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GREEN BURIAL: THE LAST FOOTPRINT

A Dissertation written in partial fulfillment of the requirements of the Master of Science
in Impact Focused Business & Investing

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Abstract

The research includes an overview of the environmental impacts of burial and cremation practices and the benefits of green burials. Additionally, the study investigates why green burial has not been more widely implemented and offers insight to increase the adoption of this alternative within the United States. A mixed-methods approach of individual interviews and a survey with consumers was utilized. The goals were to identify the awareness, perceptions, attitudes, and reported behaviors of adult consumers regarding their knowledge of green and traditional funeral practices and to gain an understanding of decision making when dealing with death. Interview findings indicate that there was little to no awareness of green burials. However, exposure to the concept raised interest. Additionally, findings indicated that in the face of grief and loss, the environmental impact of traditional practices of burial and cremation was not considered. A positive finding supporting the adoption of green burials was confirmed by survey respondents universally reporting that they would consider a green burial after exposure to the concept. Together, these findings suggest that raising awareness and educating consumers of this alternative to traditional methods could lead to increased adoption of green burials within the United States.

Acknowledgments

“Always believe that the impossible is possible.” – Selena Quintanilla

Never in a million years would I have thought that I would have completed and earned a Master’s degree in my life. Getting my education has been such a gift and earning this graduate degree feels like only the beginning for me. While it wasn’t easy, I certainly did not do it alone. I had an amazing support system throughout the past ten years of my life, and that person is my husband Wesley. He has guided me throughout this educational journey, whether it was with me in tears or me within inches of feeling like giving it all up. I will always be grateful to have such an intelligent, generous, and loving partner by my side to review and edit any work I do or just give me a hug when I need it most. He is a blessing in my life.

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Chapter I: Introduction

My interest in cemetery land use and green burials has evolved over time. While visiting a cemetery in Paris in 2017, I was struck by the enormous amount of land used and thought to myself, “Wow, what a waste of space.” In fear of offending both the dead that were resting there as well as the loved ones left behind, I kept these thoughts to myself. While I have had experiences with death throughout my life with most of my pets dying and a number of funerals attended, it has never been a topic I was uncomfortable with.

TV has always been important in my life. It was a source of escape, entertainment, familial connection, education, and exposure to the world - and not surprisingly, my thinking and interest of green burials were galvanized by the seemingly endless deaths, burials, etc., that occurred on the HBO series *The Sopranos*. After starting a graduate program focused on sustainability, I realized that sustainability could be applied to any industry including death. I became fascinated with the topic of sustainability and death and decided that it was worth some digging. I was astonished to see books, articles, blogs, and even a movement behind this topic. There are even companies that exist today solely to help dispose of a human body with the least amount of environmental impact, such as *Recompose*, which transforms human bodies into the soil through human composting (Recompose, 2018).

While digging for knowledge, I was excited to learn that green burials were actually not a new concept. In fact, going back to ancient times, simple and natural burials were a well-known practice and are “documented in the Bible, the Torah, and the Koran—the latter two requiring the deceased to be left in contact with the earth” (Rehagen, 2016). In modern times, our funeral practices have become so standardized and commonplace that we tend not to question them.

Green burials challenge conventional funeral practices and social norms regarding death.

Elizabeth Fournier, the author of *The Green Burial Guidebook*, states, “a green burial is a way to care for our dead with the least possible environmental impact” (Fournier, 2018). Essentially, a person is buried in a vessel that can decay along with the human body and retreat into the soil. The overall purpose is that nothing is used that doesn’t help renew the earth (Fournier, 2018).

While my study seeks to investigate why the adoption of green burial practices as a healthy alternative to traditional practices in death has not become more popular, my intention for this dissertation was to reclaim death as part of our experience. My overall objectives include: offering insight into the environmental benefits of green burials; question convention and societal norms related to how death is handled in the United States; and raise awareness of the negative environmental impact of traditional practices. Importantly, this dissertation will hopefully leave readers more aware of the environmental problems in the world and thus, more likely to support environmental initiatives in the future.

Chapter II: Review of Literature

The Increased Interest in the Environment

Human existence has an immense impact on the planet's environment. Beginning with the industrial revolution and the dependency on fossil fuels this impact has been increasingly negative (Roser et al., 2017). During the past sixty years, there has been increasing concern, dialog, and action regarding reducing the negative impact of human activity (Ebbs, 2019). Concern and action are evidenced at the international, national, institutional, and individual levels across the private, public, and non-sectors (Ebbs, 2019). This global concern resulted in the multinational Paris Climate Agreement of 1998 (Ebbs, 2019).

Initially sparked by environmentalists who were considered radical and extremist, the environmental movement quickly became mainstream and adopted by the baby boomer generation and included recycling, vegetarianism, organic produce, and natural childbirth (Reagen, 2016). By 1970, Earth Day was established and President Nixon created the Environmental Protection Agency (EPA) and signed numerous milestone environmental laws, including the Clean Water Act, the Clean Air Act, and the Endangered Species Act (Dykstra, 2008; Hayward et al., 2000).

Beginning with citizens living in western developed countries, over the past 60 years there has been an increasing interest in finding new ways to reduce waste, energy use, and other polluting activities at an individual level (Kelly, 2018 & Borden, 2019). Over the last few decades in the United States, among important segments of the population, notably younger generations, living a more "green" lifestyle has been a common social and political trend (Ellsmoor, 2019). A recent study by Southern Cross University indicated that out of the 913

collected respondents that were given the online survey, 77% wanted to learn more about how to live a more sustainable lifestyle. This study was administered to both Americans and Australians; “20.7% of the sample was from Australia, and 79.3% identified as American” (“Going Green”, 2019 & Ellsmoor, 2019). The environmental movement is no longer considered as radical in 2020. Climate change and discussions of a viable future for humanity are pervasive topics in the social environment, and the United Nations itself established sustainable development goals (SDGs) that address climate change, energy, clean water, and sanitation to be obtained by 2030 (Sustainable Development Goals, 2015).

Lowering one’s carbon footprint and therefore, lowering greenhouse gas emissions, has evolved from a radical concept to a more public one. The 2017 study from Southern Cross University also showed that “87% of respondents said they made efforts to live an eco-friendly lifestyle, and that 72% were driven to leave a better planet for their children” (“Going Green”, 2019 & Ellsmoor, 2019) Living a more sustainable or green lifestyle has also impacted people’s view on having children, wanting to reduce their carbon footprint by decreasing resources consumed as well as conserve “breathing room for those of us who are already here or on the way” (Hymas, 2011). This segment of the population is called GINKs, green inclination, no kids (Hymas, 2011).

The individual interest in environmentalism has caused a systemic change as well. Current examples of this are seen through the trending issues of renewable energy and the more recent plastic bag ban legislation. In a recent survey by the market research firm Maslansky & Partners, “70 percent of respondents said America should produce 100 percent of its electricity from renewable energy sources; more than half thought renewables were a good idea even if they

raise energy bills” (Kaldjian & Barua, 2019). The firm examined service messaging, “questioned utility execs and environmentalists, ran a national opinion survey, and did a couple of three-hour sit-downs with “media informed customers” in Minneapolis and Phoenix” (Kaldjian & Barua, 2019). This survey reveals the public’s view on renewable energy, but it also shows how far the environmental movement has come in the form of public opinion. There has been an unparalleled increase in renewable energy acquiring, expansion, and pledges. “As of November 2018, 99 U.S. cities have committed to 100 percent renewable energy, up from just 50 cities a year ago” (Kaldjian & Barua, 2019). What’s more, is that eight states have banned single-use plastic bags in hopes of diminishing the destructive impacts on our water ecosystems and also alleviate stress on landfills and waste administration. These states include California, Connecticut, Delaware, Hawaii, Maine, New York, Oregon, and Vermont (State Plastic and Paper Bag Legislation, 2020).

Traditional Funeral Practices, Cemeteries, and Environmental Impacts

Environmentalism has stirred consumers to think in-depth about the environmental impact of their decisions across a wide range of categories and life domains. (“The Evolution of the Sustainability Mindset”, 2018). One of these categories is end of life decisions including the environmental impact of how our bodies are taken care of when we die.

Traditional burials and environmental impact. Traditional burials are extremely polluting to our planet and are built around the idea of preserving the dead (Rehagen, 2016). Collectively, we put so much non-biodegradable material in the ground that is toxic to the surrounding soil, can potentially leak into groundwater, and contributes significantly to greenhouse gas emissions (Fournier, 2018 & Harris, 2007). For example, bodies slowly decay

anaerobically, and this loss of oxygen produces methane, a potent greenhouse gas (Fournier, 2018). According to Mark Harris, the author of *Grave Matters*, "The typical 10-acre cemetery ground contains enough coffin wood to construct more than 40 homes, 900+ tons of casket steel, and another 20,000 tons of vault concrete" (Harris, 2007). All of the metal, varnish, and toxic adhesive used to manufacture traditional caskets with reinforced steel and shellacked hardwoods, and added embellishments are in no way biodegradable or suitable for the encompassing land (Fournier, 2018). Emissions also transpire during the production of these traditional caskets and grave liners. It is Harris who writes that graveyards should be thought of as landfills and the embalmed bodies of the deceased release bacteria, formaldehyde, liquefied tissue, fluids, and acids, that create a noxious brew that seeps out of the receptacle (Harris, 2007). Cemeteries also use gallons of pesticides, fuel, and water to project a tidy and polished image on the grounds. To put all of this into perspective, "each year 'we bury enough embalming fluid to fill eight Olympic sized swimming pools, enough metal to build the Golden Gate Bridge, and so much reinforced concrete that we could build a two-lane highway from New York to Detroit'" (Fournier, 2018).

However, based on a 2015 study by Elizabeth Keijzer, the "environmental impact of funerals is very low compared to other activities during a person's life, which means that the environmental impacts of funerals, in general, are not primarily a reason for societal concern" (Keijzer, 2015). The study further showed that the major consequences of burials emerge from "the cotton lining of the coffin and from the transport of the monument" (Keijzer, 2015).

Therefore, Keijzer argues that green burials or green funeral practices should not be a primary focus when the environmental impact is so low. This includes cremation along with burial.

Embalming. Embalming is the process of replacing bodily fluids with chemicals to slow decay and preserve the body (Fournier, 2018). Embalming fluids contain formaldehyde and other chemicals. A body can be revived, stored for some time, and carried long distances (Fournier, 2018). Initially started during the civil war, embalming allowed the deceased soldiers to be shipped back home for burial (Kelly, 2015; Fournier, 2018). Soon it became common practice and bodies were sent off to professionals to be revived back to their lifelike state (Fournier, 2018). Embalming is not legally required but has become widely practiced because it brings color back into the lifeless body (Fournier, 2018)

Traditional cremation and environmental impact. Cremation is the “process of reducing the body to its basic elements of bone fragments through the use of heat” (“Understanding Green Cremation”, 2020). As mentioned previously, cremation has gained popularity over the last few decades due to the extreme costs of a traditional burial and environmental concerns regarding land usage (Fournier, 2018). Author Jessica Mitford has been credited for the spike in cremation after her 1963 publication of *The American Way of Death*. She criticized the funeral industry and the unnecessary practices that became commonplace (Fournier, 2018). A 2018 study stated that among the numerous factors that have added to the rise of cremation, such as environmental interests, less religious bans, and choices for easier, less elaborate services, the prime factor has been cost (Coutts, et al., 2018). The average cost of a general cremation is \$2,400 (Carrns, 2019). While the average cost of a “burial with a coffin and full funeral home services is about \$7,400” (Carrns, 2019).

