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# **The Generational Stratification of Ecological Anxiety**

Jack Wilde

A senior thesis  
submitted in partial fulfillment  
of the requirements for the  
degree of Bachelor of Arts

Environmental Program

Rubenstein School of Environment & Natural Resources

Honors College

The University of Vermont 2022

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***ABSTRACT:***

The following undergraduate senior thesis focuses on the impacts of ecological anxiety within the 21st century—specifically, the non-uniform mental health consequences of climate change across multiple age demographics ranging from Millennials to Baby Boomers. To be precise, this research asks which of these two generations most acutely feel the cognitive impacts of climate change awareness and climatic experiences, as well as how these consequences manifest in relation to multiple distinct socioeconomic factors. Ecological anxiety represents a newfound dimension of the climate conversation, as mental and spiritual wellbeing are threatened by oncoming climate change in tandem with natural and built environments relied upon by humans. This research intends to analyze distinctions across generations regarding concentrations of & responses to ecological anxiety. I initially hypothesized that younger generations would be more susceptible to the condition compared to older adults due to newfound contemporary focus on the consequences of climate change in schools and through media. I administered a closed-form questionnaire set up through QualtricsXM and distributed it through multiple channels, ranging from physical QR codes to social media outlets (alongside entry into a raffle for a \$50.00 Amazon gift card in order to incentivize participation), in order to assess responses to ecological anxiety across age demographics. Quantitative indices corresponding to ecological anxiety within the survey include awareness of ecological degradation across mediums of communication & information, relative proximity to natural areas, history in relation to extreme climatic events, and overall metrics of satisfaction as quantified on a numerical scale. This research will contribute to an improved understanding of the psychological impacts of climate change, substantiating our knowledge of those most susceptible to mental health conditions. This study is centered on the civilian experience of climate change in America, and aims to enhance collective understanding of at-risk populations regarding the mental health impacts of climate change. For the sake of clarity, climate change anxiety constitutes the primary characteristic measured, but ecological degradation resulting from said climatic events & processes are also considered as sources of potential anxiety.

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***INTRODUCTION:***

The term “eco-anxiety,” denoting “a chronic fear of environmental doom” (American Psychological Association, 2017), is a contemporary mental health subject formally recognized and researched past the early 2000s. Regardless of its history, the widespread impacts of climate change facilitate the development of ecological anxiety across the globe. Unique to this affliction is the potential for symptoms to vary between individual cases. Depending on multiple variables, including the severity of disasters, ecology of affected areas, community & administrative responses to climatic events, and the unique psychological makeup of all individuals, indicators of the condition may vary between cases. Just as climate change will impact all life on Earth to varying extents, so too will the knowledge of said impending consequences impact the mental health of all of humanity.

Indeed, ecological anxiety represents a pressing issue with consequences concerning the psychiatric wellbeing of citizens around the globe. As such, understanding the malleable nature of how it stands to manifest may represent the most important dimension of the conversation, despite being among the most under-researched. Variance regarding how individuals experience and react to climate change will only become further exacerbated with oncoming generations experiencing an entirely distinct natural world and political climate pertaining to the issue than that of their predecessors. One could already observe such distinctions between generations such as the Baby Boomers and the Millennials, both having been raised in distinct climates surrounding these challenges, figuratively and literally.

This research addresses the question: how do different generations experience ecological anxiety in terms of its prevalence & intensity when compared to one another? As alluded to previously, researchers within the field have focused on uneven susceptibility to the condition among various social groups, yet many of those studies were centralized around specific

conditions such as insomnia or Post-Traumatic Stress Disorder (PTSD) (Gifford & Gifford, 2016), or paid little attention to age aside from the increased vulnerability of children and adolescents (Burke, Sanson & Van Hoorn, 2018). I aspire to bridge that gap of understanding with the explicit goal of addressing age as a factor in one's susceptibility to ecological anxiety and subsequent eco-grief.

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## ***LITERATURE REVIEW:***

### ***I. Conceptual Introduction***

The impacts of climate change on global ecosystems become clearer amidst continued levels of industrial production and growth. Overt physical processes such as increased rates of wildfire in arid locations with reduced vegetation (ex. the western coast of Northern America), dwindling forest cover due to the commoditization of timber, and oceanic acidification increasing the pH values of Earth's water prompt research into the rates of environmental change experienced during the 21st century. Moreover, traceable physical phenomena and trend charts that illustrate climate trends ensure increased awareness of the physical implications of climate change.

However, while concern for nature's wellbeing has been documented since the 19th century by the likes of Muir and Thoreau, research and insights regarding the impacts of the climate crisis are far more contemporary by comparison. Of course, climate change was not necessarily a high-priority issue for much of the world until very recently; it took until June 23, 1988, for Dr. James Hansen's testimony before the U.S. Senate Energy and Natural Resources Committee for climate change to become a common topic in American political discourse, after all. Moreover, early research into the climate crisis failed to consider its mental & psychological impacts when first studying the biophysical ramifications of increased climate. The implications of "eco-anxiety" are of particular interest here, insofar as studies regarding said mental health impacts are becoming increasingly significant as more psychologists & climate scientists recognize the legitimate threat such reactions represent to human wellbeing.

It is crucial to once again note that responses to environmental trauma and awareness of ecological degradation fail to manifest uniformly—a result of the variable nature of human circumstance and perspective in the midst of both the climate crisis and the events caused by climatic trends. Some may experience acute stress and anxiety in relation to the latest news on the subject and develop symptoms. Conversely, those having directly experienced climate related disasters may undergo widely variable psychological responses (and that is without considering the varying types & nature of contemporary climate disasters as having an impact on the perspectives of those affected).



Ecological anxiety, though perhaps more prevalent in select population demographics such as children, women, the elderly and those lacking effective climatic infrastructure, nonetheless has the potential to arise in anyone, either due to direct experience of a natural disaster or second-hand exposure and awareness. This can come in the form of educational insights, media coverage, administrative & federal addresses, or even word of mouth within a community or support network. Alternatively, it can manifest as a response to trauma, reflecting both the deadly nature of the climate crisis and its ongoing progress. However anxiety surrounding climate change arises, cases can be just as legitimate regardless of whether or not one has stood in the path of a cyclone.

The distinction between these modes of exposure also inform the symptoms experienced: PTSD and insomnia are often cited as common in the wake of climatic events. Conversely, awareness as opposed to experience of climate change presents its own set of associated symptoms: panic attacks, dietary changes and even depression are all reported responses to anxiety resulting from knowledge of the climate crisis. In the wake of climatic events, social cohesion is often tested as well, which may give way to different sources of violence and aggression, such as resource shortages or even domestic abuse. Anxiety after the fact often manifests as unrest, while distrust and fear are common prior to such events, as awareness of the climate crisis contrasted with widespread social apathy may facilitate the development of the aforementioned unrest in anticipation of climate change related damages.

Effectively, ecological anxiety constitutes a highly variable field of research due not only to the varying conditions surrounding individual experiences related to climate change (i.e. whether their experience was direct or indirect; the ecosystems they situate themselves within; etc.), but also inconsistent reactions to trauma & stress amidst those exposed.

Variability is further compounded by the impacts of generational stratification—while location and conditions have significant influence over the individual experience relating to climate change, so too does the relative amount of perspective available to the individual. While children and adolescents are being raised in a society that acknowledges climate change, many older individuals may still recall a past where worries about the health and wellbeing of nature were far less publicly pronounced. To that end,

there may be a significant difference regarding the perception of climate change, as well as and subsequently experienced anxiety resulting from climatic events. As such, this literature research and review serves to inform the progression of the field of ecological anxiety, exploring both its progression from fringe-relevance to prominence in collective discourse and common trends observed within the field's writing.

## *II. The Literary Gap*

Despite growing interest in the subject, researchers openly acknowledge the deficit of research conducted regarding “eco-anxiety” (Pihkala, 2018). While the field of psychiatry has recently begun to acknowledge climate change as a source of mental disorders, ongoing consequences relating to vulnerable biological subjects and communities necessitate further investment (Cianconi, Betrò & Janiri, 2020). Though the American Psychological Association has defined the term, said definition is entirely contemporary—despite there being concern as far back as the 1970s, the organization waited until 2017 to provide a legitimized definition of the condition. This delay may have been in part due to a lack of consensus from researchers within the field regarding not just the impacts of the condition, but also the terminology surrounding it. Dr. Pihkala recognizes this barrier, commenting on the polarizing implications of the “eco” prefix, as well as alternatives such as Daniel Goleman’s use of “eco-angst” as an alternative (Pihkala, 2018). In order to understand the progression of the terminology to its contemporary state & relevance, it is crucial to observe the trajectory of research and writing surrounding ecological anxiety tracing back to its roots in published media.

### *Early Writings*

Early efforts that promoted environmental awareness focused on the physical health impacts of ecological disturbances as opposed to mental health. The advent of COVID-19 and declines in reported mental health figures have certainly been crucial in pushing the importance of mental wellbeing; one might argue that the contemporary prominence of ecological anxiety may be in part due to our transition towards a society more concerned with psychosocial wellness in the wake of recent lows in perceived mental health (Adams-Prassl, Boneva, Golin & Rauh, 2022). Despite long standing knowledge that mental health constitutes another dynamic process functioning within the interrelationships of an ecosystem (Wilkinson & O'Connor, 1982), it has long since been lamented that mental health implications of climate change are under researched when compared to the physical implications of climatic events. The aforementioned article is particularly interesting due to its utilization of the term “Ecopsychiatry” as a

catch-all for the field of research—this relates to the aforementioned difficulties surrounding uniform terminology within the field.

Though discourse regarding environmentalism was primarily dominated by concern over physical impacts, proponents of the mental health dimension of climate change did exist in this formative time for the wider social movement. Researchers such as psychoanalyst Harold F. Searles put forth early hypotheses as to mankind's relation to the environmental crisis from a psychological perspective, offering theories as to the "pervasive apathy" frequently manifesting in the form of unconscious feelings and or attitudes (Searles, 1972). Such introductory works were intriguing due to their foundations within the field of psychiatry—a discipline which provided a baseline for addressing the reasons as to why said mental responses were occurring. Searles posited that apathy in relation to ecological anxiety was a means of ego defense that allowed individuals to cope with oncoming anxiety and stress in an unconscious manner. This approach to dealing with environmental trauma, however, would become far more difficult to indulge as the subject came further into mainstream focus.

### *Turn of the Century*

Philosopher Glen Albrecht, a prominent advocate and researcher within the field, leveraged his familiarity with both the existential aspects of ecological anxiety and familiarity with efforts towards sustainability in order to create a newfound distinction for the condition: *solastalgia* (Albrecht et al., 2007). The term specifically denotes distress due to an inability to find comfort in one's environment amidst ongoing destruction. Solastalgia represents a dimension of the conversation reminiscent of yet distinct from ecological anxiety—it specifically concerns individuals having already experienced the debilitating impacts of climate change, as opposed to all those directly or indirectly impacted. Such distinctions in terminology combined with a non-uniform adherence to specific turns of phrase within the community have made it more difficult to properly push for further research and action, as many are left with an unclear understanding of the scope & significance of the diction. Even Dr. Pihkala himself

fluctuated with his choice of terminology, eventually adopting “ecological” as opposed to “environmental anxiety” for ease of understanding.

### *Contemporary Understanding*

A significant portion of the research and writing surrounding ecological anxiety is relatively contemporary, with many papers having been published past the 2010s in comparison to the years leading up to the turn of the century. Even still, many within the field continue to recognize a need for research regarding the dynamics of age and individual responses to ecological grief. Indeed, a majority of studies surrounding the mental health implications of climate change focus on adult participants as opposed to children & adolescents (authors such as Hickman leverage the term “young people”). Moreover, the insights of children are often obscured as their words and perspectives are frequently filtered through older researchers, leading to heightened disparities of representation (Hickman, 2020). Of course, adolescents (typically understood as 10-19 years of age) and “young people” may be further along in transitioning into adulthood such that their viewpoints may be clearly articulated.

In any case, this heightened interest in younger perspectives on climate change anxiety reflects the substantial implications of being raised within a society with little to no adequate means of slowing self-induced destruction (i.e. they’re bound to be some of the most anxious individuals regarding these processes). It is important to note that while mental health being susceptible to change due to climatic processes & events is indeed a significant revelation going forward, said insight is far more significant for adolescents and children. For younger individuals raised in an environment of far more concentrated ecological anxiety, the impact is compounded—authority figures, educational institutions and media sources may all stand to refract said anxiety through adolescent exposure, resulting in far more acutely experienced mental health complications. This recognition of the exponential increase of anxiety amidst younger individuals serves as the justification for further research, while also informing the tactics & solution methods required to address said anxiety at early stages of life.

Many writers on this subject focus on the widespread mental health implications of the conditions accompanying climate change. As such disasters grow more numerous and potentially affect larger populations of people, it is crucial to create material that allows for others to recognize and understand the terminology (appropriate, considering the malleable history of terms within this field). Writing regarding the subject is often made to not only justify the importance of its own research, but also relay solutions to observed problems across distinct social sectors, seeing as the issue is so inherently broad. While this certainly promotes further writing regarding the establishment of support networks for ecological anxiety, this also consigns much of the work to serving as almost introductory material, requiring sections dedicated to establishing terminology & subject matter (of course, the somewhat vague nature of eco-anxiety regarding its impacts does not help in this matter).

Regarding symptoms, ecological anxiety is seen to have multiple associated mental health responses indicative of increased stress related to climatic events. Some cases have shown dramatic responses to climate change awareness or experiences, including panic attacks and insomnia (Nobel, 2007). It should be acknowledged that the emotional responses experienced in the wake of solastalgia also constitute a symptom of ecological anxiety. PTSD as well is entirely too common in the wake of climatic events—a condition that itself lends to depression, potential substance abuse and aggravation (Gifford & Gifford, 2016). In the wake of 2005's Hurricane Katrina, for example, a marked increase in recorded incidents of PTSD and depression among those living in affected areas was accompanied by doubled rate of suicide and suicidal ideation (American Psychological Association, 2017). It cannot be denied that those experiencing climate change firsthand experience severe mental health complications alongside the process of physical displacement and potential bodily harm.

Yet potentially more common than explicit symptoms is a state of unconscious anxiety experienced by many individuals yet to properly come to terms with the consequences of climate change. Inaction and ignorance is not always a choice, but for many people living outside areas immediately impacted by climate change, awareness of oncoming danger is not received well. More often than not, it is not received at all in favor of a “business as usual” approach to the issue. Various reasons exist to

justify inaction regarding climate change (Gifford, 2011), including environmental numbness, optimism bias, perceived risks, sunk costs and more. In essence, it is just as if not more common to, rather than exhibit clear symptoms, restrain one's sense of anxiety in order to preserve the ego and one's sanity amidst contemporary processes that threaten Earth's stability.

Of course, said symptoms are not experienced uniformly across the population. Researchers often reference multiple disparate social groups when discussing ecological anxiety, but a specific few are often brought up in relation to increased vulnerability: children, women, the elderly, those with prior mental conditions, the economically disadvantaged/homeless individuals, and first responders are all cited as having a greater susceptibility to adverse mental health impacts; this extends to communities either living in areas frequently impacted by climatic events or sustenance communities reliant on the natural world for their livelihoods (Dodgen et al., 2016). Community vulnerability to both climatic events and mental health impacts is of particular note insofar as it is not exclusive to areas with high incident rates or those reliant on the natural world. Vulnerability to climate impacts is exacerbated by outdated infrastructure as well as social stressors; lacking medical care coverage, failing extreme weather warning systems & storm drain measures...these factors result in populations with a reduced ability to confront the physical and emotional consequences of climate change. The same can be said for other socioeconomic and psychosocial factors, as failing social cohesion and inequitable conditions/social services undermine cooperative efforts well in advance of climatic events (Clayton, Manning & Hodge, 2014).

As for select population demographics, researchers often reference the high vulnerability of children and adolescents in relation to ecological anxiety. Younger individuals are often at risk of developing sleep and attachment disorders alongside conditions such as PTSD, depression or even newfound phobias—these in turn impair the development of children and adolescents, hampering academic capabilities and learning capacities (Burke, Sanson & Van Hoorn, 2018). The true point of interest here is that children, while being susceptible to said impacts, are also more likely to carry said impacts over into adult life, potentially inhibiting their development on multiple fronts (Norris et al., 2002) (to be fair, Norris et al. found that impairment is also more likely when coming from a developing

country, furthering the stance that lackluster social services and cohesion also promote the development of these conditions). These findings do well to explain the attention many researchers within this field allocate to children and adolescents, as they stand to be impacted the most not only in the moment, but also going forward into life. Women also receive a substantial amount of attention, though this is partly due to their being more prone to mental health conditions and issues than men (Gifford & Gifford, 2016).



### ***III. Medical Implications***

Common to almost all research regarding eco-anxiety is discussion surrounding the medical implications of the condition—likely done in part to disprove those unwilling to recognize the condition as truly severe. Ultimately, though mental health (or “mental hygiene” during the concept’s early inception) was an idea initially appearing in English literature in the mid-1800s, technical references to the terminology are not at all common prior to 1946—a timeframe coinciding with the inception of the World Health Organization (WHO) (Bertolote, 2008). Much like ecological anxiety itself, mental health as a concept was not effectively explored or researched for long after its inception. It is only when credence has been provided to the importance of mental health through public campaigns on conditions such as depression and anxiety that the public at large has been receptive to research. As such, it is almost routine within writing on ecological anxiety that legitimate conditions are raised as consequences of unchecked anthropocene development facilitating climate change.

#### *In the Wake of Climate Events*

After experiencing the impacts of climatic events, individuals are susceptible to far more than physical harm and displacement as a result of the lingering trauma caused by climate disasters. Trauma may be rooted in a fear of once again experiencing such events, or perhaps mental hangups are based upon feeling unsafe in the wake of widespread destruction. Conditions typically manifest after initial reactions of generalized shock and grief, ultimately giving way to depression, despair, and even Post-Traumatic Stress Disorder (PTSD) (Gifford & Gifford, 2016). Moreover, PTSD is a condition known to promote further anxiety and depression, as well as substance abuse and increased violence. Many of these conditions have lingering impacts on those afflicted, such that symptoms and altered behavior may continue for long periods of time after the initial environmental disturbance. Other research links exposure to climate change events to weakened immune systems due to acute stress levels (American Psychological Association, 2017)—yet another condition with widespread implications beyond initial inception (in this case, weakened immune response systems may leave individuals at greater risk of

infection due to an outside agent). Initially reported in 2017 (Clayton et al., 2017), said findings are worth considering in relation to other studies having found a link between immune system activity and emotional state.

Ann G. Thoma, for instance, developed a model of physiological processes and corresponding behavior meant to simulate common pathways to immune system impairment (Ann, 2011). It specifically details how the consumption of carbohydrates or stimulants as means to improve serotonin and cope with anxiety and/or stress establishes self-reinforcing patterns of behavior that promote rather than quell the aforementioned states. Such behavior may be expected in the wake of climatic events, as substance abuse post-trauma is relatively common in relation to natural disasters. Ultimately, said behavior may contribute to heightened Cortisol levels (the primary stress hormone) within individuals, leading to potential damage for brain structures and the internal balance of one's immune system. Work done by other researchers indicates that anxiety as opposed to anger has greater influence over inflammatory activity within the body (Moons & Shields, 2015). Emotionally-induced inflammatory responses (in this case, prompted by anxiety) represent one of many significant challenges regarding both the mental and physical wellbeing of those made to experience the climate crisis directly—however, that does not mean that only those who go through climatic events may develop mental health conditions.

### *Second-Hand Awareness*

Whereas realized conditions such as PTSD reflect the experiences of those who have experienced the debilitating impacts of climate change firsthand, that is not to say that climate change cannot impact the mental health of individuals before an apparent experience. Many researchers actually give greater credence not to mental health impacts experienced in the wake of disaster, but rather those impacts occurring simply due to awareness of ecological degradation (this idea is at the very core of the study of ecological anxiety). Some researchers have posited that observed “habitual ecological worrying” in preparation for climatic events represents an adaptive response mechanism to the changing environment (Verplanken & Roy, 2013). Effectively, the stimulus being responded to is simply awareness of the risks

inherent to the contemporary climate crisis, as responses take the form of social behavior that may potentially evoke change through collective engagement (effectively making said course of action a “social adaptation” designed to assist the longevity of our collective way of life).

In terms of responses to said ecological awareness, conditions vary greatly between individuals. Many have been prone to self-report conditions such as panic attacks, insomnia, obsessive thinking, and even changes in appetite (Usher, Durkin & Bhullar, N, 2019) in the wake of thinking about climate change (with none of them being too outlandish, either—sleep deprivation and extreme cases of anxiety such as panic attacks have been observed in the wake of disaster events as well). While such insight does showcase the importance of further research into the conditions related to ecological anxiety, it comes with the unpleasant realization that said research is necessitated by the breadth of forms through which the condition may manifest. This variance may even detract from efforts to find solutions within the field, in that consistent symptoms and responses are not inherently easy to come across. Again, said variance is ultimately the result of the multiple means through which eco-anxiety may be cultivated. In summary, part of the difficulty underlying ecological anxiety’s struggle to reach mainstream relevance comes from the staggering diversity of both the means through which it is cultivated and conditions.

### *Solastalgia & Existential Crises*

Returning to Glen Albrecht’s work, solastalgia represents a unique dimension of ecological anxiety in that it specifically manifests as a response to gradual changes across a familiar landscape, hence its status as antithetical to the positive emotions elicited by sensations of nostalgia as solace is stripped from these natural spaces (Albrecht et al., 2007). To borrow another one of his terms, the somaterratic (Body-Earth) changes to the landscape ultimately facilitate psychoterratic (Psyche-Earth) responses among those living within such spaces. Inherently speaking, these psyche-based responses are far less inherently visible than the physical impacts of climate change. Moreover, their variability means that the degree to which they manifest within individuals is subject to fluctuation, ultimately making such phenomena seem far more individualistic than they actually are. Both disasters and gradual changes to

one's environment constitute grounds for mental health complications, and that's without discussing the multiple types of climatic events or community models that may inform said responses (Clayton, Manning & Hodge, 2014). In truth, a wide array of social phenomena and behaviors are informed by ecological anxiety to the degree of influencing our collective response to climate change.

Of particular note is the condition of "socially constructed silence," which is a term representative of the social contract in relation to ecological degradation. Essentially, difficult to reconcile problems and challenges may disturb individuals within a social group to the point where the collective determines that the course of action is to avoid discussing said problems (Pihkala, 2018). Renée Aron Lertzman's stance in "environmental melancholy" builds on this dynamic, positing that individuals undergo a form of anticipatory mourning for what they are soon to lose, effectively trying to break down the emotional connections they hold in order to avoid suffering due to their loss (Lertzman, 2015). Individuals often also experience existential crises on the grounds of having an unclear sense of purpose beyond death—whereas many take comfort in the notion that life continues irrespective of an individual's death, the threat of climate change represents a means of upending the cyclical nature of life through widespread resource deprivation and climatic destruction. Ultimately, though many writers and researchers within the field have sought to bring prominence to the overt mental health impacts of climate change, oftentimes their impacts are broader than we might possibly imagine.

While the mental health implications of climate change are doubtless important to explore on an individual level, ultimately, humans constitute a social species heavily reliant on gatherings and adverse to isolative practices. To suggest that the mental health implications of climate change fail to impact wider social processes is to discount the impact humans have on one another.

#### ***IV. Inequitable Distribution of Vulnerability***

An additional running theme within works pertaining to eco-anxiety concerns the uneven distribution of susceptibility to the aforementioned mental health conditions, particularly in the case of those most marginalized across society (Hayes, Blashki, Wiseman, Burke & Reifels, 2018). While groups falling into this category may vary, the trend across literature within this field typically manifests in the form of some degree of recognition of the socially and environmentally mediated factors that make particular demographics more vulnerable to said mental health afflictions. In many instances, said distinctions are made in reference to specific populations and cultures, such as indigenous communities and those otherwise dependent on the natural environment for resources and wellbeing (American Psychological Association, 2017). To this end, eco-anxiety may stand as a cornerstone of a newfound dimension of environmental justice, insofar as those impacted most severely by eco-anxiety are correlated with those most routinely marginalized by society.

#### *Age Distribution & Distinctions*

In terms of distinctions observed between generations, it is common within this field of research to acknowledge the increased vulnerability of children, though that does not discount other groups that are potentially at risk, such as women and the elderly (Gifford & Gifford, 2016). This was already apparent in a physical sense: the World Health Organization credits more than 88% of the existing burden of disease attributable to children under 5 years old (Burke, Sanson & Van Hoorn, 2018). However, the mental and emotional implications of climate change awareness regarding development are potentially immense for children and younger individuals, representing a youth and/or life crisis intrinsically linked to developmental psychology (Pihkala, 2020).

