals have the control over the customization of their internet education, they have an increased sense of control in addition to an increased level of perceived threat to their freedom when messages are more persuasive,

increasing their reactance. Their study further highlights the importance of sense of control on reactance levels. Exploring control through the lens of clutter tendencies and personal projects during Covid (particularly across United States regions) may uncover how individuals regain control when it has been taken away with a community psychology context.

However, control is not the only factor that has a documented association with reactance levels. One study found that social influence increases psychological reactance through a positive association with perceived freedom restriction (Ogbanufe & Gerhart, 2022). When people feel that other people they hold in high regard think negatively of their choices, they feel their choice is limited to socially favorable decisions. Additionally, in a study on political ideology and tendency to experience psychological reactance, Irmak and Murdock (2020) found that those who are politically conservative are more likely to exhibit reactance. They explain this relationship as since conservatives have a foundational sentiment of limited government intervention, they are more likely to perceive any overreach as a threat to freedom, arousing reactance.

Building on Irmak and Murdock (2020), a study on the negative attitudes about face masks during the Covid-19 pandemic, psychological reactance was associated with Covid Disregard Syndrome and political conservatism (Taylor and Asmundson, 2021). They propose that reactance was elicited through the perception that mask mandates violated their freedom of choice, and that these individuals were in disbelief of the seriousness of Covid. Finally, in a study exploring reactance and personality in adolescents, (Moreira et al., 2021) found that individuals characterized with lower harm reduction had the highest levels of reactance, supporting the idea that those who do not practice harm reduction, such as masks and Covid

precautions, are more likely to experience psychological reactance. These findings suggest that there is a discrepancy between reactance levels and fear of Covid. The current study aimed to contribute to the understanding of this connection through regional differences in reactance and the impact of regained control via a decluttering project.

Reactance may be a tool used to understand groups of individuals based on their psychological value of autonomy and control. However, in the context of clutter, reactance may aid in the psychological understanding of external pressures on positive outcomes. In the context of the pandemic, reactance may help explain the mental and emotional turbulence due to policies and the loss of autonomy. The current study investigated the regional differences in the United States based on reactance and its relationship to overall concern during the pandemic.

Additionally, in the context of clutter, the present study examined how a decluttering project might have impacted this relationship as a means of reestablishing control in one's situation.

Dividing the United States for Reactance and Clutter

The United States is one of the most diverse countries in the world. There are significant differences in culture, political beliefs, and socioeconomic status just to name a few. It is important to divide the United States into regions or areas when researching trends and beliefs (Katzenstein, 2001). In the same article, it is stated that organizing the United States into regions of similarity makes comparison in trends possible and differences are easier to identify. The importance of this process gained traction during the Cold War, where social science researchers emphasized the importance of cross-cultural research (Katzenstein, 2001).

A common way to divide the country is into regions, Northeast, Midwest, South and West. The United States additionally may be broken down into states, with their own unique sets of culture and status. In the context of the Covid pandemic, there were differences in Covid

policy response by state. The ten states with the strictest Covid response were Rhode Island, Connecticut, Maryland, New York, Washington, Massachusetts, New Jersey, Minnesota, Vermont, and the District of Columbia, mostly states from the Northeast region, and a few from the South region. Additionally, the ten states with the least aggressive response to the pandemic are Wyoming, Mississippi, Texas, Nevada, Oklahoma, Missouri, Hawaii, Kansas, Tennessee, and Indiana, mostly states from the South region and West region (Leins 2020). However, it is not uncommon for psychologists to divide the country into regions for studies concerned with psychological processes. Both Rentfrow et al. (2008) and Mondak and Canache (2014) used state level division in their studies on personality and political differences. Cultural differences in America at the regional level was explored in Marsden et al. (1982). The present study employed regional areas for exploring reactance levels in the United States and the impact of regaining control through personal decluttering projects to gain a better understanding of regional values and importance placed on control during the Covid pandemic.

Diving the United States into regions to explore psychological processes, such as reactance, has been practiced in the past. Researchers have used different criteria to divide the country into regions such as cultural differences, socioeconomic status and rural or urban factors to explore reactance. Kitayama et al. (2010) explored cultural differences in American regions and found that the South and West Coast regions were more individualistic, whereas the Midwest and Northeast regions were more collectivists. Research also supports dividing the United States into regions based on socioeconomic differences to explore reactance. Rains and Turner (2007) found that those in lower socioeconomic environments may experience more psychological reactance as they may feel like their freedom of choice is more limited. Finally,

research suggests that women and people living in less dense communities may experience more distress (Matiullah et al., 2021).

There is less research on cultural and regional differences in clutter behavior. However, Ferrari and Roster (2018) found that there are generational differences in cluttering behavior. There also is strong literature on the relationship between clutter and psychological distress (Roster & Ferrari, 2016). Therefore, since Rentfrow et al. (2008) found significant differences in psychological characteristics in the different regions of the United States, there is support for the process of examining cluttering behavior by geographic regions. Understanding how decluttering projects impact constructs like reactance and fear of Covid during the pandemic is an important task for psychologists as it contributes towards a greater understanding of how individuals attempt to gain stability and control in their lives when it is challenged. At the community level, exploring regional differences in the value of control in the lens of command over their physical space contributes to the larger understanding of the diversity of America in a unique frame.

Study Rationale

Much of the available literature on the relationship between psychological behavior and clutter has focused on behaviors that lead to clutter impact or decluttering (Roster & Ferrari, 2016). The present study investigated this relationship from a new angle, where decluttering may have led to changes in thoughts and behavior. Additionally, this study contextualized this relationship during the Covid-19 pandemic, a time with marked increase in psychological distress. There was an expected relationship between one's fear of Covid, decluttering, and reactance as these processes may be a result of the Covid regulations leaving individuals feeling helpless in their situation. Whereas a successful decluttering project may give individuals a sense of accomplishment and control over their situation. The gaps identified between psychological

reactance, fear of Covid, control and decluttering in a woman's experience during the pandemic were explored as related to United States regionality.

Method

Participants

Archival data from C. Roster's (University of New Mexico, School of Marketing) original, larger study focusing on psychological responses to decluttering projects during the Covid-19 pandemic was used for the present study. Data was collected through the *Institute for Challenging Disorganization (ICD)*, an organization that promotes strategies and programs that assist people who struggle with chronic disorganization along with the professionals that aid them through education, research, and practical decluttering strategies. Eligibility requirements for participants were that they are at least 18 years of age, English-speaking and residents of the United States. Additionally, participants needed to at least have considered undertaking decluttering projects since the beginning of or during the Covid-19 pandemic.

In total, 207 participants comprised the study population: all participants self-identified as female. It should be noted that there were 13 persons who self-identified as male and another 4 persons as non-binary. Because of a significant sample discrepancy, this study only used female participants. This decision was made to ensure that the sample avoids potential confounding effects that may arise from a gender imbalance. In the process of cleaning the data, participants who did not complete the survey ($n = 48$) were omitted from subsequent analysis, making the final sample size 156 participants. The mean age of participants was 51 years ($SD = 11.9$). Participants in the final sample were instructed to choose all ethnicities that apply to them, making the demographic breakdown of participants are as follows; White ($n = 137, 87.8\%$),

Black or African American ($n = 3$, 1.9%), Hispanic or Latinx ($n = 10$, 6.4%), American Indian or Alaskan Native ($n = 1$, 0.6%), other ($n = 5$, 3.2%), and prefer not to say ($n = 5$, 3.2%). A large majority of participants reported at least obtained a high school or equivalent degree ($n = 153$, 98.1%), and over three quarters of the sample ($n = 124$, 79.5%) earned a bachelor's degree or higher. Additionally, participants are representative of all four regions of the United States as defined by the United States Census (2021). The regional breakdown of participants are as follows; West ($n = 50$, 32.1%), Midwest ($n = 34$, 21.8%), South ($n = 33$, 21.2%), and Northeast ($n = 39$, 25%).

Psychometric Scales

The original study used 13 previously validated and proven reliable self-report scales that participants responded to in the archival data. The current study, however, utilized five measures (see Appendix A - E). Each measure that was utilized in this study is further described in this section.