Unfortunately, cremation is not a solid or environmentally sound option when dealing with the deceased. The foremost reason is because of the energy it uses. Using fossil fuels and

sustaining a temperature of 1,800 degrees Fahrenheit, cremation significantly contributes to the emissions of pollutants in the atmosphere such as carbon monoxide, sulfur dioxide, trace metals, and most importantly mercury. Mercury is found in dental fillings and is released into the atmosphere falling into water sources (Harris, 2007; Fournier, 2018). The spreading of cremation ashes also raises a red flag. Human ashes are composed of various components that range depending on what that person's body held. In short, ashes are not compost or fertilizer and hold no nutrients for the environment. All of the useful nutrients for flora and fauna have been burned away (Fournier, 2018).

Despite the negative environmental impacts, cremation is not a declining trend. There are expectations that cremation will continue to increase in popularity. According to the 2019 report on cremation and burial by the National Funeral Directors Association, the cremation rate passed 50 percent in 2016 and continues to rise (Carrns, 2019). The rate is expected to increase to 79 percent by the year 2040 and the burial rate is expected to “drop to just 16 percent over the next two decades” (Carrns, 2019).

Cemeteries and environmental impact. There are several distinguished types of human cemeteries including public/private, municipal, religious, family, memorial park/monuments/gardens, military, and green/natural (“Where to be buried?”, 2016; “An Overview Of Cemeteries”, 2020). Environmental concerns of cemeteries are mirrored by Uslu, Baris, and Erdogan in their 2009 study *Ecological concerns over cemeteries*. They write that environmental concerns need to be taken seriously in the conception, preparation, and managing of cemeteries. As reported in this study, the burial sections can become endangering to the environment, contaminating underground water and producing adverse effects on fauna and

flora, i.e. plant and animal life (Uslu, et al., 2009). Further ecological problems are the contamination of soils.

Public/Private Cemeteries. For-profit cemeteries run by an organization or company and one of the most commonly used (“Where to be buried?”, 2016; “An Overview Of Cemeteries”, 2020).

Municipal Cemeteries. Non-profit cemeteries controlled and run by the city or county. They are open to the public and are very common. (“Where to be buried?”, 2016; “An Overview Of Cemeteries”, 2020).

Religious Cemeteries. Non-profit cemeteries maintained by a religious group. They are typically reserved for members of the local church community. (“Where to be buried?”, 2016; “An Overview Of Cemeteries”, 2020).

Family Cemeteries. Although they are not as prevalent as they once were, they are self-explanatory. Most family cemeteries are older and are harder to start due to varying state by state regulations (“Where to be buried?”, 2016).

Memorial Park/Monument/Garden. While there are no graves or headstones, they typically consist of a monument and well-groomed grounds. “The purpose is to honor the lives of the deceased” (“Where to be buried?”, 2016).

Military Cemeteries. Government-run cemeteries for the burial of veterans and their families. (“An Overview Of Cemeteries”, 2020). A popular example is the Arlington National Cemetery (“Where to be buried?”, 2016).

Green Burials and Green Cemeteries: An Environmental Alternative

Green burials. The green/natural burial movement is a way for people to return to earth without the use of toxic chemicals or caskets, and instead to replenish the soil by decaying naturally within the earth itself. Green burials involve a body wrapped in non-toxic biodegradable material such as cotton, wool, silk, etc. (Fournier, 2018). Although green/natural burials have been practiced for generations, the new movement arose in the early 90s (Rehagen, 2016). The first green burial cemetery was in the UK started by Ken West who wanted to retain a part of the cemetery to natural burial as he was concerned with environmental issues. West was growing disappointed with the use of pesticides and other chemicals on cemeteries. Instead of headstones, he planted trees and left the section wild hoping to draw in wildlife (Smith, 2016; Fournier, 2018). His ideas grew in popularity and the first natural burial grounds in the United States were created in 1996 in South Carolina, named the Ramsey Creek Preserve with “33 acres of woodland and open fields” (Fournier, 2018). Since the early stages of the movement, green burials have increased. Lee Webster, the treasurer of the Green Burial Council, confirms this and states that green cemeteries have more than doubled in 5 years (L. Webster, personal communication, February 6, 2020). Founded in 2005, the Green Burial Council is a non-profit organization that certifies green cemeteries, sets standards, and educates the public on the subject (Green Burial Council, n.d.). As of 2019, the United States has at least 266 official green cemeteries (Webster, 2019).

With the baby boomer generation entering the final stages of life, there are expectations that green burials will be further increased (Fournier, 2018). This is the generation that was welcoming the environmental movement with Earth Day as well as green activities. According to

a recent study, this generation wants to perish naturally, too (Rehagen, 2016). This 2015 study by the Funeral and Memorial Information Council found that overall awareness of green funeral alternatives was the same as in 2010, at 34%, but “64 percent of adults 40+ said they would be interested in green funeral options, compared with 43 percent in 2010” (Funeral and Memorial Information Council ([FAMIC], 2015). The study was administered online “among 1,238 U.S. adults ages 40+ and 305 U.S. adults ages 20-39 by Harris Poll, a market research company, on account of FAMIC” ([FAMIC], 2015).

Green embalming. Similar to traditional embalming but without the use of formaldehyde (“Greener Embalming, 2016”). The fluids are made from non-toxic, natural, biodegradable, plant-based extracts (Fournier, 2018). It does not last as long as traditional embalming, but dry ice can also help with preservation (Fournier, 2018; “Greener Embalming, 2016).

Burial at Sea. A burial at sea can be considered a green burial as it does not involve traditional embalming or containers made of biodegradable materials (Fournier, 2018). The process consists of delivering a deceased body into the ocean so that it sinks and decays naturally (Fournier, 2018). The Environmental Protection Agency regulates burials at sea and requires that all materials be biodegradable or “decomposable in the marine environment” (EPA, n.d.).

Green Burials: The environmental benefits. The human body is full of nutrients and is naturally biodegradable (Rumble, 2016). Natural burial allows the body to decay into the soil and in doing so, fertilizes it and nourishes new life (Rumble, 2016). A body wrapped in a shroud or placed in a plain wood container decomposes swiftly, leaving little to no pollutants in its path (McCausland, 2008). A 2017 study by Gwendolyn Michel and Young-A Lee, revealed that decomposition can be seen as a step in a " recurring cycle of transformation of nutrients into

food" (Michel, et al., 2017). Death is a chapter of life and human decay is a part of that natural process. According to Harris, the body releases its organic nutrients into the soil. The microorganisms and bugs continue to nourish the ground, while also "aerating the dirt, loosening compacted earth and thereby creating fertile ground for vegetation" (Harris, 2007).

Another study from 2012, reported that besides providing nutrients to the soil, "the great potential for conservation burial is to conserve land, create open space, and restore natural habitats" (Harker, 2012). The environmental impact of traditional burials and cremation is substantial and studies show that green burial has little to no ecological repercussions. A 2018 study previously mentioned gathered that "natural burial stands as the most conscientious alternative on the spectrum of ecological sensitivity" (Coutts, et al., 2018).

Kelly writes that green burial also reconnects us to the earth; a now distant relationship (Kelly, 2015). Although the movement was very much ignited from the concerns over the scarcity of land and the contaminants connected with conventional burial practices, it was also ignited by this desire for "ecological return and connection" we hold to the earth as humans. Humans are separate from nature but are also integrally a part of nature (Feagan, 2007).

Green Cremation. Alkaline hydrolysis, also known as bio cremation, water resonation, or flameless cremation technology uses water blended with an alkali solution of potassium hydroxide (KOH)" ("Understanding Green Cremation, 2019; Fournier, 2018). The process uses lye, heat, and water to disintegrate a human body into liquid and some residual bone (Fournier, 2018). Placed in a stainless steel cylinder, the body creates a liquid that can be safely sent down the drain, and the bone remains are "ground into a powder and given to the loved ones, like regular cremation" (Fournier, 2018).

The lower temperatures help lessen carbon emissions because almost zero air emissions are sent into the atmosphere during the alkaline hydrolysis process (“Understanding Green Cremation, 2019; Fournier, 2018). Because any clothing will be absorbed during, specific clothing is required like silk, wool, or leather during the process (“Understanding Green Cremation, 2019).

Green/Natural Cemeteries. The literature organizes green cemeteries into three types: hybrid, natural, and conservation. The Green Burial Council has established standards and these cemeteries are defined by the level “to which they conserve natural resources and preserve the environment”(“The Three Different Types Of Green Cemeteries”, 2020).

A 2017 study mentions the ecological benefits of green cemeteries and how they can be used for healing "natural habitat and woodlands, and animal grazing" (Michel, et al., 2017). Linking back to the research of traditional cemeteries and their negative impact on flora and fauna, mentioned earlier. This is in comparison to a traditional cemetery that cannot be used for reviving natural environments because of the pesticides and chemicals used to maintain it nor can the soil be reused or recycled (Michel, et al., 2017).

Hybrid. A traditional cemetery that “allows for burial without an outer burial container (burial vault or grave liner) and allows for burial in any type of container, including a shroud” (“The Three Different Types Of Green Cemeteries”, 2020). Another recent study from 2018 published that hybrid cemeteries that merge natural burial with traditional graves may produce a bigger impact in "delivering regulatory and cultural ecosystem services than the much larger and frequently more environmentally ambitious natural burial grounds" (Clayden, et al., 2018). This specific study reports that hybrid cemeteries can help shift traditional graveyards towards a more

"habitat rich" landscape and will " help support soil formation, reduce the use of pesticides, and N₂O emissions" (Clayden, et al., 2018).

Natural. Natural cemeteries are grounds committed to sustainable methods that save energy, minimize waste, and do not allow the use of toxic chemicals. This includes “any part of a vault (lid, slab, or partitioned liner), markers, and burial containers made of anything other than natural or plant-derived elements” (“Green Burial Characteristics”, 2020). They also do not allow for bodies to be buried that have been “embalmed with toxic chemicals and prohibits” (“The Three Different Types Of Green Cemeteries”, 2020). Natural burial grounds must also be pesticide-free and any pests must be managed using natural practices “that maintain the natural ecology and landscape” (“The Three Different Types Of Green Cemeteries”, 2020).

Conservation. A natural cemetery that is in cooperation with a conservation organization. The land is protected by this organization and includes sustainable management practices while also “restoring and protecting the ecological integrity of the land (“Green Burial Characteristics”, 2020).

Burials and Cemeteries: Current Societal Perceptions, Attitudes, and Behaviors

To understand human decay and decomposition is to understand the human linkage to the earth and in doing so, accepting that death is a part of the circle of life. Traditional burials were developed around the idea of preserving the body when in reality, our bodies are designed to decay. In this, we are denying the cycle of life (Rehagen, 2016). In refuting death, we are refuting "the very substance from which we are made - matter, mater, the Mother" (Herring, 2019).