Reactions to ecological anxiety exist on a spectrum for all age groups, ranging from mild feelings of discomfort and upsetness to significant or severe reactions. This includes everything from older individuals experiencing grief and/or shame regarding their children & grandchildren to a loss of faith in authority figures & subsequent behavioral shifts, such as avoiding having children or committing to less

flight mileage (Hickman, 2020). In all, the apparent variability of symptoms and responses to ecological anxiety is effectively informed by deviations in circumstance, specifically regarding the critical determinants of social, economic & physical systems (Obradovich, Migliorini, Martin & Rahwan, 2018). Said understanding is enhanced through recognizing how the social disparities of health leave certain communities and population demographics more vulnerable to climatic events and mental health consequences. As alluded to previously, infrastructure regarding health services and social cohesion serve to strengthen communities in the face of climate change. Federal efforts to marginalize certain demographics and segment society must then play into vulnerability to climatic events. Hurricane Katrina stands as a good example of disparities regarding federal efforts to provide relief and zoning in the interest of segregation, but that is just one prominent example amidst hundreds of unreported stories.

## *V. Solutions & Reformation*

In recognizing eco-anxiety as a potential threat on multiple health fronts, it is a running trend among authors to formulate potential solution approaches to oncoming mental challenges presented by climate change, either by recommending direct action or through reframing the discussion. Oftentimes, discussion surrounding the best course of action becomes complicated due to the variable nature of responses to ecological anxiety. The creation of infrastructure and support networks dedicated to addressing ecological anxiety becomes far more arduous and complicated without a clear condition to address, after all. As such, many researchers take the position of advocating for increased education and communication surrounding the topic as opposed to hardline legislation meant to create newfound medical plans or curb the oncoming climate crisis. It is disappointing to think that the majority of work surrounding ecological anxiety in the future is adaptive rather than mitigative, but insofar as the mental health impacts of climate change continue to surface, a response must be reached in order to adjust to said newfound aspect of daily contemporary life.

### *Resilient Social Networks & Communities*

One of the foremost solutions posited by researchers on this topic concerns building greater resilience through social networks and communities (American Psychological Association, 2017). Whereas it is commonly pushed by actors with vested interests that climate change and environmental decay are ultimately individual problems rooted in the choices of the consumer, ultimately, our ecological footprint comes from a community rather than one person alone. Everything citizens rely upon and are relied upon to produce constitute part of the equation of how we may address climate change. As such, creating communities that can be sufficient in the face of disasters and provide support for those within them in the wake of loss represents a crucial endeavor going forward that may manifest in multiple ways. Beyond unified disaster response planning, the reduction of disparities as well as the equitable distribution of resources is emphasized as crucial to the establishment of resilient communities (Clayton et al., 2017). Furthermore, community action in the form of engaging members, increasing cooperation and providing

opportunities to contribute are just as if not more central to promoting resilience. It is through the establishment of support networks with the best intentions for both individuals and community members in kind that action and energy might be put towards collective betterment before individual advancement, as it stands in contemporary capitalism.

An interesting dimension of the conversation comes through the role of faith & religion in addressing existential concerns rooted in climatic events. Communal life as experienced in faith communities present safe spaces for individuals to process traumatic events and complex feelings, whereas rituals engage the body and mind in the company of others (Pihkala, 2018). Oftentimes, dealing with existential questions prompts engagement with ideas far larger than individuals (i.e. religion), and in turn, engagement with spirituality and constructive questioning & processing helps to deal with said existential questions. In effect, there is a spiritual perspective to be taken when addressing ecological anxiety insofar as it functions as another medium to process one's emotions and experience much needed societal cohesion.

Yet while the cultivation of social emotional resilience is doubtless crucial to weather the oncoming storm, other avenues of action exist within the collective space that may assuage anxiety related to oncoming climate change. UVM alumni Isabel Grace Coppola's research suggests that action based around evoking positive communal and environmental changes effectively serves as an antidote for some of the mental health conditions discussed previously (Coppola, 2021). This conclusion makes sense when considered alongside the interpretation of scope for an average young adult. Entering into higher academia leads many to become far more familiar with entrenched power structures within their home countries, if not the world, and can potentially leave individuals uncertain as to the means through which they can create positive change. At this local organizational level, many feel a sense of efficacy within communities to the extent that they are able to act appropriately within their respective spheres of interest. Such efforts may contain overlap with educational & outreach efforts with a similar intention to assuage sentiments of ecological anxiety.



*Educational Solutions*

While resilience through social networks & communities is one common suggestion, others champion alterations to methods of teaching environmentally concerned subjects, the suggestion being that the awareness and potential anxiety accompanying an informed position is preferable to denial efforts, insofar as it may lead to a greater capacity for addressing underlying concerns (Pihkala, 2020). This represents an intuitive solution approach insofar as it also serves to sustain further research into the effects of eco-anxiety while also offering a potential solution through awareness of the condition(s) and accompanying support networks. Moreover, understanding the effect to which exposure to climate change processes impacts the development of children and adolescents remains a critical component to our developing understanding of ecological anxiety. Research has been conducted regarding the relation between minors and adults regarding ecological anxiety, yet little to no outreach exists in common newspaper narratives and the like regarding suggestions for parents beyond an authoritative approach (Benoit, Thomas & Martin, 2021). The present has an unsustainable model of climate education that leads to adultified children taking on more than past generations and ill-informed parents pursuing parenting tactics without the informed opinions of researchers at their backs. As such, experimenting with the nature of our education regarding the environment to foster more hope, awareness, and informed individuals may be the key to effectively reducing anxiety experienced in relation to the natural world.

UVM alumni Maya Bostwick's work regarding the psychosocial impacts of climate change education openly recognizes the importance of how such information is presented within academic settings, openly asking professors to consider not only what narratives are at the forefront of their climate discussions, but also the degree to which educators are responsible for the mental health of their students (Bostwick, 2021). To that end, it is at the very least important for students and educators alike to acknowledge the difficulties inherent to discussing such topics. Making such conversations and support networks surrounding them normalized will not only help individual students, but also promote the stance that climate change impacts the physical and mental health of all persons throughout Earth.

*Emotions & Pathologization*

A common link between these distinct solution approaches is found in the fact that eco-anxiety routinely elicits emotional rather than behavioral responses (Clayton & Karazsia, 2020). As such, bridging the gap between the two reactions may act as an avenue to address mental health complications through eliciting change on an individual and/or communal level. Some also argue that pathologizing eco-anxiety such that it is regarded as an individual struggle is counter-productive, insofar as understanding the condition as a social/global condition both helps differentiate it from other forms of distress and emphasizes the need for communal resilience (Hickman 2020). In any case, both the recognition of the counterproductive nature of pathologization and the aforementioned insights regarding the distinctions between emotional and behavioral changes speak to a greater need to question ingrained societal practices that put our bodies and communities at risk in the wake of climate change. Ultimately, it is in how humanity organizes itself that a solution may be found to the crisis of the current moment, rather than through addressing each individual as the sole agent responsible for themselves.

## ***VI. Closing Remarks***

Research regarding ecological anxiety often requires self-justification for its relevance; a fact which makes sense considering the contemporary nature of the field. Through presenting multiple disparate societal groups & various mental health conditions alongside the climate crisis, researchers properly convey the scope of an issue that has been underrepresented in comparison to overt physical impacts, though there is still a need to further research distinctions between social groups regarding their susceptibility to adverse effects. Solution methods offer less concrete options to challenge the condition than they do avenues serving to further insight into the affliction, either in the form of reframing the issue or championing education. Overall, there appears to be a trend towards later literature being more willing to reframe the condition & present more alternative solution methods in comparison to earlier works, which were largely defined through the course of discussing & defining the topic rather than further elaborating on the theory underlying it.

Dialogue may be furthered through direct analysis of denial in opposition to eco-anxiety, especially as observed among different social groups. Moreover, the general argument around eco-anxiety might be strengthened through the development of a more concise set of symptoms and/or impacts list. To the extent that the impacts of the condition remain somewhat obscured by sheer volume of potentially observed responses, some may attempt to detract from the affliction as an unsubstantiated medical state.

Granted, another approach to this could be to pursue the aforementioned re-contextualization of the condition away from individual affliction towards more collective framing in service of generating a more widespread awareness of the mental implications of climate change. Regardless, the former approach would still assist psychologists in the development of discussions & treatments surrounding said subject matter. Much of this might stand in service of potentially legitimizing the field of ecopsychiatry, which is promising both for the futures of those impacted by eco-anxiety and for the larger trajectory of a world defined by shifting climate & the subsequent impacts created as a result.

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***OBJECTIVES:***

This research intends to contribute to a deeper understanding of the factors that inform the development of ecological anxiety across generations within the United States as climate change becomes a more prevalent physical threat & present aspect of ongoing sociopolitical discourse. Multiple variables ranging from built environment to educational exposure inform the degree to which individuals perceive climate change as actively threatening to contemporary life, yet some of said factors may have a more concentrated impact on specific age demographics as opposed to uniform anxiety across generations. As environmentalism has become an increasingly prevalent discussion point & ongoing issue for communities, politicians, the economy and the environment, more and more individuals have been subject to shifting amounts of coverage for said topics. Variable exposure may prove to be one of the primary determinants regarding the influences informing ecological anxiety. My intention is for this research to be used as a baseline for informing the distinctions between age demographics regarding their traditional vulnerability to the mental health impacts of ecological anxiety, as well as the many variables informing said vulnerability.

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***METHODS:******I. Initial Design***

Project development for this research was initiated in the spring of 2021. ENVS 201: Research Methods, alongside intermittent involvement with the Climate Communication, Action and Literacy Lab (CCALL), assisted me in the development of this topic, specifically regarding the construction of a research question that addresses a newfound dimension of ecological anxiety & the initial development of the proposal. This preliminary research, which was largely confined to engagement with relevant literature and the development of an engaging research question, proved instrumental in assisting to contextualize my understanding of the contemporary United States' engagement with the mental health impacts of climate change. Engagement with peer-reviewed sources assisted in the early stages of developing a methodology for the endeavor, alongside inquiry surrounding the presence of ethical codes within scientific research communities such as the American Astronomical Society.

ENVS 201 was instrumental in the formulation of my thesis proposal, which was developed during the spring and summer of 2021 to be submitted in my Junior year at UVM. The proposal development also involved various stages of fine-tuning regarding my target demographic for this research. Initially, the scope was planned to be considerably broad, with the intention of surveying individuals from across the United States via the help of surveying software sites such as QualtricsXM and SurveyMonkey. This design choice was made intentionally in order to distinguish research being conducted from past papers, which either focused more efforts on defining and identifying symptoms of ecological anxiety or dealt with a smaller pool of respondents for associated questionnaires and interviews. Whereas factors such as income disparity, racial diversity and educational stratification were considered alongside the key variable of age demographics, early versions of the study design lacked intuitive means through which anxiety and mental health might be effectively measured. Early deference to likert scale survey questions administered remotely was intended to streamline the data collection process, with group organization being used to sort questions into “thematic blocks.”

The approval process saw the research go through multiple iterations, and all of the listed advisors for the endeavor were consulted for further advice regarding proposed goals, methodology, and more. Difficulties arose surrounding misconceptions within the distribution process that led to unrequired funding being spent on distribution services for QualtricsXM that could have potentially been completed independently, were it not for the substantial desired sample size. Ultimately, my advisors and I agreed that scaling back the amount of respondents from around 400-600 to a tighter 150 would be the most realistic end goal, and a refund was ultimately acquired from the aforementioned company. This process also lengthened the time it took to receive IRB approval for the research, as aspects of the proposal would routinely need to be updated and then approved virtually (to say nothing of the multiple iterations of survey questions that were pitched and restructured for the survey). Upon receiving final approval for both the research proposal and the eventual completion of IRB approval, the data gathering portion of the research would commence.

## ***II. Data Gathering Methods***

Data for this research was primarily gathered through the distribution of surveys created on the QualtricsXM platform. Due to the Advent of COVID-19, data collection primarily took place remotely, though considering the proposed penultimate response count, such an endeavor may have proved far more arduous in-person. Moreover, quarantine had furthered both the infrastructure surrounding remote work and the capabilities of individuals to figure out such sources of engagement from home. To that end, I was comfortable with conducting research remotely—it was time efficient, accessible, and understandable for the given situation.

The creation of survey questions came first, as I was concerned with their ability to address multiple aspects of the climate conversation in relation to mental health. I primarily made use of likert scale questions and frequency scale questions for the survey, as both formats naturally lend themselves to data collection through the accumulation of numerical responses. In effect, I pursued these questions specifically because they could help to clearly visualize trends in age demographics regarding responses

to certain aspects of the climate crisis. Beyond those, there were some more straightforward multiple choice questions dealing with the demographics surveyed in the research, a singular slider scale question pertaining to optimism, and contributions from established scales corresponding to work done on the GAD-7 Anxiety Scale and the Yale Six Americas Climate Survey.

In terms of the thematic organization of the survey questions, respondents would view them in an order determined by “blocks” which sorted questions into groups of similar inquiry. In total, there were six primary question blocks. The “Lived Experience” block contained questions pertaining to the individual experiences of respondents, such as whether or not they had experienced a natural disaster or how frequent they were in their respective areas. The “Expanding Media Coverage & Awareness” block concerned individual exposure to climate change insights from sources ranging from educational institutions and scientific consensus to media coverage. “Varying Contribution(s)” dealt with the role of government and economic development in relation to climate change. The “Personal Risk Assessment” block focused on questions that dealt with the respondents perceived “risk” in the face of climate change, borrowing from the Six Americas Yale research to further ground findings as to people’s stances on how it may impact their everyday lives. “Anxiety Review” drew from the GAD-7 among other resources to present questions that would inform the reported levels of anxiety from respondents. Finally, the “Demographics” block addressed confounding demographic variables including political affiliation, employment & residency, and most importantly, age.

Regarding distribution methods, initially the assumption was that UVM’s partnership with QualtricsXM would cover associated charges for survey distribution on the software’s end. However, UVM access only covers survey creation as opposed to distribution beyond individual efforts. As such, it fell upon me to find different mediums through which to present the research & survey. Ultimately, I landed on SMS messaging, Email contact, and QR/Print material posting & distribution. This made it more difficult to assure that my respondents would be equally distributed across age ranges, so I leaned further into assessing older generations as opposed to younger ones (that is not to say that the aforementioned demographic was not covered).

I was able to distribute the survey through Nextdoor (an online social media platform for neighborhood discourse), presenting it alongside the proposed raffle as a means of getting respondents from in and around the New York & Newark population (many in my neighborhood have residency in the suburbs but spend most of their work and leisure time in the city). Other social media outlets like Facebook were leveraged as well, and since the majority of users on said boards are beyond higher academia at this point in their lives, the exercise suited my purposes well. I also took to posting flyers advertising the survey and QR codes that would link to it in and around train station stops in my hometown of South Orange, as well as the neighboring Maplewood and Morristown (I also took the opportunity to post flyers around Penn Station and in Chicago during visits to each). I then used email to reach out to associates of mine with ties to environmental fields asking them for further help pushing the survey out into either areas with awareness or areas sorely needing it (fortunately, more than one of my relatives on the west coast work intimately with environmental issues, so they were interested outright). And whenever talking about the survey, I always welcomed anyone to take it in order to provide their thoughts and feedback. Moreover, oftentimes the survey was advertised alongside a request for respondents to send it further along to others who may have interest, or interesting contributions. Whereas at the outset of the research I would not have imagined such channels to be effective, having reassessed the goals of the research and parameters to be met, I believe this was the best course of action.

An additional incentive provided for respondent participation came in the form of an optional raffle for a \$50.00 Amazon gift card. This was initially conceived of as an additional means to incentivize individuals seeing the physical distribution methods & email messages alluded to previously. Difficulties came in the form of requiring an additional survey linked within the survey itself in order to facilitate this: essentially, respondents would indicate on the original survey whether or not they would like to be entered into the raffle in order to be linked to the raffle sign-up survey. This survey included options for respondents to include means of contact in order to let them know whether or not they had been victorious in the raffle. Ultimately, nowhere near as many respondents signed up for the raffle; many more simply saw fit to complete the other questions and submit their responses.



### ***III. Data Analysis Methods***

Adhering primarily to likert-scale questions resulted in the majority of data collected for this research being quantitative rather than qualitative. Predecessors in this field of research at UVM such as Maya Bostwick and Isabel Grace Coppola considered utilizing coding for qualitative interview questions, but insofar as my research does not contain observational, interview-based records, this approach seems inappropriate in this case. Beyond one question concerning how optimistic or pessimistic people feel about climate change, each question presents ordinal-level insight. To that end, many graphical representations of this take the form of bar charts. The most common score (or “mode”) alongside median values were also a point of significance for ordinal questions, though it should be said that such an approach is best utilized for individual likert-scale questions. When a series of likert questions exist to describe a personality trait or attitude (i.e. perceived anxiety), the mean and standard deviation are deferred to instead of the mode.

Frequency distributions were effective means of visualizing likert scale insights within this, as they could well distinguish insights gathered from the different primary populations (i.e. age demographics). Cross-tabulations were used at instances wherein two nominal variables were directly compared with one another, such as age grouping and political demographics. Chi-squared tests of significance were considered for multiple portions of the data analysis process, being leveraged wherever nominal data points could be directly considered in relation to one another. The Mann-Whitney U Test was also considered, but insofar as the surveying conducted herein would both compare more than two groups per given variable of interest and not represent entirely independent sampling efforts, this model was avoided.

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**RESULTS:**

Further survey analysis through both independence tests and mode comparisons revealed that no statistical significance could be determined regarding age having significant bearing on one's susceptibility to the mental health impacts of ecological anxiety. The data collected still showcases noteworthy trends and statistical insight regarding the human condition in relation to climate change, but the primary research purpose of the endeavor remains open for further inquiry. Of the 148 responses collected, only 118 completed their surveys in full—a completion rate of close to 80% (this is frustrating, as I had thought that Qualtrics was only going to display completed responses). Incomplete surveys were not considered—many incompletes failed to get 10% of the way through the survey, and most others failed to fill out demographic information, making their responses markedly less valuable (given that the primary focus of this research was on a key demographic detail: age).

*Table 1: Demographics of Survey Respondents (N = 148)*

Variable	18-25 (Generation Z)	26-41 (Millennials)	42-57 (Generation X)	58-76 (Baby Boomers)	77-97 (The Silent Generation)	Incomplete	TOTAL
<b>Total Respondents</b>	<b>3</b>	<b>40</b>	<b>23</b>	<b>47</b>	<b>5</b>	<b>30</b>	<b>148</b>
<b>Political Preference</b>							
Democrat	0	17	18	36	2	N/A	73
Republican	0	0	1	1	1	N/A	3
Independent	1	9	2	5	1	N/A	18
Progressive	2	10	2	5	1	N/A	20
Libertarian	0	0	0	0	0	N/A	0
Other	0	4	0	0	0	N/A	4
<b>Employment Status</b>							
Working Full-Time	1	21	9	14	0	N/A	45
Working Part-Time	0	8	8	14	0	N/A	30

Unemployed & Looking	0	1	2	2	0	N/A	5
Homemaker / Stay-At-Home	0	4	3	2	0	N/A	9
Student	2	2	0	0	0	N/A	4
Retired	0	0	0	12	5	N/A	17
Other	0	4	1	3	0	N/A	8
<b>Residency Descriptor</b>							
Rural	0	8	0	6	0	N/A	14
Urban	0	11	1	7	1	N/A	20
Suburban	3	21	22	33	4	N/A	83
Other	0	0	0	1	0	N/A	1
<b>Parental Status</b>							
Yes	0	17	20	40	4	N/A	81
No	3	23	3	7	1	N/A	37
<b>Child Count</b>							
1	N/A	8	4	10	1	N/A	23
2	N/A	8	12	19	0	N/A	39
3	N/A	1	4	10	2	N/A	17
4	N/A	0	0	1	1	N/A	2
5+	N/A	0	0	0	0	N/A	0

### ***18-25 Years & 77-97 Years (Generation Z & The Silent Generation)***

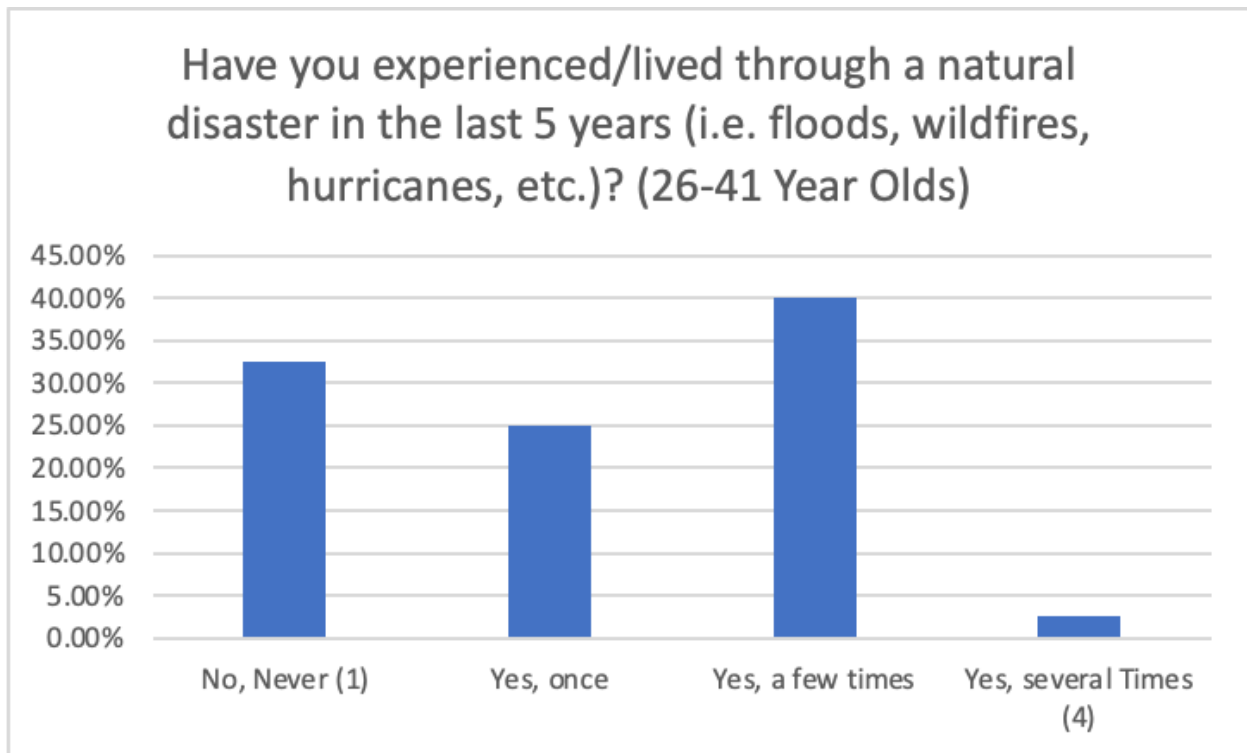
Though Generation Z and far younger age demographics were neither the target audience nor the focus of the research, I decided early on to include options for them both for the sake of covering all bases and in the event that younger individuals took any interest in the research. It should be known that I also deliberately limited the survey such that ages covered would cap at 18 years, as many other studies far more explicitly focus on the mental health implications of climate change regarding children and

adolescents. Regardless, this age demographic constituted the smallest response amount out of all the listed age demographics, with there being only 3 reported respondents in this category.

A similar stance was achieved regarding the Silent Generation, as I assumed that it would be more difficult for older individuals to entirely complete the survey (as is natural). While 5 respondents ultimately came forward in this category, they did not necessarily deviate enough from the trends present for the preceding age demographics to justify prolonged separate analysis.

**I. Lived Experience**

The “Lived Experience” category mainly exists to allow for individuals to indicate whether they have been directly or indirectly affected by the impacts of climate change—a distinction that is crucial to clarify outright. Insofar as those having directly experienced natural disasters become susceptible to a wide host of distinct mental health conditions when compared to individuals with tangential awareness of ecological degradation, the distinction serves a key role here. Moreover, the questions within this block also address exposure through others who have been directly impacted, and starts to develop insight regarding how the lived environments of individuals continually impact their senses of stability.