Fear of Covid. Participants were administered the *Fear of Covid-19 Scale* (FCV-19S) (Ahorsu et al. 2020). This unidimensional scale was developed using classical test theory and Rasch analysis. It consists of seven items each of which are scored by a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Examples of items from this scale include "*It makes me uncomfortable to think about coronavirus-19,*" and "*I cannot sleep because I'm worrying about getting Coronavirus-19.*" The FCV-19S was initially created and validated for an Iranian sample ($n = 717$) in the Farsi language. Using classical test theory analysis, results showed that this scale has good internal consistency ($\alpha = 0.82$) and an acceptable composite reliability (0.88). In using Rasch analysis, item separation reliability was found to be satisfactory with a score of 0.99.

Additionally, concurrent validity was demonstrated by administering the Hospital Anxiety and Depression Scale and the Perceived Vulnerability to Disease Scale, with depression ($r = 0.425$), anxiety ($r = 0.511$), perceived infectability ($r = 0.483$) and germ aversion ($r = 0.459$) (Lin, C.Y. et al. 2020). FCV-19S has since been adapted and retested in other samples and displayed high internal consistency (Cronbach's $a = 0.87$) in samples from Bangladesh, United Kingdom, Brazil, Taiwan, Italy, New Zealand, Iran, Cuba, Pakistan, France and Japan (Lin, C.Y. et al., 2021). The English version of this scale was later validated in a recent study evaluating FCV-19S and its relationship with behavior and political belief. This study used two samples, S1 ($n = 1624$, $M = 15.6$, $SD = 7.7$) and S2 ($n = 1111$, $M = 18.3$, $SD = 7.9$) and demonstrated a high internal reliability (Cronbach's $a = 0.85$) and displayed strong association with adherence to lockdown regulations (Winter, T. et al., 2020).

Psychological reactance. The *Hong Psychological Reactance Scale* (HPRS; Hong & Faedda, 1996) is a multidimensional scale that measures one's tendency to experience psychological reactance in response to a perceived loss of freedom. This scale consists of 14-items in response to which participants were asked to report the degree to which they agreed with each item on a 5-point Likert scale (1 = *Strongly disagree*; 5 = *Strongly agree*). Thomas et al., (2001) administered the HPRS to an American sample, and this scale demonstrated acceptable reliability (Cronbach's $a = 0.77$). Test-retest reliability ($a = 0.73$) was demonstrated in the original study by Hong & Faedda, (1996) in a six-week retest. The 14-item scale demonstrated convergent validity with significant, positive correlations with trait-anger ($r = 0.38$) and depression ($r = 0.15$), and discriminant validity was demonstrated with significant, negative correlations with life satisfaction ($r = -0.04$; Hong & Faedda, 1996).

The scale was originally refined to four subscales: *emotional response toward restricted choice*, *reactance to compliance*, *resisting influence from others*, and *reactance to advice and recommendations* (Hong & Faedda, 1996). The emotional response toward restricted choice subscale ($M = 14.6$, $SD = 3.1$, $\alpha = 0.63$) includes sample items such as “*it irritates me when someone points out things which are obvious to me*” and “*I become angry when my freedom of choice is restricted.*” The reactance to compliance subscale ($M = 9.6$, $SD = 2.9$, $\alpha = 0.57$) includes items such as “*when something is prohibited, I usually think, ‘that’s exactly what I am going to do,’*” and “*it disappoints me to see others submitting to society’s standards and rules.*” The resisting influence from others subscale ($M = 11.9$, $SD = 2.9$, $\alpha = 0.53$) includes items like “*it makes me angry when another person is held up as a model for me to follow,*” and “*when someone forces me to do something, I feel like doing the opposite.*” Finally, the reactance to advice and recommendations subscale ($M = 4.5$, $SD = 1.6$, $\alpha = 0.48$) includes the items “*I consider advice from others to be an intrusion,*” and “*advice and recommendations induce me to do just the opposite.*”

Personal project analysis. Participants were administered the *Personal Project Analysis* (PPA; Little, B.R. 1983) to assess subjective dimensions of their personal decluttering projects. This measure consists of 17 Likert scale items of which participants rated the degree to which they agreed with the statement ranging from (1 = *not at all*; 10 = *very/completely*). The *Personal Project Analysis* consists of four dimensions measuring identity fulfillment, perceived strain, mastery-control, and social impact. In a later study (Jackson, T., et al. 2002) each subscale demonstrated moderate to strong internal consistency, identity fulfillment ($\alpha = 0.74$), perceived strain ($\alpha = 0.76$), mastery-control ($\alpha = 0.60$), and social impact ($\alpha = 0.47$).

However, the present project was concerned with the *mastery-control* subscale. The mastery-control subscale ($M = 32.46$; $SD = 5.87$) is comprised of five items "how much did you feel that the amount of time working on the decluttering project was adequate," "how much did you feel you were in control over the decluttering project," "how successful would you rate the decluttering project so far," "how successful did you anticipate the outcome of the project would be," and "how much did you feel responsible for having initiated the decluttering project." Confirmatory factor analysis in Jackson, et al. (2002) found high loading for initiation ($\lambda = 0.70$), control ($\lambda = 0.67$), expected outcome ($\lambda = 0.59$), time adequacy ($\lambda = 0.47$) and progress ($\lambda = 0.44$). Predictive validity for the mastery-control subscale was demonstrated in Jackson, et al. (2002) for its positive and significant predictive relationship with optimism ($\beta = 0.18$, $p = 0.02$, $\alpha = 0.60$).

Action control. Participants also were administered the *Action Control Scale* (ACS; Diefendorff et al. 2000) to assess their propensity for enacting and maintaining their goals. Participants indicated which option best represents their reaction to a given situation. The full multidimensional measure consists of 36 dichotomous items with three subscales- preoccupation, hesitation, volatility- each with 12 items. However, this current study was concerned with the hesitation subscale ($M = 6.35$, $SD = 2.89$, $\alpha = 0.74$). Confirmatory factor analysis in Diefendorff et al. (2000) found an average, moderate factor loading of (0.74) for the 12 items. Sample items for this subscale include "when I don't have anything in particular to do and I am getting bored" and "when I have an obligation to do something that is boring and uninteresting."

Discriminant validity of the *Action Control Scale* reported in Diefendorff et al. (2000) where the Wechsler Adult Intelligence Scale (WAIS)- digit span and information subscales were

administered. Correlates ranged from -0.09 to .13 across ACS and the WAIS subscales, and no correlations were found to be significant. Additionally, convergent validity was demonstrated in Diefendorff et al. (2000). Significant, predictive relationships between the hesitation subscale and the Thought Occurrence Questionnaire- escape subscale ($r = -0.29$), and task related subscale ($r = -0.26$). In addition, Cognitive Interference ($r = -0.32$) and Cognitive Failure ($r = -0.30$) were significantly predicted by the hesitation subscale, further demonstrating convergent validity.

Social desirability. To better control for response bias and expose respondents' tendencies to give socially acceptable answers, participants were administered a social desirability measure. The *Social Desirability* scale ($M = 13.72$, $SD = 5.78$, $\alpha = 0.88$; Crowne & Marlowe, 1960) was originally 33-items, until it was shortened by Reynolds (1982). In the factor analysis of the shorter 13-item scale, it demonstrated an acceptable level of reliability ($\alpha = 0.76$). The validated, shortened version by Reynolds (1982), is a unidimensional 13-item scale using forced-choice True-False scale anchoring to assess the social acceptability of participant's answers.

Items that are phrased in an absolute manner concerning socially acceptable behaviors such as "*I'm always willing to admit it when I made a mistake*" and "*I have never deliberately said something that hurt someone's feelings*" are designated a weight of 1 if marked "True." However, items that are not absolute in socially acceptable behavior such as "*there have been times when I felt like rebelling against people in authority even though I knew they were right,*" and "*there have been times when I was quite jealous of the good fortune of others,*" are given a weight of one if marked "False." Upon summing the responses, the higher the total score suggests an increased tendency to answer in a socially responsible way.

Demographic variables. Participants responded to several demographic based questions such as gender, age, relationship status, education level, ethnicity, personal income, and state of residence. Participants were able to self-identify their gender given the options; Female, Male, Third Gender/Non-binary, Self-describe as well as the option to not say. Respondents also were allowed to self-identify their race by choosing from the options; Black or African American, Asian or Pacific Islander, White, Hispanic or Latinx, American Indian or Alaskan Native, Middle Eastern or North African, Other and prefer not to say.