The findings from the literature indicate that the American avoidance of death has enabled an entire funeral industry to be built by distancing oneself from the death of a loved one and handing off to the specialists (Feagan, 2007; Fournier, 2018). After the rise of embalming after the Civil War, a funeral industry was born with profitable services to be offered (Fournier, 2018). This is coinciding with the modern “aesthetic of sanitation and avoidance of decay, which ‘constitutes a denial of deterioration by a nation that regards cleanliness as a key aspect of religious and cultural identity’” (Hockey et al., 2001; Feagan, 2007). There are misconceptions that a dead body is harmful and according to the Centers for Disease Control and Prevention, “the average dead body is neither dangerous nor contagious” (Fournier, 2018). According to Robert Feagan, death and burial have become “professionalized, privatized, and medicalized” (Feagan, 2007). The corrective work of morticians to bring color back in the face or make them lifelike for the funeral and casket appearance is “tied to this era of denial” (Davies, 2005; Feagan, 2007). There is an idea of cleanliness and not getting our hands too dirty (Fournier, 2018). Fournier says that the loved ones left behind try to cherish and “honor the deceased as they were when they were living, and conversely, we try to hide all signs that they are dead” (Fournier, 2018). However, the outcomes of this approach and of these burial customs have created a multitude of environmental difficulties that continue to be hidden and unrecognized (Fournier, 2018).

This denial of death can be seen throughout American cemeteries with trimmed landscapes and unnatural state (Kelly, 2015). Suzanne Kelly, the author of *Greening Death*, writes that by sterilizing decay through embalming, shellacked hardwood and metal coffins, and cremation has "amounted to a way of distancing the dead body from its decomposition and

eradicating the ecological value of its reintegration into the cycles of nature" (Kelly, 2015). The dismissal of death can be tied to many religions and the idea of resurrection. The conventional burial practices grew from progressive ideas of hygiene, sterility, and purity (Feagan, 2007). According to Kelly, the death care industry in the United States is "ignoring the very logic inherent to the process of decay, making it seem as if it has no place, or value, in the natural world" (Kelly, 2015).

A 2018 study revealed the tensions that develop between users of natural burial grounds and traditional practices of memorialization (Stewart, 2018). Everyone has different ways of both spirituality and remembrance. This strain brings up the question of how we are to memorialize our loved ones as different natural burial grounds allow for different types of memorialization and rules (Stewart, 2018). Based on this study, natural burial is "under pressure to frame its ecological dimension as an expression of the deceased's individuality rather than as an assertion of shared ecological anthropology" (Stewart, 2018). This rationale for green burials involves honoring the individual and their choice of a green burial as well as the environmental benefits (Stewart, 2018).

Raising Awareness, Acceptance, and Practice: of Green Burials: the Role of Consumers in Behavioral Change

Changing Human Behavior. The most important path towards the acceptance and utilization of green burials is changing consumer behavior. The strategy used to change behavior is important for ensuring success. Information alone is not an adequate driver for individuals to change behavior "despite gains in attitudinal views" (Fink, 2011). Although behavior is traditionally consistent, it can be changed under situational circumstances or other drivers

(Sauerberger, et al., 2016). For example, information around the environmental and social effects of the fashion industry will shift consumer's attitudes towards the industry, but will not necessarily lead them to make different purchasing decisions (Niinimäki, et al., 2011). Basically, awareness and education do not guarantee changes in behavior.

Further research shows that specific set goals act as a driver for behavioral change (Bamberg, 2013). Creating a specific goal leads to the intention to change behavior which serves as the basis for implementation (Bamberg, 2013). Based on a 2014 study by Pagiaslis and Krontalis on green consumption behaviors regarding biofuels, their results showed that heightening consumer knowledge of environmental concerns may lead to a significant change in their views "toward various aspects of green consumer behavior, thus increasing their intentions to behave accordingly" (Krontalis, et al., 2014). Societal pressures are another driving factor toward behavioral change. As social beings, individuals respond to cultural standards or peer pressure (Schultz et al. 2007; Fink, 2011). For example, the use of normative messaging was used through "feedback on utility bills i.e. happy and sad faces depending on consumption" (Schultz et al. 2007; Fink, 2011). It proved to be successful as it showed a "reduction in energy use of 2% over one year within a sample set of 35,000 households" (Schultz et al. 2007; Fink, 2011). According to Schultz, this was the result of the positive support as well as the comparative scoring in relation to their peers in the area (Schultz et al. 2007; Fink 2011). The use of this psychological technique in relation to climate change concerns "is gaining support in Australia and the United States, where the cliché 'keeping up with Joneses' may eventually work in reverse and encourage greater energy savings" (Schultz et al. 2007; Fink 2011).

Measuring Impact. The above review of the literature has shown the negative environmental impacts of cremation and burial as well as the positive environmental benefits of green burial. However, there are conflicting perspectives on how big of an environmental impact it truly has and whether it's worth worrying over (Keijzer, 2015). This is mirrored in other environmental concerns such as water usage and ways to conserve it (EPA, n.d.). According to the Environmental Protection Agency, thermoelectric power counted for 45% and irrigation counted for 32% of the U.S. freshwater withdrawals in 2010 (EPA, n.d.). Therefore if consumers aim to reduce their water usage, how big of an impact will that have? If reducing the time consumers are in the shower won't solve the world's global water problems, "then choosing green over conventional burial will not be an end-all solution to our environmental death problems, either" (Kelly, 2015). Kelly says that although individual consumer choices matter and moving away from environmentally destructive habits are positive, the "rhetoric of green choices provides the illusion that individual acts amount to profound cultural shifts" (Kelly, 2015). Essentially, individual "change doesn't equal social change" (Jensen, 2009). Funeral directors are urged to please the decision-makers in all of us, but this hasn't been proven to be effective (Kelly, 2015). Despite the focus and attention on individualized funerals, the fact remains that "funerary practices remain quite uniform and our choices quite slim" (Kelly, 2015).

Barriers to acceptance and practice. There are significant barriers to the green burial movement and they have been there from the beginning (Kelly, 2015). The biggest being the death care industry and cemetery laws (Kelly, 2015; Brown, 2019). Kelly writes that the funeral care industry, worth more than \$15 billion, consists of "funeral homes, funeral directors, and products - caskets, chemicals, vaults, insurance that manages prepaid funerals, and cemeteries"

(Kelly, 2015). An industry that was widely unregulated until 1984 when the Federal Trade Commission implemented the Funeral Rule that “made it possible for consumers to pick and choose only those funerary services they wanted and leave the rest at the door” (Kelly, 2015). She continues to state that although there are some funeral directors and funeral homes that offer greener options like Greenwich Village funeral home in New York City, the business as a whole has focused on the bottom line (Kelly, 2015; Green & Natural Services, n.d.). Goods and services like caskets, vaults, and embalming produce a healthy helping of their profit margin. But with green burial needing neither casket, vault, or embalming services, there is little to no incentive to offer it as an option at all (Kelly, 2015).

Kelly writes that even with industry opposition, the green burial movement needs the involvement of funeral professionals to drive the movement forward. Particularly because specific state laws exist that can deter consumers from planning a green burial. For example, Oklahoma and Virginia demand consumers to only purchase caskets from a licensed funeral director (Kelly, 2015). While other states demand a licensed funeral director to control the transport, and some laws “require refrigeration or embalming once a person has been dead for more than 24 hours” (Brown, 2019). Therefore working with funeral professionals to offer services needed for a green burial is crucial (Kelly, 2015).

Another obstacle for the green burial movement is cemetery law or as Kelly writes laws, land, and money (Kelly, 2015; Brown, 2019). While there is no law within any state that prevents green burial, “cemetery operators all over the country say outdated state and local laws have made it difficult for green burial to gain a foothold” (Brown, 2019). Each state has diverse laws related to cemeteries and funerals. Some laws, for example, demand asphalt paths to burial

plots or fencing around the cemetery. Other states like New York, New Jersey, Ohio, Virginia, and Washington require a large endowment trust fund for expected preservation, which for green-burial advocates, can be a difficult requirement because of their intentions for the grounds to be left in a natural state (Kelly, 2015; Brown, 2019). In numerous areas, local leaders may not provide green cemeteries with the zoning permits they need or may pass other ordinances to hinder them. For example, in 2008, administrators in Georgia's Mason-Bibb County approved a mandate demanding "leak-proof containers for burials after neighbors complained about a proposed green-burial cemetery" (Brown, 2019).

Many green-burial advocates can feel discouraged if they have to work within specific state and local parameters, but Kelly writes that the easiest way to secure green burial is through being attached to a current cemetery due to the capital intensive process of establishing new green burial grounds (Kelly, 2015). Many GBAs (green burial advocates) say loved ones should be entitled to take care of the organization and arrangements themselves, and "these laws are based on misguided fears that the dead carry diseases" (Brown, 2019). This fear of spreading disease is prevalent within consumer perception as well. Kimberley Campbell, who runs Ramsey Creek Preserve in South Carolina says that "Everybody assumes you need to be embalmed or you can't transport unembalmed bodies. The idea that you're going to be spreading the disease if you don't embalm the body is complete codswallop" (Brown, 2019). However, there are positive developments within the legislation. For example, in 2019, Washington legislators passed a bill authorizing human composting. The pass was based on "a technology that rapidly converts human bodies into the soil" and the bill was met with widespread support (Brown, 2019).

Study Topic, Research Objectives, Hypotheses and Who Will Benefit

Study Topic

The topic of the dissertation is the need for increased adoption of green burials in the United States. The overall objectives of this study include identifying and understanding:

- Consumers' current decision making regarding funeral and burial practices;
- Consumers' awareness and knowledge of the negative environmental impacts of traditional funeral and burial practices; and
- Consumers' awareness of green funeral and burial practices.

Additionally, the study is designed to contribute to the development of an evidence-based strategic approach to increasing consumers' acceptance and use of green funeral and burial practices in the U.S.

Hypotheses

Hypothesis 1: Consumers are unaware of the environmental impacts of traditional funeral practices.

Hypothesis 2: There is a significant lack of awareness, knowledge, and education of green burials among the general consumer.

Hypothesis 3: There is significant misinformation and misunderstanding surrounding funeral practices that are perceived to be "green" choices i.e. cremation.

Research Questions

- **Environmental Impacts:** What is the level of consumer awareness of the environmental impacts? What is the environmental impact of traditional burial funeral practices? What is the environmental impact of the materials we put into the ground? What are the environmental impacts of a traditional graveyard? What are the environmental implications of current graveyard land usage?
- **Environmental Benefits:** What are the environmental benefits of a green burial? Are there nutrients in the body that are beneficial for the earth as the body decomposes? Are there toxins in the human body that are not useful for the earth?
- **Challenging Convention:** Why is the environmental impact traditionally not considered in death? What is facilitating and what is hindering the adoption of green burial? Are green burials growing in popularity? Who drives the decision to choose traditional or green burial practices?

Who will Benefit. The research will benefit existing and rising researchers studying the environmental impacts of traditional burial and cremation or the environmental benefits of green burial, consumers looking to learn more about both traditional or green methods, funeral industry professionals, and advocates of the green burial movement.