*Fig. 1: Lived Experience Question Results—Pt. 1 (26-41 Years); N=40*

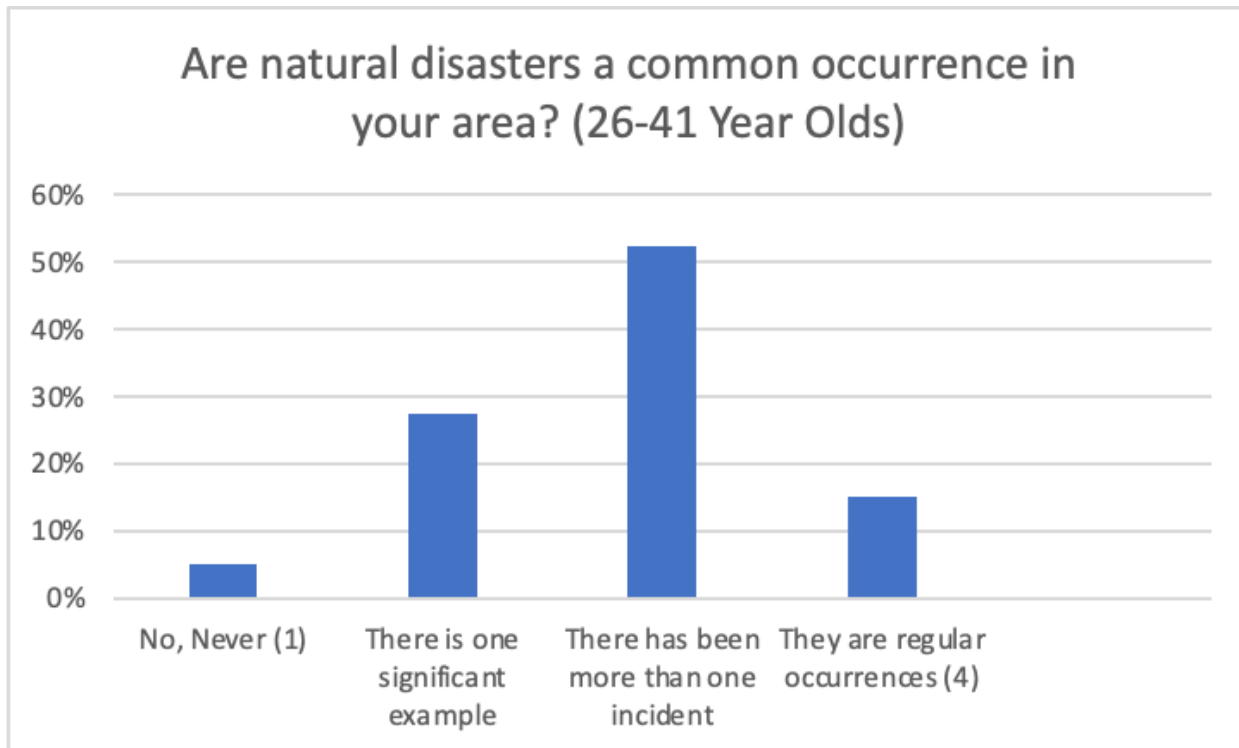


Fig. 2: Lived Experience Question Results—Pt. 2 (26-41 Years); N=40

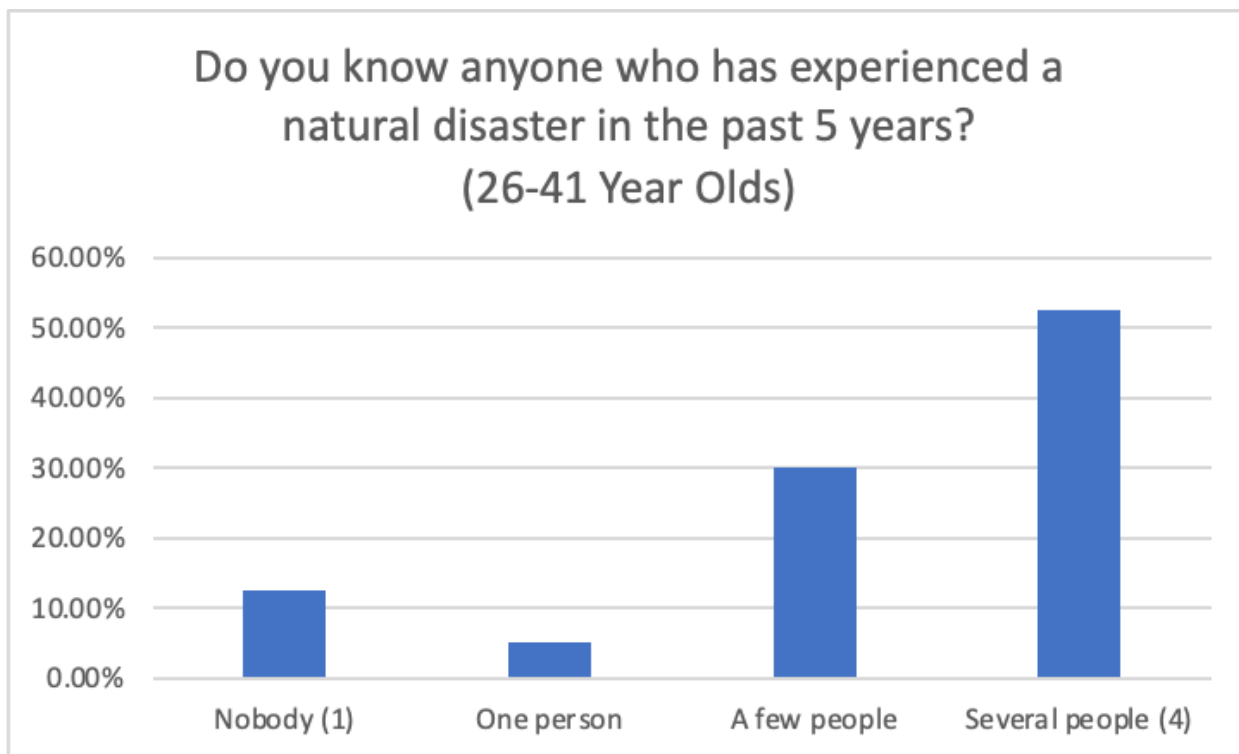


Fig. 3: Lived Experience Question Results—Pt. 3 (26-41 Years); N=40

The younger age demographics surveyed here seem to at the very least be far more inclined to know individuals having experienced natural disasters within the preceding 5 years considering that less than 20% of respondents could name one or fewer people in said category. Furthermore, 52.5% of respondents seem to not just know multiple individuals having experienced climate disasters—the same proportion of respondents claimed that there had been multiple disaster incidents within memory for their respective areas of residency. Ultimately, it seems likely to conclude that the increased frequency of disasters going forward into the 21st century has offhandedly resulted in far more within the Millennial generation having marked experience regarding disaster impacts. As for individual experience, it is relatively even in terms of the spread between 1 & 3, though few individuals seem to have lived through multiple significant disaster events (a fact which I suppose should be reassuring). Regardless, disaster exposure is clearly noteworthy in these younger age demographics.

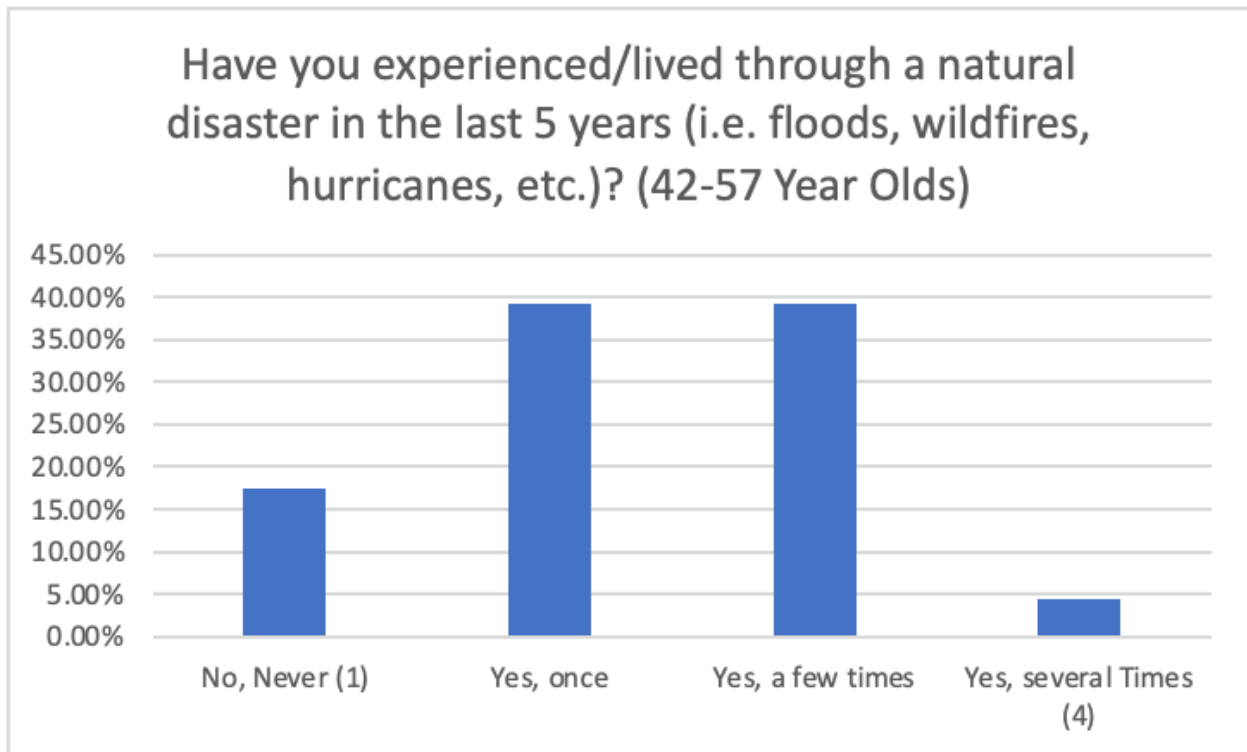


Fig. 4: Lived Experience Question Results—Pt. 1 (42-57 Years); N=23

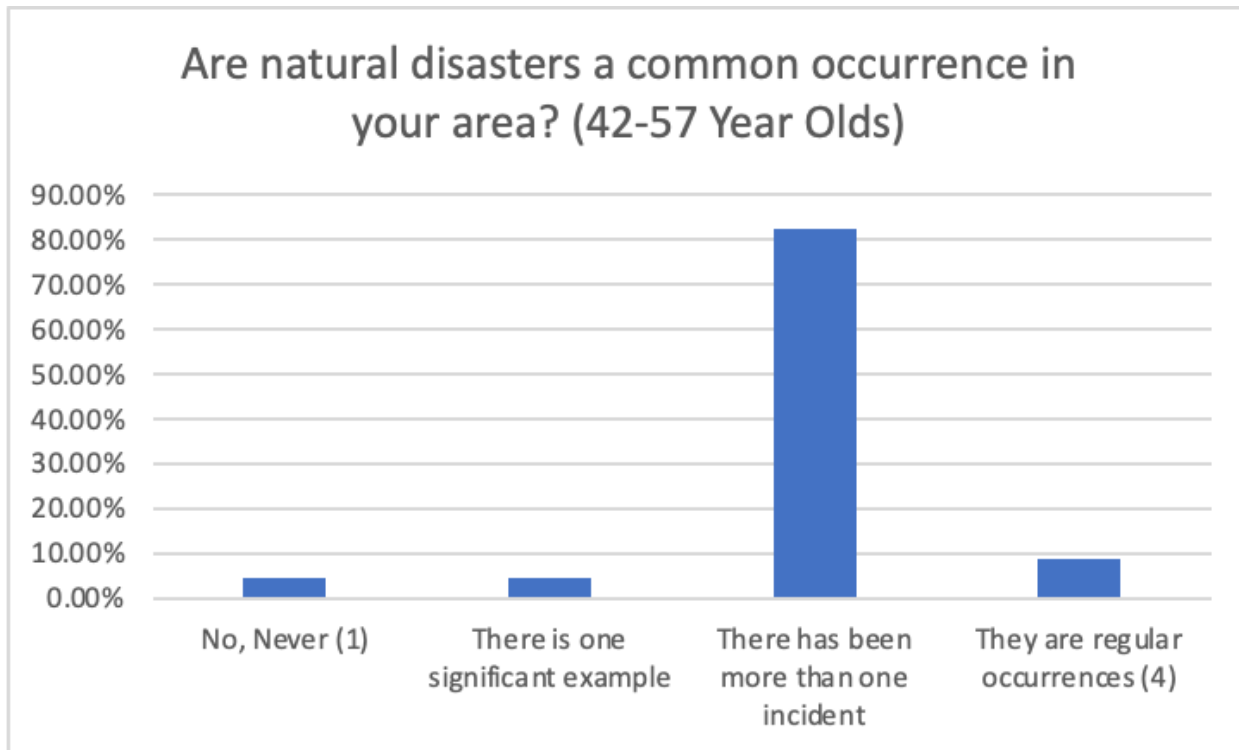


Fig. 5: Lived Experience Question Results—Pt. 2 (42-57 Years); N=23

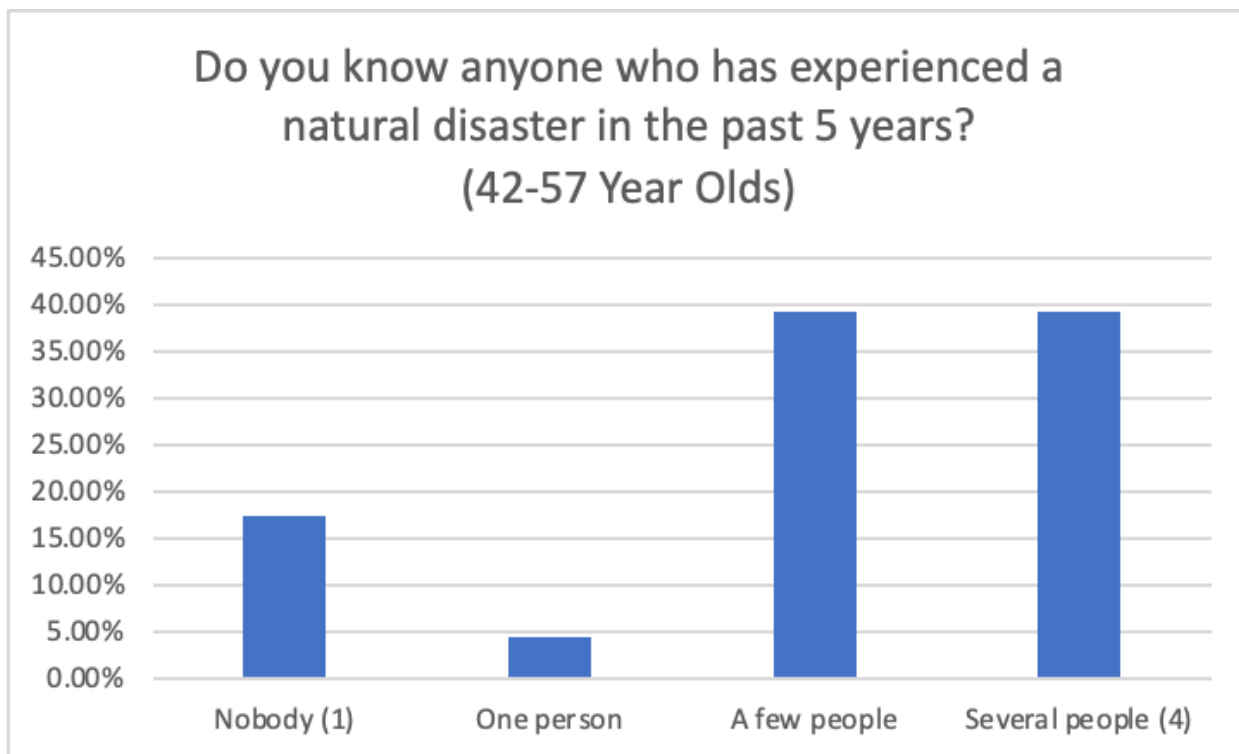


Fig. 6: Lived Experience Question Results—Pt. 3 (42-57 Years); N=23



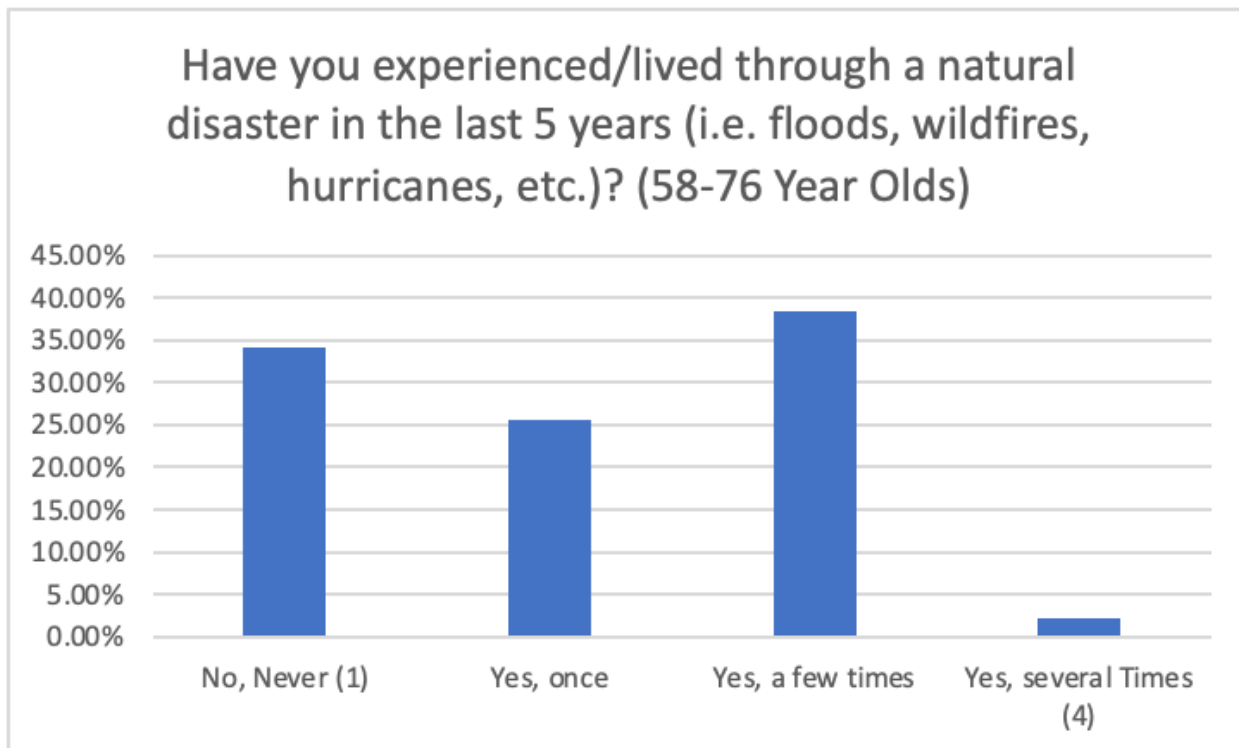


Fig. 7: Lived Experience Question Results—Pt. 1 (58-76 Years); N=47

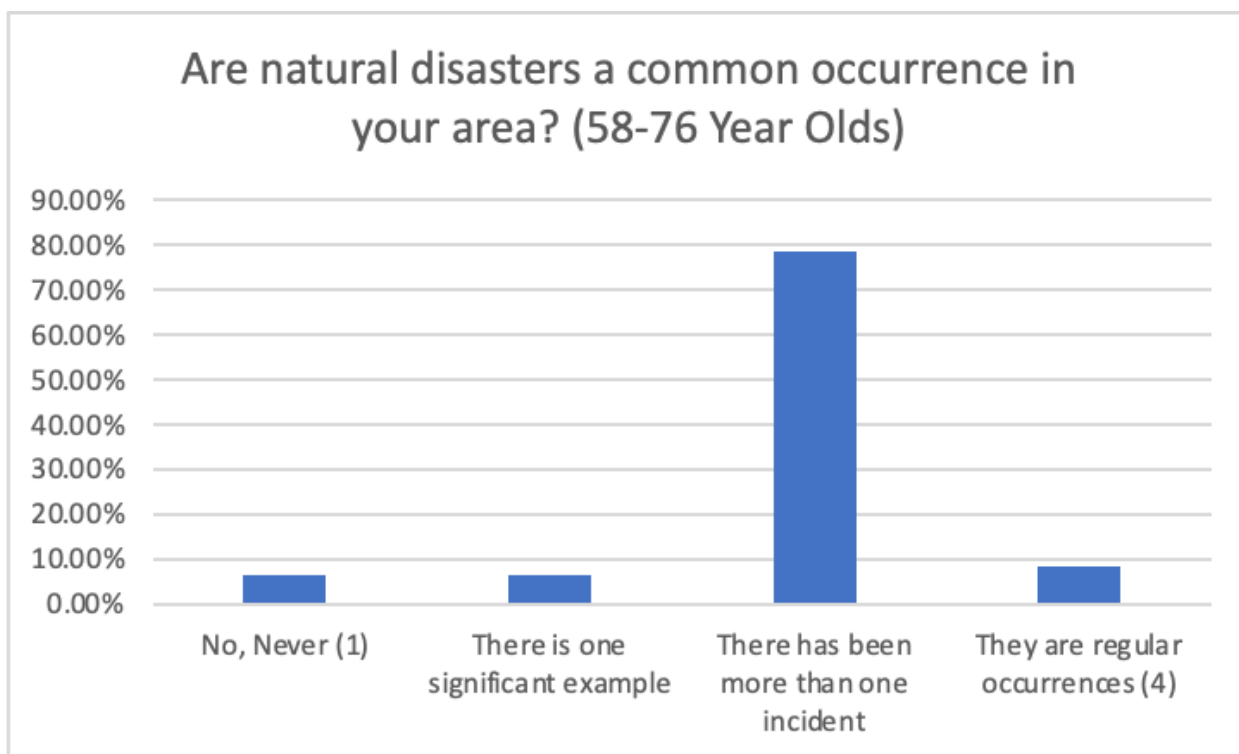
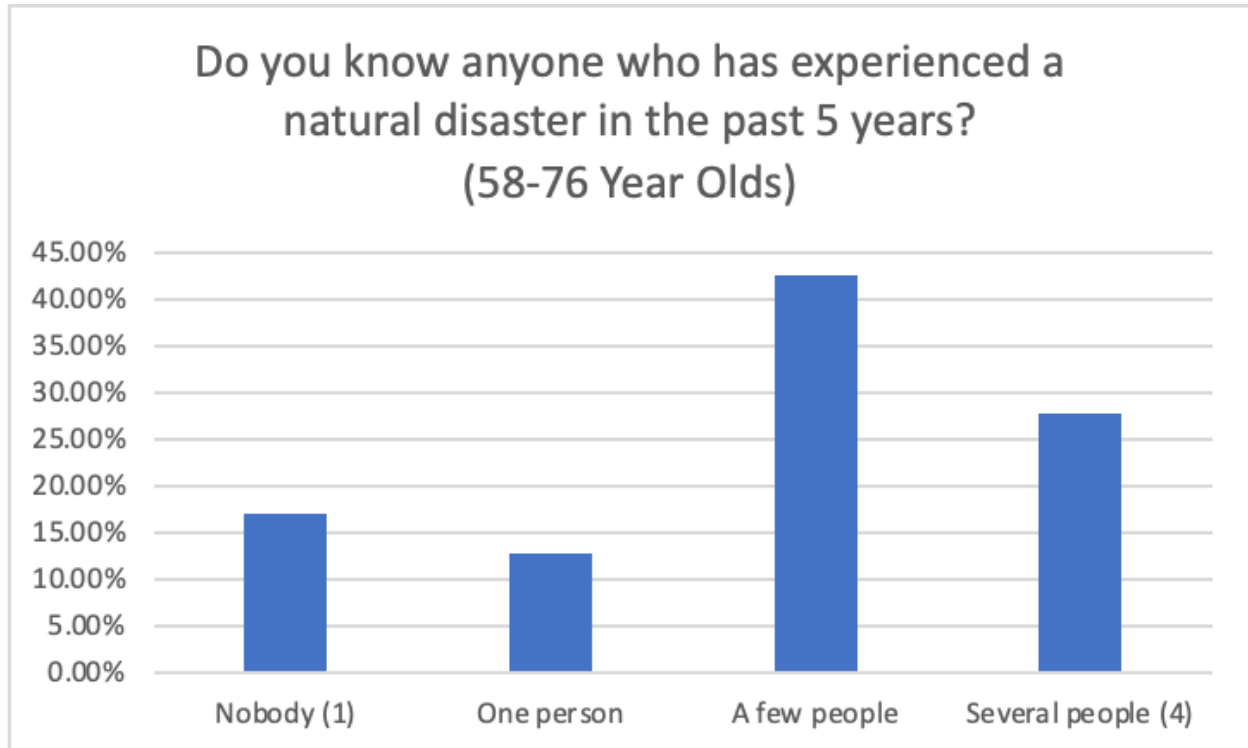


Fig. 8: Lived Experience Question Results—Pt. 2 (58-76 Years); N=47

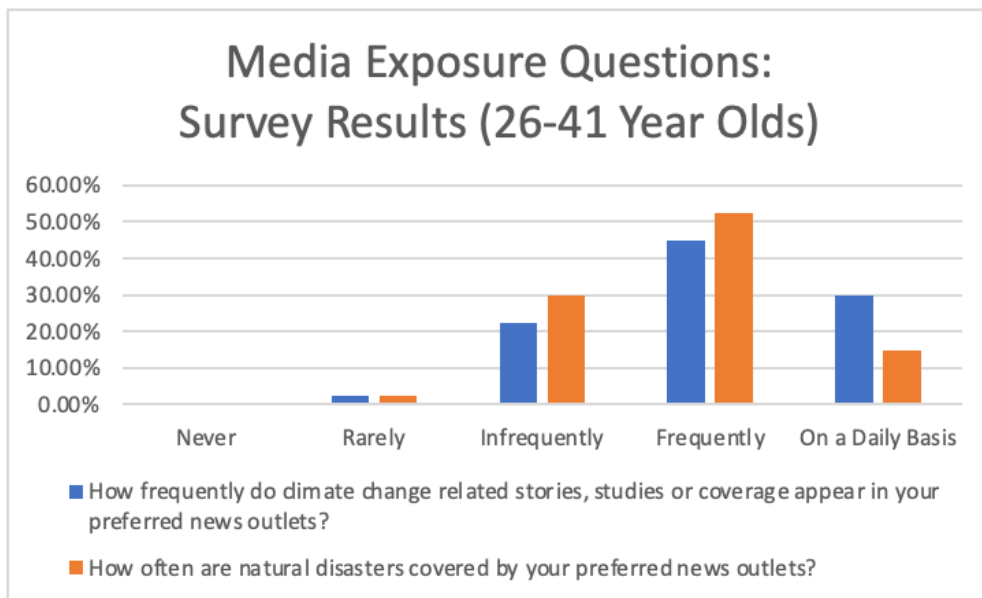


*Fig. 9: Lived Experience Question Results—Pt. 3 (58-76 Years); N=47*

Comparatively, the older age demographics showcase similar trends to those younger survey respondents, though there are important areas of distinction. For instance, there is a staggering increase for both older age demographics regarding how common natural disasters are in their respective areas. This could either be the result of older individuals making less-informed housing decisions that jeopardize the security of their property or due to their having had more time to experience said natural disasters, thus altering their perspectives regarding frequency. Among both older and younger individuals, few if any have acutely experienced the impacts of natural disasters over the last 5 years multiple times, thankfully. Otherwise, many of the distinctions between the two older demographics may be a result of the smaller sample size of 42-57 year olds surveyed leading to reduced counts compared to the other two, which rest steadily in the 40's for their reply counts.