Participants reported their relationship status to determine if they live with anyone and the number and age of any other residents, along with a slew of questions pertaining to the characteristics of their residence. These characteristics include their state of residence, if they rent, own, or occupy their home without payments of rent, the type of home in which they live, and then additional composition questions like number of bedrooms, bathrooms and the existence of a basement, garage, or other storage area.

Participants also reported their state of residence to determine their region within the United States. The regions were decided in accordance with the United States Census Bureau's conceptualization of the regions. The breakdown of the West region of the United States includes Washington, Oregon, California, Alaska, Hawaii, Montana, Idaho, Wyoming, Nevada, Utah, Colorado, Arizona, and New Mexico. The Midwest region comprises North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Illinois, Wisconsin, Michigan, Indiana, and Ohio. The South region, as defined by the Census, includes Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Kentucky, West Virginia, Delaware, District of Columbia, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida. Finally,

the Northeast region includes Maine, Vermont, New Hampshire, New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, and Rhode Island.

Procedure

The data for the present survey study was collected between the months March to September of 2020. There was no compensation given for completing the 20-minute survey, but respondents were given assurances that their answers would be kept confidential and were instructed to give informed consent before starting the survey. At the end of the survey, participants filled out a demographic questionnaire that included age, ethnicity, state of residence, personal income, and household composition. Participants were recruited from members and associates of the Institute for Challenging Disorganization due to their existing awareness and experience of clutter in their life and the impact it can make. During recruitment, participants were informed of the study's intentions to better understand the various psychological and emotional influences people felt during the Covid-19 pandemic and how they influenced decluttering projects around the home.

Statement of Hypotheses and Research Questions

Hypothesis I: *Regions that experienced stricter Covid regulations will experience different levels of reactance.*

Hypothesis II: *Psychological reactance will predict fear of Covid-19 scores.*

Hypothesis III: *Mastery/control scores will moderate the relationship between psychological reactance and fear of Covid-19.*

Hypothesis IV: *Action-state orientation will moderate the impact of mastery/control on psychological reactance and fear of Covid-19.*

Research Question I: Do regions of the United States that had stricter Covid regulations have

different levels of reactance?

Research Question II: What is the relationship between psychological reactance and fear of Covid-19?

Research Question III: What impact does mastery/control of a decluttering project and action orientation have on the relationship between psychological reactance and fear of Covid-19?

Results

The present study consists of four hypotheses and three research questions. The first hypothesis examined the relationship between United States region of residence and levels of psychological reactance. The second hypothesis explored the predictive relationship between psychological reactance and fear of Covid. The third and fourth hypotheses examined the relationship between psychological reactance and fear of Covid including the moderating effects of dispositional factors (action orientation) and situational factors (mastery-control of personal project).

The purpose of exploring multiple factors related to control was to evaluate the impact of successful decluttering projects on psychological reactance and fear of Covid in regions with higher levels of reactance.

Preliminary Analysis

Zero-order correlations were computed between each psychometric variable and social desirability to explore whether the inclination to offer socially desirable answers could influence participants ratings (see Table 1). Social desirability scores were significantly correlated with all psychological reactance subscales, all personal project analysis mastery-control subscale items,

and action control-hesitation. Consequently, social desirability was controlled in subsequent analysis of the research questions and hypotheses containing these variables. Additionally, Cronbach's alpha was calculated for each variable and is presented in Table 1 along the diagonal.

Table 1. Means, Standard Deviations, and Correlations with Reliability for Psychometric Scales

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Fear of Covid	15.86	5.96	[.88]								
2. Psychological Reactance	41.26	9.86	.20	[.87]							
3. Emotional Response Towards Restricted Choice	14.68	3.22	.18	.97**	[.72]						
4. Reactance to Compliance	9.95	3.37	.11	.92**	.85**	[.70]					
5. Resisting Influence from Others	11.85	3.45	.23	.98**	.94**	.85**	[.68]				
6. Reactance to Advice and Recommendations	4.60	1.82	.29	.91**	.85**	.75*	.92**	[.87]			
7. Social Desirability	6.33	2.92	.42	.68*	.64*	.66*	.65*	.67*	[.71]		
8. Action Control Hesitation	16.94	3.61	-.56	-.82**	-.77*	-.72*	-.81**	-.83**	-.84**	[.87]	
9. Mastery Control	40.77	8.07	-.60	-.78*	-.71*	-.75*	-.76*	-.76*	-.70*	.79*	[.80]

n = 156.

* $p < .05$ ** $p < .01$

Note. Values along the diagonal in brackets indicate Cronbach's Alpha.

The means and standard deviations of psychological reactance scores across the four regions of the United States are displayed in Table 2. Additionally, the results from a preliminary analysis of variance between the regions of the United States based on psychological reactance scores are presented in Table 3. Preliminary analysis indicates there are non-significant differences between the four main regions of the United States (West, South, Northeast, Midwest) based on psychological reactance scores. Since preliminary results indicate that there

were not significant regional differences in levels of reactance, initial testing of the hypotheses in the current study utilized the larger national sample of 156 participants. However, these results were nonsignificant (see appendix F), indicating that further analysis of the highest region of reactance may be useful in exploring the impact of decluttering on Covid fear. Therefore, the primary analysis utilized the sample from the West region, which displayed the highest levels of reactance.

Table 2. Mean Psychological Reactance score across US region.

Region	<i>n</i>	<i>M</i>	<i>SD</i>
West	50	43.02	10.13
South	33	39.15	8.66
Northeast	39	40.69	11.36
Midwest	34	41.35	8.59

Table 3. Fixed-Effects ANOVA results using Psychological Reactance as the criterion.

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>	partial η^2	partial η^2 90% CI [LL, UL]
(Intercept)	20658.39	1	20658.39	244.16	.000		
Region	210.17	3	70.06	0.83	.480	.02	[.00, .05]
Social Desirability	1993.43	1	1993.43	23.56	.000	.13	[.06, .22]
Error	12775.86	151	84.61				

n = 156

Note. LL and UL represent the lower-limit and upper-limit of the partial η^2 confidence interval, respectively.

Primary Analysis

Hypothesis I: *Regions that experienced stricter Covid regulations will*

experience different levels of reactance.

To evaluate the first hypothesis, a one-way analysis of covariance (ANCOVA) controlling for social desirability was conducted utilizing R-Studio. The four main regions of residence within the United States (refer to Table 2) were input as the predictor variable, and psychological reactance scores were input as the criterion variable with social desirability scores input as a control variable (see Table 3). The one-way ANOVA revealed that United States regions differences in psychological reactance levels were non-significant when controlling for social desirability, $F(1,3) = 0.83, p = 0.48$.

Hypothesis II: *Psychological reactance will predict fear of Covid-19 scores.*

To evaluate the second hypothesis, a linear regression was conducted through R-Studio to explore the predictive relationship between psychological reactance levels and fear of Covid levels in region of the United States with the highest levels of reactance while controlling for social desirability. The inputs were psychological reactance as the predictor variable, fear of Covid-19 as the criterion variable while social desirability was input as a control variable. The results are summarized in Table 4.

As displayed in Table 4, psychological reactance was not a significant predictor of fear of Covid levels ($\beta = -0.02, p = 0.86$), indicating there is a non-significant linear predictive relationship between psychological reactance levels and fear of Covid levels. However, the control variable social desirability exhibited a statistically significant predictive association with fear of Covid levels ($\beta = 0.77, p = 0.04$), indicating that higher social desirability scores are associated with higher fear of Covid levels. The overall model was marginally significant ($R^2 = 0.11, F(2, 47) = 3.002, p = 0.059$), explaining 11.33% of the total variance in fear of Covid levels.