- Consumers will benefit from an increased awareness and education of both traditional and green funeral practices.
- Funeral industry professionals will benefit from an increased awareness that consumers are interested in green burials as an alternative method.

Chapter III: Methodology

Overall Research Design

In order to meet the objectives, a combined method qualitative and quantitative research design was utilized. Qualitative research consisted of in-depth individual interviews (IDIs) with adults who have had personal experience with the death of a loved one and/or planning a traditional funeral. Quantitative research consisted of a survey with a general adult population.

Qualitative Research: In-depth Individual Interviews (IDIs)

Eleven structured in-depth individual interviews (IDIs) were conducted with adults who have experienced a close death or planned a traditional funeral. Due to the nature of this topic, IDI's were handled with sensitivity to the individual's personal experiences. The interviews were designed to elaborate on their environmental concerns throughout their daily life, their personal experiences with death, and expand on their decision-making process during the planning of the funeral arrangements.

Sampling & Recruitment. Interviewee selections were based on personal knowledge and existing connections in order to facilitate more in-depth questioning and open discussion. Interviewees were recruited based on individual experiences with death including the loss of a loved one or have been part of the funeral planning process. The sample was chosen based on personal knowledge from already existing relationships.

Sample Profile.

Number: 11

Age: 26-70

Sex: 5 Males & 6 Females

Consent & Confidentiality. Each participant was informed of the study's purpose, goals, and overall focus before consenting to be interviewed and recorded in adherence to the Glasgow Caledonian New York College Internal Review Board guidelines. Each interviewee was informed their interviews would be confidential, recorded, safely filed, potentially quoted, and used for data research. (See Appendix A)

Interview Guideline. The guideline was developed by the researcher. (See Appendix B) Interviews were administered in a structured format with preconceived questions and an outline for the interview. The questions were designed to be non-invasive but direct. Time was not a focal point and interviewees decided how much detail they wanted to include and how in-depth they wanted to go, with some interviewees answering with simple yes or no, while others gave more detailed responses. Towards the end of the interview, a more free-flowing conversation was encouraged with interviewees adding additional thoughts regarding their perceptions, attitudes, and experiences. Interviews were 25-45 minutes in length.

Procedure. Interviewee choices were contacted through text, email, and phone. Due to the COVID-19 pandemic, in-person interviews were not an option, and instead, interviews were conducted online through video chat over google hangout or over the phone. Interviews were either recorded and transcribed or notes were taken during the interview jotting down the responses. Each interview followed the structured format and was designed to make the interviewee comfortable answering general questions at first and answering the more detailed questions towards the middle and end. Interviewees were not sent the questions beforehand. Interviews were conducted between May 14th, 2020 to May 20th, 2020.

Analysis. Seven interviews were recorded and transcribed while the other four were simple note-taking listening to responses. Commonalities between interviews were then found.

Limitations

The in-depth individual interviews were limited to the personal network of the researcher. Hence, the findings cannot be projected to represent the general population of adults that have experienced the death of a loved one and/or planned a traditional funeral.

Quantitative Research

The structured survey was conducted in order to garner insight into consumer's mindset towards traditional funeral practices like cremation and burial as well as green burials. The survey was designed similarly to the IDIs that had already been conducted. Questions were structured and direct with noninvasive undertones. The survey was completed by sixty respondents and was built to gather consumers' general awareness and level of interest.

Sampling & Recruitment. Respondents were recruited to represent a well-rounded group of consumers. The survey was targeted towards a more general population of friends, colleagues, family members, etc.; spanning genders, ages, and education levels. Selections were based on personal and existing connections. Due to the COVID-19 pandemic, respondents were encouraged to pass along the survey to their partners, friends, family, etc. since most respondents were quarantined with their families, partners, friends, etc. garnering a more widespread response.

Sample Profile.

Number: 60 Respondents

Age: (18-24) 13 Respondents

(25-39) 42 Respondents

(40-60) 5 Respondents

(60+) 0 Respondents

Sex: (Female) 46 Respondents

(Male) 14 Respondents

(Prefer Not to Say) 0 Respondents

Education Level: (GED/High School Diploma) 6 Respondents

(Bachelor's Degree) 40 Respondents

(Master's Degree) 8 Respondents

(PhD) 0 Respondents

(Other) 6 Respondents

(None) 0 Respondents

Consent & Confidentiality. Each respondent was informed of the study's purpose in adherence to the Glasgow Caledonian New York College Internal Review Board guidelines. Each interviewee was informed their responses would be confidential and anonymous.

Survey Instrument. The survey was designed to be simple, easy to understand, noninvasive, and anonymous. The definition of a green burial was provided, but the survey did not include any environmental impacts of traditional burial or cremation nor did it include the environmental benefits of green burial in fear of potentially leading the results.

The survey consisted of 20 concise and manicured questions including demographic questions like age, gender, and education level. Questions also asked respondents to rate their

environmental concerns throughout their daily life, their awareness level of traditional burial or cremation practices, their level of interest in green burials, and if they would ever consider it for themselves or a loved one. Answers were optional and the level of detail was left up to the respondent.

Procedure. Respondents were contacted through text, email, and social media messaging via Instagram. All reach outs included the survey link via google forms and responses were recorded there. Each respondent followed the structured format of the survey with simple yes or no multiple-choice questions and rating scales followed by more detailed questions towards the middle and end with short answer sections. Respondents were not sent the questions beforehand or had any knowledge of what was going to be asked while taking the survey. Surveys were sent out between May 21st, 2020 to May 29th, 2020.

Analysis. Responses to the survey were recorded anonymously and safely secured in a google form that only the researcher could access. Google forms provided percentages for the responses as well as the individual answers filled out in the short answer sections.

Commonalities between surveys were then found.

Limitations

The survey respondents were limited to the personal network of the researcher. Hence, these accounts may not correctly represent the environmental concerns and behaviors of the general population. Nor may it accurately portray the experiences of those who have been part of planning a funeral for a loved one or their overall interest in green burials.

Chapter IV: Findings and Analysis

Introduction

Data from in-depth individual interviews were examined to identify recurring themes reported across interviews. Findings from the survey are reported by the frequency of responses. Findings are organized and reported in two sections: Qualitative Individual Interview Findings and Quantitative Green Burial Awareness Survey Findings.

Qualitative Individual Interview Findings

The findings from the individual interviews represent a sample of adults who have experienced the loss of a loved one or planned a traditional funeral. Based on all the interviews conducted, recurring themes were identified and are presented below. The themes are as follows:

- **Overall Environmental Awareness, Concern, and Personal Behaviors**
- **Awareness of the Environmental Impact of Traditional Burial and Cremation**
- **Green Burial Awareness and Knowledge**
- **The Popularity of Cremation**
- **Grief and Loss and The Role of Funeral Home**

1. Overall Environmental Awareness, Concern, and Personal Behaviors. There is a general awareness of major environmental concerns but it does not drive all personal behaviors in one's daily life. All interviewees were aware of and concerned with a variety of environmental issues including the negative impact of carbon emission from fossil fuels and negative impact plastics on the ocean ecosystems and on surrounding shorelines. Additionally,

interviewees practiced personal environmentally friendly behaviors, including recycling; using reusable grocery bags, avoiding the use of plastic straws, toothbrushes, and water bottles to reduce waste; shopping second hand; as well as reducing energy usage in one's household. However, this did not translate into their daily decisions throughout all categories and life domains.

Interviewees universally reported recycling as the first response when asked about their relationship or personal behaviors with the environment. While awareness of other popularized environmental concerns was reported in interviews recycling was reported as behavior that identified oneself as environmentally conscious and correct. The majority of interviewees said they are striving to be better and understand that they could have a more green lifestyle overall. However, for some, convenience and cost variables that were often more important various decisions at this point in their lives.

Some interviewees talked about their low waste output, their focus on relying on public transportation, or mentioned specific initiatives like clean energy and offshore drilling as their main areas of concern. While others said that they didn't think about the environment as often as they should but want to be better in the future. One interviewee specifically reported that behavioral responsibility lies with large corporations within the United States and not individuals. Additionally, they believed that they "could not help solve environmental problems" nor be held responsible if national leadership and those in power are not doing their part.

One interviewee said that they did not think about the environment within their daily life until they had children. There was a rise in their eco-friendly purchases and an increased concern

of the world they were leaving behind for their children. They became more aware of the food and products they allowed in their children's lives.

In sum, findings indicate a high level of awareness and concern about environmental issues across all interviews. Interviewees reported a range of attitudes and responsibilities regarding personal environmentally-oriented behaviors.

2. Awareness of the Environmental Impact of Traditional Burial and Cremation.

When asked, the majority of interviewees reported that they've never considered the environmental impact of traditional funeral practices like burial or cremation. Two interviewees reported that they had considered the environmental impact.

Of those two who reported 'yes', one was aware of the level of negative impact and also alternative practices such as biodegradable burial pods that turn your body into a tree. The second interviewee who reported 'yes' identified her Master's degree in Environmental Science and her current pursuit of a Master's in Energy Law as the basis for her level of awareness. "Those in environmental science know more about the negative impacts of this and think about their own carbon footprint regularly." For the purposes of this study, these two can be considered outliers to the majority.

In sum, findings indicate that there is a low level of awareness of the environmental impact of traditional burial and cremation. This finding supports the first hypothesis that consumers are unaware of the environmental impacts of traditional funeral practices such as burial and cremation.

3. Green Burial Awareness and Knowledge. There is a low level of awareness and knowledge of green burial and exposure to the concept engenders a positive attitude and

interest. There is little to no knowledge of green burials nor the definition of what it is. With the exception of two interviewees, the majority had never heard of the term green burial until this interview.

The two outliers identified above were aware and interested in green burials and would consider one for themselves or a loved one. The other interviewees were not aware of green burials on any level. While speaking to one interviewee who had planned the funeral of their mother, they asked how long green burial had been around for? A question showing the lack of knowledge within this topic since technically, green burial is not a new topic or new movement. However, the knowledge that a casket or coffin is nonbiodegradable was seen in some interviews; showing some level of connection between traditional burial and the environment.

At the end of the interview, eight interviewees reported that their individual interest in green burials rose and they would consider it for themselves or a loved one. One interviewee who did not have an increased interest in green burials after learning reported that they assumed green burials were more expensive. Another said cremation was just easier for everyone involved and the last respondent said that they would maybe consider it in the future, but that they “weren’t there yet” as far as their relationship with the environment goes. In one interview, the respondent said they would want a green burial before the question was asked while another said that they liked the idea more after learning the definition of a green burial. This interviewee even went on to mention that Jesus had a green burial since He was wrapped in a shroud with flowers instead of a coffin

Interviewees reported a range of attitudes towards thinking about death and funerals. One interviewee specifically said that they would never go out of their way to learn about green

burials because it is morbid and thinking about death is uncomfortable. Another said that while planning their mother's funeral, they "avoided or preferred not to be aware of the after-death processes" while a different interviewee, who planned their father's funeral, said they "blocked most of the process and details out." For most, death is a touchy subject and sometimes a very painful one. However, one interviewee shared their perspective and said that "death is the only certain thing in life." They went on to say that "death is something we all have to deal with but a lot goes into thinking about death."

