

**Mortuaries and mindfulness: The study of incorporating meditation spaces into modern  
mortuaries**

by

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The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this thesis. The Graduate College will ensure this thesis is globally accessible and will not permit alterations after a degree is conferred.

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## **ABSTRACT**

The purpose of this study is to investigate the impact of adding a non-denominational meditation space to a mortuary and burial location. First, a comprehensive review of literature regarding meditation, meditation benefits, emotions associated with grief and bereavement, and combining meditation with negative emotions were made. The research includes a brief history of meditation and the holistic benefits that correlate with meditation. It includes research on how the death of a loved one can influence the brain. The research also includes how grief and overwhelming emotions affect the brain. An analysis of combining meditation and bereavement concludes the review of the literature.

Second, there is a survey questionnaire to collect data for this study. The survey collected information on how individuals feel about attending a burial location and describing their visit. The survey collected information on how individuals feel about meditation and describing their emotions associated with it. The survey collected information from individuals on their thoughts, comments, and concerns on the effects of having an indoor non-denominational meditation space at the burial location that they frequent. The survey collected information from individuals who are a member of a mortuary team to ask if their business has a non-denominational meditation space or not, and their opinions on the benefits it may provide for users and the business.

## **CHAPTER 1. INTRODUCTION**

### **Statement of the Problem**

Death is an inevitable process for physical human existence. The passing of a loved one is then followed by a period of bereavement and a grieving process. Visiting the resting location of a passed love one can be difficult and bring up emotions of sadness, anxiety, and grief. How can interior design intervene and make that place feel like an intersection between the living and the dead? Would adding a meditation space be a positive addition to a cemetery to make that space feel more neutral and allow the users to feel more comfortable to connect, celebrate, and feel closer to the deceased and help with the bereavement process?

### **Background**

The purpose of this research originated in the curiosity for the relationship between the living and the dead. When Brown was attending the University of Minnesota for her bachelor's degree, she took an extracurricular seminar titled "Death Education," where her interest in the subject began. The seminar studied personal emotion attached to death, the grieving process correlated with death, and several cultural traditions for death.

Years later, Brown attended graduate school at Iowa State University, where she got the opportunity to take an experimental interior design course that touched on a subject she was very fond of. The focus was on designing a burial and memorial space, concentrating on sustainable design and responsible environmental and social stewardship as they pertain to the human community's future spiritual and emotional needs while still honoring the dead. While taking the course, Brown wondered if there could be a way to draw individuals to a beautifully designed

memorial and burial space; since those spaces are not usually frequented with high foot traffic, like a finely designed restaurant or museum would have. Designing something that would encourage individuals to visit would have to coincide perfectly with the surrounding environment. For example, creating a public swimming pool or a state zoo on the site would feel tone-deaf and disrespectful for honoring passed loved ones. There would have to be a structure that was public but still honored and celebrated the dead. The idea of meditation was brought up since it has been known to help people with coping and emotional well-being. Adding a meditation space on the site not only would act as an intersection between the living and the dead, but it would also be an excellent tool for individuals to use to combat grief, stress, anxiety, etc. associated with death. Sequentially, it would work as a way to gain more foot traffic to a mortuary and burial location - increasing mortuary business and a way to enjoy beautiful design. This thought created the question: Would incorporating a meditation space to the site of a mortuary and burial space help with processing emotions from dealing with death and encourage individuals to visit more often?

### **Purpose of the Study**

The purpose of this study is to explore the hypothesis that adding a public non-denominational meditation space to a mortuary and burial location would encourage individuals to visit more often. Joining a meditation space to the site can help individuals cope with negative emotions associated with death and bereavement. Adding a meditation space would be a positive enhancement to a mortuary and burial location.

### **Significance of the Study**

There is a correlation between meditation and grief. Meditation can help combat grief and the overwhelming emotions that come with a passed loved one (Desbordes et al., 2012). There is a lack of research identifying the correlation between incorporating a non-denominational meditation space located on the premises of a burial site. This research study is necessary to fill this void of information for the inclusivity of meditation spaces to a cemetery/burial location.

### **Research Questions**

This study's primary goal is to explore the impact of adding an indoor non-denominational meditation space to a burial location. Some research questions that might help answer this issue include:

1. How many people visit a passed loved one at a burial location?
2. Would providing an indoor non-denominational meditation space at a mortuary and burial location help with bereavement?
3. Would providing an indoor non-denominational meditation space encourage you to visit more often?
4. Would adding an indoor non-denominational meditation space to a burial location be a positive addition?

### **Summary**

This chapter has provided a structure for this study, including research questions, relevant background information, and hypotheses developed by the researcher. Expected chapters will include Chapter 2: Literature Review, Chapter 3: Methodology, Chapter 4: Results, Chapter 5:

Conclusion, accompanied by a creative component. Future research interests are presented as part of the final chapter.

## CHAPTER 2. LITERATURE REVIEW

### Introduction/Objectives

This review of literature has provided foundational information that will help define the context of this study. The first part of this literature review focuses on meditation. This chapter reviewed the definition and history of meditation, types of meditation, mindfulness-based stress reduction, benefits of meditation, how meditation became popular in western culture, and the interior design and architecture for a meditation space. The second part of this literature reviewed focuses on grief and meditation. The chapter reviewed studies centered on how grieving and bereavement affect the brain, the amygdala, and how meditation and grief can be used together.

### Meditation Analysis

#### Meditation

Mediation is defined from the dictionary as engaging in contemplation or reflection, to focus one's thoughts: reflect on or ponder over. The term originates from the Latin word *meditatum*, meaning "to ponder." Meditation is a mind and body practice with a long history of use to increase calm and physical relaxation, improve psychological balance, cope with illness, and enhance overall health and well-being (NCCIH, 2016).

The earliest documented records that mentioned meditation involved Vedantisma, a Hindu tradition in India, around 1500 BCE. There was no exact recorded date when the practice of meditation began; however, historians believe that meditation was practiced as early as 3000 BCE (Chow, 2018). Although there are images that date back to around 5,000 to 3,500 BCE that

portray forms of meditation such as people sitting on the floor with their legs crossed, eyes shut slightly, and wrists are setting their knees, also known as the meditation posture. (Puff, 2013).

Mediation is practiced worldwide, and diverse countries have given different names for the meditation that they practice (Rajaraman, 2013).

Meditation involves a complicated form of relaxation called the parasympathetic response wherein meditation techniques and other kinds of relaxation procedures help reduce the sympathetic component of the Autonomous Nervous System and promote the parasympathetic component's activities by reducing the release of stress hormones like cortisol. (Rajaraman, 2013)

### **Types of meditation**

There are many different types of meditation. Traditionally there are two main categories: mindfulness meditation and concentrative meditation (Goleman, 1988). Mindfulness meditation, originally stemming from Buddhist meditation traditions (Tang et al., 2015), also called Mindfulness-Based Stress Reduction (MBSR) can also be referred to as "insight meditation" or "vipassana practice". MBSR plays an increasingly considerable role in defining how meditation can contribute to therapeutic growth and personal development. Mindfulness meditation can be described as “focusing one’s attention in a nonjudgmental or accepting way on the experience occurring in the present moment” (Koszycki et al., 2010, p. 575). In contrast, concentrative meditation holds the attention steady on any chosen object or subject (Kristeller, 2007) (Mayo Clinic, 2014). Another common meditation type is called transcendental meditation (TM). By definition, TM is a method of meditating in which you close your eyes and repeatedly think of a

simple sound, word, or phrase. Virtually all meditative approaches combine elements of both concentrative and mindfulness meditation practices.

### **Mindfulness-Based Stress Reduction**

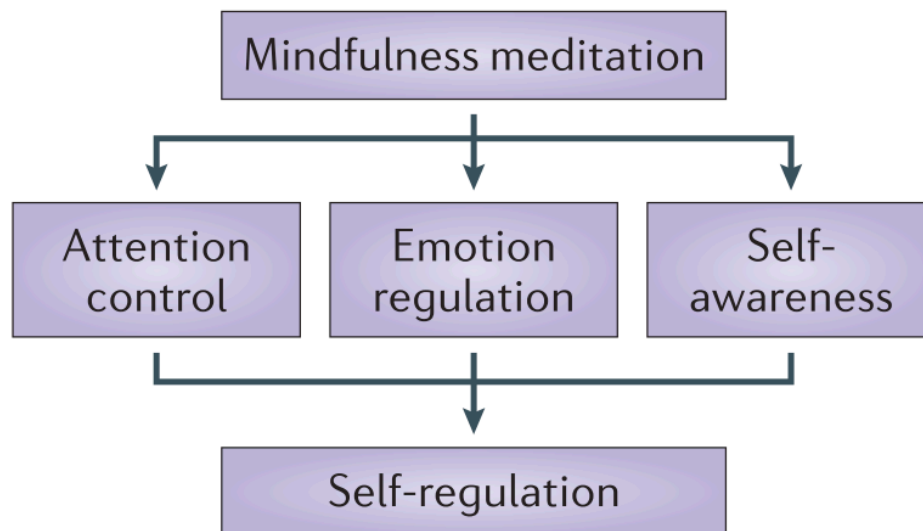
Mindfulness meditation originally stems from Buddhist meditation traditions. Stemming from that is Mindfulness-Based Stress Reduction (MBSR). MBSR is an eight-week evidence-based program that offers guidance into mindfulness meditation training. MBSR was created in 1982 by Jon Kabat-Zinn, a professor of medicine and founder of the Stress Reduction Clinic and the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School (Kristeller, 2007). It is known to reduce symptoms of stress, anxiety, and depression. MBSR can alter emotional responses by modifying cognitive-affective processes. Mindfulness meditation involves the cultivation of moment-to-moment, nonjudgement awareness of one's present experience, whether narrowly or more broadly focused. The goal of MBSR is to cultivate a stable and nonreactive awareness of one's internal experiences (Kristeller, 2007). Experiencing pain mindfully enables one to help eliminate the psychological agony of physical pain. When one utilizes mindfulness with their pain, they no longer fight or resist the pain. Instead, they nonjudgmentally experience it as part of their present moment experience (Sagula & Rice, 2004).

A study done by the Department of Psychology at Stanford University investigated MBSR related changes in the brain-behaviors indices of emotional reactivity and regulation of negative self-beliefs in patients with a social anxiety disorder (SAD). Sixteen patients underwent functional MRI while reacting to negative self-beliefs and regulating negative emotions using “two types of attention deployment emotion regulation—breath-focused attention and

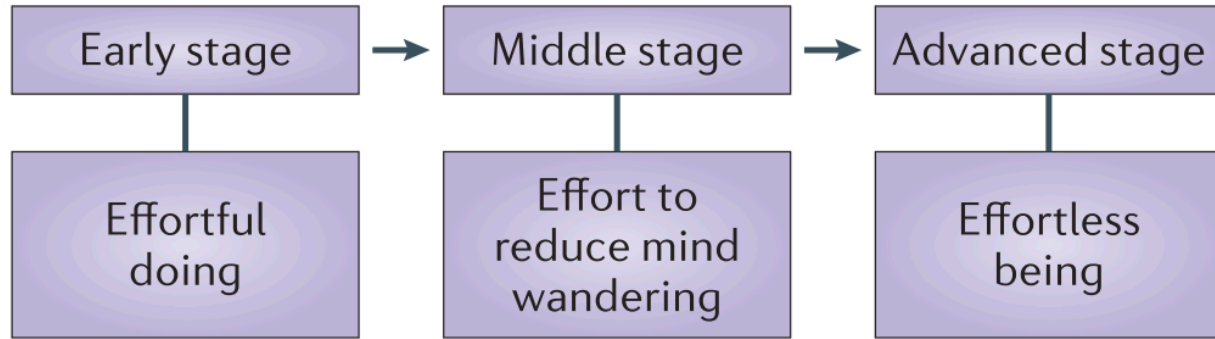


distraction-focused attention. MBSR completers showed improvement in anxiety and depression symptoms and self-esteem. During the breath-focused attention task (but not the distraction-focused attention task), they also showed (a) decreased negative emotion experience, (b) reduced amygdala activity, and (c) increased activity in brain regions implicated in attentional deployment” (Goldin & Gross, 2014, p. 4).

It has been suggested that mindfulness meditation includes at least three components that interact closely to constitute a process of enhanced self-regulation – attention control, emotion regulation, self-awareness, as seen in Figure 2.1 (Tang et al., 2015, p. 214). Mindfulness meditation can also be roughly divided into three different stages of practice – early, middle, and advanced stage, that each require a different amount of effort as seen in Figure 2.2 (Tang et al., 2015, p. 214)



*Figure 2.1. The three components that interact closely to constitute a process of enhanced self-regulation.*



*Figure 2.2. Mindfulness meditation divided into three different stages of practice.*

### **Benefits of Meditation**

As mentioned previously, meditation can be beneficial regarding someone's health, reducing pain, anxiety, stress. Also, it can be beneficial in a grieving process. A study was conducted on the effectiveness of mindfulness training on the grieving process and emotional well-being of chronic pain patients using a mindfulness meditation program to determine its effectiveness in addressing the grieving process among patients diagnosed with chronic pain. The results indicated that the treatment group advanced significantly more quickly through the initial stages of grieving than the comparison group (Sagula & Rice, 2004).

We have all heard that meditation is a way to ease stress and calm anxiety. Although meditation is not a replacement for traditional medical treatment, the Mayo Clinic has researched why meditation is a fast and straightforward way to reduce stress. The benefits that meditation has on one's well-being can include; gaining a new perspective on stressful situations, building skills to manage stress, increasing self-awareness, focusing on the present, reducing negative emotions, increasing imagination and creativity, and increasing patience and tolerance. Meditation can also be used to manage anxiety, chronic pain, depression, high blood pressure, sleep problems, and tension headaches (Mayo Clinic, 2014).

Meditation can affect the stress response in four separate stages: First, it

provides a way to free the senses from whatever is pulling at them. Second, with some more practice, mindfulness meditation provides a way to observe patterns of responding or reacting as they occur. Third, with yet more practice, conditioned reactions and responses to these sense objects gradually disengage and weaken. Finally, in the course of this uncoupling, meditation allows more integrative, "wiser," or distinct levels of processing to emerge, contributing to more effective responses (Kristeller, 2007b).

In 2012, the National Center for Complementary and Integrative Health reviewed thirty-six trials. They found that twenty-five of them reported better outcomes for anxiety symptoms in the meditation groups compared to the control groups.