**II. Media Coverage**

Initially, media coverage constituted one of the most interesting dimensions of this research for myself. The inherent influence exposure to information has on forming human opinions and perspectives is doubtless non-negligible, so it seemed like a natural area of interest. However, in order to make the questions feel less targeted, they explicitly addressed the frequency with which climate-related stories appear in their feeds as opposed to asking for specific networks or program types. Said decision likely forced further contemplation from respondents to determine where their information intake laid on the spectrum of climate awareness.



*Fig. 10: Media Exposure Question Results (26-41 Years); N=40*

When compared to the exposure of older age demographics, it seems like a more significant proportion of young adults experience infrequent exposure to climate-related news and topics. Whereas 83% of 42-57 year olds cited such stories as frequently appearing for them and 53% did the same for the oldest bracket (with an additional 36% claiming “daily basis”), only 45% of Millennials suggested that such stories are frequent in their media (30% said on a daily basis)—making them the lowest overall in terms of proposed frequency of exposure to such information. I would hypothesize that this may be a result of the distinctions through which may younger individuals consume media—social media,

specifically, constitutes a major field of information media, yet many individuals engaging with it experience a tailored newsfeed that may opt to avoid depressing topics like the climate in the interest of pushing familiar and enjoyed content for the sake of revenue. Regular newscasting has fallen out of favor for recent generations, so their next alternative would be social media platforms such as InstaGram, TikTok, and Twitter. Otherwise, it seems appropriate that the only “never” responses fell within the oldest age demographic of Baby Boomers (only 2.13% even said as much).

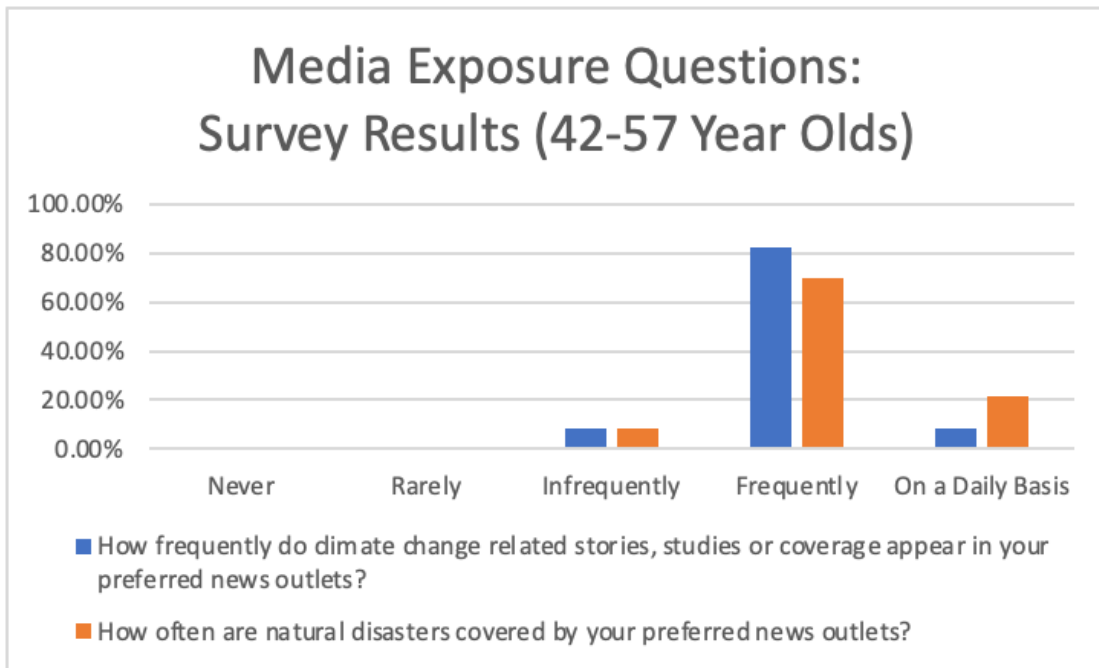


Fig. 11: Media Exposure Question Results (42-57 Years); N=23

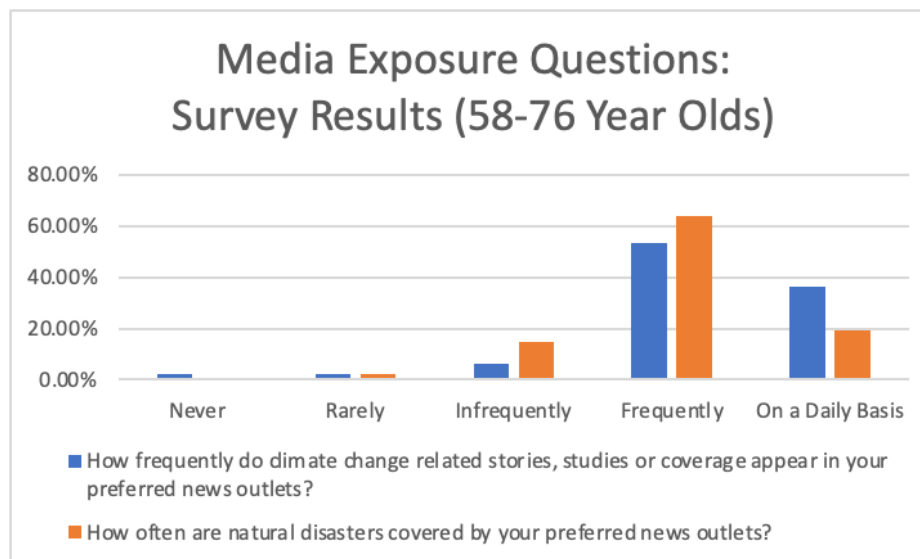


Fig. 12: Media Exposure Question Results (58-76 Years); N=47

Table 2: Chi Squared Test for Independence (Observed Values)

(OBSERVED) "My friends say I think about climate change too much..."	Never	Rarely	Sometimes	Often	Almost Always	Total
"How frequently do climate change related stories, studies or coverage appear in your preferred news outlets?"						
Never	1	0	0	0	0	1
Rarely	0	0	1	1	0	2
Infrequently	13	2	0	0	0	15
Frequently	53	7	5	2	0	67
Daily Basis	26	3	3	1	0	33
Total	93	12	9	4	0	118

*Table 3: Chi Squared Test for Independence (Expected Values)*

(EXPECTED) "My friends say I think about climate change too much..."	Never	Rarely	Sometimes	Often	Almost Always	Total
"How frequently do climate change related stories, studies or coverage appear in your preferred news outlets?"						
Never	0.79	0.10	0.08	0.03	0	1
Rarely	1.58	0.20	0.15	0.07	0	2
Infrequently	11.82	1.53	1.14	0.51	0	15
Frequently	52.81	6.81	5.11	2.27	0	67
Daily Basis	26.01	3.36	2.52	1.12	0	33
Total	93	12	9	4	0	118

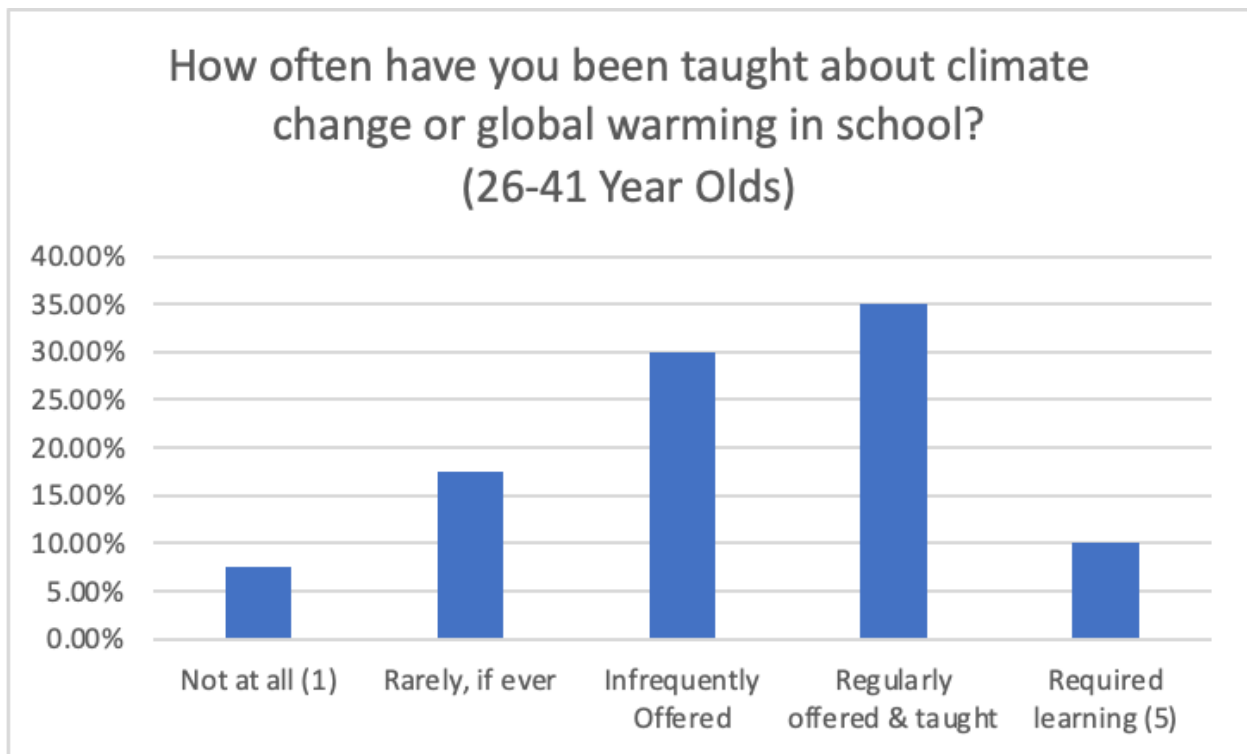
*Table 4: Chi Squared Test for Independence (Observed - Expected)*

(Difference Between Observed & Expected)	"My friends say I think about climate change too much..."	Never	Rarely	Sometimes	Often	Almost Always
"How frequently do climate change related stories, studies or coverage appear in your preferred news outlets?"						
Never		0.06	0.10	0.08	0.03	0
Rarely		1.58	0.20	4.71	12.82	0
Infrequently		0.18	0.15	1.14	0.51	0
Frequently		0.0007	0.01	0.00	0.03	0
Daily Basis		2.76135E-06	0.04	0.10	0.01	0

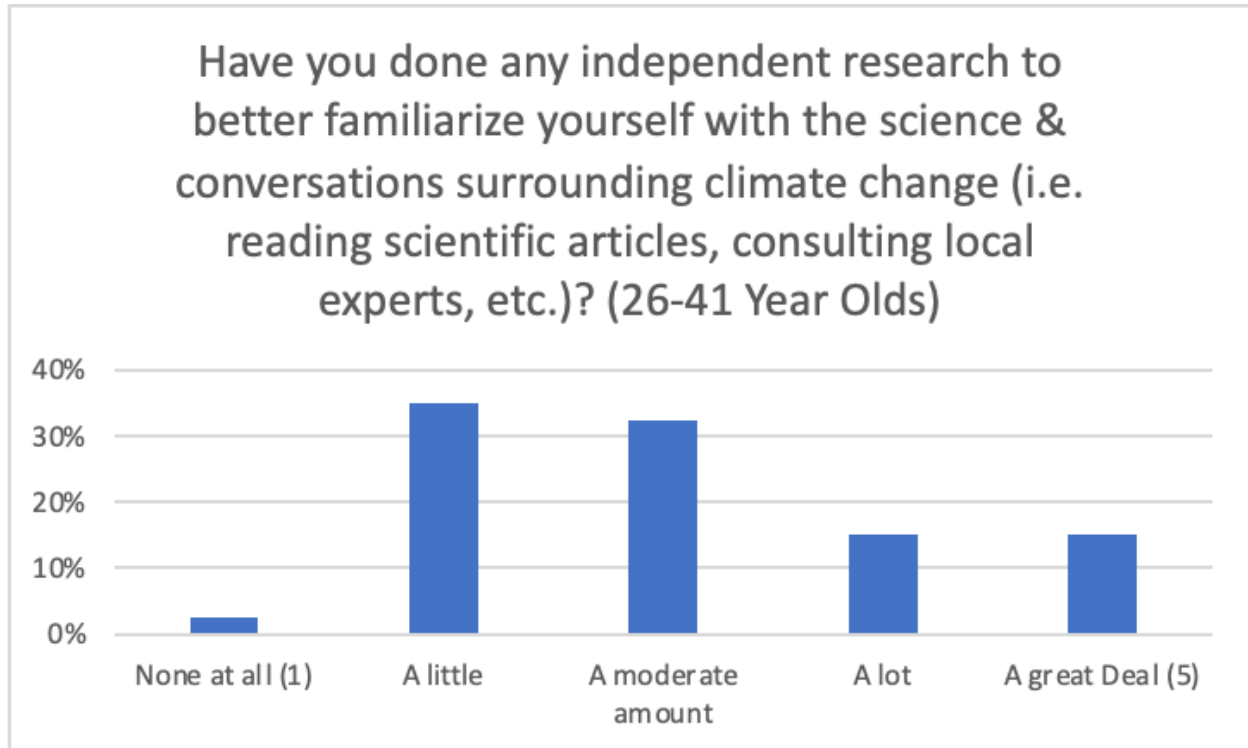
This Chi Squared test did not hold statistical significance, with a P-Value of 0.15397974—close, but not enough to reject at the 0.05 level of significance ( $X^2$  was 21.6755551 in this case, and there were 16 degrees of freedom).

**III. Educational Exposure**

Similarly to media exposure, this category of questions mainly served to affirm the degree to which respondents had been exposed to climate science and information prior to taking the survey. This metric holds slightly more significance than the questions concerning media; whereas media is somewhat curated to a wider audience such that information is broadly accessible and understandable, specific efforts towards education within the climate sciences may prove more rigorous in terms of where students ultimately end up in terms of their applicable knowledge. Of course, not every individual has the opportunity to pursue classroom-based education. As such, the questions were split so that individuals could indicate a difference between exposure through institutional academics and through independent research efforts.



*Fig. 13: Education Exposure Question Results—Pt. 1 (26-41 Years); N=40*



*Fig. 14: Education Exposure Question Results—Pt. 2 (26-41 Years); N=40*

For reference, the numerical scale ranging from 1 to 5 represents a likert scale regarding the frequency of exposure within the classroom and on one's own, with 5 being the greatest and 1 being the smallest (effectively "none"). Only 25% of the respondents within this category listed a 2 or less for their scores regarding how frequently such information appears in school environments—a far superior count to both of the older age demographics listed below. Whereas the 42-57 demographic had 0 respondents indicating a 4 or 5 for educational exposure, the 58-76 demographic had 72.34% of their respondents list a 1 or 2 regarding educational exposure within classrooms. Of course, this is a consequence of increased attention to climate science within the classroom since the advent of Earth Day in the 1970s. Indeed, academic efforts to familiarize young people with the oncoming threats presented by climate change is a far more contemporary scholastic development, so this distinction is unsurprising. In keeping with this is the fact that the oldest age demographic has the highest reported amount of independent research conducted, with 43% of respondents indicating that they had engaged in a "moderate amount" of independent research. Seeing as this would be the age demographic with the least frequent exposure to



such information within academic settings, it only seems natural that they might further their own understanding independent of classroom learning.