Another respondent that planned their mother's funeral said that green burial was not even an option offered to them when making decisions. The options were presented to them by the funeral home and green burial was not one of them. This interviewee knew nothing about the subject or had even heard the term green burial before this interview.

In sum, there is a low level of awareness and knowledge of green burial. These findings support the second hypothesis that there is a significant lack of awareness, knowledge, and education of green burials among the general consumer.

4. The Popularity of Cremation. Cremation remains the popular choice amongst interviewees. The majority of interviewees chose cremation because of their concerns about land use and financial cost. Other reasons behind their individual choices were the desire for ease and simplicity, being less of a burden on the loved ones, and discomfort with being buried. Ten out of the eleven individual interviewees said they wanted to be cremated, with the exception of one saying they wanted a green burial before the question of if they would ever consider one for themselves could even be asked.

Interviewees reported many reasons behind their preference for cremation. One interviewee reported that cremation was cheap and easier to do in comparison with the financial cost and excessive stress of planning a traditional burial. The majority of interviewees reported that they did not want to be a burden on their loved ones, particularly financially.

Another interviewee reported their own phobia of being buried in a box. This interviewee reported that they chose cremation because they wanted to be spread out into the ocean. Many of the interviewees also reported that cremation was more environmentally sound. Specifically, because it conserves land. One interviewee reported that they wanted cremation because “we will run out of space eventually, so we may as well think of other options.” Another said spending the money on a coffin and just burying it in the ground was a waste of land and resources. It became apparent that very few interviewees knew of the negative environmental impact traditional cremation holds.

On more than one occasion, the biblical quote ashes to ashes, dust to dust was used in interviews in reference to cremation. Religious undertones were reported in two interviews, specifically mentioning the purifying nature that flame holds in death. One referred to it as the sacred flame, going on to say that “flame cremation has its own religious symbolism and it helps create the finale in death.” Another interviewee, who lost their brother to HIV in the early 90s, said that their “brother hated what that disease did to him and he didn’t want any part of that left here on earth.”

In two interviews, both respondents reported that although they wanted to be cremated, ultimately it didn’t matter what they wanted because they wouldn’t be around to decide it anyway. One interviewee said specifically that “funerals are for the living. Hence, the wishes of

the dead person are not always carried out.” Both interviewees said that their loved ones are the ones to decide and they are aware they have little to no control in the matter regardless.

In sum, cremation was the popular choice amongst interviews for many reasons, but specifically for land conservation and the lower financial cost compared to traditional burial. These findings support the third hypothesis that there is significant misinformation and misunderstanding surrounding funeral practices that are perceived to be "green" choices i.e. cremation.

5. Grief and Loss and The Role of Funeral Home. All interviewees said that dealing with the death of a loved one was immensely difficult and while planning the funeral, most did not even consider the environmental impact. All of the interviewees had worked with funeral homes in the past and eight out of eleven said they had positive experiences working with them. The majority reported that having someone else do all the arrangements, was less stressful and made it easier for them to cope. While the remaining three reported that working with the selected funeral home was like a sales pitch and there were charges for everything. One interviewee said that while planning their father’s funeral, they felt like they were being sold tires at the auto shop. Another reported that while planning their mother’s funeral, working with the funeral home made it easier but it was expensive overall, saying that you have to pay for every single thing “including people’s time.” A different interviewee reported that they felt “funeral homes took advantage of grieving people,” assuming they were referring to high prices for caskets and services.

Another interviewee reported that while making arrangements for their mother, thinking "how can I do this the greenest way possible would have never crossed their mind." They did

report that they would have given a green burial more thought if it were offered to them by the funeral home. However, only traditional burial and cremation were offered when arrangements were made. One interviewee reported that while dealing with the loss of their brother, the grief was consuming and hard to face. This specific interviewee has a Master's degree in Environmental Science but reported that thinking about reducing the environmental impact was "the last thing on their mind. Their mind was somewhere else trying to come to terms with the loss of their brother."

Additionally, findings provide insight as to why environmental impact is traditionally not considered in funeral and burial decisions and the dynamics that facilitate and hinder the adoption of green burials.

In sum, the environmental impact of traditional burial or cremation was not considered in the face of grief and loss nor was green burial an option offered by the funeral homes used. These findings support the second hypothesis that there is a significant lack of awareness, knowledge, and education of green burials among the general consumer.

Quantitative Green Burial Awareness Survey Findings

The findings from the quantitative green burial awareness survey are reported by the frequency of responses reported in both numbers and percentages.

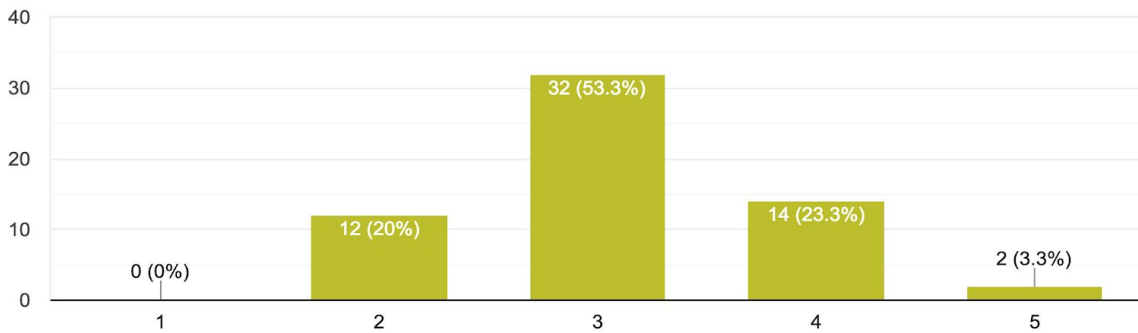
Overall Environmental Interest, Awareness, and Personal Behaviors. The survey was taken by 60 respondents. 70% of respondents were 25-39 years old, 22% were 18-24 years old, and 8% were 40-60 years old. 77% identified as female and 23% identified as male. 67%

reported that they had a Bachelor’s degree, 13% had a Master’s degree, 10% had a High School Diploma/GED, and 10% reported Other.

Findings indicate that consumers rate their interest in the environment somewhere in the middle between very low and very high based on how “green” they rate their lifestyles. Please see Table 1 below.

Table 1: Level of Green Lifestyle by Number and Percentage of Responses

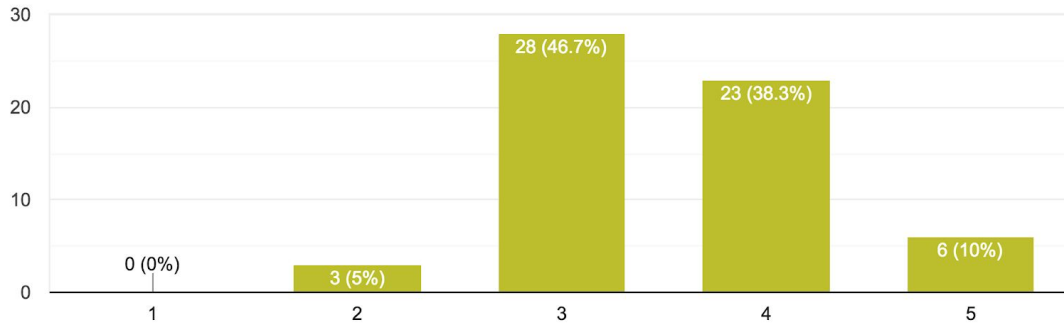
On a scale of 1 to 5, how “green” would you describe your lifestyle?
60 responses



Findings indicate that environmental impact informs some consumer’s decisions but not all decisions with 46.7% of survey respondents selecting the middle of the scale. 38.3% selected 4 on the scale, and 10% selected 5 on the scale. Please see Table 2 below.

Table 2: Level of Impact of Environmental Concerns on Decisions by Number and Percentage of Responses

How much would you say environmental impact informs your decisions?
60 responses

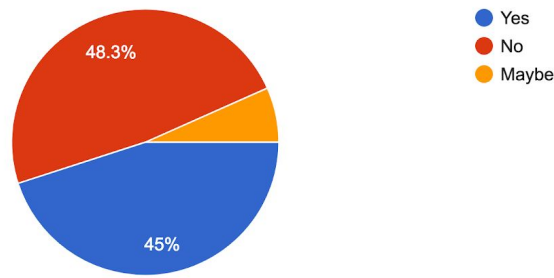


Survey respondents were asked if they have ever considered our environmental impact regarding traditional funeral practices like burial and cremation with yes, no, or maybe as options for answers. The numbers were quite close with 48.3% saying no, they had not and 45% saying yes, they have. 6.7% of respondents said maybe. Please see Table 3 below.

Table 3: Consideration of Environmental Impact on Traditional Funeral Practices by Number and Percentages of Responses

Have you ever considered our environmental impact regarding traditional funeral practices like burial and cremation?

60 responses



In sum, survey respondents rated the level of how “green” their lifestyles were somewhere in the middle with 53.3% selecting 3 and 23.2% selecting 4 on the scale. Respondents were asked to rate how much environmental impact informs their decisions, with 46.7% selecting 3 and 38.3% selected 4 on the scale. Respondents were also asked if they have ever considered our environmental impact regarding traditional funeral practices like burial and cremation with 48.3% saying no, they had not and 45% saying yes, they have. These findings support the first hypothesis that consumers are unaware of the environmental impacts of traditional funeral practices such as burial and cremation, but the findings show that a healthy percentage of survey respondents have considered it. The majority of survey respondents rated their lifestyles to be somewhat green which is similar to interviewee responses. The overall environmental concern has not translated into their daily decisions throughout their life.

Green Burial Awareness and Knowledge. The findings indicate that there is awareness of the term traditional burial and green burial showing 45.8% of respondents selecting yes, and 54.2% selecting no. Respondents also rated their interest in green burials with the majority of responses towards the very high option. Based on the scale, 35% selected 3, 31.7% selected 4, and 30% selected 5. These results show that as respondents became familiar with green burials, their interest level rose. This can be seen in the results of if they would consider a green burial for themselves or a loved one, with 71.7% saying yes, they would consider a green burial and 28.3% saying maybe, they would consider. No respondents said no they wouldn't consider a green burial. Respondents were asked to elaborate on the reasoning behind their choice. Please see tables 4, 5, 6, and selected responses below.

