

Streets of comfort: Design of urban streets and parks for users impacted by severe stress and traumatic stress in Cairo, Egypt

by

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Abstract

Post-traumatic Stress Disorder (PTSD) and traumatic stress has become a serious issue affecting millions of people worldwide. Due to the growing number of trauma victims from war, abuse, assault, illness, natural disasters, and terrorism, the population of people suffering from traumatic stress is a significant part of society (Kessler et al., 2017). Most of these people walk the same streets and public spaces as those unaffected by trauma but experience them with a completely different state of mind that is much more reactive and vulnerable. This research project addresses how the principles of therapeutic landscape design may be applied to a busy public space in urban Cairo, Egypt to provide relief for victims of trauma and traumatic stress in the area. Design strategies were informed by the study of literature on existing outdoor therapeutic spaces, literature on the mental and emotional impacts of nature, and from input from experts in therapeutic landscape design, political conflict, and trauma therapy and treatment.

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Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt

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Terms and Definitions:

Trauma: a psychological, emotional response to an event or an experience that is deeply distressing or disturbing (APA DSM-5 Task Force, 2013)

Traumatic Stressor (Event): Any event (or events) that may cause or threaten death, serious injury, or sexual violence to an individual, a close family member, or a close friend. Traumatic events include sexual abuse, physical abuse, domestic violence, community and school violence, medical trauma, motor vehicle accidents, acts of terrorism, war experiences, natural and human-made disasters, suicides, and other traumatic losses (APA DSM-5 Task Force, 2013).

Psychological Distress: range of symptoms and experiences of a person's internal life that are commonly held to be troubling, confusing, or out of the ordinary (APA DSM-5 Task Force, 2013).

Stress: The pattern of specific and nonspecific responses a person makes to stimulus events that disturb his or her equilibrium and tax or exceed his or her ability to cope (APA DSM-5 Task Force, 2013).

Severe Stress: term used in this article to refer to longer term exposure to stressing events such as poverty, abuse, extreme pollution and harsh living conditions, government corruption, police brutality, and extreme traffic levels

Stressor: Any emotional, physical, social, economic, or other factor that disrupts the normal physiological, cognitive, emotional, or behavioral balance of an individual (APA DSM-5 Task Force, 2013).

Mental Illness (Disorder): Mental illnesses are health conditions involving changes in emotion, thinking or behavior (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities.

Trauma and Stressor-related Disorders: Trauma- and stressor-related disorders include disorders in which exposure to a traumatic or stressful event is listed explicitly as a diagnostic criterion (APA DSM-5 Task Force, 2013).

Posttraumatic Stress Disorder (PTSD): a psychiatric disorder that can occur in people who have experienced or witnessed a traumatic event such as a natural disaster, a serious accident, a terrorist act, war/combat, rape or other violent personal assault (APA, 2018).

Childhood Trauma: when a traumatic event is experienced by a child or adolescent ages 0-18 (APA, 2018).

Chronic Traumatic Stress (Complex PTSD): salient symptoms and problems of individuals who are exposed to prolonged and repeated trauma such as childhood sexual abuse, domestic violence, and political violence which create disturbances that contribute to distressed lives and disability (Cloitre et al., 2012)

Continuous Traumatic Stress (CTS): refers to ongoing traumatic experiences in contexts of structural violence, including repressive state violence or pervasive community violence (Matthies-Boon, 2017).

Historical Trauma: a construct to describe the impact of colonization, cultural suppression, and historical oppression of Indigenous peoples in North America; e.g. Native Americans in the United States, aboriginal peoples in Canada (Kirmayer et al., 2014). In this case, historical trauma refers to the impact of past traumatic events still affecting Egyptian society.

Mass Social Trauma: an elevated state of trauma due to the absence of sustainable coping mechanisms in a setting where continuous traumatic stress occurs (Matthies-Boon, 2017).

Startle Response: An involuntary (reflexive) reaction to a sudden unexpected stimulus, such as a loud noise or sharp movement (APA DSM-5 Task Force, 2013).

Arousal: physiological and psychological state of being awake or reactive to stimuli (APA DSM-5 Task Force, 2013).

Hyperacusis: increased auditory perception (DSM-5, 2013).

Flashback: dissociative state during which aspects of a traumatic event are reexperienced as though they were occurring at that moment (APA DSM-5 Task Force, 2013).

Hypervigilance: enhanced state of sensory sensitivity accompanied by an exaggerated intensity of behaviors whose purpose is to detect threats; accompanied by a state of increased anxiety which can cause exhaustion; other symptoms include abnormally increased arousal, a high responsiveness to stimuli, and a continual scanning of the environment for threats; perpetual scanning of the environment to search for sights, sounds, people, behaviors, smells, or anything else that is reminiscent of threat or trauma (APA DSM-5 Task Force, 2013).

Dissociation: splitting off of clusters of mental contents from conscious awareness.; separation of an idea from its emotional significance and affect, as seen in the inappropriate affect in schizophrenia; may allow the individual to maintain allegiance to two contradictory truths while remaining unconscious of the contradiction (DSM-5, 2013).

Depersonalization: experience of feeling detached from, and as if one is an outside observer of, one's mental processes/body/actions (APA DSM-5 Task Force, 2013).