The Mayo Clinic (2014) has provided some of the more common meditation features:

1. Focused attention. Focusing one's attention is generally one of the essential elements of meditation. Focusing attention is what helps free the mind from the many distractions that cause stress and worry.
2. Relaxed breathing. Deep, even-paced breathing using the diaphragm muscle to expand the lungs. The purpose is to slow breathing, take in more oxygen, and reduce the use of the shoulder, neck, and upper chest muscles while breathing so that you breathe more efficiently.
3. A quiet setting. Meditation may be more accessible if done in a quiet spot with few distractions.
4. A comfortable position. Practice meditation, whether sitting, lying down, walking, or in other positions or activities.

## **Meditation Today**

Meditation has become increasingly common in western culture since the late 1960s (Goleman, 1988). Often meditation is associated with the lifestyle of the 1960s that counters the prevailing power structure of academic medicine, such as long-haired, pot-smoking hippies who sang and danced on street corners wearing saffron robes and chanting phrases like “Hari Krishna” (Sternberg, 2009).

During this time, the remarkably successful band The Beatles were in the process of “making history by anticipating it,” and the rest of the rock world was along for the ride. The Beatles became “acid heads” captivated by eastern Music and religion. In 1968 they took a trip to India, accompanied by fellow artists, to study Transcendental Meditation (TM) with Maharishi Mahesh Yogi (Moretta, 2017). What could be more intriguing than celebrities who had everything and could go anywhere deciding to sit with their eyes closed for several hours a day? For the youth market, this was the gold standard in endorsements. A recent graduate from the University of California Berkeley University at the time had stated, “If meditation is good enough for John Lennon, it is good enough for me.” It had seemed that the Beatles and other rich and famous artists had abandoned LSD in favor of meditation, in turn increasing the popularity of meditation amongst western culture (Goldberg, 2010).

According to Susan Chow, Ph.D., in the 18th century, the ancient teachings of meditation began to become more popular among the population of Western cultures. In 1927, the book “Tibetan Book of the Dead” was published, which attracted significant attention from Westerners and a keen interest in the practice. This was followed by the Vipassana movement, or insight meditation, which began in Burma in the 1950s. “The Dharma Bums” was published in 1958, attracting more attention to meditation at this time. In 1979, the MBSR program was founded in

the United States, which used meditative techniques in treating patients with chronic diseases.

“Since this time, meditation has become increasingly common, such that a survey in 2007 found that almost 1 in 10 Americans had practiced meditation. Meditation plays a central role in many religious traditions and rituals and helps individuals manage stress and improve overall well-being” (Chow, 2018, p. 2).

Between the years 2012 and 2017, the National Health Interview Survey studied how many adults practice meditation. In 2012 they recorded that 4.1% of adults age eighteen and over in the United States used meditation. In 2017, 14.2% of adults age eighteen and over meditation. The practice of meditation is steadily increasing and becoming more popular (NCCIH, 2016). Meditation spaces are an excellent way for people to engage in meditation practices. Workplaces have begun to incorporate meditation spaces for employees or visitors to recharge and center themselves. Lululemon, an athletic retailer predominantly for yoga attire, is an example of a company that has incorporated a space for meditation, calling the space "Mindfulness." The first "Mindfulness" space is located in the New York City, NY location. It includes zen-pods that allow visitors to sit comfortably, put on a pair of headphones, and listen to a self-guided meditation (Nigel & Waller, 2017).

### **Meditation in Interior Design and Architecture**

According to Shriya Agrawal (2019, p. 380), “meditation spaces are the areas or spaces which have the power to evoke awareness, i.e., the search to know our true selves and to discover the real nature of consciousness. Architecture is a communication way for meditation spaces that can excite all senses. It helps one concentrate positive energies to calm a disturbed mind and make it peaceful.” Agrawal conducted a research study recently intending to

understand the semantics of meditation spaces and how they contribute to calming a human mind, therefore establishing a connection between sacredness and the built environment. Her research methods investigated spatial design analysis's linguistic aspects by analyzing the syntax and semantics of meditation spaces. The hypothesis that the philosophical parameters enhance meditation spaces through built elements that lend semantic meaning to it.

Agrawal used research methods by understanding the philosophy behind the faith used in meditation. A case study of meditation centers on a series of different faith denominations. Agrawal concluded that “architecture would help in a space for meditation – a spiritual journey in a more profound, sanctified way. It has also made the semantics part in an explored way rather than just making it unexplored. It combines the built environment that should be made according to the function and form of beliefs by engaging the people to meditate” (Agrawal, 2019, p. 380).

Agrawal concluded through her study that “built elements such as columns, domes, arches, walls, light, symmetry, rhythm, and windows play an essential role in making a space to meditate. The semantics attributes like etymology, pragmatic, lexicology, and syntax makes the form of architectural buildings which connotes to denote – the semiotics part to make a meditation space. The studies show that architecture does affect a meditation space” (Agrawal, 2019, p. 397).

While finding that the architecture of a meditation space is essential, it is even more important for this research paper to discover how a meditation space interior design can affect the individual's wellness. There is little research done on the effects of interior design on a meditation space specifically. However, there is research done on interior design and wellness generally that can certainly be applied to a meditation space.

Roger Ulrich, a professor in the department of architecture and center for healthcare at the Chalmers University of Technology in Sweden, reported on the theory and scientific research on the effects of interior design on wellness, specifically to health facility design. Ulrich was the first to measure patients' surroundings' effects on the healing process (Sternberg, 2009). Ulrich found that there is increasing scientific evidence that poor design works against patients' well-being and, in certain instances, can have opposing effects on physiological indicators of wellness. Research has linked poor design to negative consequences for patients, such as anxiety, delirium, elevated blood pressure, and increased intake of pain drugs. One central part Ulrich focused on was stress. Stress is a vital obstacle to healing. Studies have shown that an essential factor influencing stress levels and wellness is a sense of control. There is scientific evidence that indicates that humans have a strong need for control and the related need for self-efficacy for environments and situations. Many studies have found that lack of control is associated with negative consequences such as depression, passivity, elevated blood pressure, and reduced immune system functioning (Steptoe & Appels, 1989).

Research in environmental psychology suggests that well-being is usually created when physical surroundings give a moderate degree of positive stimulation. If stimulation levels are high due to sounds, intense lighting, bright colors, and other environmental elements, patients will likely be stressed. On the other hand, extended exposure to low environmental stimulation levels produces boredom and often negative feelings such as depression. The most effective positive distractions are mainly elements that have been essential to people throughout millions of years - happy and caring faces, animals, and nature elements such as trees, plants, and water (Ulrich, 1991).

The intuitively based belief that visual exposure to trees, water, and other nature tends to produce restoration or recovery from stress dates as far back as the earliest large cities, such as ancient Rome (Ulrich, 1991). Findings from a sequence of studies on non-patient groups such as university students suggest that views of ordinary everyday nature, compared to urban scenes lacking nature, are significantly more effective in promoting recovery in the psychological component of stress (Ulrich, 1991). This research suggests that many nature scenes or elements promote stress recovery because they evoke positive feelings, reduce negatively toned emotions such as fear, anger, and sadness, effectively hold attention/interest, and accordingly might block or reduce stressful thoughts. Even short periods, such as ten minutes, have been shown to be positive (Ulrich, 1991).

In 1990, Judith Heerwagen and Gordon Orians researched wall art associated with patient anxiety in a dental clinic. Their questionnaire data suggested that patients felt less stressed on days when a large mural depicting a natural scene was hung on the waiting room wall, in contrast to days when the wall was blank. Likewise, heart rate measurements also indicated that individuals were less stressed or tense when the nature mural was visible instead of the blank wall (Heerwagen & Orians, 1986).

Ulrich then investigated whether exposure to visual stimulation of nature in intensive care units promotes wellness or not for postoperative open-heart surgery patients. One hundred and sixty-six patients were randomly assigned to visual stimulation consisting of a nature picture, mostly water or trees, and abstract pictures dominated by either curvilinear or rectilinear forms. The heart patient study findings suggested that the individuals exposed to the nature pictures experience less postoperative anxiety than the group exposed to the abstract pictures. Abstract pictures caused higher anxiety in patients (Ulrich, 1991).



Using previous studies on how interior design can help with individuals' wellness is essential, so it can be applied to this paper in assisting the design of a meditation space. It appears that providing elements of nature in the space is important. It is imperative to have a window in the space that is associated with nature. A sense of control is important to lower stress levels, so providing individual rooms with different light and sound options is important to maintain autonomy for the individual using the space. Artwork provided in the space will not be abstract but recognizable scenes of nature.

## **Grief and Meditation**

### **Grief/Bereavement**

A loved one's death can trigger emotional reactions that are generally natural and adaptive (Fernández-Alcántara et al., 2020). The psychological and physiological reactions that follow a loved one's loss are collectively known as grief (Lundorff et al., 2017). Many times, these triggered emotional reactions can become "complicated grief" (CG), also known as "prolonged grief disorder" (PGD).

Grief can be defined from the Merriam Webster Dictionary as deep and poignant distress caused by or as if by bereavement. "Complicated grief (CG) can be characterized as intense feelings of longing for a passed loved one, having a hard time coming to terms with the loss, and increased emotions such as anger, sadness, guilt, emptiness, emotional numbness, rumination of thoughts, and usually a reduced ability to experience positive mood, that usually lasts longer than a duration of six months" (Lundorff et al., 2017, p. 138).

"Prolonged grief disorder (PGD) is a proposed diagnostic category intended to classify bereaved individuals who experience notable dysfunction for atypically long periods of time

following a significant loss. Core symptoms include a pervasive yearning for the deceased or a persistent preoccupation with the deceased accompanied by intense emotional pain. PGD is characterized by difficulties in engaging in social or enjoyable activities, a reduced ability to experience a positive mood, and difficulties accepting the loved one's death” (Lundorff et al., 2017, p. 138).

### **The Amygdala and Grief**

The part of the brain responsible for the perception of emotions such as anger, fear, and sadness and controlling aggression is called: the amygdala. The amygdala is a little section of the brain responsible for detecting fear and preparing for emergency events. The amygdala helps store memories of events and emotions so that an individual may recognize similar events in the future. “For example: if you have ever suffered a dog bite, then the amygdalae may help process that event and, therefore, increase your fear or alertness around the dogs. The size of the amygdala is positively correlated with increased aggression and physical behavior” (Williams & Cena, 2015, p. 2).

A recent 2020 fMRI (functional magnetic resonance imaging) study was conducted to measure the amygdala activations during an emotional experience of death-related pictures with participants diagnosed with CG. An fMRI works by identifying the changes in blood oxygen and flow that occur in response to neural activity. The purpose was to identify brain activations in CG individuals while observing positive, negative, and death-related pictures.

“The participants consisted of nineteen CG individuals and nineteen NB (non-bereaved) individuals. In comparison, individuals with CG displayed distinct brain activations in response to the different emotional images instead of NB individuals. The participants with CG were

qualified for the study if they were over the age of eighteen years old, had a loss of a loved one in the past eighteen months, diagnosed with CG, and were absent of any other psychopathologies. The NB participants were qualified for the study if they were over the age of eighteen years old, did not have a loss of a loved one in the previous three years, had no CG symptoms, and had low scores for anxiety, depression, and post-traumatic stress.

The experience included 15 pictures with diverse emotional content for each condition (positive, negative, and death-related pictures). The death-related items displayed images such as cemeteries, accidents, and terminal illnesses. A random image-distribution was used to display a randomly selected image for 5 seconds. A control image (a black fixation cross in the center of the screen) was used every three images for neutralization. The task study had a total length of 10 minutes. After this task was completed, the participants were brought into a different room where they were shown 90 additional images along with the previous 45 images and fixation cross images and asked if they recognized the images previously shown in the last task.

Focusing exclusively on the amygdala, in the contrast of death-related pictures with the fixation cross, between-group comparisons revealed significantly increased activation in the CG versus NB group in the left amygdala. Conversely, no region showed significantly increased activation in the NB versus CG group” (Fernández-Alcántara et al., 2020, p. 1).

“The result of this amygdala activation study indicates that individuals with CG have distinct emotional processing of different types of emotional stimuli. Death-related stimuli evoke an intense response in the CG group, with greater activation in the amygdala and the middle frontal gyrus that positively correlated with the present experience of grief. Finally, the CG group also manifested a more intense response in the amygdala to death-related pictures compared with positive” (Fernández-Alcántara et al., 2020, p. 12).

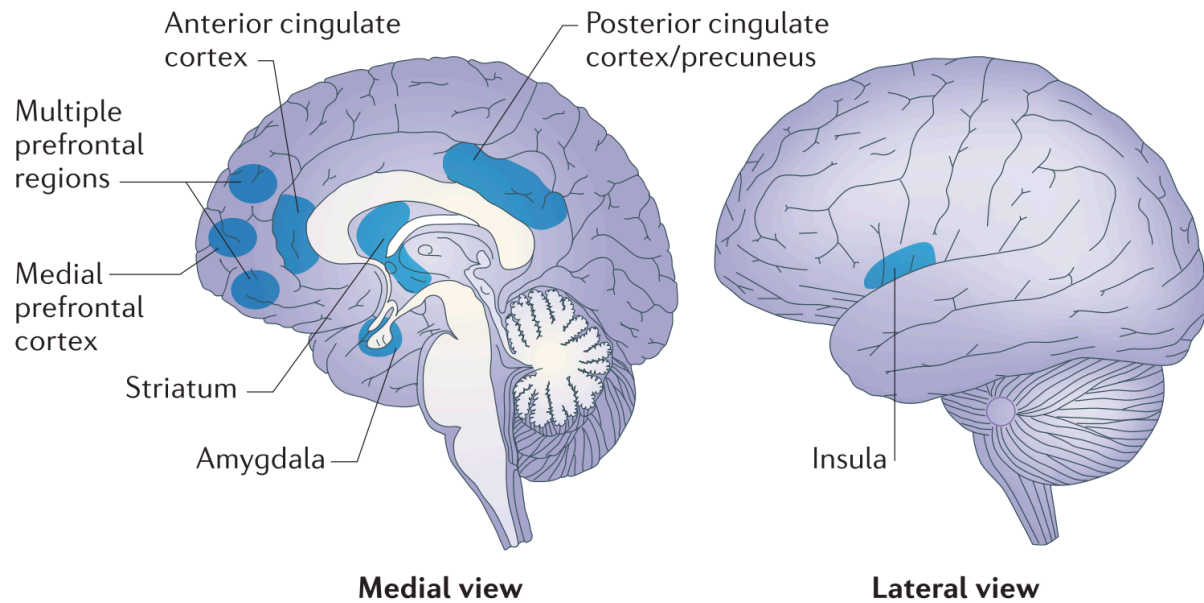
## Amygdala and Meditation Correlation

In 2012 a study was conducted to investigate whether amygdala activation may be modified by meditation training. Previous studies show that mindfulness-based interventions have been associated with lowered intensity and frequency of negative affect, reduced anxiety, more adaptive responding to stress, decreased ego-defensive responsivity under threat, decreases in difficulties regulating emotions, and reduced emotional interference from unpleasant stimuli. The 2012 study investigated eight weeks of training in meditation affects amygdala responses to emotional stimuli in subjects when in a non-meditative state, with a hypothesis that meditation training may induce learning that is not stimulus – or – task-specific, but process-specific, and thereby may result in enduring changes in mental function.