Table 4: Level of Awareness of Traditional Burial or Green Burial as Terminology by Number and Percentages of Responses

Have you ever heard the terms of traditional burial or green burial?
59 responses

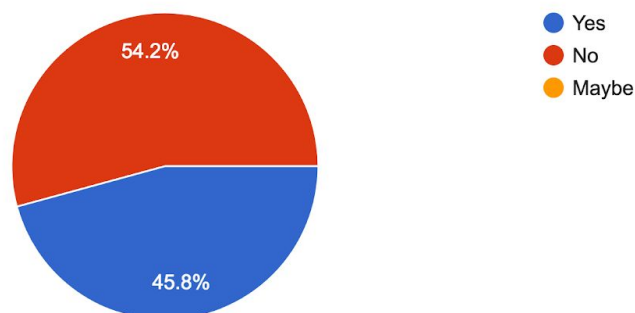


Table 5: Level of Interest of Green Burials by Number and Percentage of Responses

On a scale of 1 to 5, how would you rate your level of interest in Green Burials?
60 responses

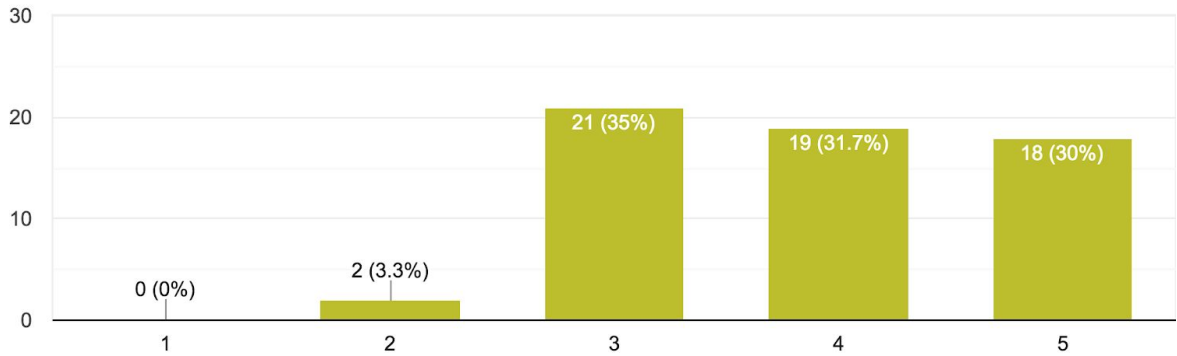
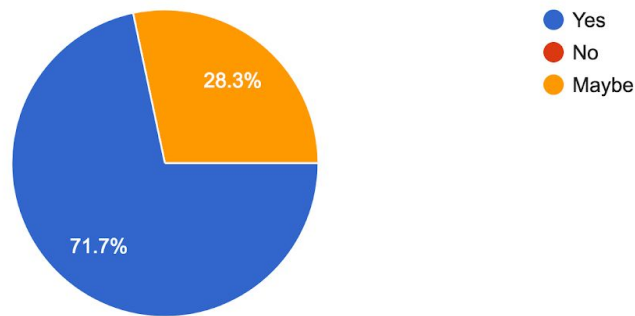


Table 6: Consideration of a Green Burial for Oneself or a Loved One by Numbers and Percentage of Responses

Would you consider a green burial for yourself or a loved one?
60 responses



Selected Responses to “Please expand on the reasoning behind that choice” are below.

Originally, there were 52 responses with some referring to the previous question asking

respondents to expand on the reason behind their preferred method, cremation, traditional burial, or other.

- “The ending of a life can bring new beginnings to nature with the green burial.”
- It’s not how the person is disposed of, it’s about who they were.
- “I think it’s a beautiful concept.”
- “Want to find out more about green burial.”
- “If I knew what a green burial was, I’d be interested.”
- “I have thought about what a costly and wasteful process it is putting coffins in the ground.”
- “Might as well return to the earth as simply as possible.”
- “When other creatures die, they decompose and their nutrients allow other life to grow. I think it makes sense for humans to be a part of this process and green burials are the perfect solution.”
- “I think if a loved one wanted to be buried, I'd MUCH prefer a green burial for them. I'm not very informed on what goes into traditional burial, but it sounds incredibly wasteful and toxic to have a coffin underground that couldn't fully decay as the body does.”
- “Now that I know there is such a thing, why not?”
- “There seem to be some really interesting things happening in the green burial space! I also HATE the idea of dying, and instead of returning to the Earth, getting pumped full of chemicals and/or burned in a huge metal box.”
- “I'd like to hear more about the option at the time of planning the burial.”

- “No sense in wasting more space into the ground when a human body can create oxygen giving trees to continue the life cycle.”
- “I would want to have the least impact possible so I would definitely consider a green burial. I believe this option makes sense for those with environmental concerns and a deep connection to nature. It feels like the most natural option for the end of life.”
- “I believe funerals are elaborate and overpriced for the dead.”
- “I think the ashes thing would come first (see previous answers) for myself. But a green burial seems like a smart second alternative. I think for the simple reason that it doesn't make sense to have something underground that is not going to decompose. It's not necessarily even an environmental reason - just practical. Also, might it be a more economic option? Also practical, but money might be better spent to honor the loved one in a more positive way - some kind of living legacy.”
- “Want to find out more about green burial.”

In sum, there is awareness of the term traditional burial and green burial showing 45.8% of respondents selecting yes, and 54.2% selecting no. There is also interest in the subject as respondents rated their level of interest in green burial. 35% selected 3, 31.7% selected 4, and 30% selected 5. When asked if they would consider a green burial for themselves or a loved one, 71.7% reported yes, they would and 28.3% reported maybe, they would consider. No respondents reported no they wouldn't consider a green burial.

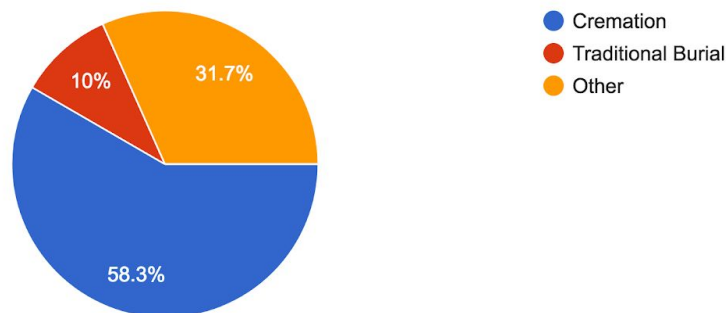
These findings support the second hypothesis that there is a significant lack of awareness, knowledge, and education of green burials among the general consumer. However, findings

show that consumers are interested after learning more about green burials and the majority of respondents would consider one for themselves. The majority of respondents wrote openly and excitedly about green burials when given the space to elaborate on if they would consider a one for themselves.

The Popularity of Cremation. Cremation remains to be the most preferred choice of consumers when discussing what they want to happen to their bodies after they die with 58.3% selecting cremation, 31.7% selecting Other, and only 10% selecting traditional burial. The survey also allowed respondents to elaborate on the reason for their choice. Please see table 7 and the specific responses below.

Table 7: After Death Preferences by Numbers and Percentage of Responses

What would you like to happen to your body after you die?
60 responses



Selected Responses to “Please expand on the reasoning behind that choice” are below.

Originally, there were 52 responses.

- “Burials require a monetary-based property that is intended for a forever resting destination, I choose cremation for the sanctity that is seemingly limitless self-decay and hence limitless boundaries of post-mortem presence that defies solitary death and favors limitless destination after death, universal compost.”
- “I’ve been to viewings and think they’re horrible and I would rather have my ashes spread somewhere. It would be more meaningful to me and my family.”
- “Traditional burial takes up space.”
- “Cheaper and I'd like to make it as easy as possible for a loved one.”
- “I would like to explore more sustainable funeral options.”
- “It seems like it would be less of a hassle (for my family) and more cost-effective than a burial ceremony.”
- “Sounds like a green burial may be something I’m interested in.”
- “Less financial burden on family members.”
- “I’m most interested in the mushroom suit I have seen. It seems like the logical choice to best enter back into the ecosystem.”
- “I’d want a green burial, I’ve heard of it before and I think it would benefit the environment greatly.”
- “I’d like to hear more about the option at the time of planning the burial.”
- “I did not want a traditional burial...and did not realize there were other options.”
- “As I learned more about the funeral industry, I got super disgusted, so right now I am considering green burial if it's possible where I am living, or maybe donating my body to

science. To me, once you die it's a "spirit has left the house" situation, and I think it would be cool to actually be useful to someone after I die.”

- “Not the most environmental I realize but I wanted to be spread over some of my favorite places.”
- “I believe that regular ground burials are wasteful and should no longer be the norm. I understand that preserving the body for viewing may be necessary for the grieving process and there are definitely religious aspects. But I think that cremation is the better way to go. I am also very interested in green burials and I hope they become more normalized.”
- “Because I always believed that burying a body in the ground was a waste of space. I’d spent my life on this planet and would want to contribute to the growth of it rather than a space.”
- “I haven't really thought of my own death, but I wouldn't want to waste anyone's time or money on a casket or burial.”

In sum, cremation remains to be the most preferred choice of consumers with 58.3% selecting cremation, 31.7% selecting Other, and only 10% selecting traditional burial. When asked to elaborate on their choice, respondents reported similar concerns as individual interviews. There were reported concerns about land use, financial cost, and not wanting to be a burden on loved ones. Respondents also wrote of their interest in green burial after this survey, some reporting that they didn’t know an option like this existed.

These findings support two of the originally stated hypotheses. First, the findings support the second hypothesis that there is a significant lack of awareness, knowledge, and education of green burials among the general consumer with some survey respondents stating that “I did not realize there were other options.” Second, these findings support the third hypothesis that there is significant misinformation and misunderstanding surrounding funeral practices that are perceived to be "green" choices i.e. cremation. A healthy amount of responses mentioned that traditional burial was wasteful, took up too much space, and was a financial burden.

Chapter V: Discussion

Discussion

At the beginning of the research, assumptions were made and three hypotheses were created. It was assumed that there was little to no awareness of the environmental impacts of traditional funeral practices like burial and cremation, green burial was an unfamiliar term to many, and cremation was considered a "green" option. These hypotheses were supported by the research findings.

Some of the key findings were as follows. First, based on both interviews and surveys, there was a general awareness of major environmental concerns but it did not drive all personal behaviors in one's daily life. It can be assumed that convenience and cost are driving factors in one's lifestyle. Second, there was little to no awareness of green burials nor the definition of what it is from both survey respondents and interviewees. Both interviewees and survey respondents said that this was something they had never thought of and never heard of before, but results showed that as respondents became familiar with green burial, their interest level rose. It can be inferred that educating consumers of this alternative to traditional methods can lead to increased adoption of green burials within the United States.

Two interviewees specifically, had extensive prior knowledge of environmental issues and deep concerns for their individual carbon footprint. Both interviewees were aware of the term green burial and other green methods such as burial pods. Therefore, it can be assumed that those who are more aware or knowledgeable of environmental issues are more likely to be familiar or understand green burial. They are also more likely to accept and consider it for themselves as a way to be taken care of when they die.

Third, cremation remained to be the popular choice amongst interviewees and survey respondents. The majority of participants chose cremation for reasons of cost, ease, and land use; emphasizing the inexpensiveness and simplicity; 58.3% of survey respondents selected cremation, and ten out of the eleven interviewees chose cremation. A handful of reported responses showed that some interviewees viewed cremation as a form of purification. One interviewee referred to it as the sacred flame, while another interviewee, who lost their brother to HIV in the early 90s, said that their “brother hated what that disease did to him and he didn’t want any part of that left here on earth.” It is clear from these findings that while financial cost, simplicity, and not wanting to be a burden on their loved ones were the main reasons cremation was the preferred practice, there was an existing but incorrect notion that cremation was more environmentally sound because of its uses of conserving land.