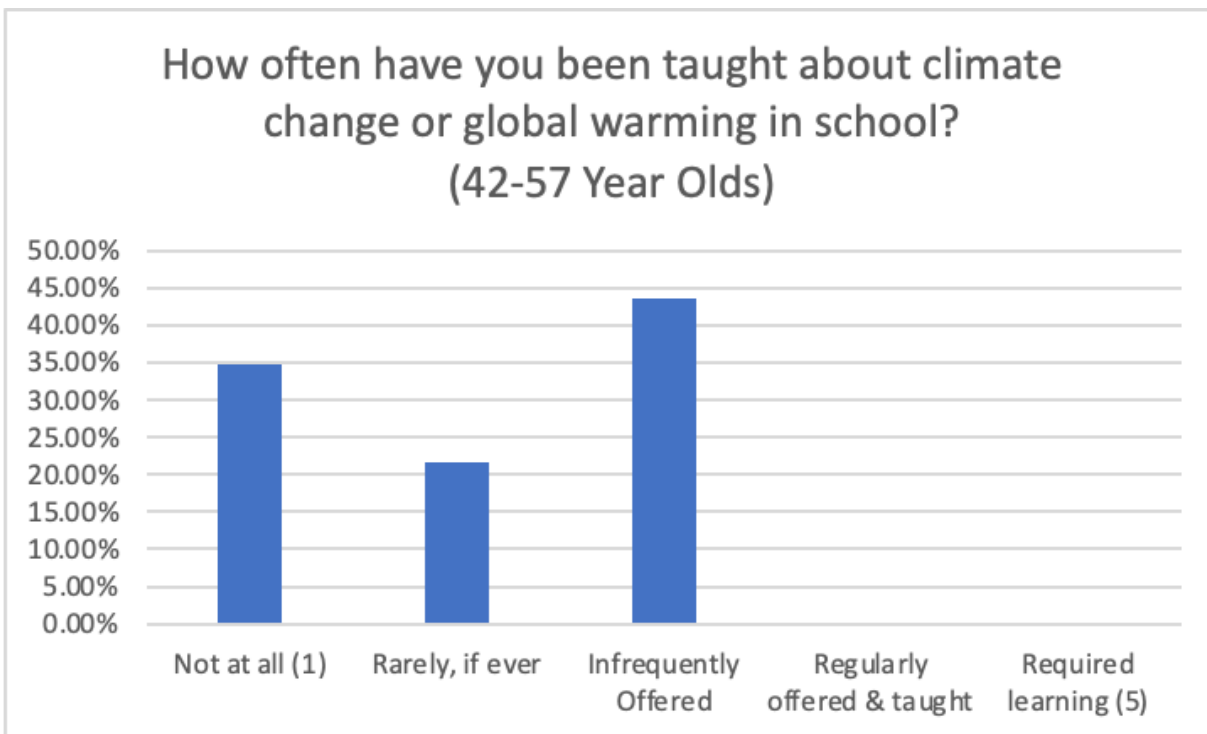


Fig. 15: Education Exposure Question Results—Pt. 1 (42-57 Years); N=23

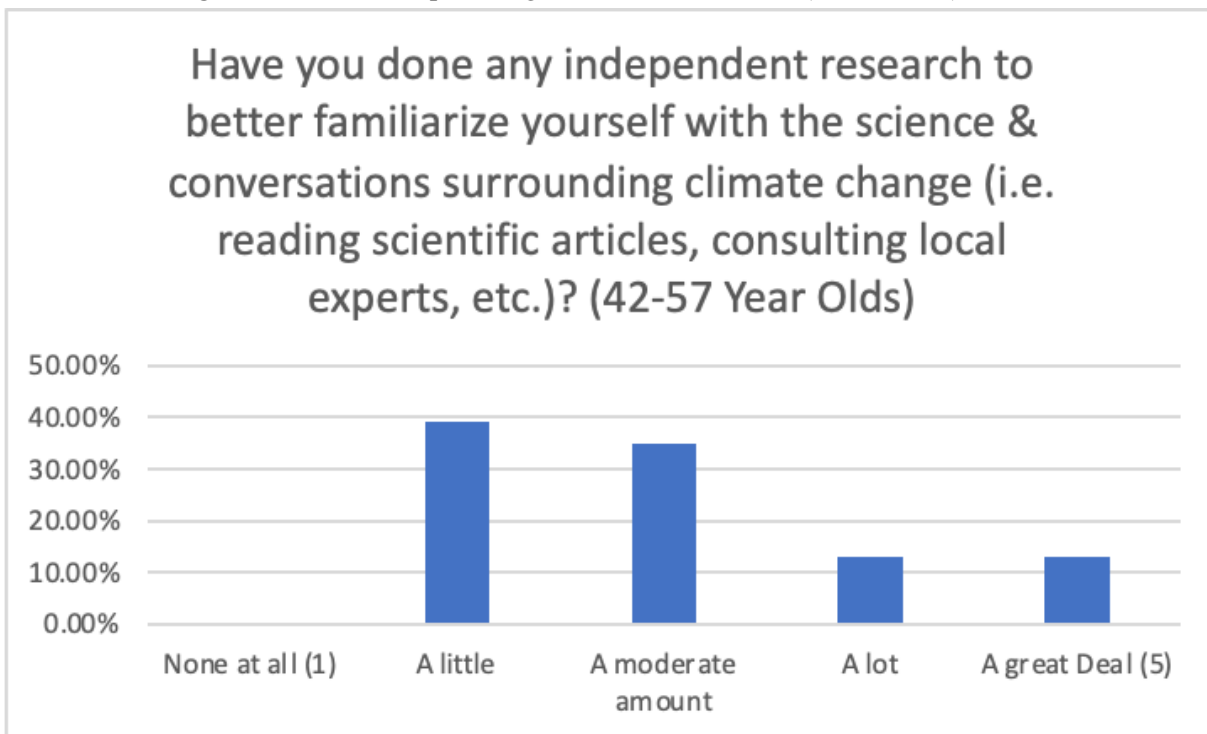
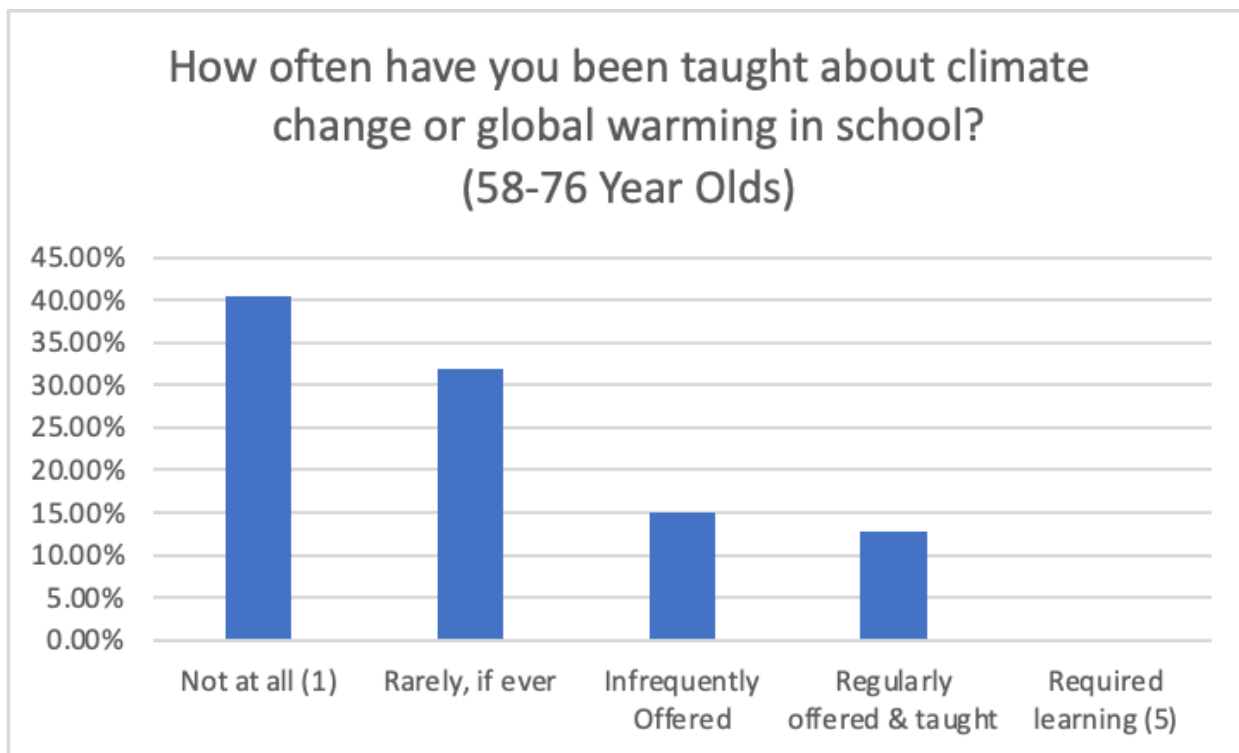
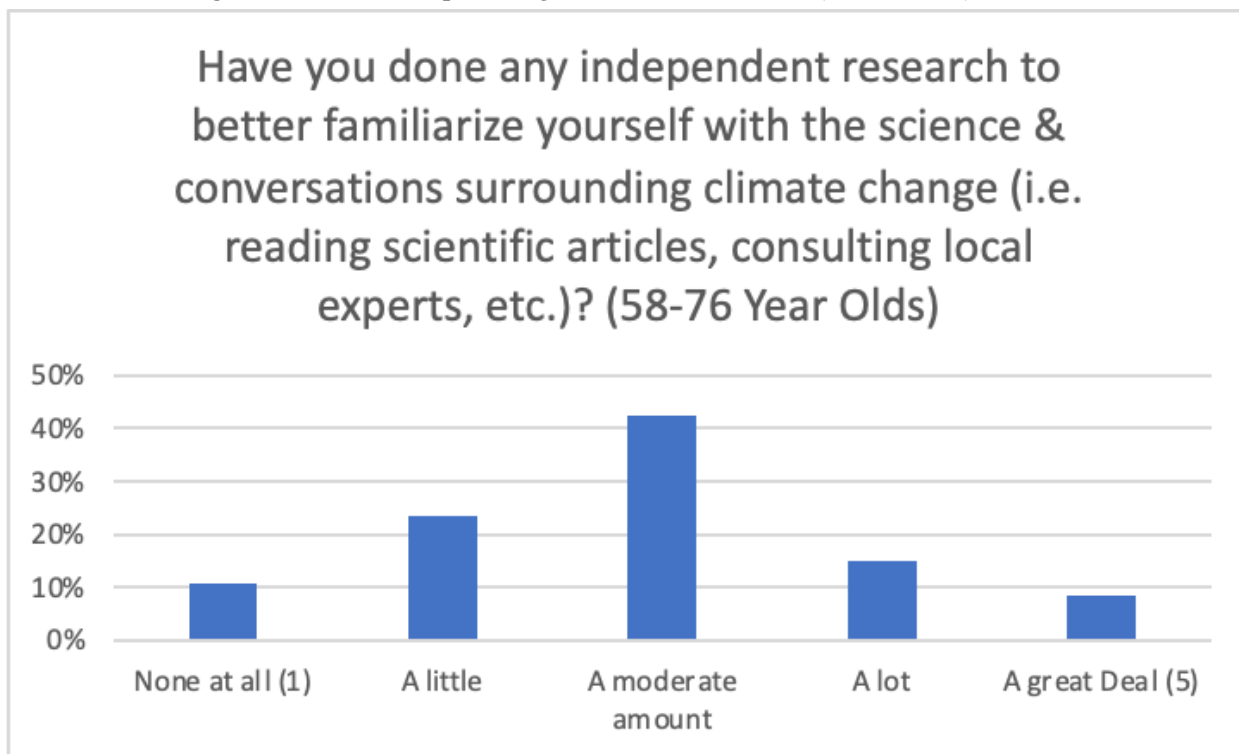


Fig. 16: Education Exposure Question Results—Pt. 2 (42-57 Years); N=23



*Fig. 17: Education Exposure Question Results—Pt. 1 (58-76 Years); N=47*



*Fig. 18: Education Exposure Question Results—Pt. 2 (58-76 Years); N=47*

Table 5: Chi Squared Test for Independence (Observed Values)

"The vast majority of scientific papers & experts agree that climate change is real and human-induced." (OBSERVED)	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	Total
"How often have you been taught about climate change or global warming in school?"						
Not at all	1	2	1	1	29	34
Rarely, if ever	3	0	0	1	23	27
Infrequently offered	1	0	0	2	28	31
Regularly offered & taught	0	1	0	3	18	22
Required learning	0	0	0	0	4	4
Total	5	3	1	7	102	118

Table 6: Chi Squared Test for Independence (Expected Values)

"The vast majority of scientific papers & experts agree that climate change is real and human-induced." (EXPECTED)	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	Total
"How often have you been taught about climate change or global warming in school?"						
Not at all	1.44	0.86	0.29	2.02	29.39	34
Rarely, if ever	1.14	0.69	0.23	1.60	23.34	27
Infrequently offered	1.31	0.79	0.26	1.84	26.80	31
Regularly offered & taught	0.93	0.56	0.19	1.31	19.02	22
Required learning	0.17	0.10	0.03	0.24	3.46	4
Total	5	3	1	7	102	118

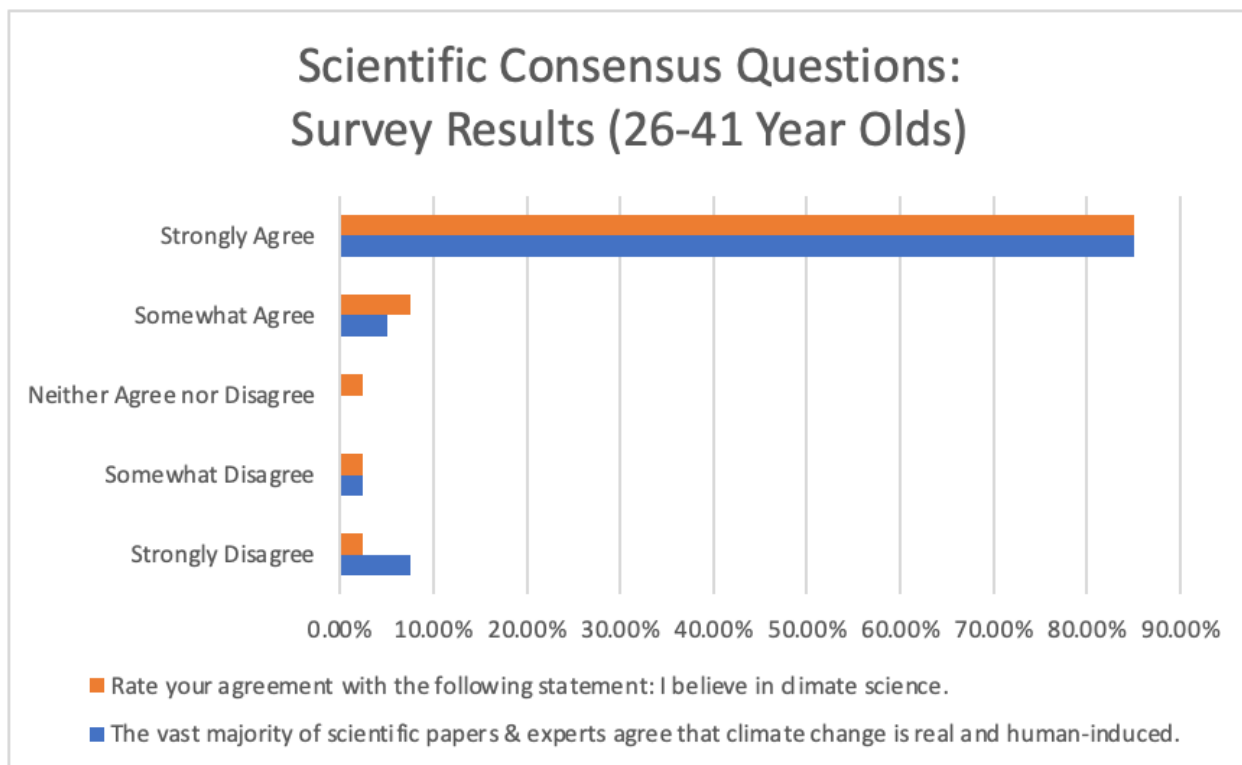
Table 7: Chi Squared Test for Independence (Observed - Expected)

(Difference Between Observed & Expected)	"The vast majority of scientific papers & experts agree that climate change is real and human-induced."	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewh- at Agree	Strongly Agree
<i>"How often have you been taught about climate change or global warming in school?"</i>						
<i>Not at all</i>		0.13	1.49	1.76	0.51	0.01
<i>Rarely, if ever</i>		3.01	0.69	0.23	0.23	0.005
<i>Infrequently offered</i>		0.07	0.79	0.26	0.01	0.05
<i>Regularly offered &amp; taught</i>		0.93	0.35	0.19	2.20	0.05
<i>Required learning</i>		0.17	0.10	0.03	0.24	0.09

The Chi Squared independence test between these two did not yield anything statistically significant. There was found to be no correlation between how frequently climate change/global warming were taught in school and individual's responses to scientific consensus regarding climate change. With a P-Value of 0.6282668, it would have been hard to justify anything, frankly ( $X^2$  had a value of 13.60294553 in this instance, with 16 degrees of freedom being present). In some respects, this finding is reassuring; regardless of how much education one has received in relation to the climate crisis, the overwhelming majority still side with scientific consensus, which is an affirmative point for our collective ability to trust expert insight.

**IV. Scientific Consensus**

Whereas the previous two question categories existed to determine the degree to which individuals had been exposed to climate science in an informative capacity, this one specifically questions the degree to which they can understand climate-related findings. It is a longstanding truth that 97% of climate scientists agree on human-induced climate change, with the remaining voices being swayed by industry and political affiliations to the point of disagreeing with consensus. However, the degree to which regular individuals have been inclined to agree with said scientific consensus has varied throughout the years. Effectively, this question tests the degree to which respondents put stock in the claims of climate scientists regarding the perilous future of Earth.



*Fig. 19: Scientific Consensus Question Results (26-41 Years); N=40*

The responses here definitely surprised me, as the non-zero amount of individuals who were hardline against scientific consensus seemed to stand opposed to the trend of increased exposure to climate science within the classroom. 2.5% of respondents somewhat disagreed with both statements listed above in the 26-41 range, and 3 times as many strongly disagreed with the sentiment that there is

consensus among scientific papers. Whereas the personal belief question is far more understandable (as some may be skeptical of the degree to which scientific and corporate interests align with the common good of the people), the outright blatant disregard for scientific consensus is just baffling (as I would assume it would be to the 85% of respondents who strongly agreed with both above statements).

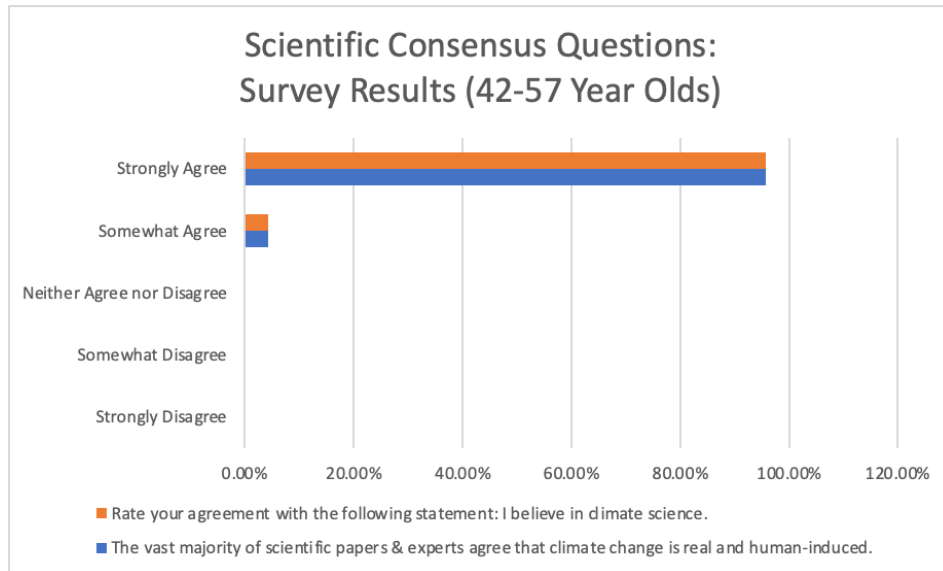


Fig. 20: Scientific Consensus Question Results (42-57 Years); N=23

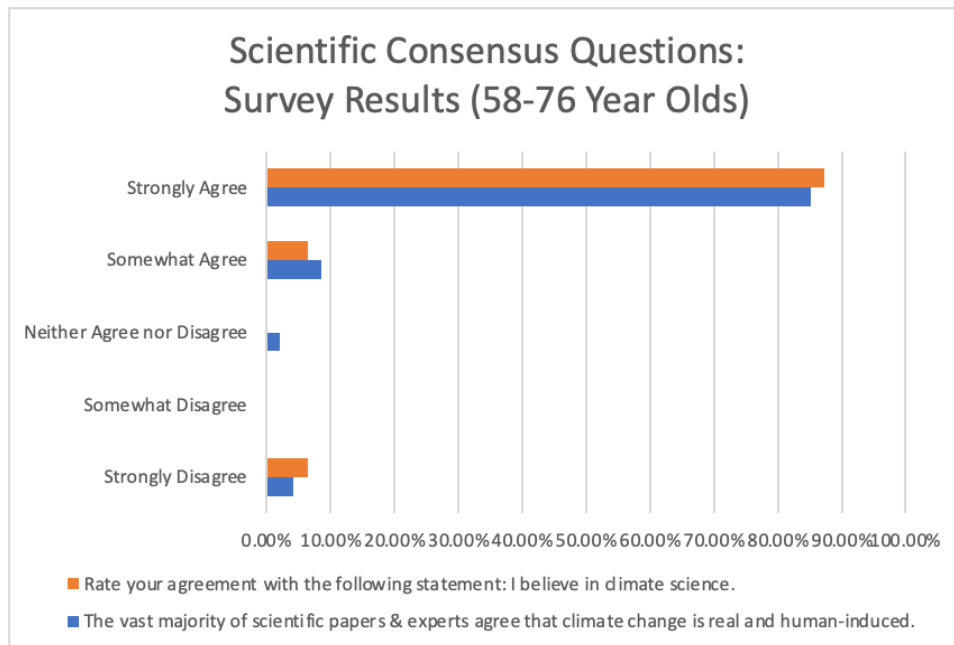


Fig. 21: Scientific Consensus Question Results (58-76 Years); N=47

Even the 58-76 demographic had fewer skeptics at 4.26% compared to the aforementioned 7.5%—a factor which is shocking given the aforementioned educational factor (I would also go on to assume that the more conservative perspective of older age demographics might align more individuals with media sources and political viewpoints that may facilitate this reaction). Perhaps the reason is rooted in right wing media efforts to convince individuals of the uncertainty of scientific climate insights. There have always been industry efforts towards disproving the findings of scientists...perhaps this is merely a reflection of the substantial sway some commentators and writers have over younger, more impressionable demographics.

#### ***V. Government & Economic Innovation***

Having addressed respondents on the grounds of both their familiarity with climate related science and news as well as the degree to which they ascribe said insights with importance, we now move to a category assessing the state, and the degree to which individuals find it has acted successfully in adapting to and mitigating the climate crisis. This is one of the broader question categories, but it effectively covers both government competence and means of solutions for the climate crisis. Ultimately, much of the theory underlying these questions concerns the “Degrowth” perspective that current rates of production are unsustainable. They merely ask whether or not individuals believe such systems can continue to persist and/or be made responsible for correcting current environmental challenges. In essence, it asks whether or not the government’s current models of disaster response and our current rates of production are ultimately able to be carried into the future considering the current state of affairs.

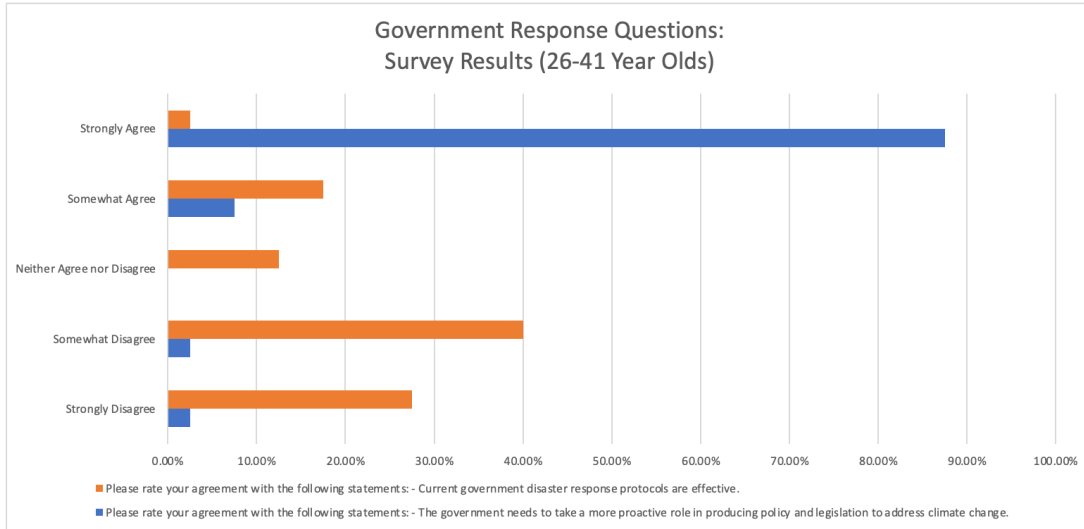


Fig. 22: Government Response Question Results (26-41 Years); N=40

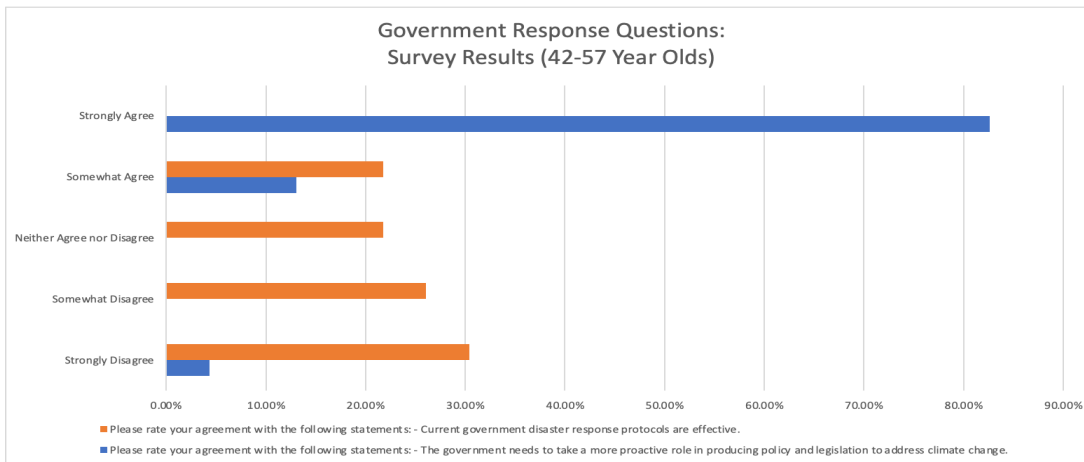


Fig. 23: Government Response Question Results (42-57 Years); N=23

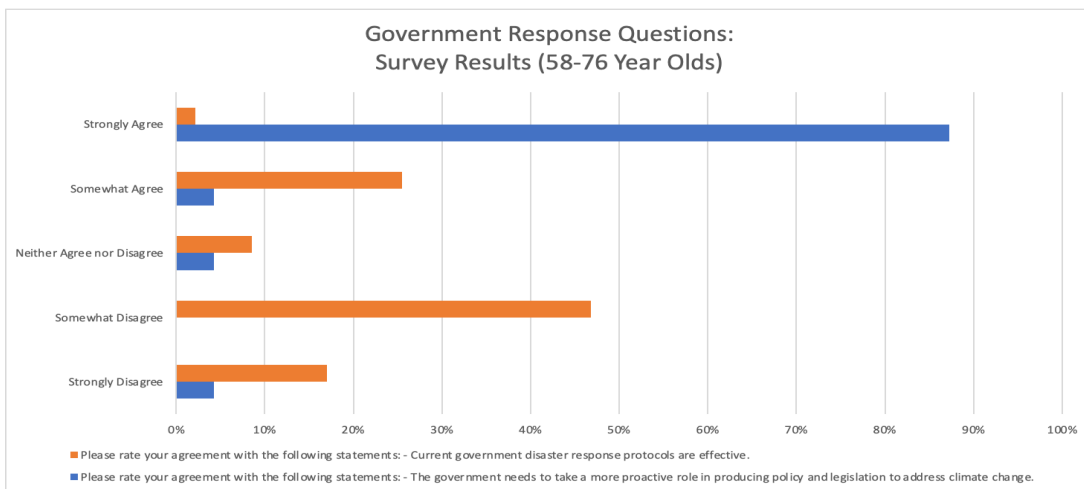


Fig. 24: Government Response Question Results (58-76 Years); N=47



There are common trends across all three age demographics here: whereas there is overwhelming consensus that the government needs to do more in terms of producing policy and legislation to combat climate change, there is also a general consensus that current disaster response protocols are not effective enough—evidenced by the skewed distributions in each graph that lean towards disagreement. 87.5% in the 26-41 age demographic, 83% for 42-57 year olds, and a surprising 87% from the oldest age bracket of 58-76 year olds all showcase a common understanding that the current means of governance surrounding climate change are inadequate.

*Table 8: Chi Squared Test for Independence (Observed Values)*

"Current government disaster response protocols are effective." (OBSERVED)	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	Total
Have you experienced/lived through a natural disaster in the last 5 years (i.e. floods, wildfires, hurricanes, etc.)?						
Never	6	17	4	8	0	35
Once	7	16	5	5	1	34
A Few Times	12	16	5	12	1	46
Several Times	1	0	0	2	0	3
Total	26	49	14	27	2	118

*Table 9: Chi Squared Test for Independence (Expected Values)*

"Current government disaster response protocols are effective." (EXPECTED)	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree	Total
Have you experienced/lived through a natural disaster in the last 5 years (i.e. floods, wildfires, hurricanes, etc.)?						
Never	7.71	14.53	4.15	8.01	0.59	35
Once	7.49	14.12	4.03	7.78	0.58	34
A Few Times	10.14	19.10	5.46	10.53	0.78	46
Several Times	0.66	1.25	0.36	0.69	0.05	3
Total	26	49	14	27	2	118

Table 10: Chi Squared Test for Independence (Observed - Expected)

(Difference Between Observed & Expected)	"Current government disaster response protocols are effective."	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
<i>Have you experienced/lived through a natural disaster in the last 5 years (i.e. floods, wildfires, hurricanes, etc.)?</i>						
Never		0.38	0.42	0.006	8.96781 E-06	0.59
Once		0.03	0.25	0.23	0.99	0.31
A Few Times		0.34	0.50	0.04	0.21	0.06
Several Times		0.17	1.25	0.36	2.51	0.05

The test for independence did not yield any statistically significant results here with a P-Value of 0.727468827. The initial assumption was to test whether or not satisfaction with government responses to natural disasters were informed by how much experience individuals personally had with such disasters, though perhaps it is an issue of conflating local organizational efforts with broader administrative protocol? Regardless, there is more room to test for this association (the X<sup>2</sup> value in this case was 8.710137536, with there being 12 degrees of freedom).