Participants in the study were randomized to 8 weeks of training in either *Mindful Attention Training (MAT)* or *Cognitively-Based Compassion Training (CBCT)*, or an active control intervention consisting of a health discussion group. 51 subjects (31 females, 20 males; between the ages of 24-41 years.) All subjects voluntarily chose to participate in the brain imaging study. They underwent the pre-intervention scan before their randomization to any of the three groups. All subjects participated in two hours of class time per week for eight weeks, for a total of 16-hours during the study. “This study found that the eight weeks of training in two different meditation forms yielded distinct changes in amygdala activation in response to emotionally valenced images while the subjects were in an ordinary, non-meditative state. These results suggest that meditation training may affect emotional processing in everyday life, not just during meditation” (Desbordes et al., 2012, p. 12).

According to *The Neuroscience of Mindful Meditation*, growing evidence demonstrates changes in the functional properties of the brain following meditation. The mindfulness

practices that have been subject of neuroscientific research comprise a broad range of methods and techniques such as Vipassana meditation, Dzogchen, Zen, as well as mindfulness-based approaches such as Mindfulness-Based Stress Reduction (Tang et al., 2015). It is shown in Figure 2.3 (Tang et al., 2015, p. 217) the schematic view of some of the brain regions involved in attention control (the anterior cingulate cortex and the striatum), emotion regulation (multiple prefrontal regions, limbic regions, the striatum, and the amygdala) and self-awareness (the insula, medial prefrontal cortex and posterior cingulate cortex and precuneus).



*Figure 2.3. Brain regions involved in the components of mindfulness meditation.*

### Summary

This chapter of reviewed literature addressed meditation, types of meditation, meditation in architecture, benefits of meditation, and meditation used today. This chapter of reviewed literature also addressed grief and bereavement, the amygdala, and meditation paired with grief. The review is a small insight into the types of meditation. The two main types of meditation that

were touched upon throughout the review was Mindfulness-Based Stress Reduction (MBSR), also known as mindfulness meditation. The second primary type of meditation is concentrative meditation (Goleman, 1988). When utilized, the goal and benefit of mindfulness meditation is to create a nonreactive awareness of one's internal experiences and can help an individual eliminate the psychological agony of physical pain and help an individual nonjudgmental experience it as part of their present moment experiences (Sagula & Rice, 2004). Lastly, studies have indicated that individuals move significantly more quickly through the initial stages of grief using mindful meditation (Sagula & Rice, 2004). Further research showed that pushing past the practice of meditation itself, meditation's architectural setting affects the way one meditates (Agrawal, 2019).

## CHAPTER 3. METHODOLOGY

### Overview

This chapter discussed the quantitative and qualitative research method used for this research paper. Using a quantitative method provided first-hand data directly from people who have experienced the passing of a loved one, also, their involvement with the practice of meditation. The information collected as a result of the quantitative and qualitative study will help clarify the following research questions:

1. How many people visit a passed loved one at a burial location?
2. Would providing an indoor non-denominational meditation space at a mortuary and burial location help with bereavement?
3. Would adding a non-denominational meditation space encourage an individual to visit more often?
4. Would adding an indoor non-denominational meditation space to a burial location be a positive addition?

The survey is a significant part of this research study because it is necessary to collect information from individuals who could contribute their personal views on post-funeral ceremony visitations and providing a non-denominational meditation space to the location where their loved one is laid to rest. While studying this topic, it was observed that there is an overall lack of reliable resources regarding the impact a non-denominational meditation space would have at a burial location. Personal experiences from the participants provided first-hand information concerning their thoughts and opinion on the subject.

## **Survey**

The method of research used was made of a questionnaire survey for individuals to complete if they felt comfortable doing so regarding their own experiences with a passing of a loved one and their involvement with visiting a loved one if they are at a burial site. The survey was provided and accessed through an online survey software service: Iowa State University Qualtrics. This method was most effective for distribution purposes, time efficiency, and consistent experience for all survey participants.

### **Survey Population**

The sample population type was used through convenience sampling. A convenience sample can be represented as a sample in which research participants are chosen based on their ease of availability. Individuals who are the readiest, willing, and able to participate in the study are selected to participate (Wenzel, 2017). Using a convenience sample for this research was the most reliable way for the author to collect responses anonymously and quickly. The survey link was issued through email to individuals through a personal contact list. The survey link was also issued through email to various mortuary businesses. Participants were given two weeks to complete the survey. The total number of survey responses totaled 29. The complete survey can be found in Appendix A.

### **Survey Implementation**

The survey used for this research was provided and accessed through an online survey software service: Iowa State University Qualtrics. Qualtrics is a safe and secure resource and is



protected by high-end firewall systems to ensure further privacy. Qualtrics provided easy distribution with a link that could be easily shared with immediate data collection.

The survey was closed on November 4, 2020. The data was then obtained from Qualtrics and was downloaded and analyzed. The data was distributed and analyzed, which will be discussed in the following chapter.

## **Survey Method**

Before distributing the survey, the Institutional Review Board (IRB) exempted this study from human subject protection regulatory requirements. A full copy of the survey can be found in Appendix A, and the IRB exemption notice can be found in Appendix B. Survey participation was entirely voluntary and anonymous. There was no compensation or incentive for participants. The survey was distributed from October 21, 2020, to November 4, 2020. There was a total of 29 completed surveys. Participants who completed the survey took on average 5 minutes and 42 seconds to complete it. Participation in the survey was voluntary. Participants could choose not to participate. If participants decided to partake in the survey, they could withdraw at any time. Survey participation was completely anonymous.

The survey followed two different path flows, which will be discussed more in chapter 4. The first path was designed for individuals who were or currently are members of a mortuary team. The second path was designed for individuals who have no involvement as a member of a mortuary team. The survey follows a unique flow that provides different questions for each answered question.

Survey questions consisted of questions about feelings and emotions associate with burial locations and meditation spaces, followed up with questions about combining the two subjects.

Questions were answered in various ways, including a 5-point Likert scale, yes/no, multiple-choice, and open-ended answers.

## **CHAPTER 4. RESULTS**

### **Overview**

This thesis paper's primary goal is to explore the impact of adding a non- denominational meditation space to a cemetery or burial location. This research is necessary to fill the void of information for meditation spaces' inclusivity to cemetery or burial location. It also analyzes if incorporating a meditation space to a cemetery or burial location can help combat the overwhelming emotions associated with visiting a passed loved one, acting as an intersection between the living and dead—allowing the individual to connect and celebrate the deceased. First discussed is the survey results. The survey aimed to gain information regarding personal feelings and emotions associated with burial locations and meditation spaces, followed by questions about combining the two subjects. The results will be presented in both written and tabular format. The survey answers and the content analysis were able to provide answers and feedback to all of the research questions presented.

### **Survey Results**

Having a research survey was essential to this paper as results from the survey helped in answering the research questions. The survey also provided information that supports or disproves the hypothesis that adding a meditation space to a cemetery or burial location is a positive addition and it can help individuals combat the overwhelming emotions associated with visiting a passed loved one. It can act as an intersection between the living and the dead, allowing the user to connect and celebrate the deceased. Over a total of 14 days, 29 responses were recorded. This survey was intended to gain information regarding personal feelings and emotions associated with burial locations and meditation spaces, followed by questions about

combining the two subjects. The following results indicate 29 personal responses and opinions on the research topic.

## Survey Flow

The survey was presented to two sets of participants; individuals who have been or currently are a member of a mortuary team, and individuals who are not involved in a mortuary business. The survey follows a unique flow that provides different questions for each answered question. Figure 4.1, Survey Flow Path, is a flow chart of the questions asked in the survey based on the individual's answers. The complete survey can be found in Appendix A.

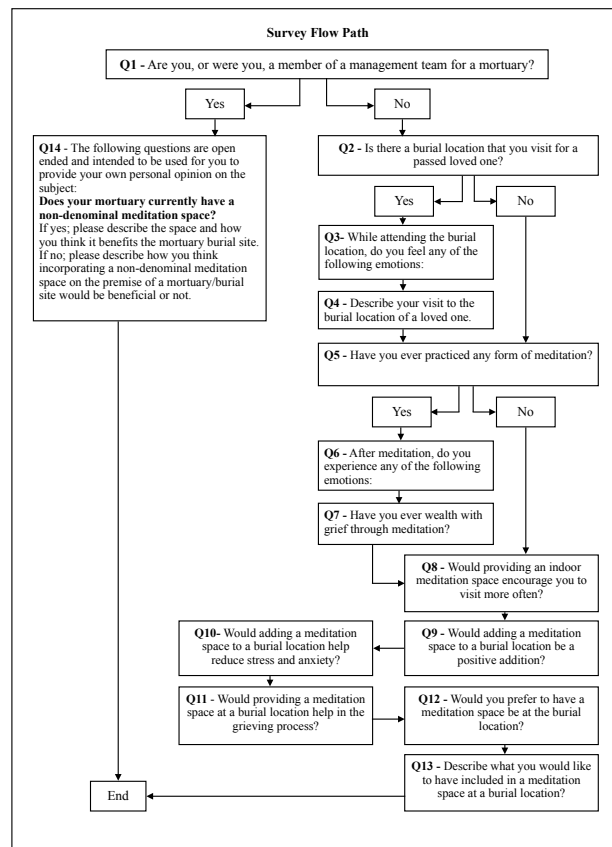


Figure 4.1. Survey Flow Path

## Data Collection

*Q1 - Are you, or were you, a member of a management team for a mortuary?*

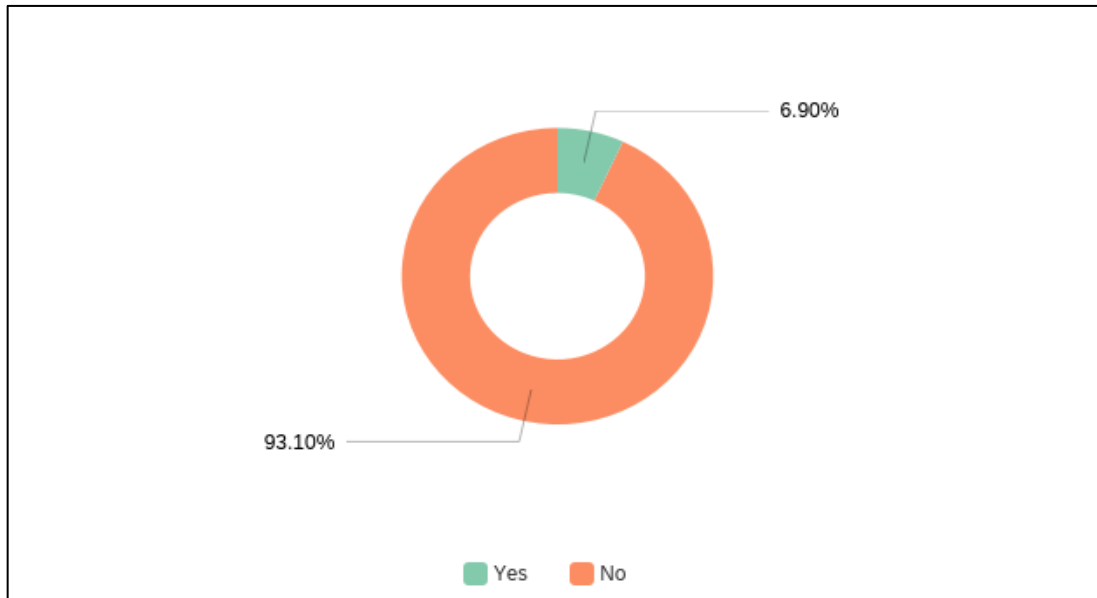


Figure 4.2. *Q1 - Are you, or were you, a member of a management team for a mortuary?*

Table 1. Results from question 1

#	Answer	%	Count
1	No	93.10%	27
2	Yes	6.90%	2
	Total	100%	29

To begin the survey, participants were asked to answer whether they were, or have been, involved in a mortuary business. The first question is, "Are you, or were you, a member of a management team for a mortuary?", Figure 4.2. Two individuals answered, "yes." Twenty-seven individuals answered "no." Individuals who answered "yes" were prompted to Question 14 to fill out an open-ended question discussing their experience in the industry, which will be discussed later in this chapter. Individuals who answered "no" were prompted to Question 2. Participants

who answered yes were important to this survey because these individuals can provide real-life experience and advice.