Fourth, all interviewees said that in the face of grief and loss, thinking about the environmental impact, while planning funeral arrangements, was the last thing on their mind. It can be inferred that some people may not want to discuss death or learn about methods used to take care of the dead. It can also be inferred that while experiencing grief and the loss of a loved one, the environmental impact of traditional burial or cremation is not considered in most cases. Additionally, based on interviews, green burial was not an option offered by funeral homes. It’s the researcher’s understanding that this reflects the funeral industry and therefore the adoption of green burial has not become as common as traditional methods.

Lastly, it appears that the wishes of the deceased loved ones and funeral homes seem to drive the decisions in regard to funeral arrangements. However, without prior knowledge of

green burials or the environmental impact of traditional practices, and green burial not being offered as an option, traditional practices will remain commonplace.

From these key findings, conclusions can be made. It can be inferred that raising awareness and educating consumers of this alternative to traditional methods can lead to increased adoption of green burials within the United States. The results from the survey were very positive, with 72% saying yes, they would consider a green burial, and 28% saying maybe, they would consider it. A positive finding supporting the adoption of green burials was that all respondents reported that they would consider a green burial. It can also be inferred that while experiencing grief and the loss of a loved one, the environmental impact of traditional burial or cremation is not considered in most cases. There is an area of opportunity for this option to be implemented more; through education and adjusting the choices offered to those planning a loved one's funeral. Lastly, survey respondents were asked if they had any final thoughts to share at the end of the survey, some respondents wrote positive comments. Some of those responses are included below.

“Hope green burials become the new norm.”

“Awareness needs to be created on green burials.”

“I love the idea of green burial.”

“Would love to see more people considering this.”

“I think this is great! I had never heard of this before.”

“Thank you for informing me of this option!”

Reflections on Methodology

While the results matched expectations, there were a variety of interesting points brought up by interviewees and responses from the survey. Although both were built around a structured format, respondents were given the chance to be freer with their thoughts, feelings, and comments towards the end of both the survey and interview; a benefit to the methodology. Creating this area of each interview and survey allowed for more detail and insight into consumer's mindsets. In both interviews and survey responses, the negative image of traditional burial and the funeral industry was brought up. Many survey respondents and interviewees expressed their feelings of how traditional burial was wasteful and a financial burden on loved ones. One survey respondent said that as they learned about the funeral industry, they were "disgusted," while two interviewees said they felt that "funeral homes take advantage" of grieving loved ones or they felt like they were being sold tires when working with them. Many interviewees and respondents mentioned the financial cost of traditional burial and that they believed they were over-elaborate and overpriced.

Utilizing a mixed-methods approach was the most successful for this topic. Gathering information based on personal experience and preferences individually along with a general survey led to the best results given the time frame. If there had been more time, further research could have been conducted including interviewing funeral professionals. Further, due to the COVID-19 pandemic, in-person interviews were not possible. Video or over the phone interviews were conducted instead.

What further research is needed. Although there are many sources to learn from and reference when discussing green burials, this research differs from current research. Based on the information gathered for the literature review, it appears that there is little research that used real consumers. Existing data sources were used to gather insight into the environmental impacts of traditional funeral practices and environmental benefits of green burial, but flesh and blood consumers were used to figure out why this alternative option has not become more commonplace. By utilizing real consumers, direct questions about their relationship with the environment and their preferred choices in death were able to be asked. Accessibility to those who had experienced grief as well as planned a funeral, allowed for more insight into the decision-making process. Based on interviews, green burial was not an option offered by most funeral homes nor was it a term mentioned by the funeral professional.

Further research should be done on green burial and the benefits it holds to the environment. Additional research should also be done on the environmental impacts of traditional cremation and burial along with consumer's experiences working with funeral homes. Interviewing funeral professionals could also lead to further insight. These areas of further research will potentially provide added context surrounding the barriers to full implementation.

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Appendix A: Informed Consent Form



Application for Waiver of Written Informed Consent

Check all that apply to your research and provide explanations:

1. The research could not practicably be carried out without the waiver or alteration.
Explain: B/c of COVID-19, I am not able to physically meet with any participants. Everything will need to be online.

2. The research involves no more than minimal risk to the subjects;
Explain: There is no risk in my research.

3. The waiver or alteration will not adversely affect the rights and welfare of the subjects;
Explain: By using the waiver, I am not endangering participants' rights. The same rights and rules apply.

4. Whenever appropriate, the subjects will be provided with additional pertinent information after participation.

5. Are any procedures involved for which written consent is normally required outside of the research context?

- Yes
- No

Name of Researcher
Mallory A Scott

Signature of Researcher
Mallory A Scott

Date: 4/29/20

- Waiver Granted
- Full committee Review required
- Application rejected due to ethical violations

IRB Chair:

Date:

4/30/20

Appendix B: In-Depth Interview Questions

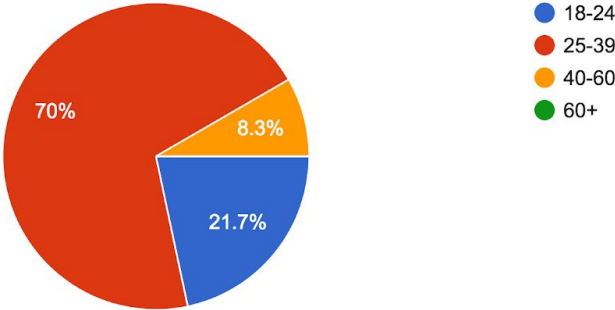
1. Tell me about you and your personal behaviors with the environment? Do you think about lowering your carbon footprint? Do you consider your lifestyle to be a “green” one?
2. What areas of your life do you think about environmental impact?
3. Have you ever considered our environmental impact regarding traditional funeral practices like burial and cremation?
4. What has been your personal experience with death?
5. How aware are you of what happens when someones die whether it be physically or the practices that take place afterward?
6. How has the COVID-19 pandemic changed any of that for you?
7. Have you attended funerals in your life? What was that experience like?
8. Have you been personally involved in the planning of a funeral?
9. If so, what was that experience like?
10. What do you know about burial or cremation?
11. Have you ever heard the terms of traditional burial or green burial?
12. For some people, there are religious guidelines in death. Does that exist for you?
13. Do you believe in the afterlife?
14. What would you like to happen to your body after you die?
15. Are you familiar with the term Green Burial?

- a. If not, here is the definition. A green burial is a person buried in a vessel that can decay along with the human body and retreat into the soil. The overall purpose is that nothing is used that doesn't help renew the earth.
16. Now that you know more about green burials from this interview, does this pique your interest in green burials?
17. Would you ever consider a green burial for yourself or a loved one? Please elaborate.

Appendix C: Green Burial Awareness Survey

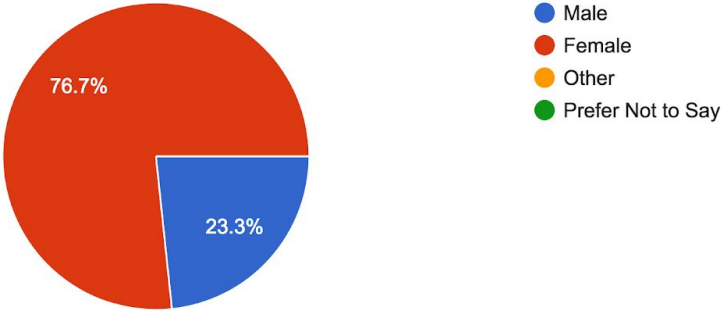
Please select your age below:

60 responses



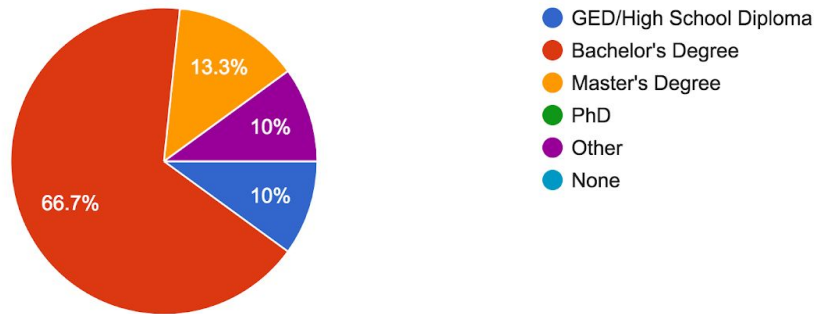
Please select your gender:

60 responses



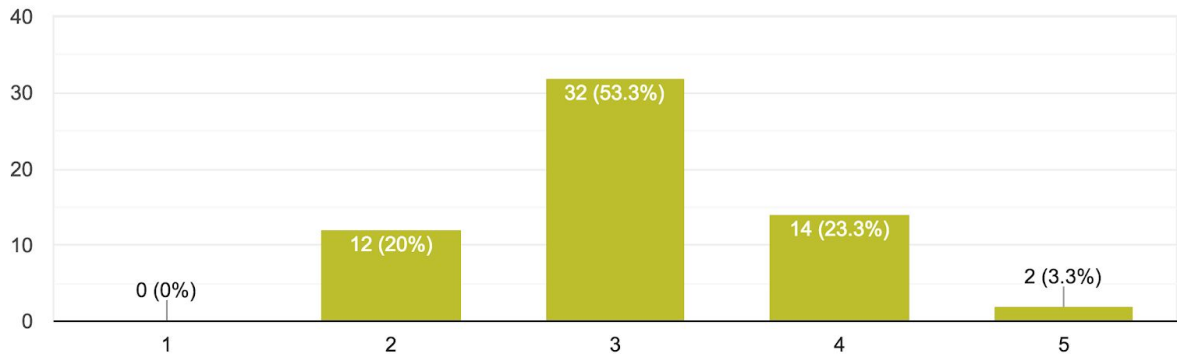
Please select your Education Level below:

60 responses



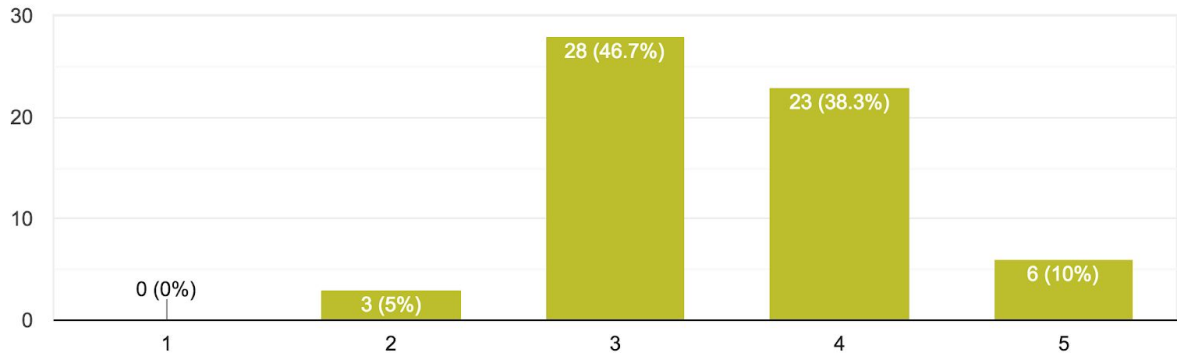
On a scale of 1 to 5, how "green" would you describe your lifestyle?