Table 4. Regression results using Fear of Covid as the criterion

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>beta</i>	<i>beta</i> 95% CI [LL, UL]	<i>sr</i> ²	<i>sr</i> ² 95% CI [LL, UL]	<i>r</i>	Fit
(Intercept)	10.09**	[2.72, 17.46]						
Psychological Reactance	-0.02	[-0.22, 0.18]	-0.03	[-0.36, 0.30]	.00	[-.01, .01]	.17	
Social Desirability	0.77*	[0.04, 1.50]	0.35	[0.02, 0.68]	.09	[-.06, .23]	.34*	
								$R^2 = .113$
								95% CI[.00,.27]

$n = 50$

* $p < .05$ ** $p < .01$

Note. A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *sr*² represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

Hypothesis III: *Mastery/control scores will moderate the relationship between psychological reactance and fear of Covid-19.*

To evaluate the third hypothesis, a moderated linear regression was conducted to examine the predictive association psychological reactance has with fear of Covid while including a situational moderator (perception of mastery/control gained from personal decluttering project) and controlling for social desirability utilizing R-Studio. The inputs were psychological reactance as the predictor variable, personal projects analysis mastery/control as the moderating variable, and fear of Covid-19 as the criterion variable, including social desirability scores as a control. The results from the moderated hypothesis testing this hypothesis are summarized in

Table 5.

Table 5. Moderated Regression results using Fear of Covid as the criterion and Mastery Control as moderator

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>sr</i> ²	<i>sr</i> ² 95% CI [LL, UL]	Fit
(Intercept)	-37.99	[-85.23, 9.25]			
Psychological Reactance	1.30*	[0.28, 2.33]	.10	[-.04, .23]	
Mastery Control	1.07*	[0.04, 2.11]	.06	[-.05, .17]	
Social Desirability	1.10**	[0.41, 1.79]	.15	[-.01, .31]	
Psychological Reactance: Mastery Control	-0.03**	[-0.05, -0.01]	.10	[-.04, .25]	
					$R^2 = .348^{**}$ 95% CI[.09,.48]

$n = 50$

* $p < .05$ ** $p < .01$

Note. A significant *b*-weight indicates the semi-partial correlation is also significant. *b* represents unstandardized regression weights. *sr*² represents the semi-partial correlation squared. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

In introducing mastery control and a moderating interaction term with psychological reactance, the overall model now explains 34.75% of the variance in fear of Covid in the region with the highest reactance levels ($R^2 = .35$, $F(4, 45) = 5.99$, $p = 0.0006$). Furthermore, psychological reactance was significantly predictive of fear of Covid ($\beta = 1.30$, $p = 0.01$), indicating that reactance levels positively predict fear levels regarding Covid. Mastery and control gained from decluttering projects exhibited a significant positive predictive relationship with fear of Covid ($\beta = 1.07$, $p = 0.04$), implying that increased perceptions of control from a situation such as a decluttering project are associated with higher levels of Covid fear. Additionally, the control variable social desirability exhibited a statistically significant predictive

association with fear of Covid levels ($\beta = 1.10, p = 0.002$), indicating that higher social desirability scores are associated with higher fear of Covid levels.

Finally, the interaction term between reactance and mastery control displayed a significant negative predictive relationship with fear of Covid scores ($\beta = -0.03, p = 0.01$), suggesting that the interaction between these variables has a dampening effect on fear of Covid.

Hypothesis IV: *Action-state orientation will moderate the impact of mastery/control on psychological reactance and fear of Covid-19.*

To evaluate the fourth hypothesis, a moderated linear regression was conducted in R-Studio to explore the predictive relationship between psychological reactance and fear of Covid while introducing situational control (mastery and control from personal decluttering projects) and dispositional control (action- state orientation) and controlling for social desirability. The inputs were psychological reactance as the predictor variable, action control and personal projects analysis mastery/control as the moderating variables, and fear of Covid-19 as the criterion variable, with the control variable social desirability. The results from this model are presented in Table 6 (page 44).

After including both situational and dispositional control through personal project mastery and control and action-state orientation, the overall model explained 38.34% of the variance in fear of Covid scores ($R^2 = 0.38, F(8, 41) = 3.19, p = 0.01$).

However, only social desirability displayed significant predictive association with fear of Covid scores ($\beta = 1.01, p = 0.01$). Psychological reactance exhibited a non-significant predictive relationship ($\beta = 4.04, p = 0.23$). Mastery control also displayed a non-significant relationship with fear of Covid ($\beta = 4.24, p = 0.15$).

Table 6. Moderated Regression results using Fear of Covid as the criterion with Mastery Control and Action Control Hesitation as moderators

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>sr</i> ²	<i>sr</i> ² 95% CI [LL, UL]	Fit
(Intercept)	-161.01	[-430.91, 108.90]			
Psychological Reactance	4.04	[-2.22, 10.30]	.03	[-.04, .09]	
Mastery Control	4.24	[-1.63, 10.12]	.03	[-.05, .11]	
Action Control Hesitation	7.26	[-10.46, 24.98]	.01	[-.03, .05]	
Social Desirability	1.01*	[0.23, 1.80]	.10	[-.03, .24]	
Psychological Reactance: Mastery Control	-0.10	[-0.24, 0.04]	.03	[-.05, .11]	
Psychological Reactance: Action Control Hesitation	-0.16	[-0.57, 0.25]	.01	[-.03, .05]	
Mastery Control: Action Control Hesitation	-0.18	[-0.55, 0.20]	.01	[-.04, .07]	
Psychological Reactance: Mastery Control: Action Control Hesitation	0.00	[-0.00, 0.01]	.01	[-.04, .06]	
					<i>R</i> ² = .383**
					95% CI [.04, .47]

n = 50

* *p* < .05 ** *p* < .01

Note. A significant *b*-weight indicates the semi-partial correlation is also significant. *b* represents unstandardized regression weights. *sr*² represents the semi-partial correlation squared. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

Additionally, action-control hesitation was also non-significant in predicting fear of Covid ($\beta = 7.26, p = 0.41$). Finally, none of the moderating interaction returned as significant predictors of fear of Covid, psychological reactance and mastery control ($\beta = -0.10, p = 0.15$), reactance and action control hesitation ($\beta = -0.16, p = 0.43$), mastery control and action control

hesitation ($\beta = -0.18, p = 0.34$), and the interaction term between all predictors also exhibiting nonsignificant results ($\beta = 0.00, p = 0.37$).

Research Question I: *Do regions of the United States that had stricter Covid regulations have different levels of reactance?*

To evaluate the first research question, a *one-way ANCOVA*, controlling for social desirability tendencies, was conducted using R-Studio. The inputs were region of residence as the predictor variable, and psychological reactance as the criterion variable, while controlling for social desirability. The one-way analysis of variance explored regional differences based on psychological reactance levels when controlling for social desirability, and results indicate there were non-significant differences in reactance levels, $F(1,3) = 0.83, p = 0.48$.

Research Question II: *What is the relationship between psychological reactance and fear of Covid-19?*

To evaluate the second research question, a linear regression was conducted using R-Studio. Psychological reactance was input as the predictor variable with fear of Covid-19 input as the criterion variable, and social desirability was included as a control variable due to significant correlations with psychological reactance (see Table 1). The results from this linear regression are summarized below and displayed in Table 4.

Overall, psychological reactance was marginally significant in predicting fear of Covid levels while controlling for social desirability, accounting for 11.33% of the total variance in Covid fear scores ($R^2 = 0.11, F(2, 47) = 3.002, p = 0.059$). Psychological reactance levels, however, were a nonsignificant predictor of fear of Covid in regions of the United States experiencing the highest reactance levels ($\beta = -0.017, p = 0.86$), suggesting there is an inverse

relationship between these variables, but it is not a significantly predictive relationship.

Alternatively, social desirability did exhibit a positive and significant predictive relationship with fear of Covid levels in regions of highest reactance ($\beta = 0.773, p = 0.04$).

Research Question III: *What impact does mastery/control of a decluttering project and action orientation have on the relationship between psychological reactance and fear of Covid-19?*

To evaluate the third research question, a moderated linear regression was conducted using R-Studio (see Tables 5-6). The inputs were psychological reactance as the predictor variable, action control and personal projects analysis mastery/control as the moderating variables, and fear of Covid-19 as the criterion variable, including social desirability as a control variable for significant correlation with reactance, action control and mastery control.

The initial moderated linear regression model, which included only mastery control as a situation sense of control, 34.75% of the variance in fear of Covid in the region with the highest reactance levels ($R^2 = .35, F(4, 45) = 5.99, p = 0.0006$). Each term demonstrated significant predictive association with fear of Covid, psychological reactance ($\beta = 1.30, p = 0.01$), mastery control ($\beta = 1.07, p = 0.04$), social desirability ($\beta = 1.10, p = 0.002$), and the moderating interaction term between mastery control and psychological reactance ($\beta = -0.03, p = 0.01$).