**Q2 - Is there a burial location that you visit for a passed loved one?**

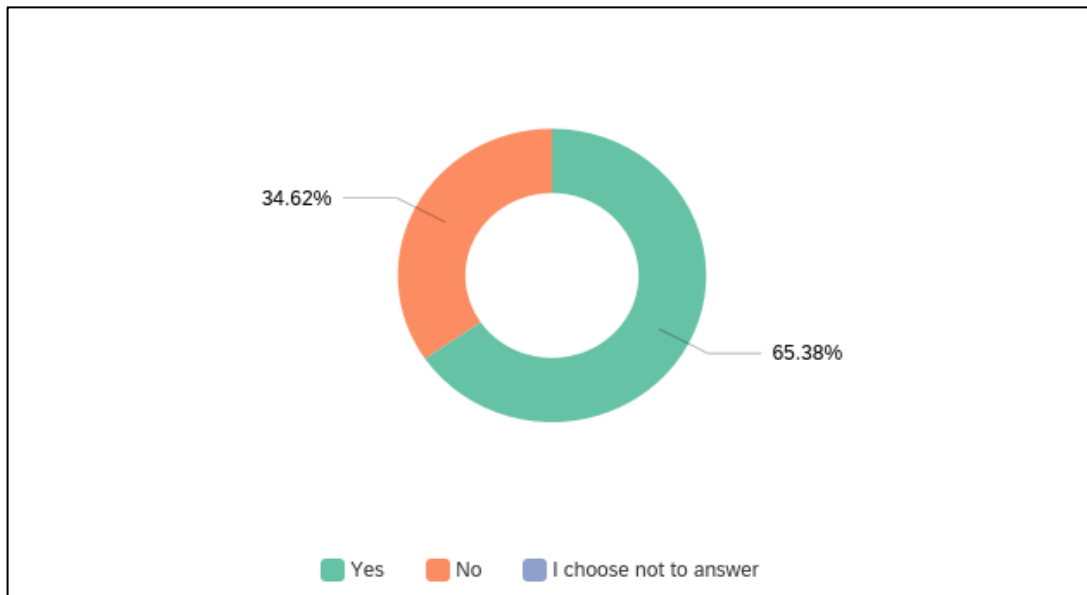


Figure 4.3. Q2 - Is there a burial location that you visit for a passed loved one?

Table 2. Results from Question 2

#	Answer	%	Count
1	Yes	65.38%	17
2	No	34.62%	9
3	I choose not to answer	0.00%	0
	Total	100%	26

Question 2 in the survey asked about visiting a passed loved one. In Figure 4.3, “Q2 - Is there a burial location that you visit for a passed loved one?” is asked. Out of twenty-six participants for this question, seventeen individuals said “yes,” and nine individuals said “no.” If “no” was chosen, participants were prompted to Question 5, which will be discussed later.

Individuals who said “yes” were prompted to the next survey question, Question 3. Gathering a group of participants who answered yes was essential to this survey because these individuals can provide real-life experience when incorporating a non-denominational meditation space to that location they visit.

**Q3 - While attending the burial location, do you feel any of the following emotions:**

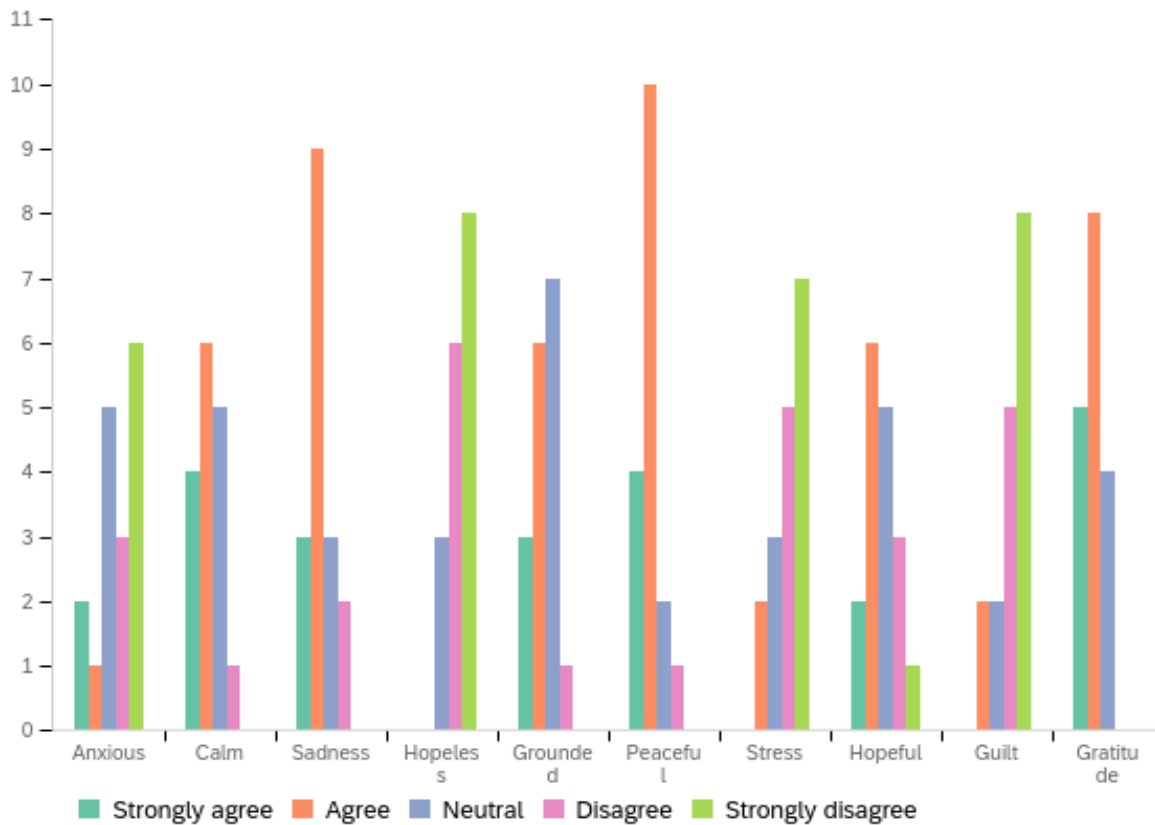


Figure 4.4. Q3 - While attending the burial location, do you feel any of the following emotions?

Table 3. Results from Question 3

#	Question	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total
4	Hopeless	0.00%	0	0.00%	0	17.65%	3	35.29%	6	47.06%	8	17
7	Stress	0.00%	0	11.76%	2	17.65%	3	29.41%	5	41.18%	7	17
9	Guilt	0.00%	0	11.76%	2	11.76%	2	29.41%	5	47.06%	8	17
1	Anxious	11.76%	2	5.88%	1	29.41%	5	17.65%	3	35.29%	6	17
8	Hopeful	11.76%	2	35.29%	6	29.41%	5	17.65%	3	5.88%	1	17
3	Sadness	17.65%	3	52.94%	9	17.65%	3	11.76%	2	0.00%	0	17
2	Calm	25.00%	4	37.50%	6	31.25%	5	6.25%	1	0.00%	0	16
5	Grounded	17.65%	3	35.29%	6	41.18%	7	5.88%	1	0.00%	0	17
6	Peaceful	23.53%	4	58.82%	10	11.76%	2	5.88%	1	0.00%	0	17
10	Gratitude	29.41%	5	47.06%	8	23.53%	4	0.00%	0	0.00%	0	17

Question 3 in the survey was concerning personal emotions while visiting a loved one's burial location—only participants who answered "yes" to the previous question, Figure 4.3, "Q2 - Is there a burial location that you visit for a passed loved one?" were asked Question 3. The participants used a 5-point Likert scale to demonstrate their emotions. In Figure 4.4, "Q3 - While attending the burial location, do you feel any of the following emotions:" was asked. According to the Merriam Webster Dictionary, "emotion" is "a conscious mental reaction (such as anger or fear) subjectively experienced as strong feeling usually directed toward a specific object and typically accompanied by physiological and behavioral changes in the body." There are ten emotions listed for this question, five positive and five negative. According to The Oxford Handbook of Positive Psychology, positive emotions include pleasant or desirable situational responses, ranging from interest and contentment to love and joy. However, they are distinct from pleasurable sensations and undifferentiated positive affect. These emotions are markers of



people's overall well-being or happiness, but they also enhance future growth and success (Snyder & Lopez, 2009). In 2018, there was a study done to investigate the association between stress and negative emotions. Findings from previous studies have shown that psychological stress responses often include negative emotions, such as depressions, anxiety, anger, and distress during real-life stressful events (Du et al., 2018).

Five positive emotions were chosen for participants to rate: hopeful, calm, grounded, peaceful, gratitude. Then five negative emotions were chosen for participants to rate: hopeless, stress, guilt, anxious, sadness. Participants rated each emotion on the following scale: strongly agree, agree, neutral, disagree, strongly disagree.

Referring to Figure 4.4, "Q3 - While attending the burial location, do you feel any of the following emotions:" the emotion that gathered the most votes for "strongly agree" and "agree" were: gratitude, peaceful and sadness. The emotion that gathered the most votes for "strongly disagree" and "disagree" were: hopeless, stress, and guilt.

**Q4 - Describe your visit to the burial location of a loved one. (For example, describe your senses being used. How do you feel after? What do the surroundings look like, and how does that make you feel?)**

1. Arlington Cemetery in Washington, D.C. My parents are buried there. It is literally one of the most beautiful places on earth.
2. A beautiful rural, peaceful setting. I have a sense of missing the person who has died but know they are in heaven. I don't see it as a special place that I need to go to for anything.
3. We visit every year. It is a beautiful, long-established cemetery. It is filled with large trees and beautiful grave monuments. I always feel peaceful when there and find it comforting to spend time there praying and reminiscing. I always leave feeling thankful for having had those loved ones in my life.

4. I feel calm and peaceful, usually in an outdoor cemetery with open spaces.
5. I haven't done it in a while, but sometimes I have feelings of guilt because I get to continue to live, and my loved one does not. Feelings of longing for more time. The surrounding is green and open with a lot of gravestones. It makes me think about how short life really is.
6. Anxious about the future but also a sense of relief
7. I feel neutral after. The surroundings are a general cemetery with headstones all around. I don't feel bad, probably just kind of a sense of loneliness and desolation.
8. Glad to have a place to go and visit loved ones. I have a sense of gratitude. Surrounding is a wooded area providing a sense of serenity.
9. We visit with the extended family, and we make it a fun time. We gather flowers and trim the grass from the gravesites. We place the flowers at several graves. It is sometimes hard to find the correct spots. It is stressful when there is a lot of traffic. We have gone inside at a space that offered coffee and cookies. I don't think there is any meditation space, but it would be a really good idea.
10. Peaceful, appreciative, thankful, respectful, serene
11. A typical visit to a loved one's burial site involves parking the car on the cemetery road and walking to the site. I always feel anxious that I am stepping on dead people as the site is surrounded by other burial sites. At the burial site, I usually take a few deep breathes and say a short prayer as well as a "What's up!?" To my loved one. The surroundings are riddled with fake or real flowers, other headstones, a few trees. All in all, the space is not comforting. After the visit, I am happy that I went but do not feel comforted or peaceful after the experience.
12. Sense of peace knowing I'm with my loved one but also great sadness. It's an overwhelming feeling of calm that rushes over you, followed by sadness that they are not physically there. Talking to a stone instead of a person is a hard concept to wrap your head around.
13. Calm and relaxed, the surroundings are quiet and peaceful.

Question 4 is an open-ended question that allowed participants to voluntarily describe their visit to the burial location of a loved one with their own words. They were encouraged to describe their senses being used, how they felt after, what the surroundings look like, and how the surrounding environment makes them feel. Thirteen participants were willing to provide responses. There is a mixture of positive responses and negative responses, as well as a combination of positive and negative feelings at the same time. A text analysis was performed on the thirteen responses, and it was found that the most used describing words were: peaceful, calm, anxious, comforting, thankful, sadness.

**Q5 - Have you ever practiced any form of meditation?**

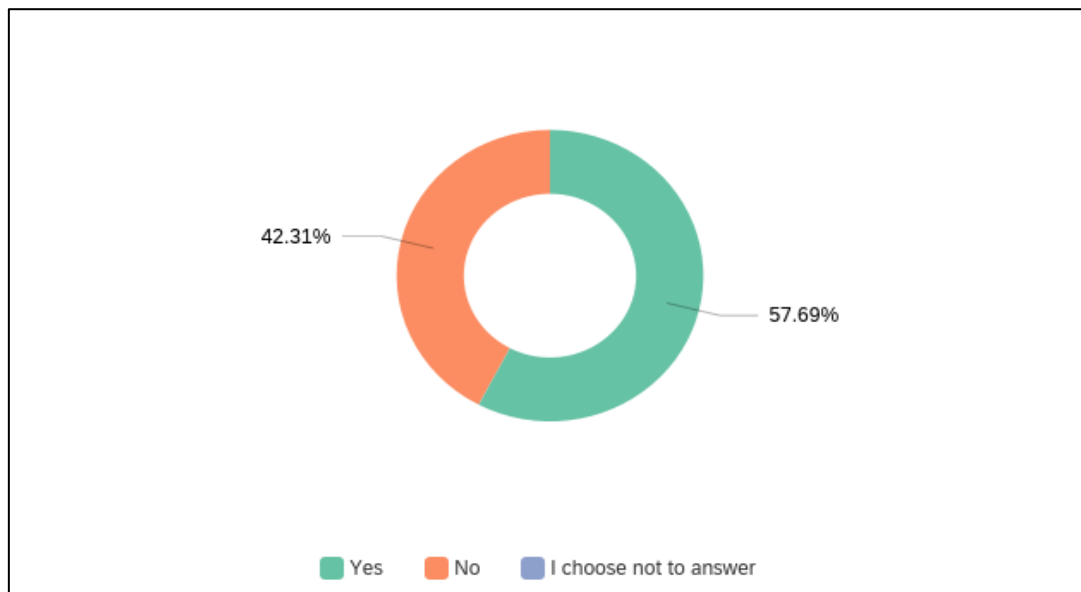


Figure 4.5. Q5- Have you ever practiced any form of meditation?

Table 4. Results from Question 5

#	Answer	%	Count
1	Yes	57.69%	15
2	No	42.31%	11
3	I choose not to answer	0.00%	0
	Total	100%	26

Questions 5 begins the meditation questions for the survey. In Figure 4.5, “Q5 -Have you ever practiced any form of meditation?” is asked. Out of twenty-six participants for this question, fifteen individuals answered “yes”, and eleven individuals answered “no.” If “no” was chosen, participants were prompted to Question 8, which will be discussed later in the chapter. Individuals who said “yes” were prompted to the next survey questions, Question 6. Gathering a group of participants who answered yes was important to this survey because these individuals can provide real-life experience when it comes to meditation.