60 responses



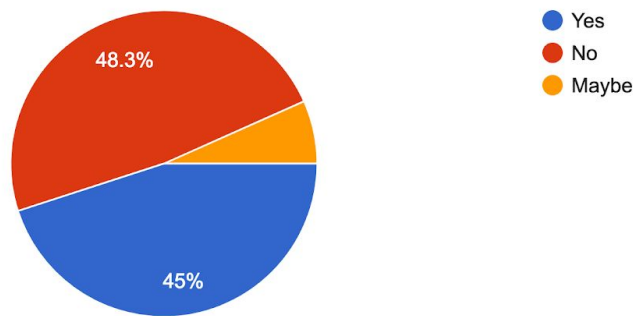
How much would you say environmental impact informs your decisions?

60 responses



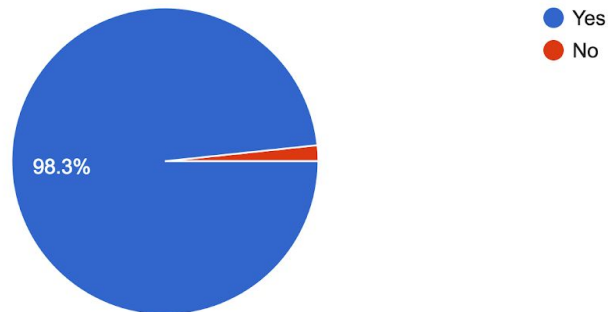
Have you ever considered our environmental impact regarding traditional funeral practices like burial and cremation?

60 responses



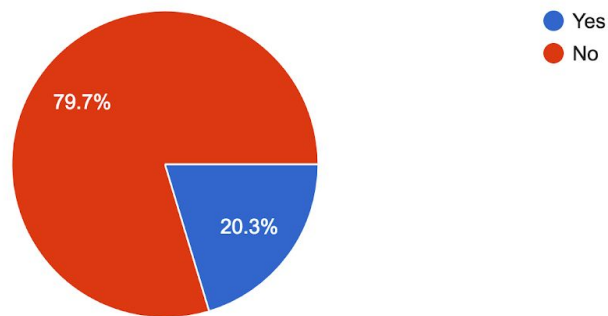
Have you attended funerals in your life?

60 responses



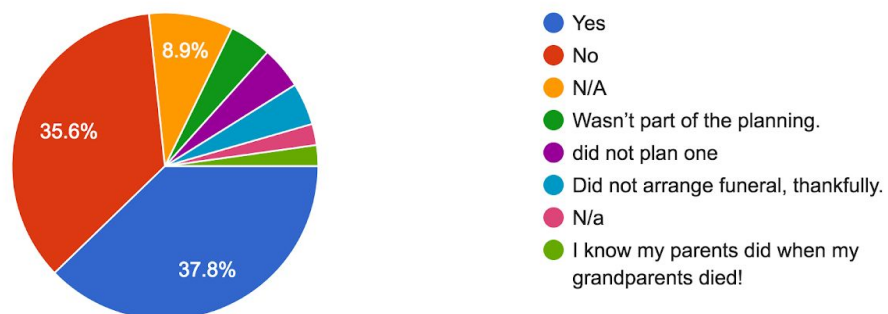
Have you been personally involved in the planning of a funeral?

59 responses



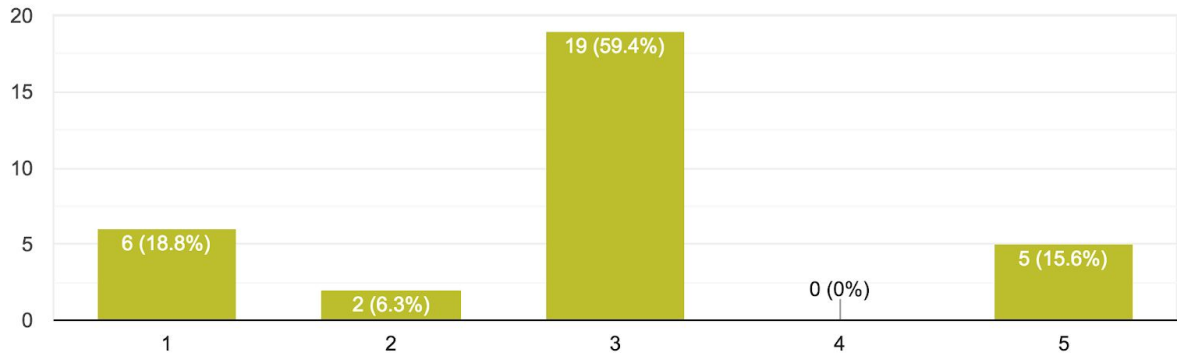
If so, did you use a funeral home, funeral director, or other arrangement services?

45 responses



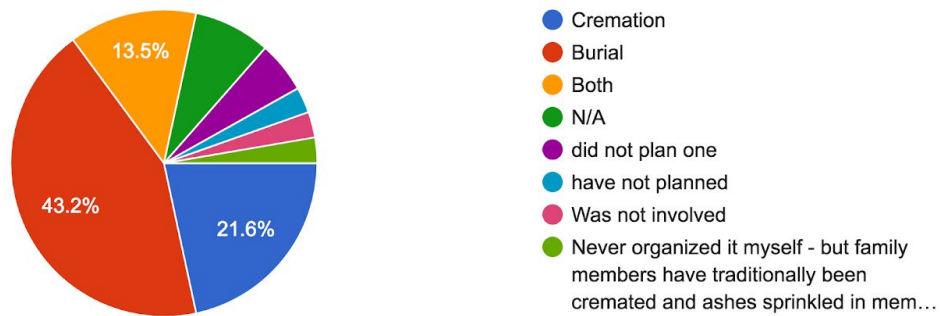
On a scale of 1 to 5, how would you rate your experience working with the above?

32 responses

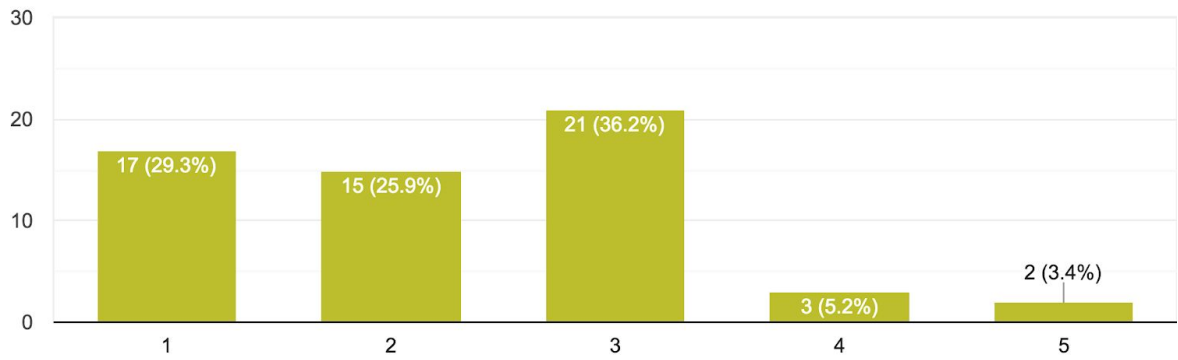


If so, what options were offered?

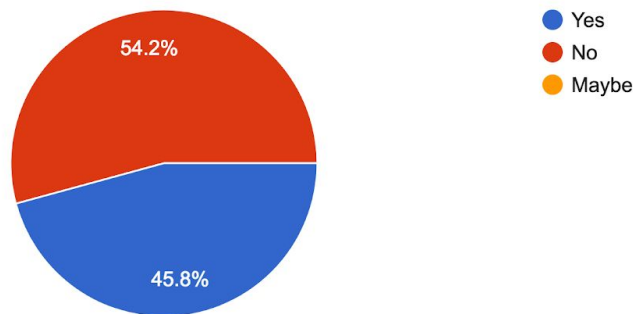
37 responses



On a scale of 1 to 5, how aware are you of the processes that take place for burial or cremation?
58 responses

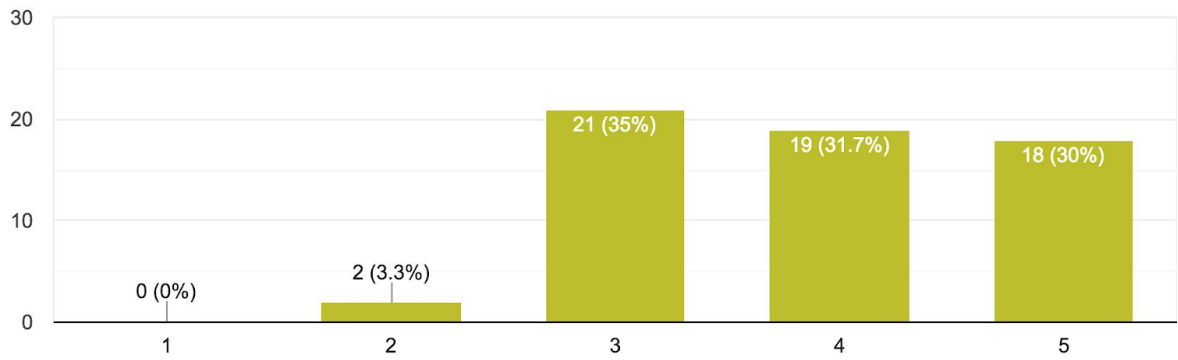


Have you ever heard the terms of traditional burial or green burial?
59 responses



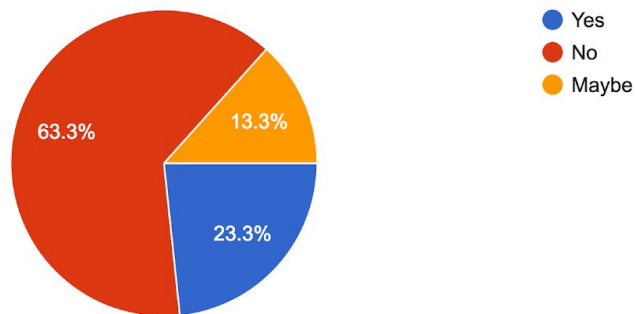
On a scale of 1 to 5, how would you rate your level of interest in Green Burials?

60 responses

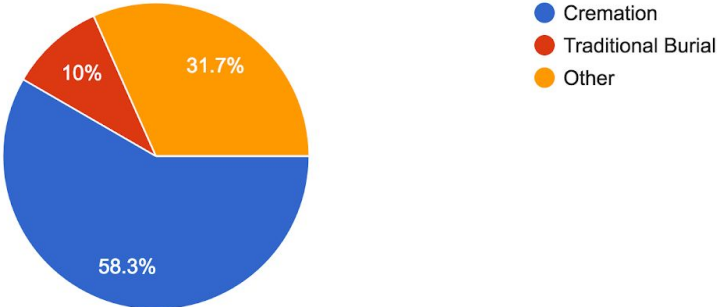


For some people, there are religious guidelines in death. Does that exist for you?

60 responses



What would you like to happen to your body after you die?
60 responses



Would you consider a green burial for yourself or a loved one?
60 responses