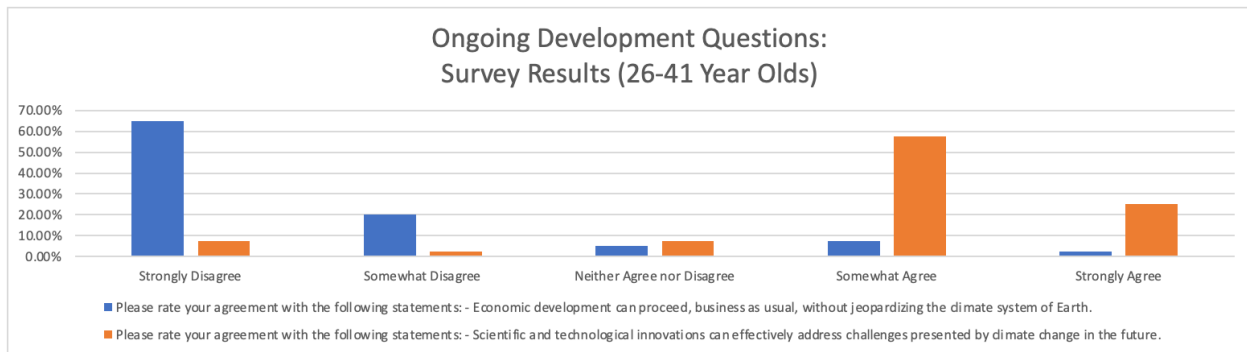


Fig. 25: Ongoing Development Question Results (26-41 Years); N=40

This is where the questions move beyond government success and towards indicators of whether or not economic/scientific solutions can be leveraged to combat the effects of global warming. Unsurprisingly, the majority in each age demographic strongly disagreed with the notion that current economic, production and consumption levels can remain unchanged while still facilitating a healthy

ecosystem (65%, then 65.2%, only to climax at 65.96% of 58-76 year old respondents). The technology discussion represents a more engaging dimension of the discussion insofar as many individuals find innovation to be an effective substitute for correcting inequitable socioeconomic proceedings and failures of civil society. Across all three of the core demographics, “somewhat agree” was the most commonly chosen response (58% for the youngest, then 61%, followed by 55% for the oldest), with “strongly agree” being 2nd behind that (25%, 26.09% and 30%). It is unsurprising that these figures persist, as so much of the mainstream discourse surrounding climate change ultimately amounts to suggesting future actions ranging from proposed policy to imagined technology that miraculously makes unsustainable societies justifiably efficient.

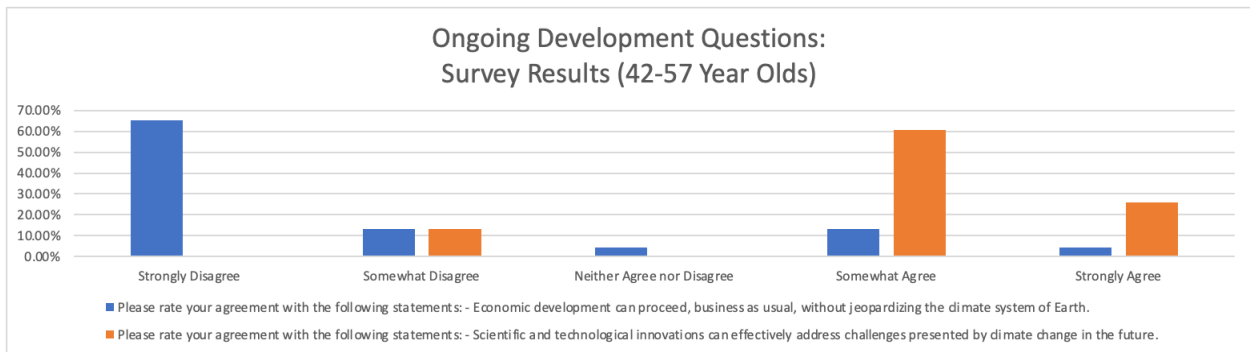


Fig. 26: Ongoing Development Question Results (42-57 Years); N=23

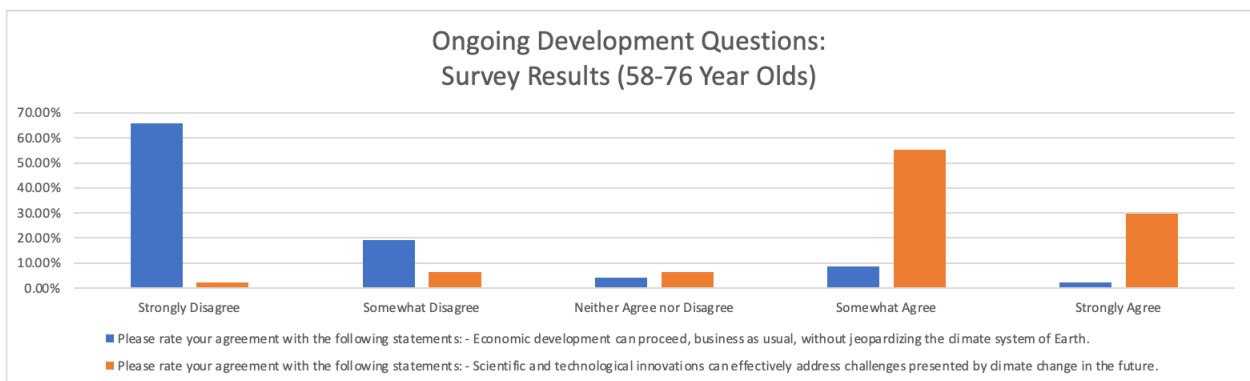


Fig. 27: Ongoing Development Question Results (58-76 Years); N=47

**VI. Ecological Anxiety & Optimism Scale**

These questions departed from discussions of efficacy in the interest of seeing how respondent’s understanding of the climate crisis and reflections on our approach to it impacted their relative anxiety and optimism. While the larger anxiety scale was meant to showcase the extent to which ecological anxiety can impact daily routines, there were (thankfully) not too many respondents acutely experiencing the mental health impacts of the condition to take up a significant portion of the data (though there are a few cases here and there). While that data will be listed in the coming pages, the most straightforward to approach would be the optimism scale—a non-likert based scale question that asked respondents to rate their optimism for the future of America in relation to 3 core components of the environmental crisis: resource conservation, species preservation, and pollutant control (these were placed after the government questions, as I felt people would be more candid in the wake of raising environmental critique). In this case, 5 would represent “highly optimistic” while 1 would constitute “pessimistic,” with the question being presented as 5 empty stars which respondents would select a number of between 1 and 5.

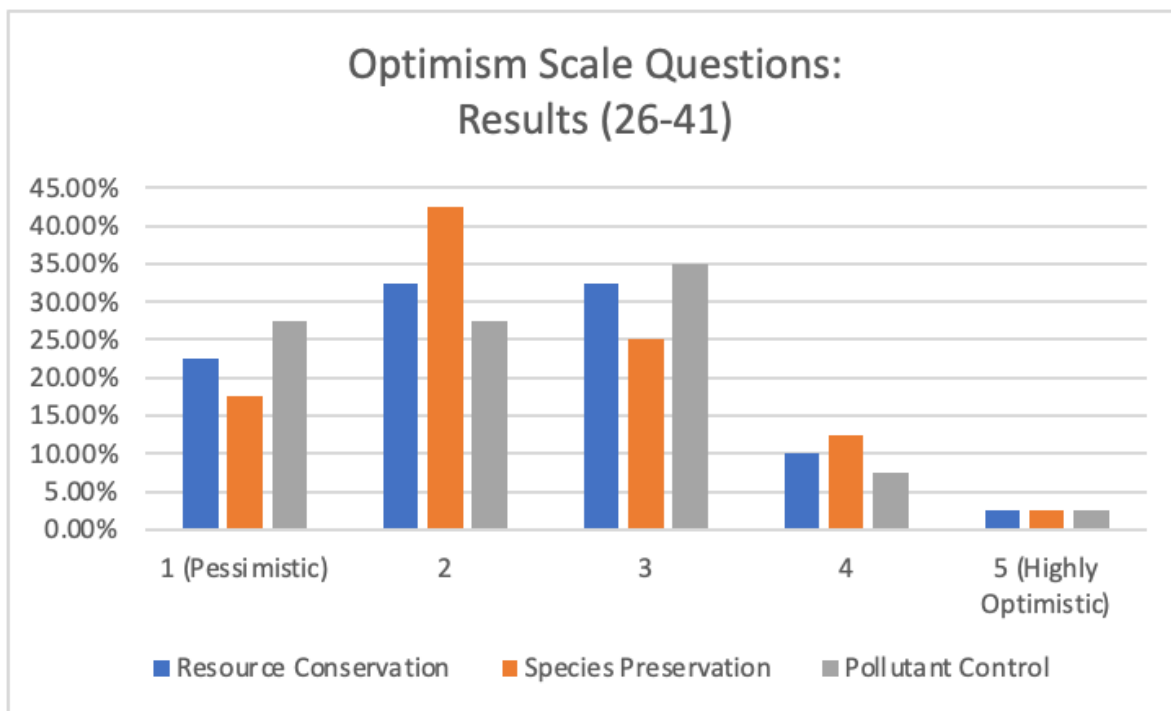


Fig. 28: Optimism Scale Question Results (26-41 Years); N=40

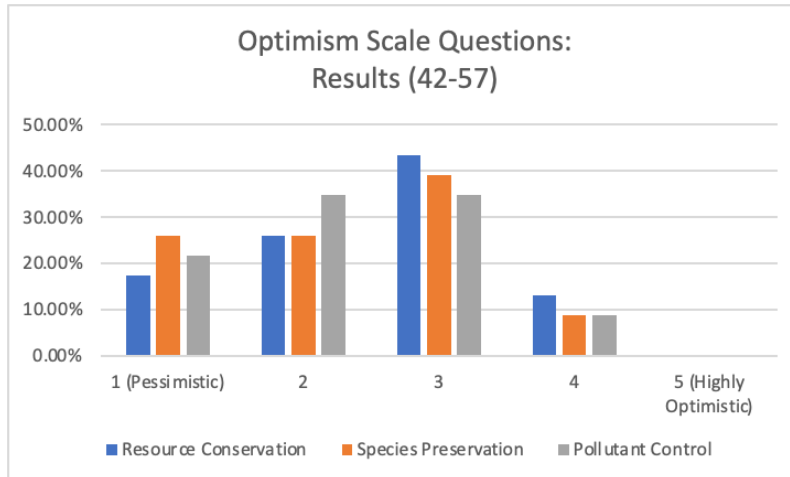


Fig. 29: Optimism Scale Question Results (42-57 Years); N=23

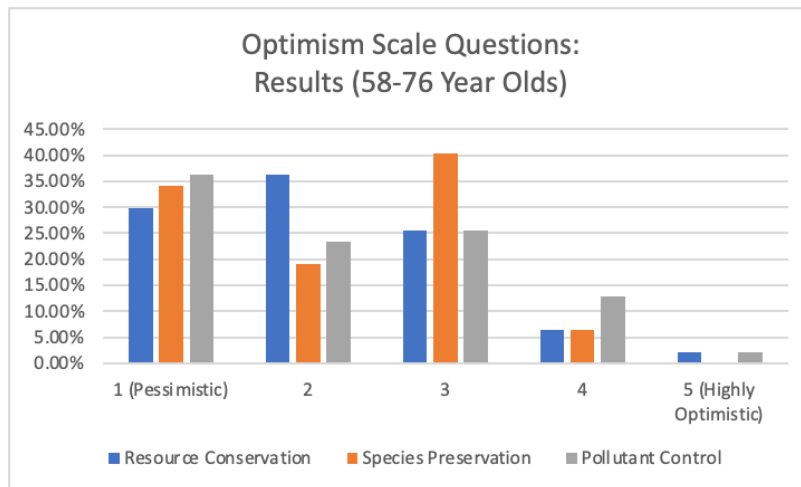


Fig. 30: Optimism Scale Question Results (58-76 Years); N=47

The highest number of individuals indicating optimistic perspectives on these subjects were respondents in the youngest age demographic. Interestingly enough, whereas 43% of the 26-41 year olds surveyed indicated a “2” in terms of their optimism for species preservation, both of the older demographics averaged around a “3” in said category—perhaps a result of having grown around less jeopardized landscapes & coverage of endangered species? Ongoing human development, urbanization, and fragmentation have become core aspects of nature for newer generations and younger individuals, such that they may on average have lower expectations for species diversity. Regardless, the staggering lack of responses centered around the “4” & “5” range showcases a decreasing degree of optimism in the future of our regulation of the environment.

Listed below are the responses to questions regarding the physical and mental responses associated with ecological anxiety. Though not statistically significant, they give an idea of the scale on which mental health is threatened by climate change, even if the repercussions are not distinctly felt/experienced by each and every individual.

*Table 11: Ecological Anxiety Question Results (26-41 Years); N=40*

How often are these statements true of you?	Never	Rarely	Some- times	Often	Almost Always
Thinking about climate change makes it difficult for me to concentrate.	20.00%	25%	38%	15.00%	2.50%
Thinking about climate change makes it difficult for me to sleep.	35%	40.00%	20.00%	2.50%	2.50%
I have nightmares about climate change.	60.00%	23%	18%	0.00%	0.00%
I find myself crying because of climate change.	55%	25%	12.50%	2.50%	5%
I think, "why can't I handle climate change better?"	52.50%	20%	17.50%	7.50%	2.50%
I go away by myself and think about why I feel this way about climate change.	62.50%	22.50%	12.50%	2.50%	0.00%
I write down my thoughts about climate change and analyze them.	80%	12.50%	7.50%	0.00%	0.00%
I think, "why do I react to climate change this way?"	75%	17.50%	7.50%	0.00%	0.00%
My concerns about climate change make it hard for me to have fun with my family or friends.	47.50%	27.50%	20%	2.50%	2.50%
I have problems balancing my concerns about sustainability with the needs of my family.	35%	20%	25%	12.50%	7.50%
My concerns about climate change interfere with my ability to get work or school assignments done.	60%	30%	5%	2.50%	2.50%
My concerns about climate change undermine my ability to work to my potential.	55%	22.50%	15%	2.50%	5%
My friends say I think about climate change too much.	70%	12.50%	10%	7.50%	0.00%

*Table 12: Ecological Anxiety Question Results (42-57 Years); N=23*

How often are these statements true of you?	Never	Rarely	Sometimes	Often	Almost Always
Thinking about climate change makes it difficult for me to concentrate.	4.35%	52%	26%	13.04%	4.35%
Thinking about climate change makes it difficult for me to sleep.	17%	56.52%	21.74%	4.35%	0.00%
I have nightmares about climate change.	60.87%	30%	9%	0.00%	0.00%
I find myself crying because of climate change.	60.87%	21.74%	13.04%	4.35%	0.00%
I think, "why can't I handle climate change better?"	39.13%	30.43%	21.74%	4.35%	4.35%
I go away by myself and think about why I feel this way about climate change.	65.22%	13.04%	21.74%	0.00%	0.00%
I write down my thoughts about climate change and analyze them.	86.96%	13.04%	0.00%	0.00%	0.00%
I think, "why do I react to climate change this way?"	73.91%	17.39%	8.70%	0.00%	0.00%

My concerns about climate change make it hard for me to have fun with my family or friends.	56.52%	30.43%	13.04%	0.00%	0.00%
I have problems balancing my concerns about sustainability with the needs of my family.	26.09%	39.13%	26.09%	8.70%	0.00%
My concerns about climate change interfere with my ability to get work or school assignments done.	65.22%	34.78%	0.00%	0.00%	0.00%
My concerns about climate change undermine my ability to work to my potential.	60.87%	39.13%	0.00%	0.00%	0.00%
My friends say I think about climate change too much.	65.22%	21.74%	8.70%	4.35%	0.00%

*Table 13: Ecological Anxiety Question Results (58-76 Years); N=47*

How often are these statements true of you?	Never	Rarely	Sometimes	Often	Almost Always
Thinking about climate change makes it difficult for me to concentrate.	12.77%	23%	51%	10.64%	2.13%
Thinking about climate change makes it difficult for me to sleep.	36%	40.43%	19.15%	4.26%	0.00%
I have nightmares about climate change.	63.83%	26%	11%	0.00%	0.00%
I find myself crying because of climate change.	65.96%	19.15%	10.64%	4.26%	0.00%
I think, "why can't I handle climate change better?"	70.21%	12.77%	14.89%	0.00%	2.13%
I go away by myself and think about why I feel this way about climate change.	82.98%	10.64%	6.38%	0.00%	0.00%
I write down my thoughts about climate change and analyze them.	78.72%	17.02%	4.26%	0.00%	0.00%
I think, "why do I react to climate change this way?"	78.72%	14.89%	6.38%	0.00%	0.00%
My concerns about climate change make it hard for me to have fun with my family or friends.	59.57%	25.53%	14.89%	0.00%	0.00%
I have problems balancing my concerns about sustainability with the needs of my family.	36.17%	19.15%	36.17%	4.26%	4.26%
My concerns about climate change interfere with my ability to get work or school assignments done.	78.72%	19.15%	2.13%	0.00%	0.00%
My concerns about climate change undermine my ability to work to my potential.	68.09%	25.53%	6.38%	0.00%	0.00%
My friends say I think about climate change too much.	89.36%	4.26%	6.38%	0.00%	0.00%

**VII. 6 Americas Questions**

The “6 Americas Questions” are mainly borrowed from the Yale study of the same name, which endeavored to create 6 central demographics of American citizens pertaining to their levels of concern for the environment in the 21st century. One could make a case for averaging out each response distribution and creating a composite as to which levels of concern are most common for each respective age demographic, though I believed that I had more than enough other questions that painted clear pictures of the levels of concern expressed by respondents. For the sake of clarification, for each issue, respondents clarified on a scale of 1-5 (5 being the maximum) how important each was to them.

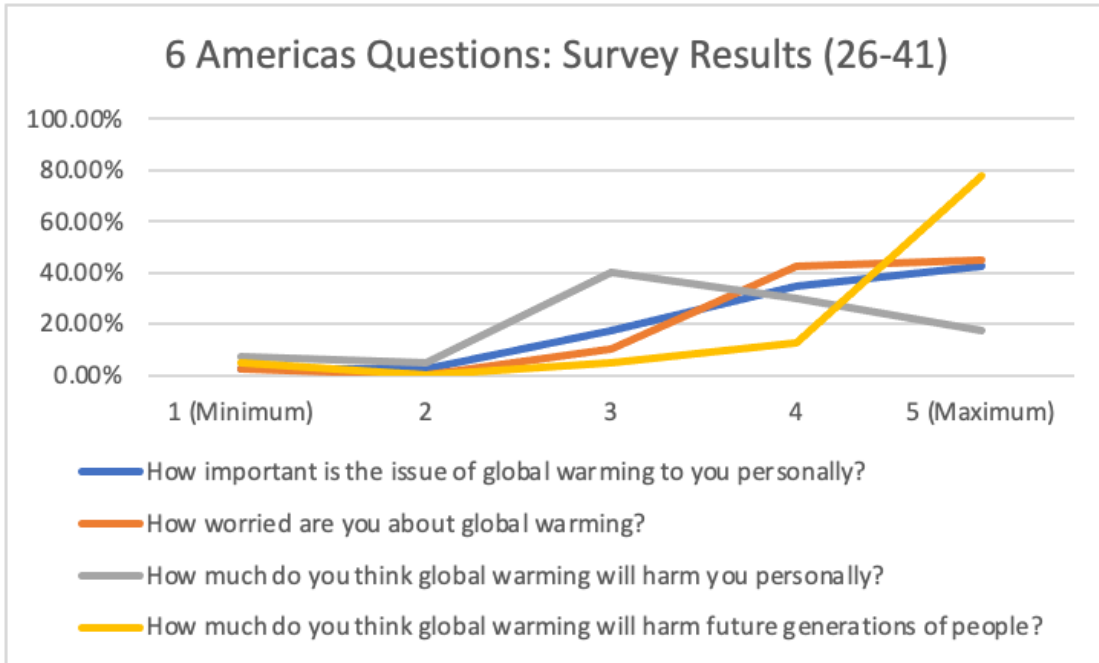


Fig. 31: 6 Americas Question Results (26-41 Years); N=40

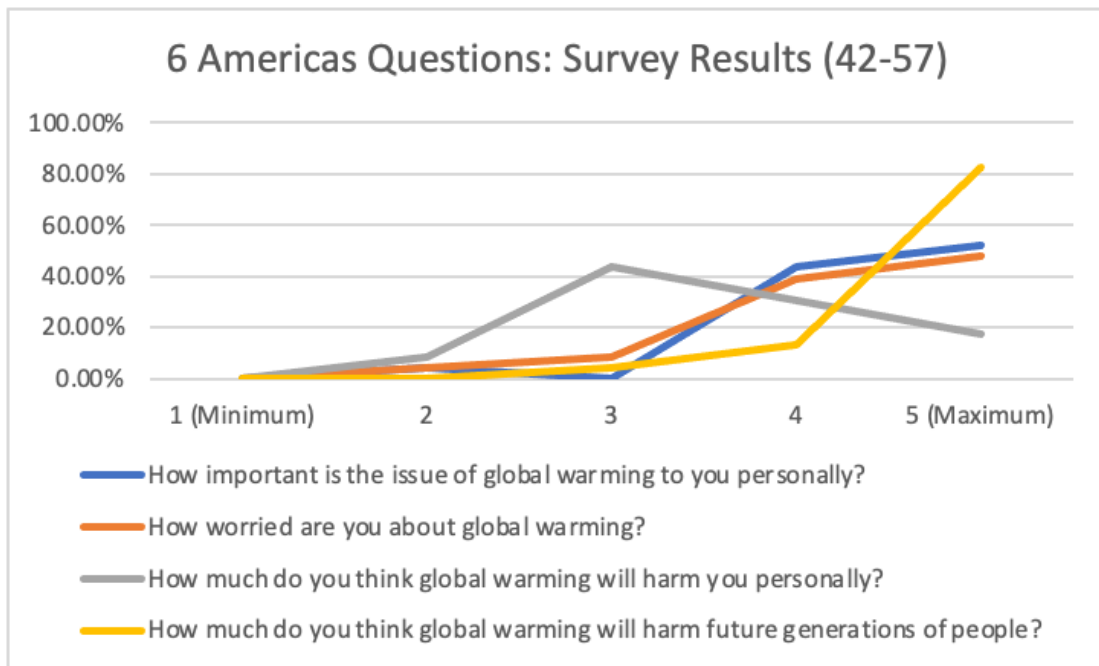


Fig. 32: 6 Americas Question Results (42-57 Years); N=23

One of the most interesting trends within this data pertained to the distinction between importance, worry and personal harm. Across all three of the major age demographics surveyed, the trendline shows that most agree that global warming will substantially impact people of future generations



(77.5% of Millennial respondents, followed by 82.6% of Generation X, and finally 78.72% of the Baby Boomers surveyed). However, distinctions arise for the other three questions. Far more members of the Baby Boomer demographic indicated a low level of concern regarding the degree to which global warming will harm them personally—6.38% of them responded with “1” and 19.15% with a “2” compared to the lower 8.7% of Generation X respondents who listed a “2” and both the 7.5% of Millennials who listed a “1” and the 5% who wrote a “2” down. That’s a substantial difference in how much perceived harm each generation predicts. It is also interesting to note that only the Baby Boomers surpassed a 50% figure regarding responses of “5” for how worried they are—perhaps a combination of fear for future generations and a lack of defined understanding substantiated by education. Regardless, across generations, the majority are not just worried for others—they’re afraid for themselves.