**Q6 - After meditation, do you experience any of the following emotions:**

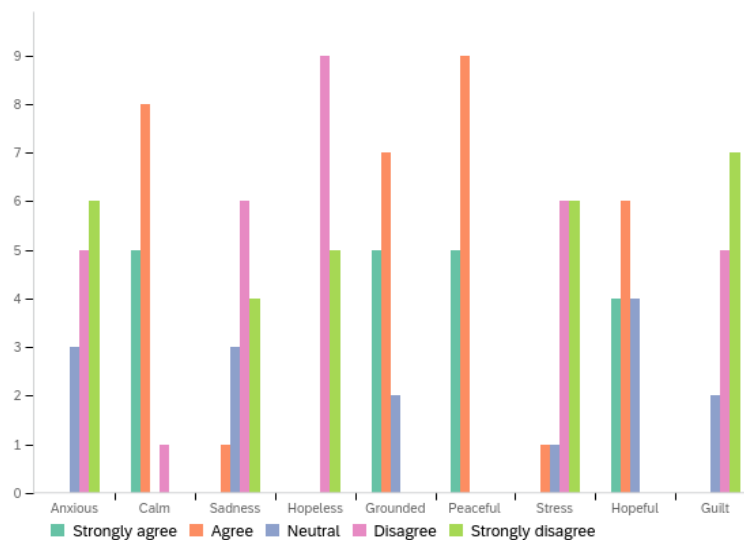


Figure 4.6. Q6 - After meditation, do you experience any of the following emotions:

Table 5. Results from Question 6

#	Question	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total
1	Anxious	0.00%	0	0.00%	0	21.43%	3	35.71%	5	42.86%	6	14
2	Calm	35.71%	5	57.14%	8	0.00%	0	7.14%	1	0.00%	0	14
3	Sadness	0.00%	0	7.14%	1	21.43%	3	42.86%	6	28.57%	4	14
4	Hopeless	0.00%	0	0.00%	0	0.00%	0	64.29%	9	35.71%	5	14
5	Grounded	35.71%	5	50.00%	7	14.29%	2	0.00%	0	0.00%	0	14
6	Peaceful	35.71%	5	64.29%	9	0.00%	0	0.00%	0	0.00%	0	14
7	Stress	0.00%	0	7.14%	1	7.14%	1	42.86%	6	42.86%	6	14
8	Hopeful	28.57%	4	42.86%	6	28.57%	4	0.00%	0	0.00%	0	14
9	Guilt	0.00%	0	0.00%	0	14.29%	2	35.71%	5	50.00%	7	14

Question 6 in the survey was concerning personal emotions experienced after meditating – only participants who answered “yes” to the previous question, Figure 4.5, “Have you ever practiced any form of meditation?” were asked Question 6. The participants used a 5-point Likert scale to demonstrate their emotions. In Figure 4.6, “Q6 - After meditation, do you experience any of the following emotions:” was asked. As previously mentioned in Question 3, there is a mix of positive emotions and negative emotions for participants to rate. Participants rated each emotion on the following scale: strongly agree, agree, neutral, disagree, strongly disagree.

The emotion that gathered the most votes for “strongly agree” and “agree” were: calm, peaceful, grounded. The emotion that gathered the most vote for “strongly disagree” and “agree” were: hopeless, guilt, anxious.

### Q7 - Have you ever dealt with grief through meditation?

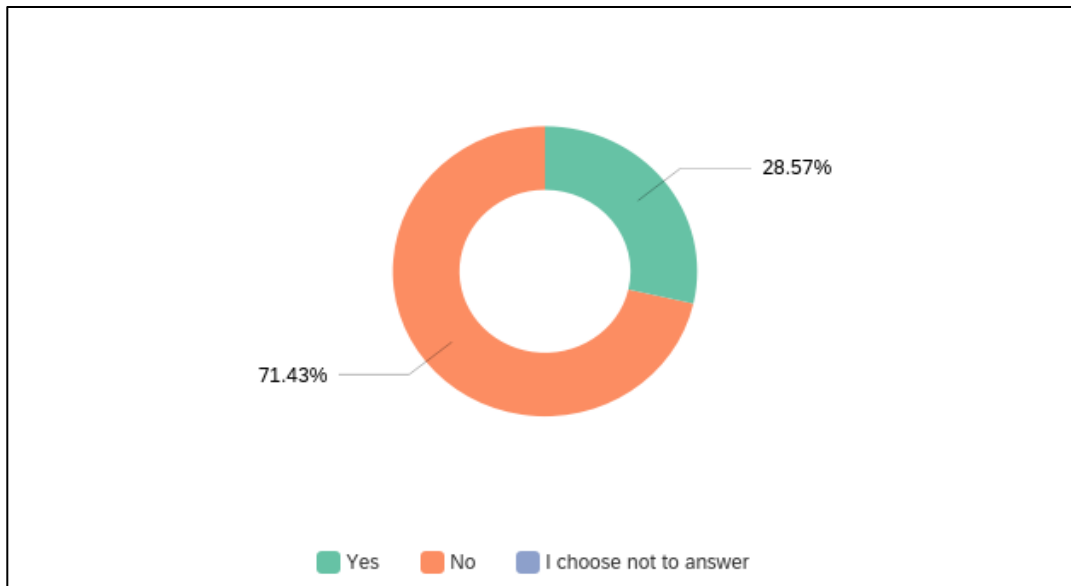


Figure 4.7. Q7 - Have you ever death with grief through meditation?

Table 6. Results from Question 7

#	Answer	%	Count
1	Yes	28.57%	4
2	No	71.43%	10
3	I choose not to answer	0.00%	0
	Total	100%	14

Question 7 identifies if participants ever handled grief through practicing meditation – only participants who answered “yes” to the previous question, Figure 4.5, “Q5 - Have you ever practiced any form of meditation?” were asked Question 7. In Figure 4.7, “Q7 - Have you ever dealt with grief through meditation?” is asked. Out of the fourteen participants for this question, four individuals answered “yes,” and ten individuals answered “no.” Gathering a group of participants who answered yes was important to this survey because they can provide real-life experience to combining meditation and grief.

**Q8 - Would providing an indoor meditation space at a burial location encourage you to visit more often.**

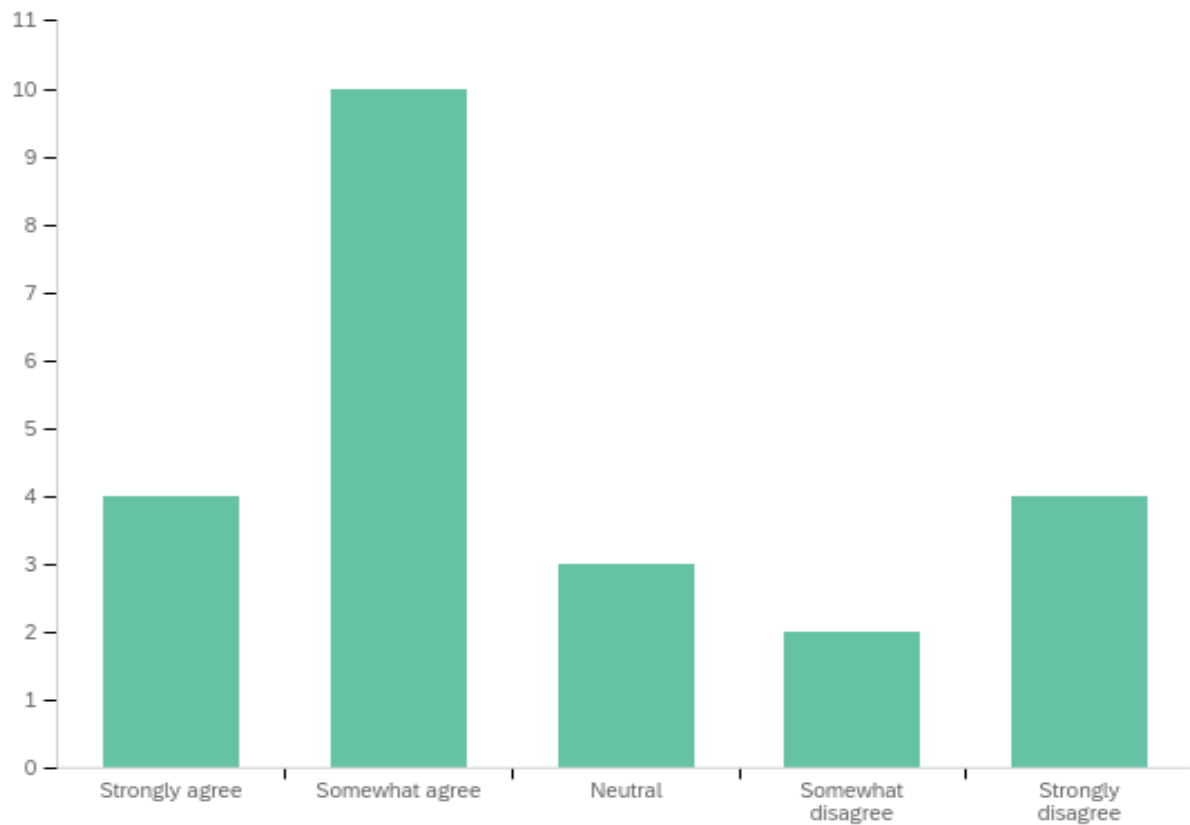


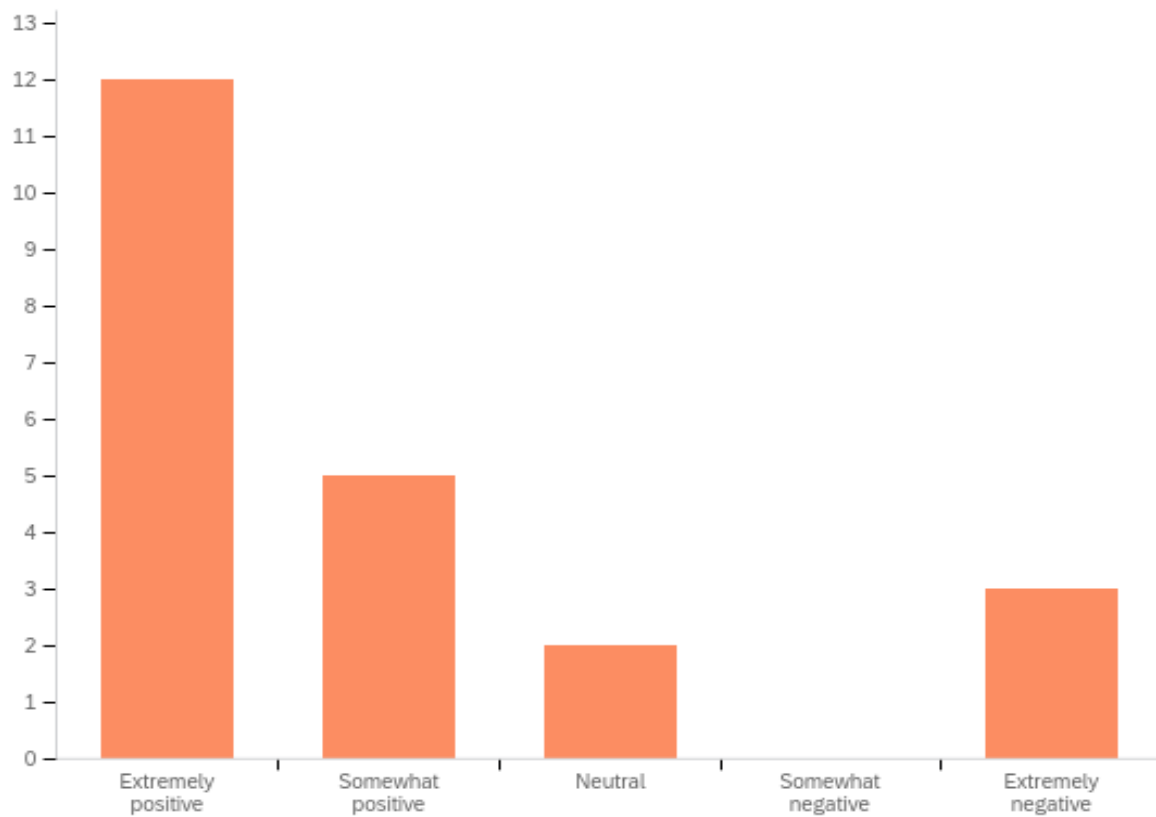
Figure 4.8. Q8 - Would providing an indoor meditation space at a burial location encourage you to visit more often?

Table 7. Results from Question 8

#	Answer	%	Count
1	Strongly agree	17.39%	4
2	Somewhat agree	43.48%	10
3	Neutral	13.04%	3
4	Somewhat disagree	8.70%	2
5	Strongly disagree	17.39%	4
	Total	100%	23

For Question 8, the participants used a 5-point Likert scale to demonstrate their responses. In Figure 4.8, “Q8 - Would providing an indoor meditation space at a burial location encourage you to visit more often?” was asked. Participants provided answers from the following scale: strongly agree, somewhat agree, neutral, somewhat disagree, strongly disagree. “Somewhat agree” gathered the most number of votes, and “somewhat disagree” gathered the least number of votes.

**Q9 - Would adding a meditation space to a burial location be a positive addition?**



*Figure 4.9. Q9 - Would adding a meditation space to a burial location be a positive addition?*



Table 8. Results from Question 9

#	Answer	%	Count
1	Extremely positive	54.55%	12
2	Somewhat positive	22.73%	5
3	Neutral	9.09%	2
4	Somewhat negative	0.00%	0
5	Extremely negative	13.64%	3
	Total	100%	22

For Question 9, the participants used a 5-point Likert scale to demonstrate their responses. In Figure 4.9, “Q9 – Would adding a meditation space to a burial location be a positive addition?” was asked. Participants provided answers from the following scale: extremely positive, somewhat positive, neutral, somewhat negative, extremely negative. “Extremely positive” gathered the most number of votes, and “somewhat negative” gathered the least number of votes.