After including both mastery control (situational control) and action state orientation (dispositional control), the overall model explained 38.34% of the variance in fear of Covid scores ($R^2 = 0.38, F(8, 41) = 3.19, p = 0.01$). Psychological reactance displayed a non-significant predictive relationship ($\beta = 4.04, p = 0.23$). Mastery control also revealed a non-significant relationship with fear of Covid ($\beta = 4.24, p = 0.15$). Action-control hesitation was also non-significant in predicting fear of Covid ($\beta = 7.26, p = 0.41$). Alternatively, only social desirability

showed significant predictive association with fear of Covid scores ($\beta = 1.01, p = 0.01$). Finally, none of the moderating interaction returned as significant predictors of fear of Covid, psychological reactance and mastery control ($\beta = -0.10, p = 0.15$), reactance and action control hesitation ($\beta = -0.16, p = 0.43$), mastery control and action control hesitation ($\beta = -0.18, p = 0.34$), and the interaction term between all predictors also exhibiting nonsignificant results ($\beta = 0.00, p = 0.37$).

A *post hoc* analysis of covariance (ANCOVA) controlling for social desirability compared the increase in fit between the multiple models included in this study was conducted using R-Studio. Model 2, a moderated linear regression of fear of Covid levels predicted by psychological reactance and mastery control while controlling for social desirability in the highest region of reactance levels, significantly differed from model 1, a simple linear regression where psychological reactance predicted fear of Covid scores while controlling for social desirability in the same region [$F(2,45) = 7.79, p = 0.001$]. However, model 3, which was a moderated linear regression where fear of Covid was predicted by psychological reactance and included both mastery control and action state orientation as moderators while controlling for social desirability, did not significantly improve the fit compared to model 2, $F(4, 41) = 0.60, p = 0.67$.

Discussion

The present study explored differences in psychological reactance levels across the four main regions of the United States (see Table 2). Specifically, this study assessed the association between high levels of reactance and fear of Covid-19 levels, and if regaining control through situational factors, such as a successful decluttering project, or more dispositional factors, like

valuing action-orientation would impact this relationship. Previous research has found that there are significant cultural differences between the regions of the United States (Kitayama et al., 2010). Additionally, psychological reactance may be a result of loss of control (Brehm, 1993) and that reactance levels may be associated with Covid Disregard Syndrome (Taylor and Asmundson, 2021). The disruption in daily living and imposed restrictions from the government may have contributed to the rise of psychological reactance in America. Since one of the main questions the present study explored was what the impact of successful decluttering projects for women in regions is experiencing the highest levels of reactance, only the sample from the western region was utilized for the primary analysis of this study.

The first hypothesis expected there to be significant differences in psychological reactance levels across the regions of the United States. The results were nonsignificant, indicating that the four regions do not vary as greatly as predicted when comparing reactance levels. It was hypothesized that since the different regions have previously identified cultural and psychological differences such as individualism and value placed on control and autonomy (Mondak & Canache, 2014; Rentfrow et al., 2013), that regions would vary by reactance alone during the Covid-19 pandemic. Previous research has found significant differences in psychological reactance levels across demographic characteristics such as age and ethnicity (Woller et al., 2007). In Woller et al. (2007), the average score of psychological reactance across groups was 70.54, which is higher than the sample average for the current study ($M = 41.26$). Higher scores in studies conducted before the Covid-19 pandemic indicates that personal autonomy and control may have been more important when health was not an immediate concern, which may impact reactance arousal (Park et al., 2021). In the earlier study (Woller et al., 2007), reactance levels were compared across specific demographics such as age, ethnicity,

and gender, indicating that perhaps comparing across regions was too broad and provided too much variability to detect any differences. It is plausible that such subgroups within the regions are more influential on community value placed on control, and eliciting psychological reactance may be attributed to a different characteristic or socialization effect.

Another possible explanation for the nonsignificant results for differences in regional differences in reactance across U.S. regions obtained in the present study may lie in the arousal of reactance in women. The current sample focused on women participants, who have marked lower reactance levels (Woller et al., 2007). Kray et al. (2004) identified a difference in reactance arousal between men and women in that women may only experience reactance when they possess adequate empowerment to act, thereby affirming the notion that reactance emerges when women perceive themselves as capable of reclaiming their autonomy. In the context of the Covid pandemic there were many confounding stressors (Wang et al., 2020; Fitzpatrick et al., 2020), and it is plausible that women in the present study did not feel that they could change their situation, resulting in lower and more comparable levels of reactance. Furthermore, during the Covid pandemic, reactance may not have been aroused to heightened levels in comparison to more stable times, as health related fear may act as a buffer to experiencing reactance (Hajek & Hafner, 2021).

While the results from the *analysis of covariance* were nonsignificant, reactance scores across all regions ($M = 41.26$) were higher than previous studies measuring reactance levels ($M = 34.20$, Middleton et al., 2015; $M = 3.1$, Jonason; 2007; $M = 4.02$, Hong & Faedda, 1996). This may be indicative of heightened levels of reactance during the Covid pandemic, supporting continued analysis exploring the complex relationships between reactance, fear of Covid and the

impact of dispositional and situational efforts to regain control. An alternative explanation for the nonsignificant differences is the statistical concept of the ceiling effects: where responses on a measure were so high that discrimination among respondent groups difficult (Meier, 2022). Since the levels of reactance were higher in the current study than previous studies, a ceiling effect may have impacted the ability to detect differences across the regional groups. Further analysis may uncover associations between these variables that may have been missed in group means alone. Additionally, in exploring the impact of these variables in the highest region of reactance during a time with heightened reactance across the nation, the results may hold additional value if the influences are significant and may provide information for future implementation.

Despite nonsignificant differences, the reactance scores displayed in Table 2 still present noteworthy insight into the perception of reactance and distress in regions of residence in America. The West and Northeast regions demonstrated the highest levels of reactance with the Midwest and South regions displaying the lowest. Previous research on state level response to the Covid pandemic indicated that the Northeast and some of the South states implemented the strictest response (Leins 2020), with most of the states from the South and West regions implementing the least strict response to the pandemic (Leins 2020).

It was predicted that regions with stricter Covid responses would experience different levels of reactance, due to the demonstrated community value placed on control. The results from the present study indicated that psychological reactance may be attributed more towards individual sense of control or potentially smaller, more specific identities as opposed to larger communities such as regionality. Additionally, the results from this study indicate that regions with the strictest response to the pandemic did not differ significantly in their levels of reactance,

and there is no discernable pattern in reactance scores for regions, further implying that comparing reactance levels across regions may be too generic and more specific group comparison may reveal significant differences. It is also plausible that a predicted pattern may be attributed to the impact of media on public perception of Covid response (Han et al., 2022), and the associated link with reactance.

The second hypothesis in the present study predicted that psychological reactance levels would predict fear of Covid-19 levels. Individually, the results of this study do not support this hypothesis, as psychological reactance alone was a nonsignificant predictor of fear of Covid. Additionally, social desirability had a significantly predictive relationship with fear of Covid, implying that Covid fear may be a function of social influence and acceptance as opposed to community reactance and importance of control. However, the combination of these two variables may explain fear of Covid, as the model was approaching significance. The inclusion of both reactance and social desirability helps to explain the varying levels of fear regarding Covid. These results may indicate that including additional variables may provide more insight into this relationship between community importance placed on control and Covid fear levels.

The results from the present study may suggest psychological reactance is context specific and may not be associated with the context of Covid fear, but perhaps with other impacts of the Covid pandemic, which is consistent with prior research. In Shen and Coles (2015), psychological reactance was associated with individual fear and messaging perception, indicating similar results from the present study in that reactance may be associated to certain fears and personal impacts. Alternatively, the factors that elicit the fear towards Covid may not be related to disruption of control and autonomy, but rather towards contraction and mortality

(Ahorsu et al., 2020). There were many impacts of the Covid pandemic such as fear of mortality, disruption in daily life and financial pressure (Kirzinger et al. 2020; Szkody et al. 2023). The present study aimed to understand the link between Covid fear and reactance, and the nonsignificant results indicate that Covid fear may be more associated with contraction rather than disruption in daily living, as the disruption would elicit reactance. However, in the context of the pandemic, the arousal of reactance has been linked to policies and restrictions (Hateftabar et al., 2022) as opposed to other Covid related factors. This connection may help to explain the nonsignificant association between reactance and Covid fear in that the contexts which elicit these psychological phenomena may not overlap, and that each trait has a distinctive stimulus and response with less overlap than expected.