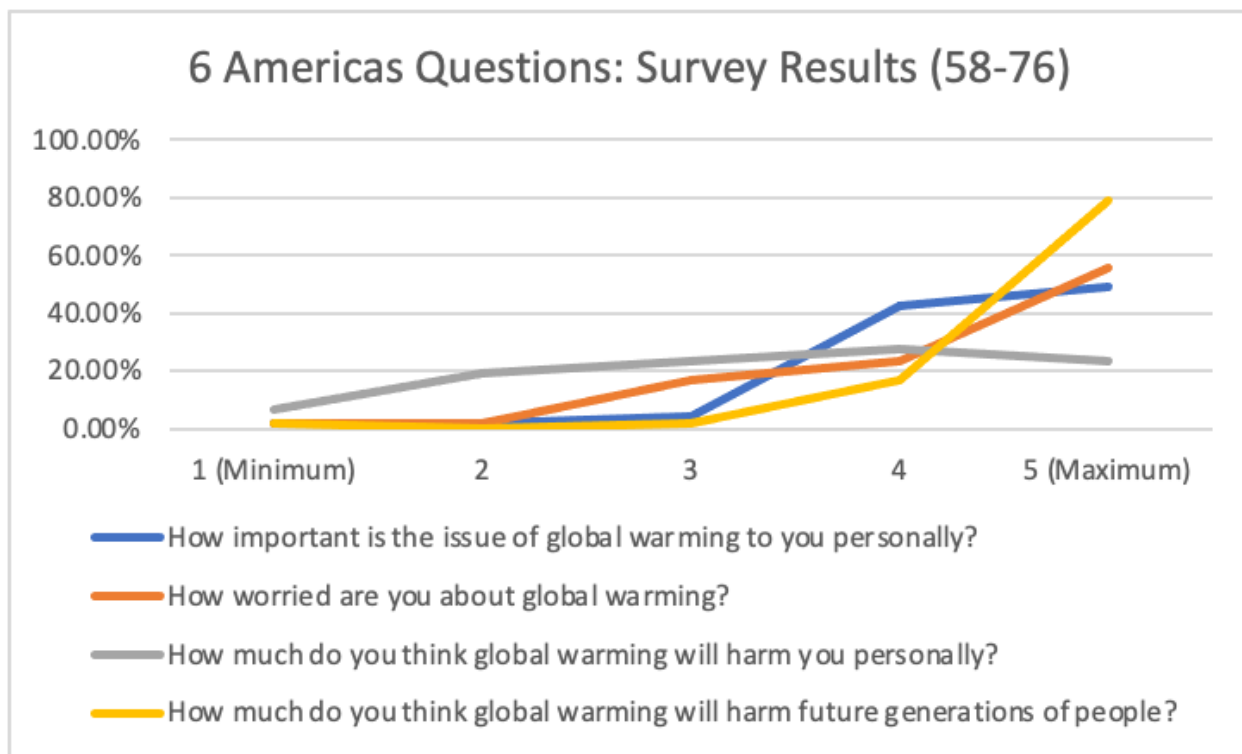


Fig. 33: 6 Americas Question Results (58-76 Years); N=47

**VIII. GAD-7 & Anxiety Review**

The main purpose of the GAD-7 inspired questions was to provide a clear space through which the survey could explore the legitimate physical and mental repercussions of acute ecological anxiety. Responses here reflect the degrees of anxiety experienced by respondents, presenting them with multiple avenues through which anxiety may manifest. Though fewer than expected, there were a surprising amount of individuals who were experiencing the impacts of anxiety across the categories, particularly in a specific age demographic.

*Note: the graphics cut out two of the questions. They read as “having trouble sitting still due to restlessness” and “feeling afraid due to a sense that something awful might happen.”*

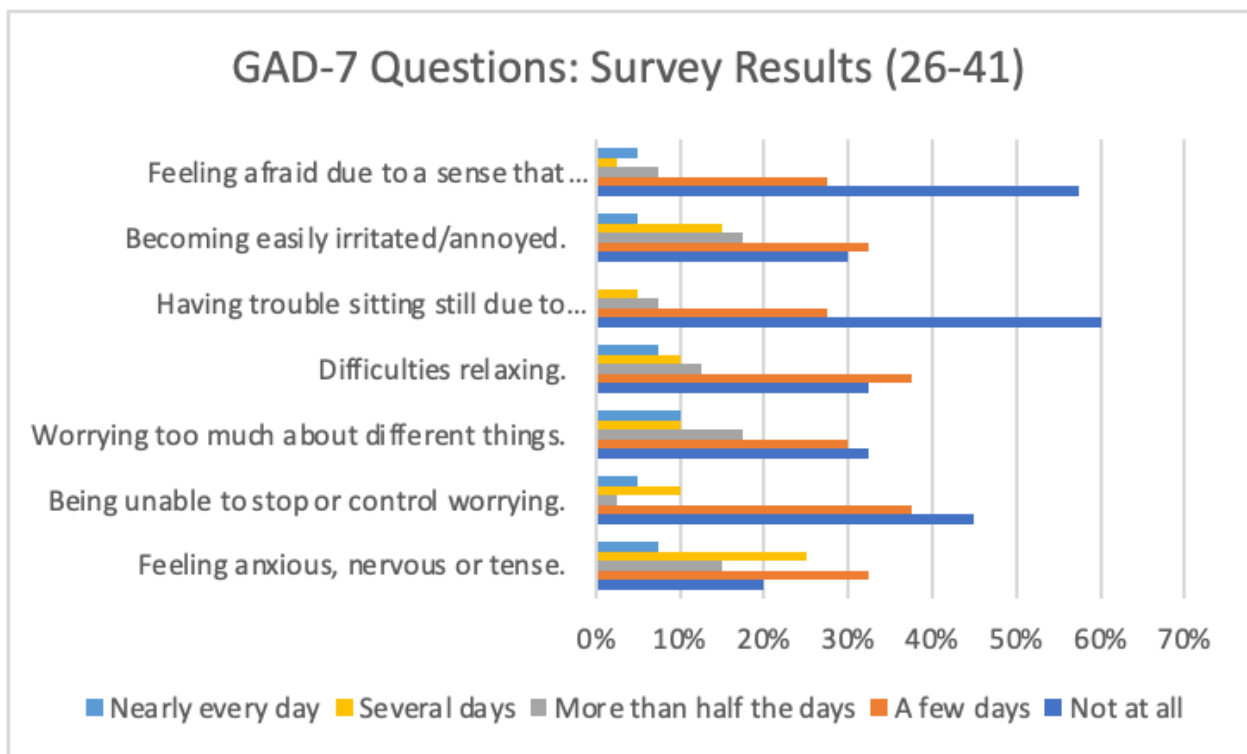


Fig. 34: GAD-7 Question Results (26-41 Years); N=40

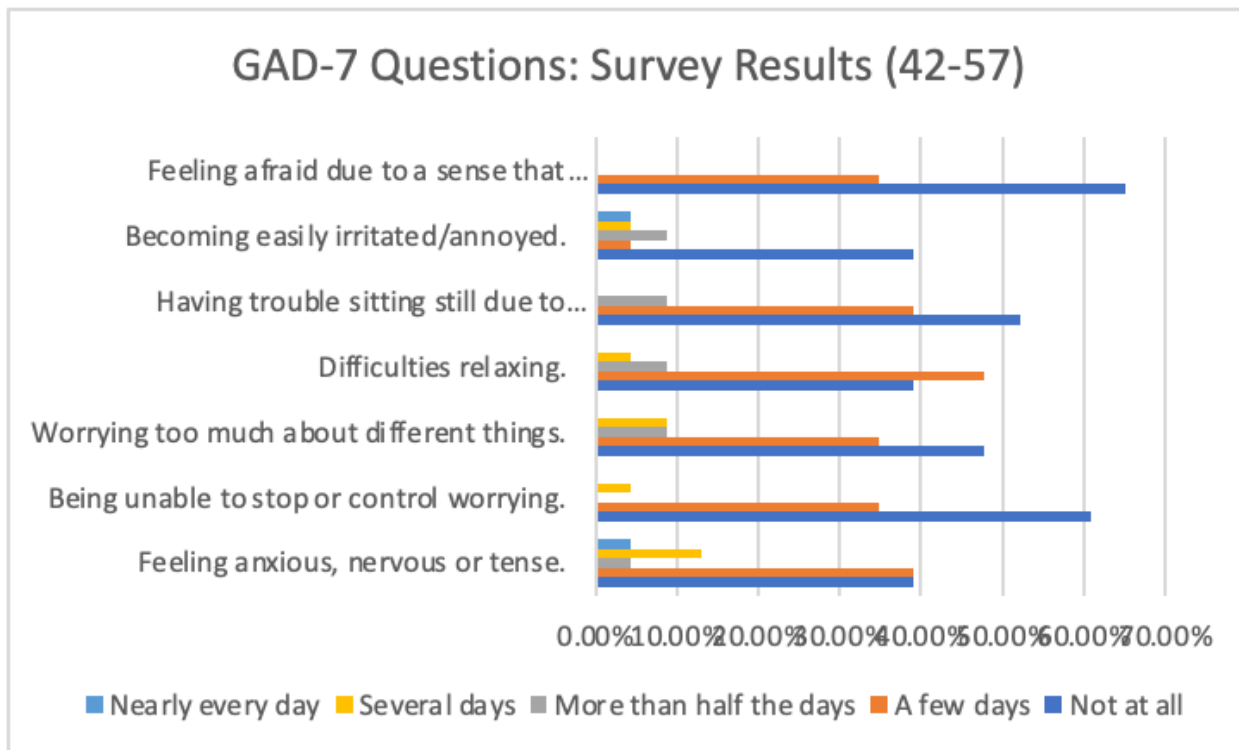


Fig. 35: GAD-7 Question Results (42-57 Years); N=23

The findings here primarily interest me because, outside of the Baby Boomer demographic, each category mainly provided responses of “Not at all,” implying that most individuals may experience some of these symptoms of anxiety but nowhere near on a regular basis, much less resulting from climate change. Of course, that is not to say that there were not common trends. Across each response category, difficulties relaxing and feelings of tension were commonly outpaced, with “A few days” replacing “Not at all” in each case (except for the Generation X section, where it was a tie). Regardless, the older age demographics clearly have the most substantial departures from the norm. Whereas the younger demographics only ever edge out past “Not at all” slightly, many of the response counts here suggest that older people have a far harder time dealing with anxiety, with greater frequency attributed to irritation and worrying about different things alongside the aforementioned categories.

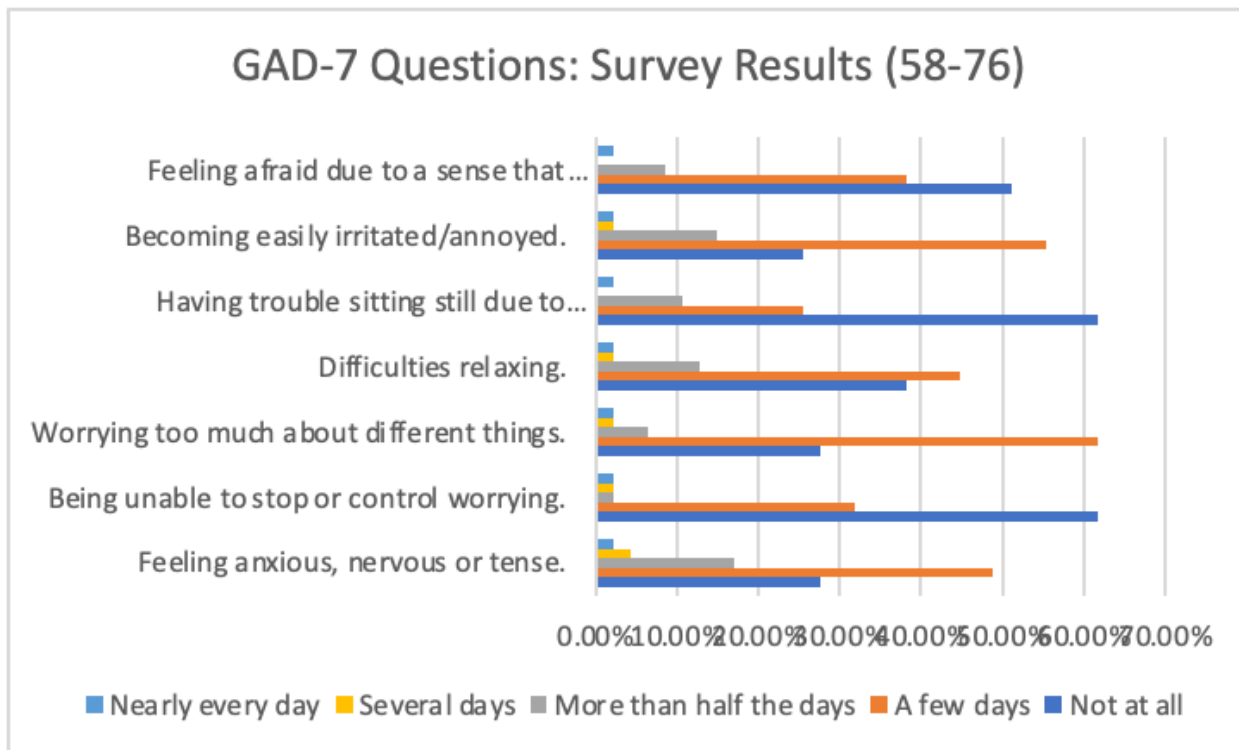


Fig. 36: GAD-7 Question Results (58-76 Years); N=47

**IX. Demographic Details**

The following numbers & graphics concern demographic information ranging from political affiliations to household counts, as many of these variables may hold further relevance when considered alongside this larger conversation surrounding ecological anxiety. One’s political affiliation may exacerbate or reduce the mental health impacts of climate change, and one’s employment status may contribute as well through leaving individuals feeling more or less secure. Regardless, there were many confounding variables present amidst these factors, so I thought it best to survey them out and observe them for potential correlations.

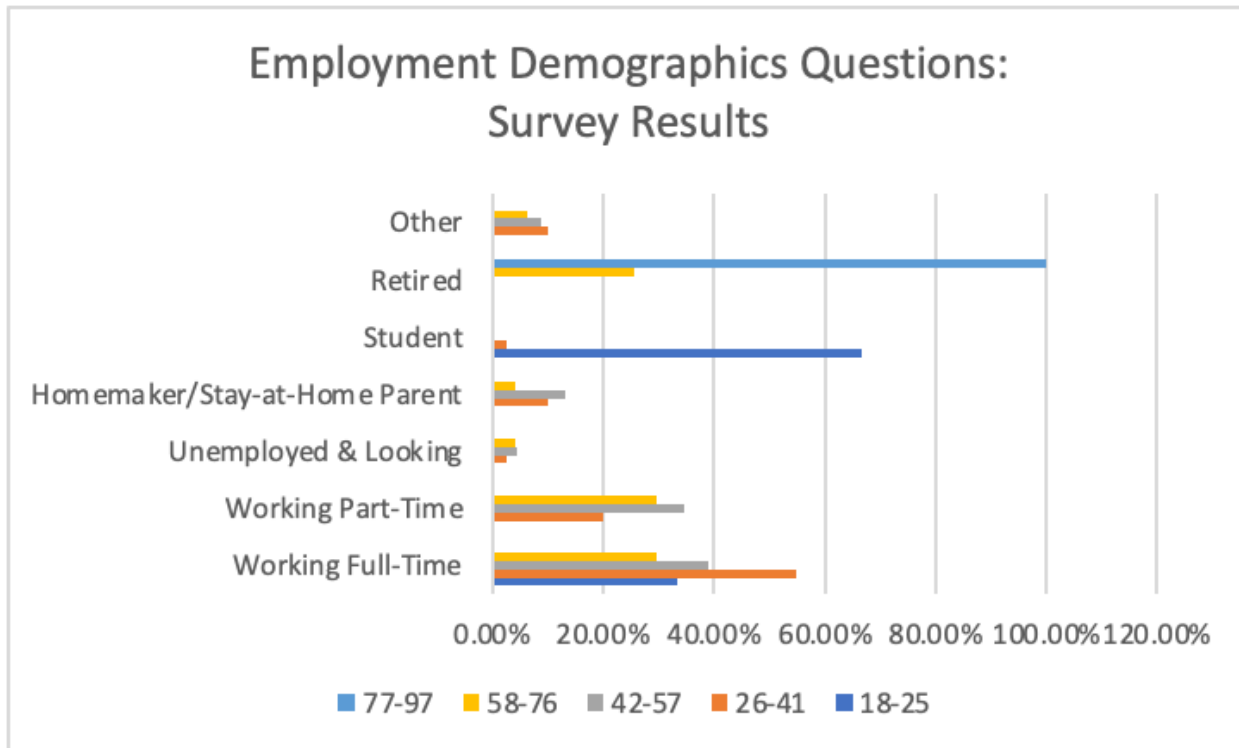
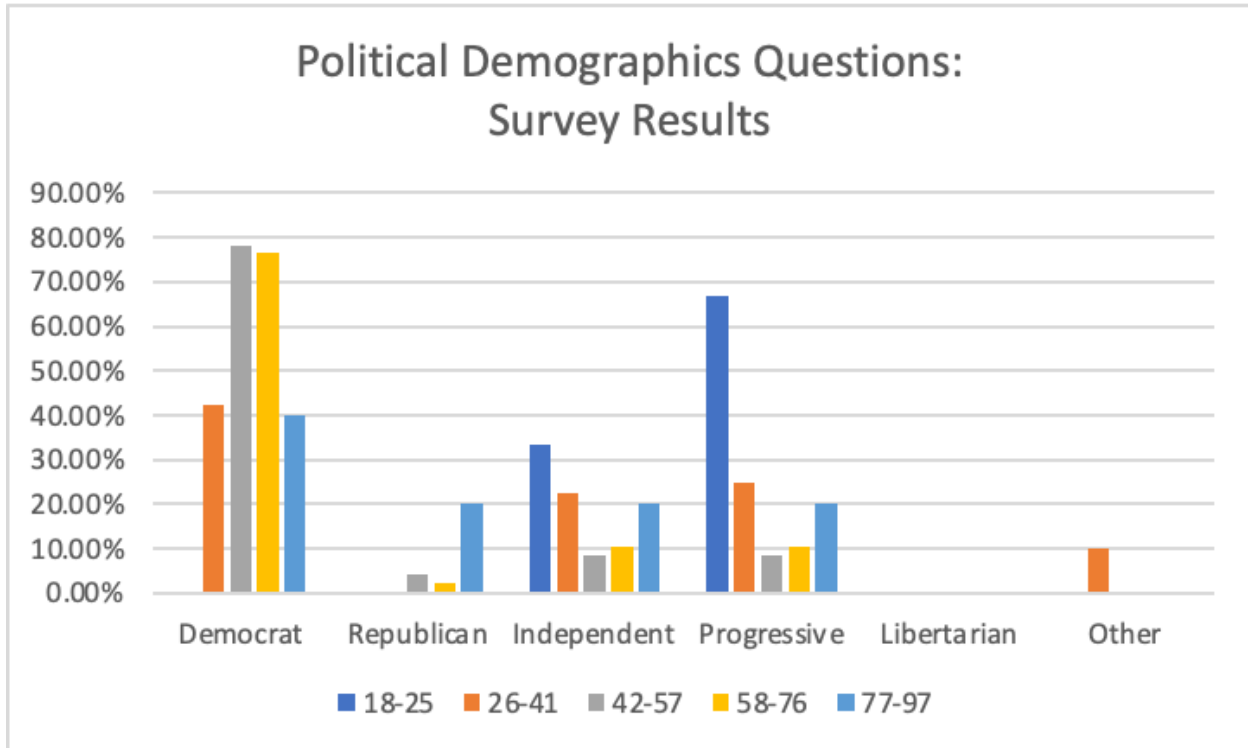


Fig. 37: Employment Demographics; N=118

Unsurprisingly, full-time employment is the most prominent response for all age groups barring 18-25 (66.67% of which selected “student”) and 77-97 (100% retirement rate). 55% of Millennials, 39% of Generation X and 30% of the Baby Boomers all selected this option—the most frequent across each one of them. It could be that the dropoff in employment as age increases (likely a result of layoff patterns or a desire to get out) increases sentiments of insecurity, thus facilitating anxiety.



*Fig. 38: Political Demographics; N=118*

An interesting dynamic to take note of here is the distinction between the younger age demographics and the rest; sadly, the 18-25 year old data cannot readily be trusted insofar as very few respondents fit that category. However, the trend can also be observed in the 26-41 year old category, which is the other prominent influence within the “Independent” and “Progressive” options. Compared to the rest, far more Millennials were willing to identify as the aforementioned political parties (23% selected “Independent” and 25% “Progressive”). This may be indicative of a transition that occurs across the years as individuals engage with politics. Insofar as younger individuals are more likely to hold more radical perspectives on politics due to the lack of family ties leading them to act conservatively, it is possible that the dropoff in these categories is resultant from maturity. As individuals age, they become less inclined to support alternatives to the two-party system in the interest of changing it, and instead fall into supporting whichever option best suits their needs and perspectives. Moreover, seeing as these options of political affiliation are not routinely supported in popular elections, perhaps there are more unrepresented among those counting themselves as “Democrats” as well...

Table 14: Chi Squared Test for Independence (Observed Values)

Age Groups	Democrat	Republican	Independent	Progressive	Libertarian	Other	TOTAL
18-25	0	0	1	2	0	0	3
26-41	17	0	9	10	0	4	40
42-57	18	1	2	2	0	0	23
58-76	36	1	5	5	0	0	47
77-97	2	1	1	1	0	0	5
TOTAL	73	3	18	20	0	4	118

Table 15: Chi Squared Test for Independence (Expected Values)

Age Groups	Democrat	Republican	Independent	Progressive	Libertarian	Other	TOTAL
18-25	1.86	0.08	0.46	0.51	0	0.10	3
26-41	24.75	1.02	6.10	6.78	0	1.36	40
42-57	14.23	0.58	3.51	3.898	0	0.78	23
58-76	29.082	1.19	7.17	7.97	0	1.59	47
77-97	3.09	0.13	0.76	0.85	0	0.17	5
TOTAL	73	3	18	20	0	4	118

Table 16: Chi Squared Test for Independence (Observed - Expected)

Age Groups	Democrat	Republican	Independent	Progressive	Libertarian	Other
18-25	1.86	0.08	0.64	4.38	0	0.10
26-41	2.42	1.02	1.38	1.53	0	5.16
42-57	0.9995	0.29	0.65	0.92	0	0.78
58-76	1.65	0.03	0.66	1.10	0	1.59
77-97	0.39	5.99	0.07	0.03	0	0.17

In conducting a Chi-Squared test of independence here, I wanted to assess whether or not political affiliation and age demographic were independent in relation to the surveying I had conducted. While initially I was worried due to the seemingly ordinal nature of the age demographic groups preventing me from running said statistical test, in the end, they are sorted by generation demographics, not numerical order. To that end, the experimentation was sound. Ultimately, the “Null Hypothesis” of there being no

association between age demographic and political affiliation was rejected with a P-Value of 0.02689116 (the  $\chi^2$  value was 33.8881756, and there were 20 degrees of freedom) at the 0.05 level. In effect, the implication here is that one cannot divorce age from political sentiments and perspectives, implying that the status of any given generation as more liberal or conservative has bearing over their response to the climate crisis. Perhaps a given political affiliation may have greater correspondence with ecological anxiety than others, should this research be undertaken on a wider scale in the future. I would assume that Democrats would be more susceptible, but this research is suggesting that partisan politics may not have as much bearing on whether or not individuals experience anxiety as much as it does the degree to which said anxiety is felt.