**Q10 - Would adding a meditation space to a burial location help reduce stress and anxiety?**

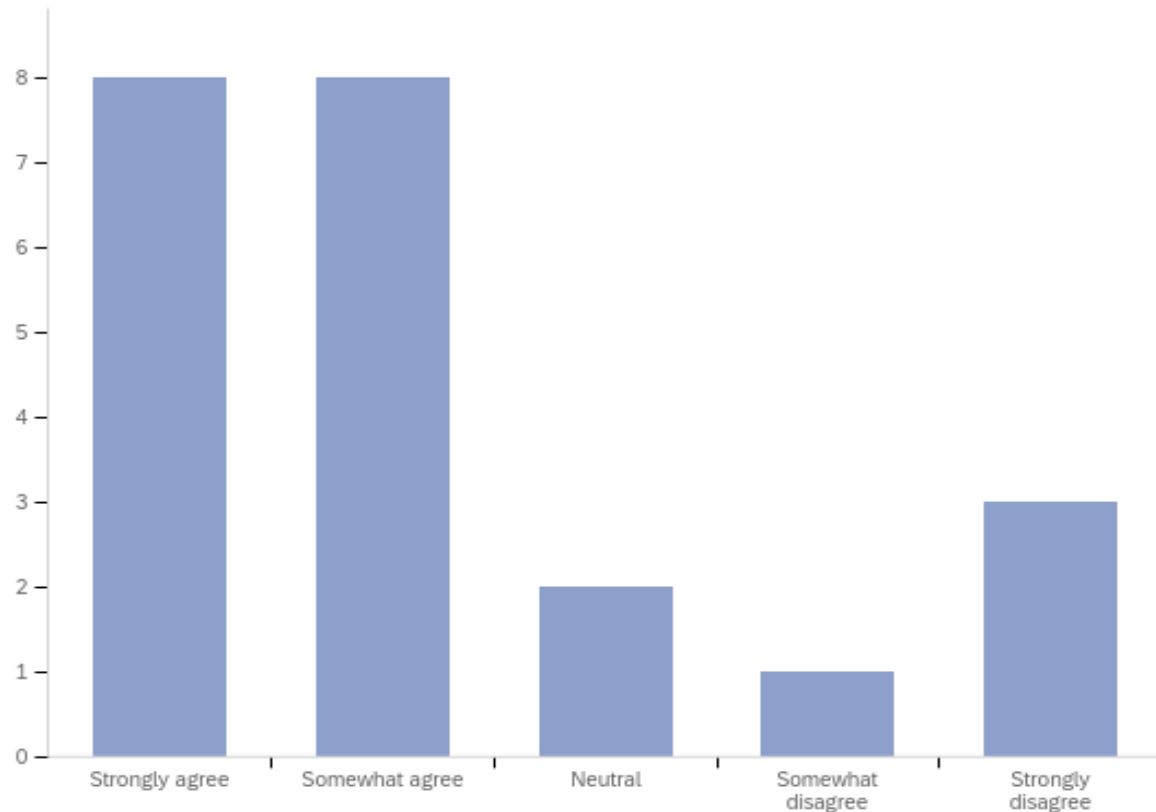


Figure 4.10. Q10 - Would adding a meditation space to a burial location help reduce stress and anxiety?

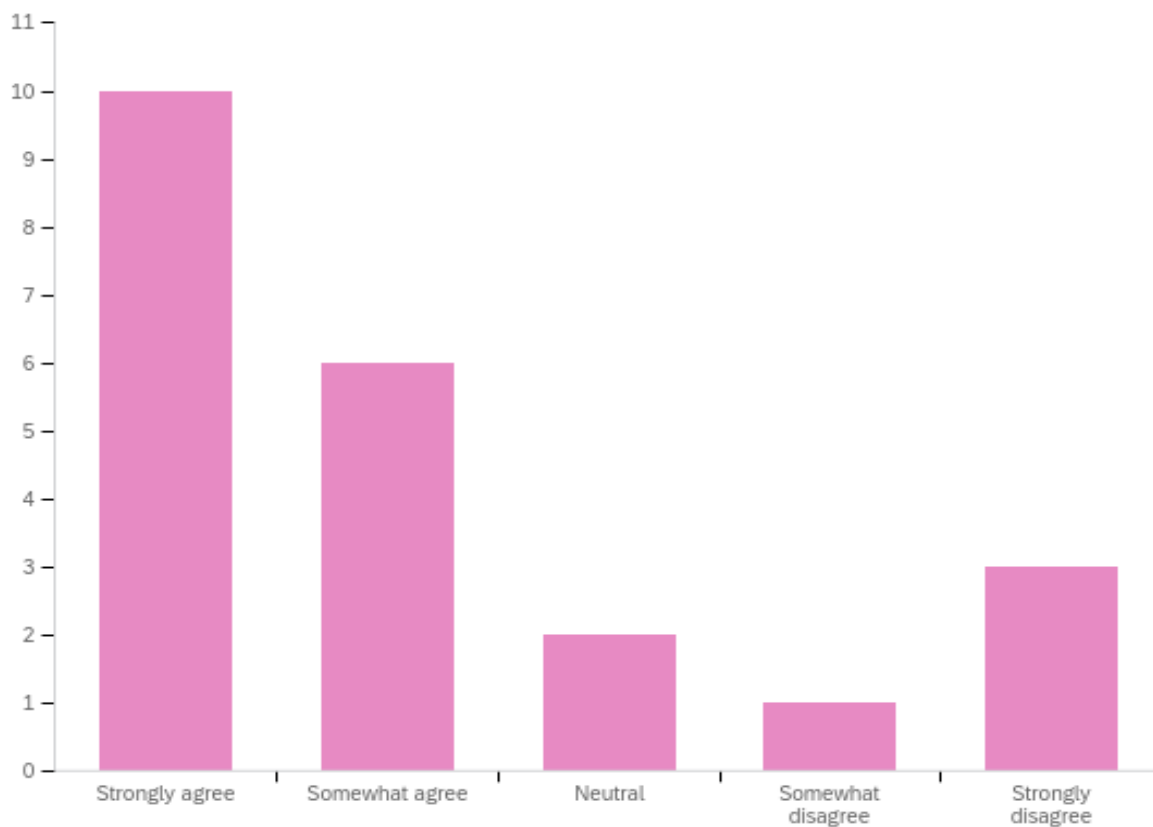
Table 9. Results from Question 10

#	Answer	%	Count
1	Strongly agree	36.36%	8
2	Somewhat agree	36.36%	8
3	Neutral	9.09%	2
4	Somewhat disagree	4.55%	1
5	Strongly disagree	13.64%	3
	Total	100%	22

For Question 10, the participants used a 5-point Likert scale to demonstrate their responses. In Figure 4.10, “Q10 – Would adding a meditation space to a burial location help

reduce stress and anxiety?” was asked. Participants provided answers from the following scale: strongly agree, somewhat agree, neutral, somewhat disagree, strongly disagree. “Strongly agree” and “somewhat agree” gathered the most number of votes, and “somewhat disagree” gathered the least number of votes.

**Q11 - Would providing a meditation space at a burial location help in the grieving process?**



*Figure 4.11. Q11 - Would providing a meditation space at a burial location help in the grieving process?*

Table 10. Results from Question 11

#	Answer	%	Count
1	Strongly agree	45.45%	10
2	Somewhat agree	27.27%	6
3	Neutral	9.09%	2
4	Somewhat disagree	4.55%	1
5	Strongly disagree	13.64%	3
	Total	100%	22

For Question 11, the participants used a 5-point Likert scale to demonstrate their responses. In Figure 4.11, “Q11 – Would providing a meditation space at a burial location help in the grieving process?” was asked. Participants provided answers from the following scale: strongly agree, somewhat agree, neutral, somewhat disagree, strongly disagree. “Strongly agree” gathered the most number of votes, and “somewhat disagree” gathered the least number of votes.

**Q12 - Would you prefer to have a meditation space be at the burial location?**

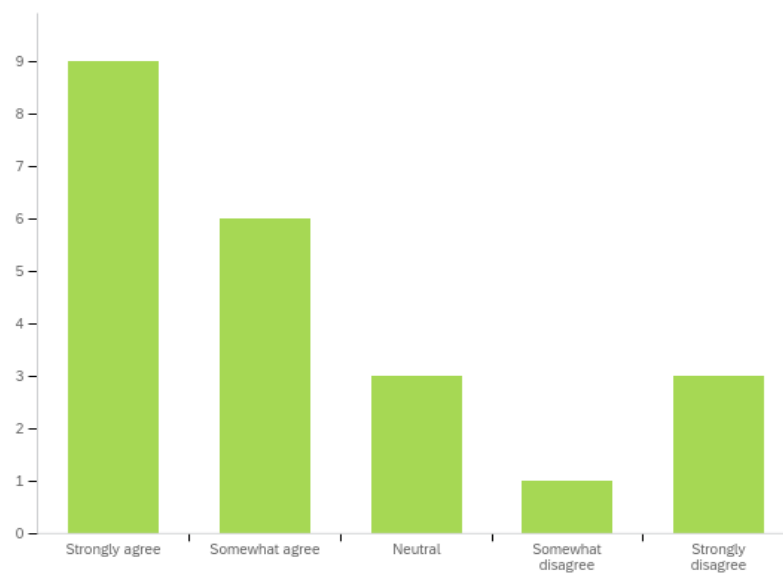


Figure 4.12. Q12 - Would you prefer to have a meditation space at the burial location?

Table 11. Results for Question 12

#	Answer	%	Count
1	Strongly agree	40.91%	9
2	Somewhat agree	27.27%	6
3	Neutral	13.64%	3
4	Somewhat disagree	4.55%	1
5	Strongly disagree	13.64%	3
	Total	100%	22

For Question 12, the participants used a 5-point Likert scale to demonstrate their responses. In Figure 4.12, “Q12 - Would providing an indoor meditation space at a burial location encourage you to visit more often?” was asked. Participants provided answers from the following scale: strongly agree, somewhat agree, neutral, somewhat disagree, strongly disagree. “Strongly agree” gathered the most number of votes, and “somewhat disagree” gathered the least number of votes.

**Q13 - Describe what you would like to have included in a meditation space at a burial location:**

1. Non-denominational space with seating that has back support, and plenty of light. Clean and sanitary. Also with restrooms and water. Quiet.
2. I would have no desire for one but am sure for some people it would be helpful. If I were to meditate, I can do that anywhere and would only want a comfortable place to sit.
3. Water fountain cascading and gently flowing, a simple cross, calming music, plants, and flowers!  
Should be indoor/outdoor capability

4. Water feature
5. Some guided meditation to help people who are distraught meditate. Meditation takes a while to get into, and when emotions are high, it can be tough to calm down enough to meditate.  
Something to help guide would be great.
6. A calm space with candles and good scents!
7. Nothing
8. A nice bench, greenery
9. A place that has NO marble or anything that resembles a cemetery. I would like a place that is private, so I could meditate/pray, knowing no one is watching me. I would like natural beauty around me, like flowers, birds, bubbling/trickling fountains, etc., but nothing that looks like I'm at a cemetery.
10. Just a quiet space with the feeling of being outside. Lots of windows.
11. I think a meditation space is a good idea, but I would not want to be meditating with other people watching me. Maybe there could be a video guiding people through meditation. It would need to be a beautiful tranquil space.
12. Seating
13. Comfortable seating, natural light, very quiet (floor and wall coverings that absorb/minimize sound)
14. Private space, dim lighting
15. Seating, quiet, calming colors, nature
16. A spot to reflect and collect your thoughts and emotions before entering the burial space or seeing the stone of your loved one
17. Good lighting
18. A bench, as well as space that is sunny and shaded, so there are options.

Question 13 is an open-ended question that allowed participants to voluntarily describe what they would like to have included in a meditation space if it located at a burial site. Eighteen participants were willing to respond. A text analysis was performed on the eighteen responses. The most used describing words were: quiet, seating, meditation, good, water, calming, lighting, bench, private, flowers, comfortable. Keywords were taken from each provided response to generate a list of qualities for a meditation space, Figure 4.13, Key Words. Gathering personal opinions from participants is important to this study because it offers information on the design qualities a meditation space might provide when located at a burial site. It shows that having a water element, a quiet and calm space, and proper lighting was mentioned the most frequently.

Clean	Water feature	Quiet
Sanitary	Guided meditation	Guided meditation
Restrooms	Calming space	Calm
Water	Candles	Seating
Quiet	Good scents	Private
Comfortable	Bench	Dim lighting
Water fountains	Greenery	Seating
Flowing water	No marble	Quiet
Simple cross	Private	Calm Colors
Calming music	Nature	Nature
Plants	Flowers	Good lighting
Flowers	Water feature	Bench
Indoor/outdoor	Windows	Shaded

*Figure 4.13. Key words from individual answers from question 13.*

**Q14 - The following questions are open ended and intended to be used for you to provide your own personal opinion on the subject: Does your mortuary currently have a non-denominational meditation space? If yes; please describe the space and how you think it benefits the mortuary burial site. If no; please describe how you think incorporating a non-denominational meditation space on the premises of a mortuary/burial site would be beneficial or not.**

1. No - I hadn't really thought about a meditation space in a mortuary or cemetery. However, after hearing about this concept I really believe it would be very beneficial to many people who have experienced a death of a family or friend. I could see this taking root and growing in our industry.

Question 14 concludes the survey and also refers back to Question 1, "Are you, or were you, a member of a management team for a mortuary?" Two individuals answered "yes," although only one chose to proceed to answer Question 14, "The following questions are open-ended and intended to be used for you to provide your own personal opinion on the subject: Does your mortuary currently have a non-denominational meditation space? If yes, please describe the space and how you think it benefits the mortuary burial site. If no, please describe how you think incorporating a non-denominational meditation space on the premises of a mortuary/burial site would be beneficial or not." The response to Question 14 was, "No - I hadn't really thought about a meditation space in a mortuary or cemetery. However, after hearing about this concept I really believe it would be very beneficial to many people who have experienced a death of a family or friend. I could see this taking root and growing in our industry."

A limitation presented in the research method was the lack of mortuary members who took the survey. Although one participant provided feedback from a professional stance, more mortuary member participants would be needed to provide reliable research numbers. The answer that has been provided can be used as a great reference to touch upon the subject but will not be included in the research results.



### **Summary**

This survey was used in order to address several of the research questions. This research has also provided solutions to the hypothesis of the paper, which is discussed in Chapter 5. This survey's information has been analyzed and applied to the research questions.

## **CHAPTER 5. DISCUSSION**

### **Overview**

This chapter discussed the collected and analyzed data from the survey, and the literature review. The information was related to the initial research questions in order to provide answers. The survey collected two forms of data; qualitative, including participant comments, and quantitative, including ranking, which provided answers for the research questions. To fully address the purpose of the study, this chapter discussed and provided information for future design decisions on incorporating a non-denominational meditation space into a burial location. This research study's results and findings were applied to a custom design for a meditation space located at a burial site.

### **Research Questions**

#### **Research Question 1**

##### **How many people visit a passed loved one at a burial location?**

Conducting a survey helped answer this research question. Survey question 2, Figure 4.3, shows the number of individuals who visit a passed loved one at a burial site. 65% of the answers from the survey question yielded yes.