Another finding from this study, the significance of social desirability in predicting fear of Covid, may imply that observing the community around you and perceiving high levels of fear may impact individual fear levels as a means of presenting social conformity and acceptance. This finding is consistent with previous research that identified higher social approval scores for women when compared to men (Tang et al., 2022). Since the present study consisted of women only, it is plausible that the perception of fear in the community may be a significant factor in Covid fear opposed to disruption in control. These findings may further be explained by Wheaton et al. (2021), which identified that emotional experiences may be spread socially, and in the Covid pandemic, those who are more susceptible to emotional contagion were more concerned about the spread of Covid. This relationship may help to explain the significance of social desirability in predicting fear of Covid, while psychological reactance, which is elicited through disruption in control and autonomy, was not a significant predictor.

The third hypothesis of this study expected mastery-control levels gained through personal decluttering projects to moderate the relationship between psychological reactance and fear of Covid scores. After introducing mastery-control as a means of situationally regaining control during the pandemic, the model became significant in explaining the variation in Covid-19 fear levels. Social desirability again displayed significant predictive association with fear scores, implying that social acceptance may be an important factor in understanding community levels of fear. Furthermore, after introducing the new variable to the model, reactance displayed significant predictive power regarding fear of Covid, indicating that as psychological reactance rises in a community, so does fear levels towards Covid, suggesting that one factor influencing Covid fear may be the perception of control over the pandemic. This claim is supported by additional findings from the current study, as mastery-control gained from personal decluttering projects was a significant predictor of fear of Covid levels, indicating that as mastery-control increases, so does fear levels. These findings may be evidence that when control is reestablished, communities may refocus on other factors related to Covid and fear levels may increase.

These findings build on the existing body of research regarding psychological reactance. In the first model described in the present study, reactance was nonsignificant in predicting fear of Covid levels, but once mastery-control was included in the model, reactance displayed significance. Previous research has indicated that reactance is elicited when control is lost (Wortman & Brehm, 1975; Wang & Sundar, 2022), but the findings from the current study build on the understanding of reducing reactance. The results imply that reactance may be concerned with situational perception of control as opposed to behavioral orientation towards control. Taken together the results from the present study: the significant negative impact mastery control

and the significant increase in model fit when only including mastery control, indicate that reactance and fear may be impacted more by regaining control through situational means rather than orientation towards initiating behavior. Furthermore, previous research has connected reactance to impediments of personal control (Hateftabar et al., 2022), and in introducing a method of regaining control that is not related to the Covid stressors, such as decluttering, both reactance and Covid fear may be reduced since decluttering is unrelated to the original stimuli and may not increase arousal.

Perhaps most interesting is the impact of mastery-control on the relationship between psychological reactance and fear of Covid-19. The interaction term of reactance and mastery-control displayed significant negative predictive power, indicating that the relationship between reactance and Covid fear may be dependent on the level of situational control gained from a decluttering project. Considered collectively, these findings demonstrate the importance of control in diminishing community fear. Since increasing sense of control may have far reaching psychological implications (Pagnini et al. 2016), it may be possible to placate community fear and concern regarding pandemics through regaining control through different means. While mastery-control from personal decluttering projects may be unrelated to perceptions of controlling Covid, initiatives that promote sense of control may benefit communities that value control and are particularly anxious of Covid or other pandemics, as the perception of control has a documented impact on the level of worry and well-being experienced during the pandemic (Howell et al. 2023).

The fourth hypothesis expected action-state orientation to moderate the impact of mastery-control on psychological reactance and fear of Covid. It was predicted that including dispositional control, or a tendency to be action oriented in daily tasks would improve the

influence of control gained through personal decluttering projects on psychological reactance and Covid fear levels in regions of high reactance as goal setting and maintenance has demonstrated significance in behavioral and psychological changes (Epton et al., 2017). The results from this study did not support this hypothesis, as the results were nonsignificant. However, these results may support the claim expected in the third hypothesis, indicating that control, as it pertains to reactance, is concerned with control in the situation, rather than orientation towards controlling behavior.

Alternatively, adding Kuhl's (1994) action-state orientation did improve the explanatory power of reactance levels on fear of Covid. Kuhl (1994) theory posited that action-oriented individuals are easily able to initiate work on tasks and may have an easier time completing tasks successfully. The present study expected action orientation to significantly improve the impact of a successful decluttering project as the predisposition to maintain success may improve sense of control following the project. The results from the present study were mixed in support for this claim, as none of the individual predictors of fear were significant from this analysis but the complete model was significant and explained the most variance in fear of Covid levels. However, the inclusion of action-orientation did not significantly improve the fit of the model of explaining fear of Covid in conjecture to psychological reactance. These results indicate that disposition towards control may be an important piece in understanding factors that influence community fear of Covid when reactance towards loss of control is included but may not be as impactful as situational control. A potential explanation for these findings may be that the Covid pandemic had a more significant impact on women (Surucu et al., 2021) and were more motivated to restore control and stability as the women in regions that experienced higher levels

of reactance may be more concerned with control in the situation of Covid rather than concerned with inhibitors to goal management. These findings are consistent with previous research, which found situational stimuli elicited reactance significantly more than dispositional factors (Boukamcha, 2016). Altogether, these results may indicate that community fear towards Covid may be related to the impact of the pandemic on their freedom and disruption of regular life rather than other impacts of the pandemic.

The first research question examined regional differences in the United States based on elicited psychological reactance. No significant differences were found between the four main regions of the United States (see Table 2). One potential explanation for this result is that comparing regions' psychological reactance levels were too general of grouping, as previous research has found significant differences in reactance scores in more specific comparison of demographics. In Moreira et al. (2021), significant differences were found between age, ethnicity, and gender groups. In the present study, comparisons of reactance were made between regions, which comprised of more demographic variability than previous research, indicating that reactance may be a factor of specific demographics rather than regionality, a relatively broad demographic grouping. Beyond nonsignificant differences, there were not even identifiable differences when examining reactance levels in individualistic and collectivistic regions. As the South and West regions have been identified as more individualist, but had the lowest and highest levels of reactance, respectively.

The second and third research question examined the predictive relationship between psychological reactance and fear of Covid-19. The second research question explored the relationship specifically between reactance and fear of Covid, and the results were nonsignificant. These results suggest that fear towards Covid is multifaceted, and the fear a

community may have towards the pandemic may stem from factors such as contracting the virus and health concerns. Additionally, when including mastery-control in the model, as was done to assess the third research question, psychological reactance became a significant predictor, supporting the claim that fear of Covid may stem from many factors. The impact of mastery-control on this relationship indicates that in regions where communities value control, fear levels may be related to the disruption of control and anxiety normalcy may be lost. Additionally, these results suggest that the relationship between reactance and fear may depend on the level of situational control gained from personal decluttering projects.

Analyzing the third research question, prior to introducing mastery-control, psychological reactance demonstrated a positive predictive relationship with fear, indicating that as reactance is elicited, so is fear. This finding suggests that there may be a connection between losing control and fear of Covid, in that one dimension of fear during the pandemic may be related towards returning to normal life and reestablishing autonomy, which was a documented fear during the pandemic (Fegert et al., 2020). However, once mastery-control was introduced, the relationship became negative, implying that if control is regained, both reactance and fear may diminish. Furthermore, when introducing community disposition towards action-oriented behavior, the results were insignificant, indicating that reactance and fear may be contextually elicited as opposed to community predisposition. When considered collectively, these findings may explain the lack of significant differences in reactance across regions. This could be attributed to the fact that each region experienced the pandemic under similar circumstances, thereby potentially contributing to both reactance and fear, rather than being influenced by pre-existing predispositions towards these psychological phenomena.

Additionally, when comparing the two models- the impact of situational control and the impact of adding disposition towards control to situational control- the results support the claim that fear towards Covid and psychological reactance are results of situational stressors. Despite explaining more of the variance in fear levels, only including situational regaining of control significantly improved the explanatory power of reactance on fear. These results are consistent with previous research that identified situational stimuli to be more significant in eliciting psychological reactance compared to human trait (Stein et al., 2019). Furthermore, the findings from the current study suggest that regaining control may not be context specific, as regaining control situationally was operationalized as perceived mastery-control resulting from a personal decluttering project. Decluttering may not directly impact fears regarding Covid, but improving control through these means may placate reactance levels, which can diminish other fears toward Covid.