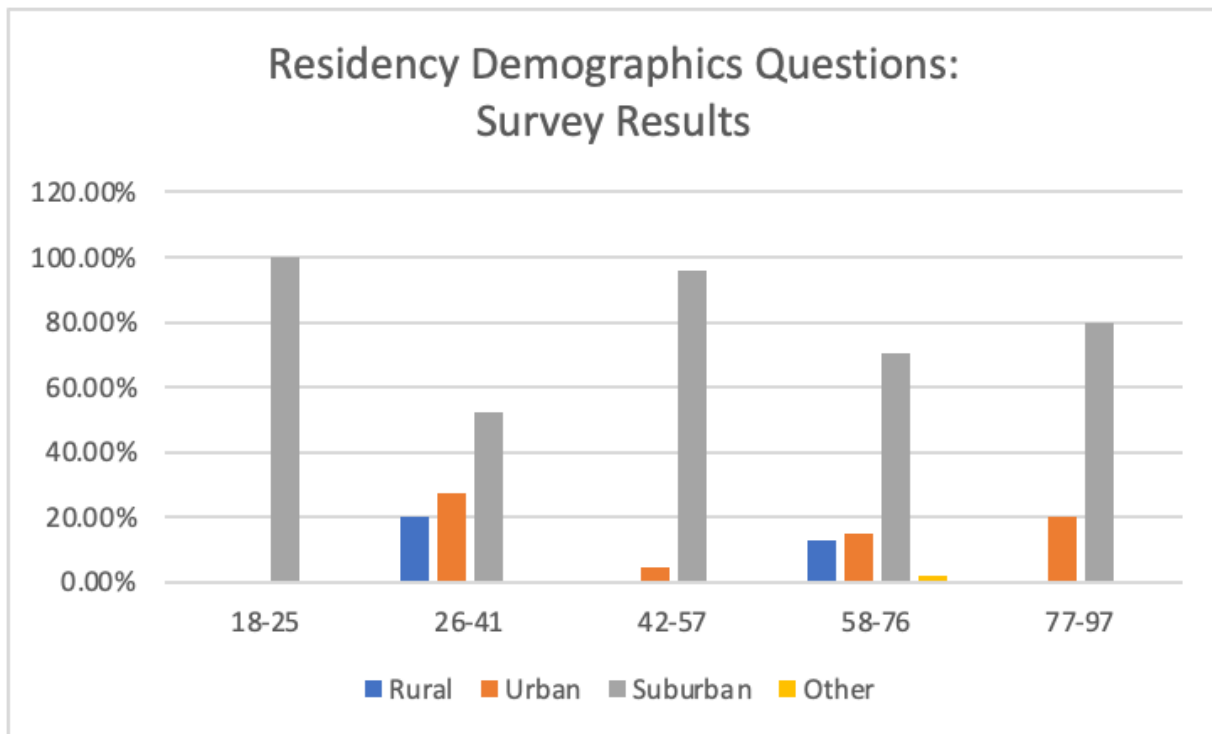


Fig. 39: Residency Demographics; N=118



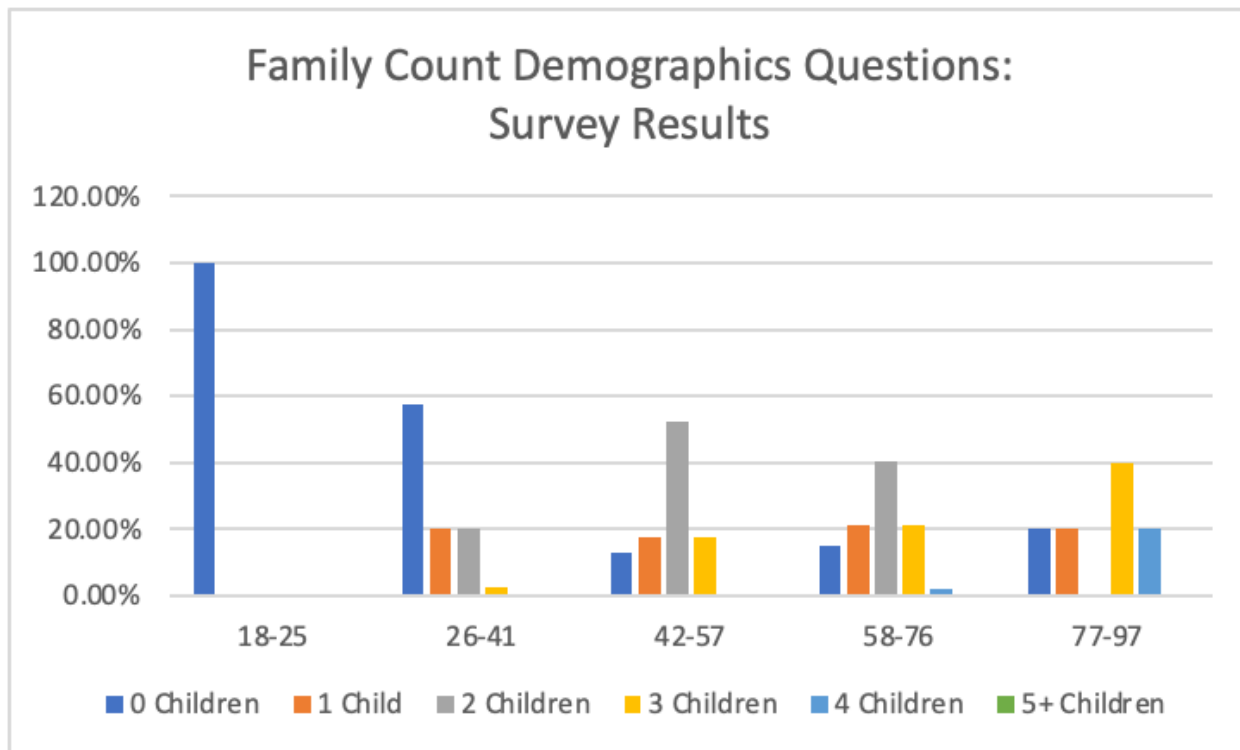


Fig. 40: Family Count Demographics; N=118

Sadly, the residency descriptor did not add anything truly extraordinary—likely a result of the limitations of my distribution methods leading to more people from the suburbs being exposed to the survey in the first place. As for the family count information, this was specifically sourced in order to establish whether or not raising children has significant influence over experienced anxiety resulting from climate change. However, many of the age demographics have expressed degrees of anxiety over the climate crisis seemingly independent of whether or not children are present (evidenced by the fact that the two youngest age demographics overwhelmingly have fewer children yet still can experience similar feelings of anxiety relating to the climate crisis). There were the previously mentioned results suggesting that older individuals were more susceptible to some of the impacts of anxiety on daily activities, so perhaps the presence of children to raise & attend to stands to compound such factors that they might become apparent in surveys such as this one.

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**DISCUSSION:**

The data collected from this survey showcases that older and younger age demographics alike routinely experience similar feelings of anxiety in relation to environmental processes, though multiple factors exist that may confound whether or not specific demographics are more or less susceptible to the impacts. In some instances, it is as simple as phrasing. For example, the independence test between media exposure and frequency of discussion surrounding climate change (Fig. 10-15) found little correlation between the two, though that may partly be due to the wording of the question, which frames the discussion around talking about climate in the presence of friends rather than just generally speaking. Perhaps with an alternative means of phrasing how often climate change is on the mind the results would differ... Whereas similar trends exist regarding the degrees to which age demographics experience the implications of anxiety (Fig. 40-42), the ultimate sources of said anxiety are unclear when considered alongside multiple other demographic variables (i.e. political affiliation, education, etc.). This result is not unanticipated, as the inclusion of multiple other distinct demographic details was done in anticipation of unsure findings informed by factors other than age. Data from this research are able to lend to the conclusion that anxiety in relation to the climate crisis is common across all generations, though it is not certain which factors have the greatest influence over said metric. While data exists showcasing correlation between age demographics and other relevant factors (Fig. 51-53), age demographics were not found to be statistically correlated to measures of ecologically-informed anxiety.

Previous studies in the field, such as the works of UVM contemporary Maya Bostwick and researcher Panu Pikhala, have often seen fit to focus on specific age demographics (often favoring younger individuals) in the interest of understanding the developmental implications of climate change and ecological anxiety. Said work has often suggested that a substantial impact is experienced by adolescents and other developing individuals in the wake of either climate disasters or as a result of the underlying knowledge of ecological degradation, facilitating a loss of faith in authority figures, senses of dread and anxiety, and even conditional responses such as Insomnia. Comparatively, the work here was less focused on the impacts of ecological anxiety than it was the scope of its reach. The findings here

showcase that individuals young and old alike are neither unaware of the climate crisis nor unaffected by it—many across age demographics showcased a susceptibility to mental health impacts listed in previous sections or changes in behavior resulting from awareness and/or experience.

Of course, many limitations exist for the study. Survey distribution was effective at times, yet ultimately it led to a population of respondents with key shared demographic details that may have skewed the results (Fig. 54). This is mainly a result of opting to push for survey responses through neighborhood survey and message boards rather than effectively embracing a physical distribution method within a high-diversity area or a randomized sampling method through services such as QualtricsXM. Another limitation concerns the bias inherent to self-reported information such as this. Admitting to anxiety and fear are not inherently easy things to do, and insofar as the burden of response was on the respondents, it is not outside the realm of possibility that many were not entirely truthful with their answers. Providing them with multiple likert scale questions was intended to provide them with the scope necessary to convey their feelings. However, perhaps it is difficult to communicate sentiments & perspectives without using their own terms, for some. As such, it cannot be considered a perfected respondent medium.

It should be acknowledged that the respondent demographics were not evenly distributed across the focus age groups as would have been otherwise desirable. As the survey respondent count (Table 1) shows, the distribution is ultimately bimodal, with centralized populations in the Millennial and Baby Boomer categories. Going into the research process, the intention was to create a surveying format that could both be equally distributed across the population and remain accessible to the average individual.

However, once again, the act of presenting & advertising the survey as climate-related may have subtly impacted the respondent demographics. It is possible that certain age demographics would be more inclined than others to engage in the first place. The Millennials have the most direct experience learning about climate change, and perhaps Baby Boomers show more interest as one of the less aware demographics due to the longevity of their lifespans. This stands in contrast to my initial assumption that

older demographics would show markedly less interest and anxiety. Conversely, Generation X was far less represented than initially expected.

In essence, efforts to distribute and advertise the survey through individual means may have impacted the demographics of those responding, thus biasing the results. A truly randomized version of this research would effectively lack an equivalent distribution across American states, age groups, gender identities and beyond. Rather, a stratified random sample could be leveraged to result in comparable respondent counts across age demographics. Utilizing said sampling method may help to answer remaining questions regarding whether or not levels of concern over climate change are similar between age groups.

An additional source of bias arises from the phrasing leveraged throughout the research process. While due attention was provided to the majority of questions regarding available options, bias nonetheless becomes possible through the assumption that respondents perceive climate change as a threat. While multiple questions existed that served to cover the various degrees to which individuals might understand the climate crisis (i.e. educational exposure, media outreach, government action, scientific consensus, etc.), the entire survey was still ultimately framed as a discussion of climate change and the anxiety resulting from said process. This stance inherently devalues the perspective of those otherwise unsure of the validity of climate change, as the ensuing conversation comes from a place of universal acknowledgement of its severity. To those otherwise unconcerned, unconvinced, or unwilling to have such a discussion, said approach mainly serves to alienate them from participating.

For example, in one “condition assessment” question which asked respondents to report on whether or not they had experienced any associated symptoms of ecological anxiety, there was not an overt option for individuals to select “none of the above” (rather, the design allowed for respondents to continue the survey without answering, though this change was seemingly inconsistent once implemented). Regardless, the problem here was that the question was not presented as optional, nor did it openly acknowledge the perspective of those who had not experienced any associated symptoms, much less considered them with severity.

Moreover, the advertised flyers presented the survey as one focused on climate-related anxiety. To that end, the conversation from the beginning stood to exclude those who have yet to experience such feelings of existential dread or stress, as its discussion of environmental topics was limited to those who directly cared about or acknowledged climate change. It is possible that, as a coping mechanism, individuals may avoid discussions expressly centered upon said topics to the extent that they primarily frighten and unsettle people. Ultimately, this restriction is the result of bias on behalf of the researcher for assuming a universal acknowledgement of climate change & desire to discuss its implications.

The hypothesis at the outset of this research posited that ecological anxiety would be more prominent and acutely experienced by younger age demographics in comparison to older individuals. However, the findings of this survey found that all ages are susceptible to anxious sentiments related to climate change, but that they also comparably experience some of the associated symptoms and/or behaviors (Fig. 40-42). Where the study does find significance is in the fact that across generations, barring outliers, there is a uniform concern for the wellbeing of the environment, whether rooted in care for friends and family, dissatisfaction with the administrative response, or concern for one's biotic community. This keeps with trends within the literature positing that ecological anxiety is a condition unrestricted in who may experience it; while certain age demographics are without question more vulnerable to some climatic impacts, it is nonetheless not an issue exclusive to any particular demographic. All people living within the biotic community of Earth have a vested stake in the issue, no matter how their stress may manifest. Regardless, one also cannot discount the mounting focus on ecological concerns present in media and education, as the awareness of younger generations at the very least surpasses the classroom exposure of other generations. With this in mind, the need for further research is made even more crucial, insofar as we recognize that these compounding sources of exposure stand to build even greater levels of anxiety in younger age demographics.

Questions still remaining concern the factors that inform this anxiety and the degree to which it may compound over the years. What factors may be present that inform compounding sentiments of ecological anxiety, or reduced ones, for that matter? How does ecological anxiety as a variable inform our

sociopolitical decision making? Of course, some questions pertaining to factors that inform levels of ecological anxiety would need to be researched with a wider scope than that of the research outlined in this paper. Though the intention was to garner a representative sample of Americans across age demographics, the aforementioned statistics showcase some trends in respondents that would make the information non-representative. Increased respondent count and location access would be crucial to further efforts in this respect.

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***RECOMMENDATIONS:***

Regarding future endeavors building upon these insights, prospective researchers might consider assessing whether or not the presence of ecological anxiety in individuals impacts other decision-making processes, such as democratic proceedings (i.e. does ecological anxiety substantially inform the ballot practices of individuals) or capital ventures. The distinction between administrative efforts at state & federal levels also merits further research regarding how civilians perceive said efforts. Such research may justify a national-level address targeted towards ecological anxiety, insofar as it stands to influence cornerstones of American democracy and life such as voting and capital flow. Another interesting area of insight pertains to how information regarding climate change may impact individuals over time. As it stands, the aforementioned research addresses educational exposure (Fig. 16-24), though it does not address the prolonged impacts of said education. Research may be undertaken that aims to explicitly address the differences in the bearing and action of individuals over time as informed by awareness of the climate crisis.

Of course, this research may also be furthered through broadening the respondent pool (perhaps to a statewide level in each instance) in order to get even more substantial counts of respondents in order to test connections between ecological anxiety and lived environments & experience. Testing for conditions in the wake of ecological anxiety may seem excessive, whereas testing for generalized anxiety instead in relation to climatic events & areas of specific interest may prove more fruitful.

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***CONCLUSION:***

Though age demographics are separated by numerous sociopolitical factors and ideological differences, there is a uniform tendency to experience anxiety in relation to climatic events across generations. This appears in spite of variable exposure through media and or education, and is coupled with widespread dissatisfaction with governmental efforts. The data from this study suggests that, while not always acutely present through defined conditions, said anxiety may impact the ongoing activities and perspectives of individuals in negative ways such that it bears further address. If said anxiety is to be felt uniformly, the best means of reproach constitute educational efforts to best inform individuals such that they are not without understanding of that which they fear, alongside expanded mental health coverage for Americans in anticipation of increasing climatic events & subsequent anxiety.

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*APPENDICES:*

# Survey of Attitudes & Awareness Towards Ecological Risks

## Start of Block: Survey Introduction

Research Info Sheet Title of Study: Generational Stratification of Ecological Anxiety

Principal Investigator (PI): Jack Wilde

Faculty Sponsor: Professor Amy Seidl

Funder: Rubenstein School of Environment and Natural Resources

Introduction: You are being invited to take part in this research study because we are interested in gauging the levels of ecological anxiety in individuals 18 and older. This study is being conducted by Jack Wilde at the University of Vermont.

Purpose: As climate change becomes an increasingly prevalent part of everyday life, it is important that we understand the myriad impacts it will have on humanity. Mental health harm is one of the more underrepresented implications of climate change, but lingering trauma from natural disasters/personal stress can be serious burdens on the population. This survey's purpose is to review the factors influencing people's relative levels of ecological anxiety in order to understand which age demographics are most susceptible to the mental health impacts of climate change.

Study Procedures: If you take part in the study, you will be asked to respond to a survey about the multiple factors that inform ecological anxiety. Specifically, participants will be expected to complete a 25-question survey.

Questions are primarily multiple choice presented in multiple formats, such as decision matrix columns and rows or classic 4 or 5 option multiple choice responses. All questions are required

fields and must be answered in order to complete the survey. Only upon completion of the survey will respondents be entered into the raffle drawing referenced in promotional materials.

Active participation of the subject should take no more than 10 minutes, and respondents need only complete the survey once to finish the process.

**Benefits:** As a participant in this research study, there may not be direct benefit for you; however, information from this study may benefit other people now or in the future.

**Risks:** The study has no identifiers. As such, “We will not collect any information that will identify you to protect your confidentiality.”

**Costs:** There will be no costs to you for participation in this research study.

**Compensation:** Respondents will not be compensated for their participation in this research, although they will be entered into a drawing for a \$50.00 Amazon gift certificate. Entry into the drawing will only be received upon completion of all questions in the survey.

**Confidentiality:** All information collected about you during the course of this study will be stored without any identifiers. No one will be able to match you to your answers.

Participant information will be collected and curated by Qualtrics, an American experience management platform founded in 2002. Any identifiable information collected for this survey will be stored by Qualtrics, alongside firewall defense systems and regular security scans. Third-party testing for application penetration is an annual process at Qualtrics. Moreover, Transport Layer Security (TLS) encryption is also utilized in order to protect transmitted data, and all involved data centers are industry standard SSAE-18 method certified. Participant info will be available only to individuals related to the project, in accordance with confidentiality obligations (access is monitored for this reason). Through anonymizing respondent data, Qualtrics will remove any and all personal data linking back to the respondents, effectively making it impossible for the Principal Investigator to identify survey participants.

**Voluntary Participation/Withdrawal:** Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. You may choose not to take part in this study, or if you decide to take part, you can change your mind later and withdraw from the study.

Participant's data is de-identified at time of collection and therefore, your data cannot be withdrawn from the study and will be used.

Questions: If you have any questions about this study now or in the future, you may contact Jack Wilde at the following phone number: (862)-250-2053. If you have questions or concerns about your rights as a research participant, then you may contact the Director of the Research Protections Office at (802) 656-5040.

It is recommended you print this information sheet for your records before continuing.

The last date of change for this information was [March 29th, 2022].

**End of Block: Survey Introduction**

**Start of Block: Question Block 1: Lived Experience**

Personal Exp. Have you experienced/lived through a natural disaster in the last 5 years (i.e. floods, wildfires, hurricanes, etc.)?

- No, never (1)
- Yes, once (2)
- Yes, a few times (3)
- Yes, several times (4)

Frequency Are natural disasters a common occurrence in your area?

- No, never (1)
- There is one significant example (2)

- There has been more than one incident (3)
- They are regular occurrences (4)

Associate Exp. Do you know anyone who has experienced a natural disaster in the past 5 years?

- Nobody (1)
- Yes, one person (2)
- Yes, a few people (3)
- Yes, several people (4)

End of Block: Question Block 1: Lived Experience

Start of Block: Question Block 2: Expanding Media Coverage & Awareness

Media Exposure How frequently do climate change related stories, studies or coverage appear in your preferred news outlets?

- Never (1)
- Rarely (around once a year) (2)
- Infrequently (at least once a month) (3)
- Frequently (at least once a week) (4)
- On a daily basis (5)



Disaster Coverage How often are natural disasters covered by your preferred news outlets?

- Never (1)
- Rarely (around once a year) (2)
- Infrequently (at least once a month) (3)
- Frequently (at least once a week) (4)
- On a daily basis (5)

Page Break

Educational Exposure How often have you been taught about climate change or global warming in school?

- Not at all (1)
- Rarely, if ever (2)
- Infrequently offered (3)
- Regularly offered & taught (4)
- Required learning (5)

Independent Research Have you done any independent research to better familiarize yourself with the science & conversations surrounding climate change (i.e. reading scientific articles, consulting local experts, etc.)?

- None at all (1)
- A little (2)
- A moderate amount (3)
- A lot (4)
- A great deal (5)

Page Break

Scientific Consensus The vast majority of scientific papers & experts agree that climate change is real and human-induced.

▼ Strongly disagree (1) ... Strongly agree (5)

Scientific Insights Rate your agreement with the following statement: I believe in climate science.

- Strongly Disagree (1)
- Somewhat Disagree (4)
- Neither Agree Nor Disagree (5)
- Somewhat Agree (6)

Strongly Agree (7)

End of Block: Question Block 2: Expanding Media Coverage & Awareness

Start of Block: Question Block 3: Varying Contribution(s)

Gov. Regulation Please rate your agreement with the following statements:

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)
The government needs to take a more proactive role in producing policy and legislation to address climate change. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current government disaster response protocols are effective. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Cont. Development Please rate your agreement with the following statements:

	Strongly Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Strongly Agree (5)

<p>Economic development can proceed, business as usual, without jeopardizing the climate system of Earth. (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Scientific and technological innovations can effectively address challenges presented by climate change in the future. (2)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Question Block 3: Varying Contribution(s)

Start of Block: Question Block 4: Personal Risk Assessment

Page Break

Eco-anxiety Scale Please rate how often the following statements are true of you:

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Almost always (5)
<p>Thinking about climate change makes it difficult for me to concentrate. (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking about  
climate  
change makes  
it difficult for  
me to sleep.  
(14)

I have  
nightmares  
about climate  
change. (15)

I find myself  
crying  
because of  
climate  
change. (16)

I think, "why  
can't I handle  
climate  
change  
better?" (17)

I go away by  
myself and  
think about  
why I feel this  
way about  
climate  
change. (18)

I write down  
my thoughts  
about climate  
change and  
analyze them.  
(26)

I think, "why  
do I react to  
climate  
change this  
way?" (20)

My concerns about climate change make it hard for me to have fun with my family or friends. (21)

I have problems balancing my concerns about sustainability with the needs of my family. (28)

My concerns about climate change interfere with my ability to get work or school assignments done. (29)

My concerns about climate change undermine my ability to work to my potential. (30)

My friends say I think about climate change too much. (31)

Page Break

Graphic Scale Rate your optimism for the future of the following subjects (5 stars being highly optimistic & 1 star being pessimistic):

Resource  
Conservation  
(1)

Species  
Preservation  
(2)

Pollutant  
Control (3)

Page Break

6 Americas Condensed Respond to each of the following questions with a rating of your interpretation of the issues (1 is minimum; 5 is the maximum; 1 is negative & 5 is positive).

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)
How important is the issue of global warming to you personally? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How worried are you about global warming? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much do you think global warming will harm you personally? (3)

How much do you think global warming will harm future generations of people? (4)

End of Block: Question Block 4: Personal Risk Assessment

Start of Block: Question Block 5: Anxiety Review

Condition Assessment Note if you have experienced any of the following conditions recently as a result of climate change:

- Post-traumatic stress disorder (PTSD) (1)
- Insomnia (2)
- Panic attacks (3)
- Weakened immune system responses (4)
- Depression (5)
- Acute anxiety (6)

Skip To: GAD-7 Anxiety If Condition: Selected Count Is Equal to 0. Skip To: Over the past two weeks, how often ha....



Page Break

GAD-7 Anxiety Over the past two weeks, how often have you experienced the following challenges?

	Problem Frequency				
	Not at all (1)	A few days (2)	More than half the days (3)	Several days (4)	Nearly every day (5)
Feeling anxious, nervous or tense. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being unable to stop or control worrying. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worrying too much about different things. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulties relaxing. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having trouble sitting still due to restlessness. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming easily irritated/annoyed. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling afraid due to a sense that something awful might happen. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Display This Question:*

*If Over the past two weeks, how often have you experienced the following challenges? : Problem Frequency != Not at all*

GAD-7 Anxiety (pt.2) If you checked any of the above problems, how difficult did they make it to complete your work, take care of obligations at home, or get along with others?

- Extremely difficult (1)
- Very difficult (2)
- Somewhat difficult (3)
- Not difficult at all (4)

End of Block: Question Block 5: Anxiety Review

Start of Block: Question Block 6: Demographics

Age Count How old are you?

- 18-25 (1)
- 26-41 (2)
- 42-57 (3)
- 58-76 (4)
- 77-97 (5)

*Display This Question:*

*If How old are you? = 18-25*

Major Focus If you fall into the 18-25 age demographic, please indicate your major in college if applicable.

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Page Break

Political Preference Generally speaking, do you think of yourself as a Democrat, Republican, Independent, or something else?

- Democrat (1)
- Republican (2)
- Independent (3)
- Progressive (4)
- Libertarian (5)
- Other (6)

Employment Status What best describes your employment status over the last three months?

- Working full-time (1)
- Working part-time (2)
- Unemployed and looking for work (3)
- A homemaker or stay-at-home parent (4)

Student (5)

Retired (6)

Other (7)

Page Break

Residency Descriptor Which of the following descriptors best suits your current residency?

Rural (1)

Urban (2)

Suburban (3)

Other (4)

Page Break

Parental Status Do you have any children?

Yes (1)

No (2)

Display This Question:

*If Do you have any children? = Yes*

Child Count If yes, then how many?

1 (1)

2 (2)

3 (3)

4 (4)

5+ (5)

End of Block: Question Block 6: Demographics

Start of Block: Question Block 7: Raffle

Raffle Entry Please indicate below whether or not you would like to be entered into the aforementioned raffle (don't worry—your response will remain anonymous).

Yes (1)

No (2)

End of Block: Question Block 7: Raffle