Overall, the survey results indicated that majority of individuals go to a burial location of a passed loved one. This question was asked because it is important to know if there is still a demographic of people who are still frequenting a burial location. Without any information on

this topic, it would be questioned if adding a physical meditation space to a burial location would be necessary or not.

## **Research Question 2**

### **Would providing an indoor non-denominational meditation space at a mortuary and burial location help with bereavement?**

Grief and bereavement have been researched and studied in correlation to meditation. The psychological and physiological reactions that follow a loved one's loss are collectively known as grief (Lundorff et al., 2017). Research done by David Sagula and Kenneth Rice state that studies have indicated that individuals move significantly more quickly through the initial stages of grief using mindful meditation (Sagula & Rice, 2004). Using this research was able to provide a strong base for answering this research question. Mayo Clinic states that meditation can benefit one's well-being, such as gaining a new perspective on a stressful situation, building skills to manage stress, increasing self-awareness, reducing negative emotions, and managing depression and anxiety (Mayo Clinic, 2014). One of the top experienced emotions when visiting a loved one at a burial site is sadness, as discovered in the survey. Survey results also indicate that only 28% of participants have used meditation to deal with grief.

According to the survey, 72% of individuals agreed that adding a non-denominational meditation space at a burial location would help with grieving. 9% of individuals were neutral on the subject. 18% of individuals said they disagree with adding a non-denominational meditation space, that adding a non-denominational meditation space at a burial location would not help with grieving.

Overall, the survey indicates that providing an indoor non-denominational meditation space to a mortuary and burial location would help individuals dealing with grief and bereavement.

### **Research Question 3**

**Would providing an indoor non-denominational meditation space encourage you to visit more often?**

It has been shown that 47% of individuals related to this study prefer not to go to a burial location of a passed loved one. According to the Quora content analysis, the group that preferred not to visit, saying it was too sad, brought up too many emotions, or they felt like their loved ones were not there but alive in spirit with them. As mentioned in research question 2, practicing meditation can help individuals process the negative emotions associated with the thought of visiting a passed loved one. According to the survey, 72% of participants agreed that adding a meditation space to a burial location would reduce their stress and anxiety. It was also discovered that 61% of participants agreed that providing an indoor meditation space at a burial location would encourage them to visit more often.

Overall, the survey indicates that providing an indoor non-denominational meditation space at a burial location would encourage individuals to visit more often.

### **Research Question 4**

**Would adding an indoor non-denominational meditation space to a burial location be a positive addition?**

The survey results show that 77% of participants said adding an indoor non-denominational meditation space to a burial location would be a very positive addition. Evidence

that meditation can be used as a healing and positive tool to help with grieving and bereavement supports the survey results.

Overall, the survey and open-ended question indicate that adding a non-denominational meditation space to a burial location would be a positive addition.

### **Design Application**

After obtaining the survey results and reviewing the literature, it appears that incorporating a non-denominational mediation space to a mortuary or burial site is beneficial and would encourage people to visit more often. With this information, a conceptual design was made to honor the research and the survey results. The site plan refers to the experimental interior design course mentioned in this research paper's background. The focus was on designing a burial and memorial space, concentrating on sustainable design and responsible environmental and social stewardship as they pertain to the human community's future spiritual and emotional needs while still honoring the dead. A section of the site was dedicated to the construction and design of the conceptual meditation spaces.

There is little research done on the effects of interior design on a meditation space specifically. However, there is research done on interior design and wellness, as reviewed in Chapter 2. These findings, along with survey participants, answer for "Describe what you would like to have in a meditation space at a burial location," can be applied to a meditation space at a burial location. The reviewed literature states that elements of nature, windows, auditory control, visual control, and recognizable artwork scenes are best to be incorporated into a space (Ulrich, 1991). The open-ended survey responses suggest that water elements, quiet, calm, proper lighting, and guided meditation were most important to the meditation space design, Figure 4.13,

Key words from individual answers from Question 13. The following design has been created and conceptualized by the author and aims to include the previously listed qualities. The data supports the following inclusion of design elements. There is an auditory sound system provided in each meditation space to provide a choice of ambient noise or music for the user. There is frosted glass on the door from the foyer to each meditation room to provide privacy for the user. To allow users to have autonomy and a sense of control, there is a control panel provided next to the entrance of the space for the user to have complete control over the temperature, the lighting, and the sound of the space. To add elements of nature, there is a live green wall filled with foliage from top to bottom on one of the walls in the space. There is a monitor in each meditation space for the user to access guided meditation if they choose to do so. A comfortable bench is provided in each room for the user to relax on. Each room is 14 feet in height, so extended pendants are installed to make the space more intimate and provide the desired amount of light. There is an area rug in each room with a provided optional yoga mat for the users to utilize. There is a large mural of a landscape to provide stress-free decor to add more elements of nature and art. Finally, there are small water features to the left and right of the provided console table; this allows the users to hear the sounds of water running and offer relaxation.

The meditation space that has been created is designed in its own building. That space has two floors. Each level has a height of 14 feet. There are 14 private mediation spaces located on the first floor, accompanied by two restrooms. There are 16 private mediation spaces located on the second floor. Each meditation space has a dimension of approximately 13 feet by 16 feet. The following list is provided to show each item's intent placed in the interior elevation of one of the rooms, Figure 5.1, Interior Elevation of Meditation Space. Note: the provided floor plans and elevations are not to scale.

- A. Speakers provide a choice of ambient noise or music for the user.
- B. Frosted glass door panel to provide privacy.
- C. Control panel to allow the user to control the temperature, lighting, and sound.
- D. Live green wall to bring nature and greenery into the space.
- E. Monitor to offer users guided meditation.
- F. Bench to provide seating and comfort to users.
- G. Extended length pendants to make the space more intimate and provide desired light.
- H. An area rug with an optional yoga mat is provided.
- I. Large wall art of a landscape to provide stress-free décor.
- J. A small water feature to provide users with the tranquil sounds of water.

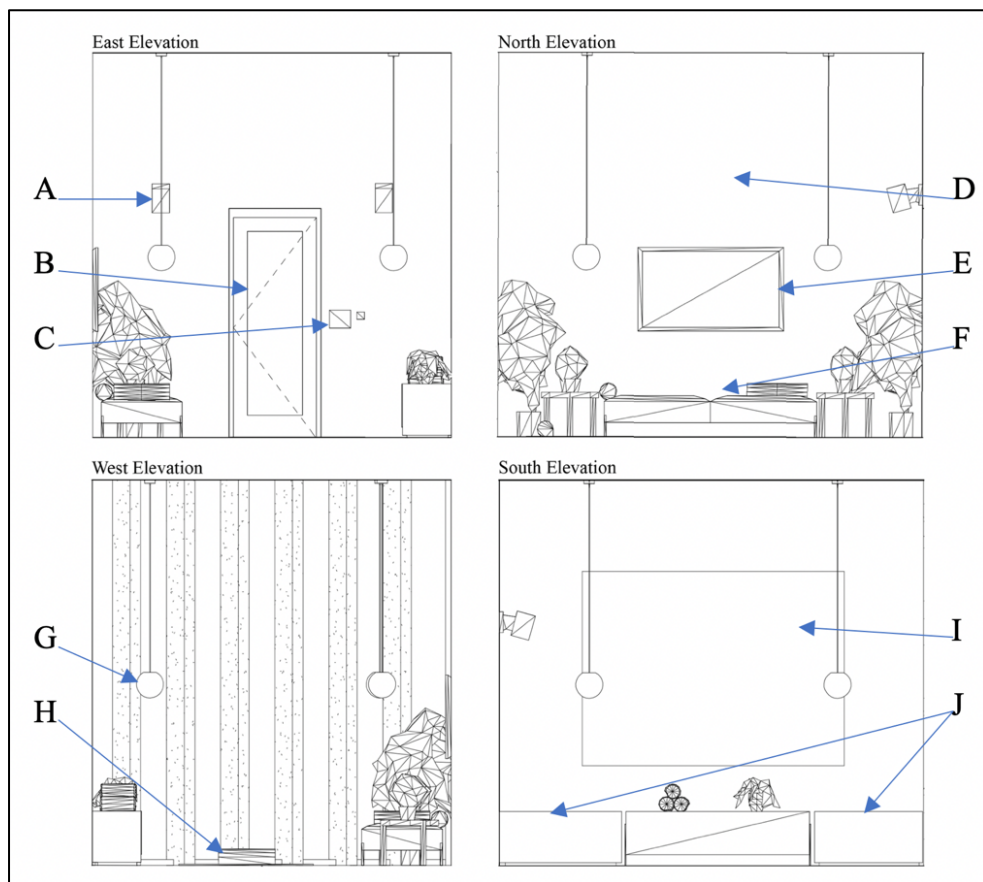


Figure 5.0.1. Interior elevations of meditation space.

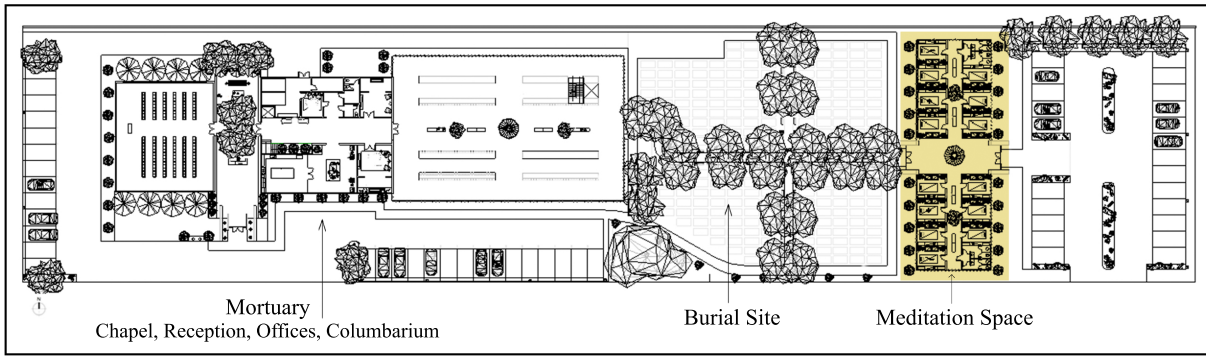


Figure 5.2. Mortuary site plan.

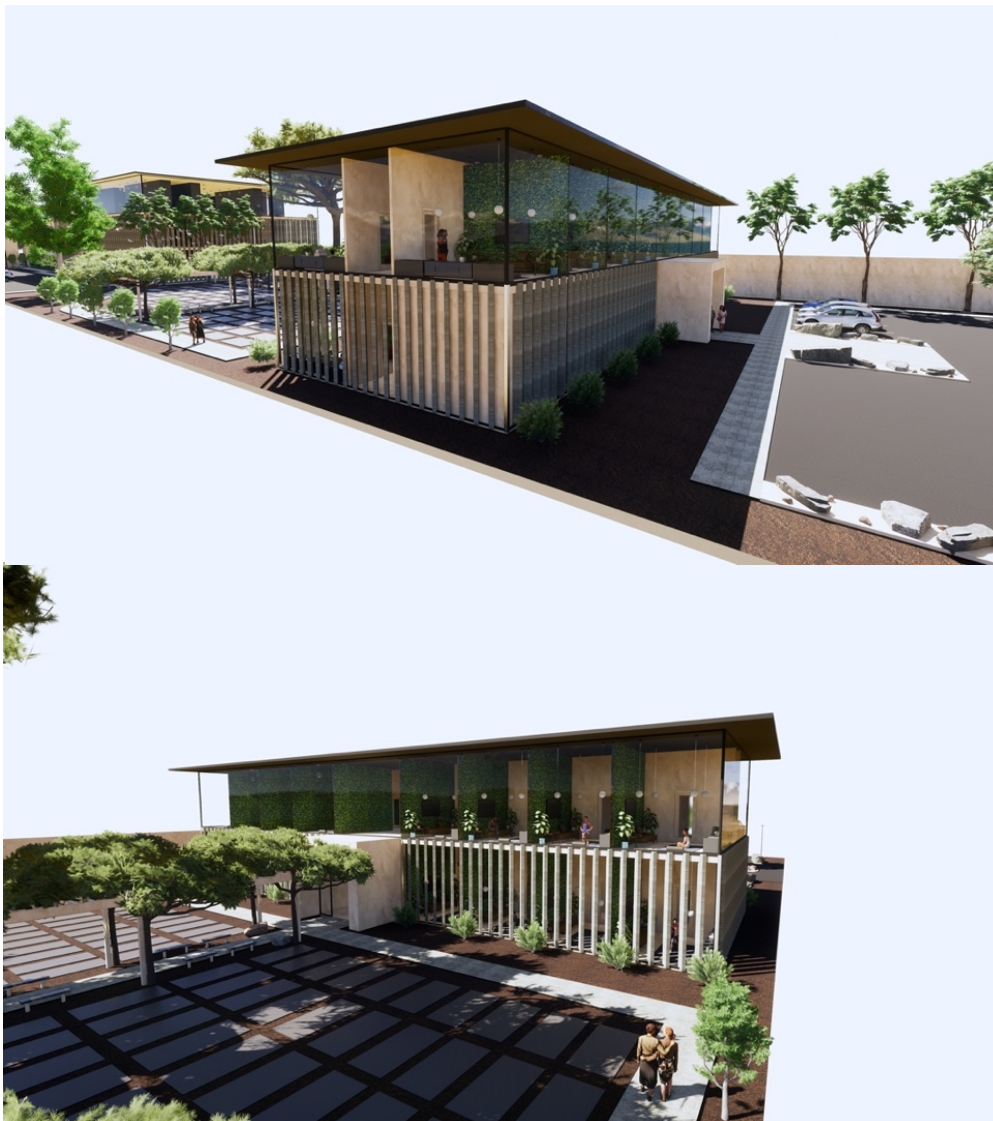


Figure 5.3. Mortuary site perspective.