Implications for Community Psychology

The findings from the present study have multiple implications for the field of community psychology. For instance, results imply ways to inform future community resilience building initiatives. Specifically, the findings may inform communities in preparing and responding to future crises. In the context of the Covid pandemic, for example, women faced significantly worse mental health distress throughout the pandemic (Liao et al., 2021), highlighting the significance of gender-based research on crisis response management. The significance of reestablishing control to alleviate fear identified in this study should inform future interventions for community psychologists working to build strength and resilience in communities facing adversity. The results from the current study taken together with results from previous studies indicate the importance of sense of control in reducing fear and increasing

capacity for resilience (Southwick et al., 2014). The present study implies that future interventions may benefit from incorporating measures for communities to regain a sense of control, and that the control may not need to be directly related to the disruption but may alleviate fears related to the crisis. Additionally, this study underscores the significance of understanding how gender dynamics within communities may impact community resilience. It highlights the need for community psychologists to consider gender-specific factors when designing interventions and strategies aimed at promoting resilience and well-being.

Cultural competence is another implication for community psychology based on the findings of the current study. Cultural competence is one of the foundational principles of community psychology and practitioners should be sensitive to cultural differences within communities and adapt interventions to respect and incorporate diverse cultural perspectives (Whaley & Davis, 2007). Specifically in tailoring interventions for women and gender-inclusive research. Findings from the present study highlight the importance of continued research and practices that explore the complexity of psychological factors and community characteristics in relation to the experiences of women. When the results from the current study are coupled with findings from previous research related to clutter impacts for women, decluttering continues to demonstrate positive mental health outcomes for women (Crum & Ferrari, 2019; Roster & Ferrari, 2023; Roster et al., 2016). Decluttering research continues to display value in continuing to understand the far-reaching impacts of clutter and decluttering initiatives for different populations and circumstances (Roster & Ferrari, 2023). Furthermore, community psychologists should consider tailoring programs to meet the needs and responses of women within communities and continue to take a gender-sensitive approach. Alternatively, despite

geographical and cultural differences in the regions of the United States, psychological construct may be more consistent across regions, which may inform interventions that may be applied more universally.

There are also theoretical implications from the findings of the current study. In terms of understanding the impact of control, community psychologists' research may benefit from the finding that establishing control is not as context specific as previously thought (Schouppe et al., 2014), and establishing control through more unorthodox means may still have benefit to community members. Additionally, the moderating role of mastery-control in the relationship between psychological reactance and fear of Covid suggests that control within a community play a crucial role in how individuals respond to public health crises. This finding underscores the importance of community-based interventions aimed at enhancing feelings of control and mastery, particularly in situations of uncertainty.

The current research findings have additional implications for the field of community psychology. According to Thebaud and Ruppner (2021), women feel more societal pressure to perform household duties, are held to higher standards of cleanliness than other genders and suffer more negative social consequences when they do not adhere to societal expectations. The findings from the present study indicate that decluttering may offer significant psychological relief during times of significant distress, therefore community psychologists may use these findings to promote community initiatives that support decluttering and organization efforts. These initiatives may include the development of resources, educational programs, or social support systems to help those who experience pressure to manage living spaces (McLeroy et al., 2003). By reducing the burden of housework and promote cleaner living environments, these initiatives may contribute to improved mental health outcomes for all community members.

Furthermore, the success of decluttering projects demonstrated in the current study suggests that individuals may improve their mental health by taking proactive steps to improve their control over their living environment. However, community psychologists should take into consideration the possibility of adding to the existing societal pressure women face around the house when developing future community interventions.

Limitations of Current Study

Of course, there are several limitations to the present study. The sampling methods utilized may have impacted the generalizability of the results. In using a non-random convenience sample, the sample population in this study might not be an accurate representation of a national sample, with a large majority of the sample including white, educated women. Taken together, this composition and sampling method limit the generalizability of the current results to larger populations. This sampling method also impacted the analytical capabilities of the study. Since the demographics of this sample were so skewed with 87% of the sample identifying as white, with no other ethnic group larger than 10% of the sample, 91% of the study identified as female, and 79% were college educated, comparisons across demographics were not possible for the current study.

Furthermore, the cross-sectional design of this study limits the ability to demonstrate causal relationships or track changes over time. Future research may consider a larger sampling effort utilizing a longitudinal design that is more representative of national demographic characteristics. Additionally, the small sample size may be considered a limitation, as effects and relationships may have been missed in the analysis of this project.

Another limitation of the current study stems from its archival analysis. Operationally, inclusion of more specific measures to assess variables included in this study may have improved the evaluation of expected relationships. Specifically, community disposition to retain control may be measured differently than it was operationalized in the current study. If measures were utilized to survey aspects of community control rather than achieving and maintaining goals, it could have provided a more nuanced and comprehensive understanding of the community's disposition in relation to the variables under investigation.

Furthermore, there are theoretical limitations to the current study. Psychological reactance may be more consistent in the frame of the Covid pandemic, as health related concerns has been a cited buffer to the arousal of reactance (Hateftabar et al., 2021). Since the data for the present study was collected at the beginning of the pandemic, participants may have been more concerned with the health risks of Covid, curbing the rise of reactance during this timeframe (Park et al., 2021). Additionally, reactance during Covid has mainly been associated with health messaging and mobility restrictions (Taylor & Admunson, 2021; Sakai et al., 2021).

The present study predicted a “logical leap” such that since reactance effects were elicited along with fear, health messaging and restrictions, then there may be an association with Covid related fear. This assumption may not have accounted for the context of reactance arousal. As for theoretical limitations for action control orientation, more individualist cultures place greater importance on control as a measure of success (Chipulu et al. 2014), but women may only act to regain control when they feel capable of making change (Kray et al., 2004), making disposition for taking action to maintain control insignificant in the context of Covid, a time with marked increases in learned helplessness and adverse mental health issues (Xue et al., 2023).

Future Research Directions

Future research should continue to explore the similarities and differences in the regions of the United States, particularly how culture impacts psychological behavior. The present study was an initial exploration of the relationship between regionality, disruption in control and decluttering as a means of regaining control for women during the Covid-19 pandemic. Results from the present study indicated that the regions may be more similar than different in valuing control and how these communities react to the disruption in control. However, regional differences in America may have a psychological base and these differences may impact one's quality of life. Such a possibility remains an understudied question and future research should consider exploring these differences (Rentfrow et al., 2013).

Exploring the finding that regaining control may not be context specific, and promoting control in different contexts outside the Covid pandemic may have application for future research. Communities that place greater importance on control and stability may react more intensely and may be more inclined to engage in behaviors that restore sense of control (Brehm & Brehm, 2013). Therefore, continued study on how to promote control and implement means of regaining control may provide additional insight for the future of research and action.

Another recommendation for future research is to explore the socialization effects of emotional regulation and psychological values for women. Women are socialized to maintain control over emotions that are stereotypically inappropriate for them to express, such as anger and disgust (Brody & Hall, 2010). Future research may benefit from examining the impact of this socialization on psychological well-being during times of significant distress. More broadly, future research should consider focusing on psychological impacts for women. How women and

men differ in valuing control in a situation, react to losing control, and the impact of clutter should be considered for future research.

Furthermore, future research should continue to explore the impact of decluttering in different contexts. The present study indicates that decluttering may be more impactful and have more implications than previous research suggests (Tolin et al., 2012). Clutter researchers should continue to research decluttering improves psychological processes like control and fear, and how utilizing decluttering projects as a means of reestablishing stability should be considered for future research.

Conclusion

The present study examined the differences in psychological reactance across regions in the United States during the Covid-19 pandemic, and how engaging in decluttering projects may lead to changes in thought and behavior. Data collected in March 2020 from a community sample yielded valuable insights on the similarities between regions of America, and how regaining control through various means may provide relief in times of affliction. First, reactance levels were more consistent across the nation, indicating that the main regions of the United States may be more psychologically consistent than previously indicated. Second, in the context of control, reactance levels may predict fear of Covid in regions experiencing elevated levels of reactance. Furthermore, when a successful decluttering project is conducted, the resulting improvement in sense of control may impact this relationship and placate both reactance and fear. Arguably, decluttering, and decluttering professionals coupled with community intervention expertise may provide social support and relief in times of distress.