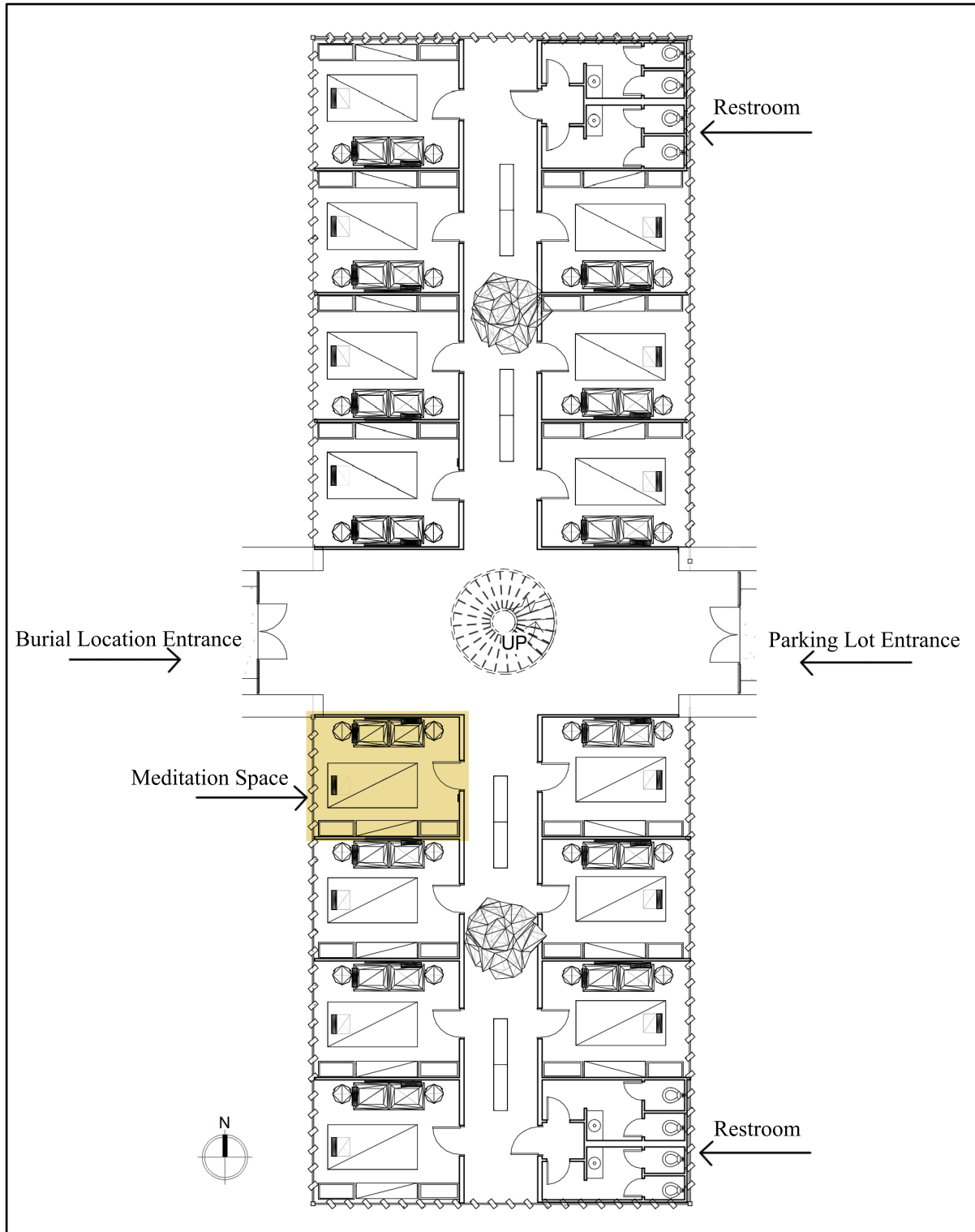


Figure 5.4. Meditation space floor plan, level 1.

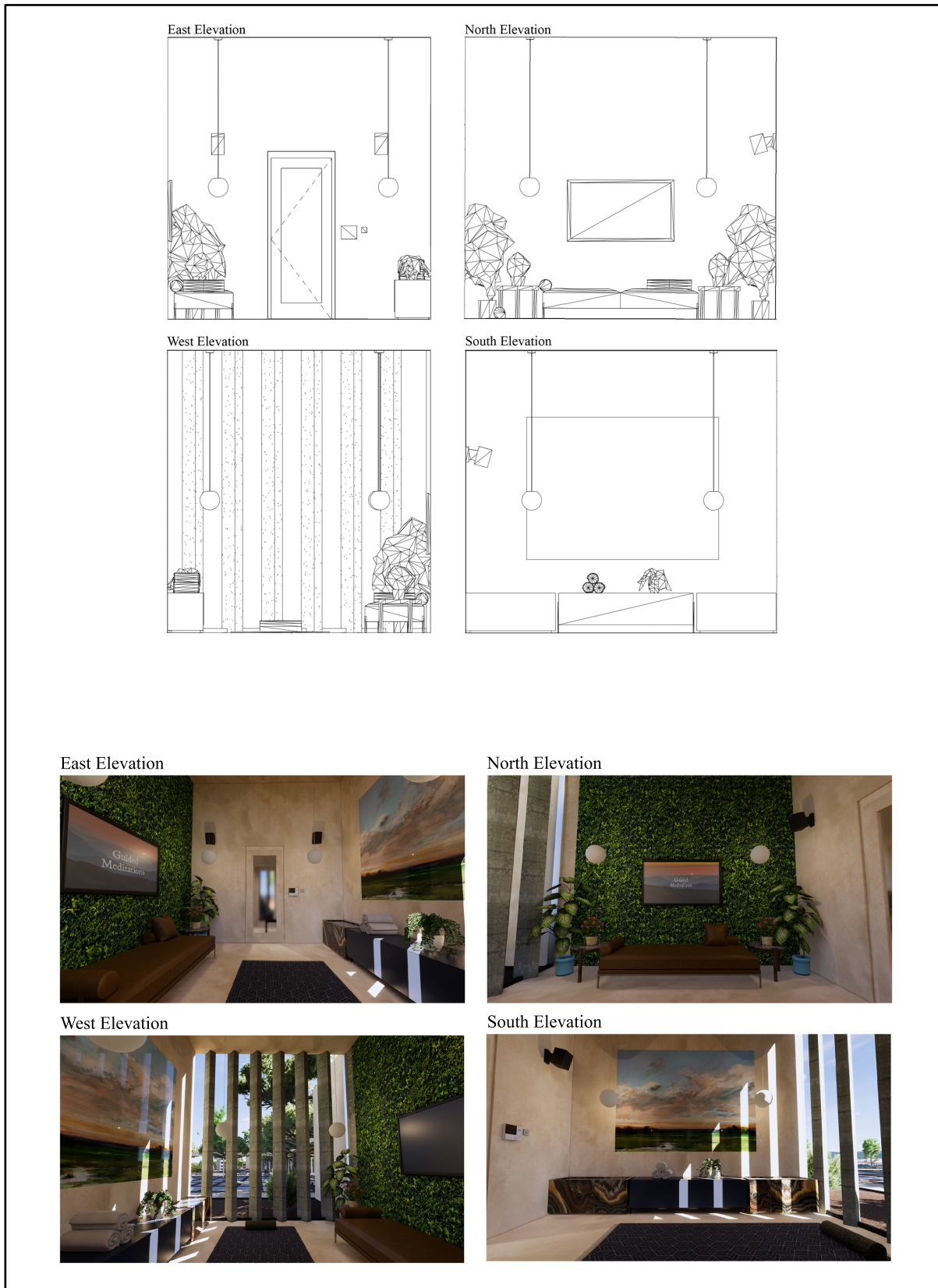


Figure 5.5. Interior elevation renderings.



*Figure 5.6. Meditation space rendering.*

## Conclusion

The purpose of this study was to explore the author's hypothesis that adding a non-denominational meditation space to a mortuary and burial location would encourage individuals to visit more often and help individuals cope with negative emotions associated with death and bereavement. Adding a meditation space would be a positive enhancement to a mortuary and burial location.

A thorough literature review was conducted to investigate the correlation between meditation, emotions, and death, which was used to make educated questions. A comprehensive survey provided first-hand anecdotal information on personal opinions and views regarding meditation, emotions, and death. All of the information gathered was analyzed, and correlations were discovered that could benefit the future of design.

After analyzing the literature review and the research methods used for this study, it is shown that adding a non-denominational meditation space to a mortuary and burial location would encourage individuals to visit more often. It would be beneficial to help individuals cope with negative emotions associated with death and bereavement. It has been proven that adding a meditation space would be a positive enhancement to a mortuary or burial location.

### **Limitations and Directions for Future Research**

The main limitation of this paper was the lack of mortuary members who took the survey. Although one participant provided feedback from a professional stance, more mortuary member participants would be needed to provide reliable research numbers. Allowing the survey link to be active for longer than two weeks could help with this issue. For future research, this study has explored and researched the philosophical aspect of integrating a meditation space on the premises of a mortuary and burial location. Future research will be needed to investigate the concept in a more pragmatic aspect. The following is a list of possible future research topics drawn from the results of this paper:

- Should the meditation spaces be gender-specific?
- Should the meditation spaces be denominational?
- Most mortuaries have a chapel; would the addition of a meditation space make a chapel obsolete?
- Is there a way to adapt the existing space to provide meditation spaces?
- What would the best dimensions of the meditation space be?
- How many meditation spaces would be best to have at the mortuary site?

Additional survey and interview research could be conducted to obtain pragmatic evidence on meditation space in a mortuary or burial location.

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## APPENDIX A. SURVEY/QUESTIONNAIRE

# Meditation/Burial Location Research Survey

Hi,

My name is Allison Brown. I am a graduate student at Iowa State University. I am surveying the impact a meditation space might have when incorporated into a burial location (i.e., cemetery/mortuary).

This survey aims to gain information regarding personal feelings and emotions associated with burial locations and meditation spaces, followed up with questions about combining the two subjects.

Consent Process: Your participation in this research study is voluntary. You may choose not to participate. If you decided to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. Your participation will remain completely anonymous.

Thank you!

-----

1 Are you, or were you, a member of a management team for a mortuary?

☐ No (1)

☐ Yes (2)

*Skip To: 14 If Are you, or were you, a member of a management team for a mortuary? = Yes*

-----

2 Is there a burial location that you visit for a passed love one?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I choose not to answer (3)

*Skip To: 5 If Is there a burial location that you visit for a passed love one? = No*

*Display This Question:*

*If Is there a burial location that you visit for a passed love one? = Yes*

3 While attending the burial location, do you feel any of the following emotions:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
Anxious (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calm (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sadness (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hopeless (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grounded (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Peaceful (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hopeful (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guilt (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gratitude (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4 Describe your visit to the burial location of a loved one. (For example, describe your senses being used. How do you feel after? What do the surroundings look like, and how does that make you feel?)

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5 Have you ever practiced any form of meditation?

☐ Yes (1)

☐ No (2)

☐ I choose not to answer (3)

*Skip To: 8 If Have you ever practiced any form of meditation? = No*

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6 After meditation, do you experience any of the following emotions:

	Strongly agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly disagree (5)
Anxious (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calm (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sadness (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hopeless (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grounded (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Peaceful (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hopeful (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guilt (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7 Have you ever dealt with grief through meditation?

- ☐ Yes (1)
- ☐ No (2)
- ☐ I choose not to answer (3)

8 Would providing an indoor meditation space at a burial location encourage you to visit more often.

- ☐ Strongly agree (1)
  - ☐ Somewhat agree (2)
  - ☐ Neutral (3)
  - ☐ Somewhat disagree (4)
  - ☐ Strongly disagree (5)
- 

9 Would adding a meditation space to a burial location be a positive addition?

- ☐ Extremely positive (1)
  - ☐ Somewhat positive (2)
  - ☐ Neutral (3)
  - ☐ Somewhat negative (4)
  - ☐ Extremely negative (5)
- 

10 Would adding a meditation space to a burial location help reduce stress and anxiety?

- ☐ Strongly agree (1)
  - ☐ Somewhat agree (2)
  - ☐ Neutral (3)
  - ☐ Somewhat disagree (4)
  - ☐ Strongly disagree (5)
-

11 Would providing a meditation space at a burial location help in the grieving process?

- ☐ Strongly agree (1)
- ☐ Somewhat agree (2)
- ☐ Neutral (3)
- ☐ Somewhat disagree (4)
- ☐ Strongly disagree (5)

12 Would you prefer to have a meditation space be at the burial location?

- ☐ Strongly agree (1)
- ☐ Somewhat agree (2)
- ☐ Neutral (3)
- ☐ Somewhat disagree (4)
- ☐ Strongly disagree (5)

13 Describe what you would like to have included in a meditation space at a burial location:

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*Skip To: End: If Condition: Describe what you would lik... Is Displayed. Skip To: Thank you for completing this survey!....*

14

The following questions are open ended and intended to be used for you to provide your own personal opinion on the subject:

**Does your mortuary currently have a non-denominational meditation space?**

If yes; please describe the space and how you think it benefits the mortuary burial site.

If no; please describe how you think incorporating a non-denominational meditation space on the premises of a mortuary/burial site would be beneficial or not.

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End: Thank you for completing this survey!

## APPENDIX B. IRB EXEMPTION



Institutional Review Board  
Office of Research Ethics  
Vice President for Research  
2420 Lincoln Way, Suite 202  
Ames, Iowa 50014  
515 294-4566

**Date:** 10/21/2020

**To:** Allison Brown Lee Cagley

**From:** Office of Research Ethics

**Title:** Funeral homes: bringing meditation inside.

**IRB ID:** 20-330

**Submission Type:** Initial Submission **Exemption Date:** 10/21/2020

---

The project referenced above has been declared exempt from most requirements of the human subject protections regulations as described in 45 CFR 46.104 or 21 CFR 56.104 because it meets the following federal requirements for exemption:

2018 - 2 (i): Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) when the information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

The determination of exemption means that:

- **You do not need to submit an application for continuing review. Instead, you will receive a request for a brief status update every three years. The status update is intended to verify that the study is still ongoing.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any *modifications to the research procedures* (e.g., method of data collection, nature or scope of information to be collected, nature or duration of behavioral interventions, use of deception, etc.), any change in *privacy or confidentiality protections*, modifications that result in the *inclusion of participants from vulnerable populations*, removing plans for informing participants about the study, any *change that may increase the risk or discomfort to participants*, and/or any change such that the revised procedures do not fall into one or more of the [regulatory exemption categories](#). The purpose of review is to determine if the project still meets the federal criteria for exemption.
- All **changes to key personnel** must receive prior approval.
- **Promptly inform the IRB of any addition of or change in federal funding for this study.** Approval of the protocol referenced above applies only to funding sources that are specifically identified in the corresponding IRB application.