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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](https://doi.org/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.

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Appendix C.

Little's Personal Project Analysis

Instructions: Next, rate the decluttering project you engaged in recently on the following dimensions by selecting a point on the scales below.

1. Not at all 2. 3. 4. 5. 6. 7. 8. 9. 10. Very

1. How important was the decluttering project for you at the time?
2. How much did you enjoy working on the decluttering project?
3. How difficult was it for you to carry out the decluttering project?
4. How visible was the decluttering project to the relevant people who are close to you? That is, how aware were they that you were engaged in this project?
5. How much did you feel you were in control over the decluttering project?
6. How much did you feel responsible for having initiated the decluttering project?
7. How relaxing/stressful was it for you to carry out the decluttering project?
8. How much did you feel that the amount of time you spent working on the decluttering project was adequate?
9. How successful did you anticipate the outcome of the project would be?
10. How typical was this decluttering project of you?
11. How important did the project seem to be to relevant people close to you?
12. To what extent was the decluttering project consistent with the values which guide your life?
13. How much did you feel the decluttering project would help facilitate other projects before you began?
14. How much did you feel the decluttering project would hinder other projects before you began?
15. How successful would you rate the decluttering projects so far?
16. To what extent was the decluttering project demanding and challenging to you?
17. To what extent did you become engrossed or deeply involved in the decluttering project?

Scoring: A total score is calculated by adding each item (ranging from 17 to 170). Note: 3, 7, 14 & 16 are reverse scored for factor analysis, but not reverse scored for mean difference in dimensions.

- I. Identity fulfillment: 1, 2, 10, 12, 13, 17
- II. Perceived Strain: 3, 7, 16
- III. Mastery Control: 5, 6, 8, 9, 15
- IV. Social Impact: 4, 14, 11

Little, B. R. (1983). Personal Projects: A Rationale and Method for Investigation. *Environment and Behavior*, 15(3), 273–309. <https://doi.org/10.1177/0013916583153002>

Appendix D.

Action Control Scale- Hesitation Subscale

Instruction: Below are scenarios that each describe a particular situation with two alternatives. For each scenario, please select the alternative that best represents your typical response in that situation. Note: 4, 8, 9, 11, 12 are reverse scored so higher scores indicate higher action orientation

1. When I know I must finish something soon:
 - a. I have to push myself to get started (S)
 - b. I find it easy to get it done and over with (A)
2. When I don't have anything in particular to do and I am getting bored:
 - a. I have trouble getting up enough energy to do anything at all (S)
 - b. I quickly find something to do (A)
3. When I am getting ready to tackle a difficult problem:
 - a. It is often hard for me to get the work done (S)
 - b. I usually get it done right away (A)
4. When I have to solve a difficult problem:
 - a. I usually don't have a problem getting started on it (A)
 - b. I have trouble sorting things out in my head so that I can get down to working on the problem (S)
5. When I have to make up my mind about what I am going to do when I get some unexpected free time:
 - a. It takes me a long time to decide what I should do during this free time (S)
 - b. I can usually decide on something to do without having to think it over very much (A)
6. When I have work to do at home:
 - a. It is often hard for me to get the work done (S)
 - b. I usually get it done right away (A)
7. When I have a lot of important things to do and they must all be done soon:
 - a. I often don't know where to begin (S)
 - b. I find it easy to make a plan and stick with it (A)
8. When there are two things that I really want to do, but I can't do both of them:
 - a. I quickly begin one thing and forget about the other thing I couldn't do (A)
 - b. It's not easy for me to put the other thing I couldn't do out of my mind (S)
9. When I have to take care of something important which is also unpleasant:
 - a. I do it and get it over with (A)
 - b. It can take a while before I can bring myself to it (S)
10. When I am facing a big project that has to be done:
 - a. I often spend too long thinking about where I should begin (S)
 - b. I don't have any problems getting started (A)
11. When I have a boring assignment:
 - a. I usually don't have any problem getting through it (A)
 - b. I sometimes can't get moving on it (S)
12. When I have an obligation to do something that is boring and uninteresting:
 - a. I do it and get it over with (A)

- b. It can take a while before I can bring myself to do it (S)

Scoring: A total score is calculated by adding each item (ranging from 12 to 24) to indicate action orientation. Higher scores indicate action orientation where lower scores indicate hesitation orientation.

Diefendorff, James M., Hall, Rosalie J., Lord, Robert G., & Streat, Mona L. (2000). Action-state orientation: Construct validity of a revised measure and its relationship to work-related variables. *Journal of Applied Psychology*, Vol 85(2), 250-263. doi: <https://dx.doi.org/10.1037/0021-9010.85.2.250>

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

Appendix F.

Table 7. Regression results using Fear of Covid as the criterion

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>beta</i>	<i>beta</i> 95% CI [LL, UL]	<i>sr</i> ²	<i>sr</i> ² 95% CI [LL, UL]	<i>r</i>	Fit
(Intercept)	11.93**	[7.84, 16.02]						
Psychological Reactance	0.07	[-0.03, 0.17]	0.11	[-0.06, 0.28]	.01	[-.02, .04]	.14	
Social Desirability	0.18	[-0.18, 0.53]	0.08	[-0.09, 0.25]	.01	[-.02, .03]	.13	
								<i>R</i> ² = .027 95% CI [.00, .09]

n = 156* *p* < .05 ** *p* < .01

Note. A significant *b*-weight indicates the beta-weight and semi-partial correlation are also significant. *b* represents unstandardized regression weights. *beta* indicates the standardized regression weights. *sr*² represents the semi-partial correlation squared. *r* represents the zero-order correlation. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

Table 8. Moderated Regression results using Fear of Covid as the criterion and Mastery Control as moderator

Predictor	<i>b</i>	<i>b</i>		<i>sr</i> ²	<i>sr</i> ²		Fit
		95% CI [LL, UL]			95% CI [LL, UL]		
(Intercept)	30.64*	[5.33, 55.94]					
Psychological Reactance	-0.20	[-0.75, 0.35]		.00	[-.01, .02]		
Mastery Control	-0.41	[-0.98, 0.16]		.01	[-.02, .05]		
Social Desirability	0.10	[-0.26, 0.46]		.00	[-.01, .01]		
Psychological Reactance:Mastery Control	0.01	[-0.01, 0.02]		.00	[-.02, .03]		
							<i>R</i> ² = .074*
							95% CI[.00,.14]

n = 156

* *p* < .05 ** *p* < .01

Note. A significant *b*-weight indicates the semi-partial correlation is also significant. *b* represents unstandardized regression weights. *sr*² represents the semi-partial correlation squared. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.

Table 9. Moderated Regression results using Fear of Covid as the criterion with Mastery Control and Action Control Hesitation as moderators

Predictor	<i>b</i>	<i>b</i> 95% CI [LL, UL]	<i>sr</i> ²	<i>sr</i> ² 95% CI [LL, UL]	Fit
(Intercept)	-48.30	[-187.11, 90.50]			
Psychological Reactance	1.65	[-1.54, 4.84]	.01	[-.02, .03]	
Mastery Control	1.64	[-1.47, 4.76]	.01	[-.02, .03]	
Action Control Hesitation	4.40	[-3.81, 12.61]	.01	[-.02, .03]	
Social Desirability	0.02	[-0.36, 0.40]	.00	[-.00, .00]	
Psychological Reactance:Mastery Control	-0.04	[-0.11, 0.03]	.01	[-.02, .03]	
Psychological Reactance:Action Control Hesitation	-0.11	[-0.29, 0.08]	.01	[-.02, .03]	
Mastery Control:Action Control Hesitation	-0.11	[-0.29, 0.07]	.01	[-.02, .04]	
Psychological Reactance:Mastery Control:Action Control Hesitation	0.00	[-0.00, 0.01]	.01	[-.02, .04]	

$R^2 = .104^*$
95% CI[.00,.16]

$n = 156$

* $p < .05$ ** $p < .01$

Note. A significant *b*-weight indicates the semi-partial correlation is also significant. *b* represents unstandardized regression weights. *sr*² represents the semi-partial correlation squared. *LL* and *UL* indicate the lower and upper limits of a confidence interval, respectively.