Cairean: a person who resides in Cairo, Egypt

Egyptian Revolution (18 days): eighteen days of protests and civil unrest in Egypt in January and February of 2011, mainly focusing in the cities of Cairo, Alexandria, and Suez that resulted in former President Hosni Mubarak relinquishing power to the Supreme Council of the Armed Forces

Abstract

Post-traumatic Stress Disorder (PTSD) and traumatic stress has become a serious issue affecting millions of people worldwide. Due to the growing number of trauma victims from war, abuse, assault, illness, natural disasters, and terrorism, the population of people suffering from traumatic stress is a significant part of society (Kessler et al., 2017). Most of these people walk the same streets and public spaces as those unaffected by trauma but experience them with a completely different state of mind that is much more reactive and vulnerable. This research project addresses how the principles of therapeutic landscape design may be applied to a busy public space in urban Cairo, Egypt to provide relief for victims of trauma and traumatic stress in the area. Design strategies were informed by the study of literature on existing outdoor therapeutic spaces, literature on the mental and emotional impacts of nature, and from input from experts in therapeutic landscape design, political conflict, and trauma therapy and treatment.



1

Introduction

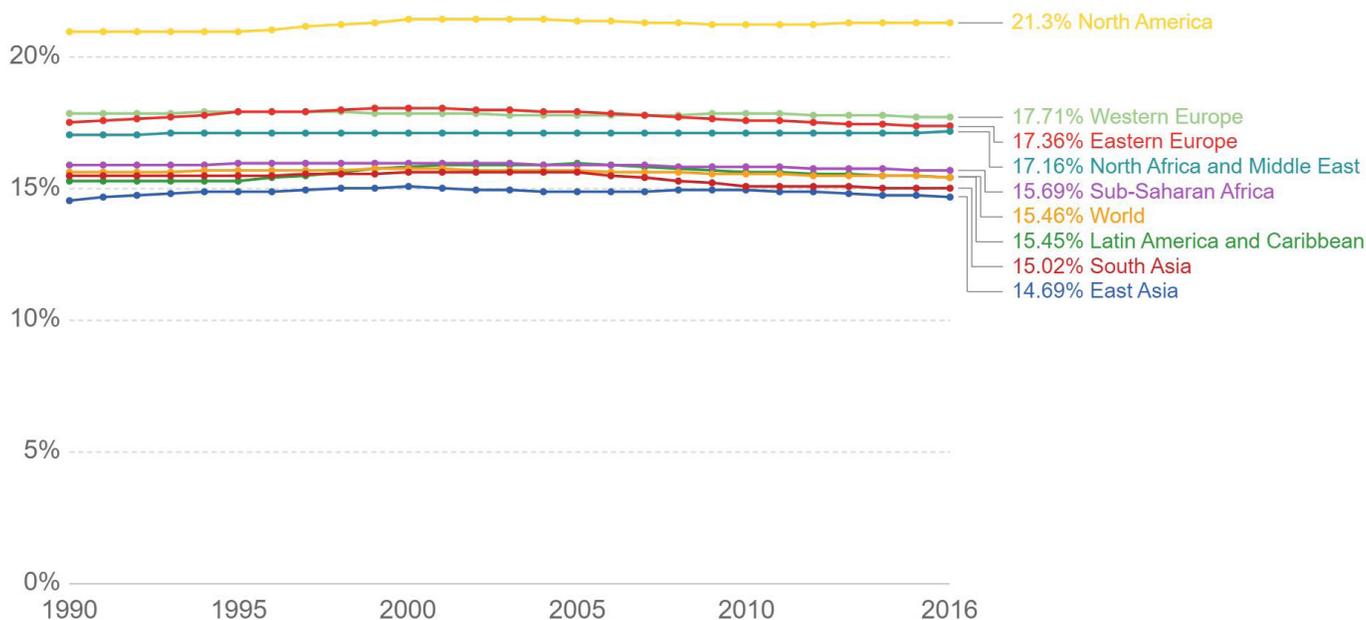
1.1 *Project Background and Relevance*

There is a growing presence of Post-traumatic Stress Disorder (PTSD) in the stimulating, fast-paced, and violent societies we live in. Since the 2011 revolution, psychiatrists in Egypt report seeing increased instances of trauma, depression, anxiety and PTSD (Dean, 2015). The last well-documented study of the prevalence of mental illness in Egypt was in 2009 with 16.93% of the studied population showing mental illness and 4.75% showing symptoms of anxiety disorders (M. Ghanem, et al., 2009). Since this publication, Egypt and the Middle East have experienced significant traumatic and violent events with political and social unrest from the 2010-2011 Arab Spring and many other conflicts between civilian and police or government military personnel. Yet, Egypt's Ministry of Health reports the current rate of mental illness to be at only 7%, showing a disparity between data pre and post revolution. Regardless, recent findings suggest PTSD and other trauma-related mental health issues resulting from widespread conflict are, and will be, a public health crisis in the Arab world (Suto, 2016). There is also a lack of affordable mental health services available in Egypt and a social stigma against anyone who may seek help (Dean, 2015 and Matthies-Boon, 2017). Therefore, this research will address the challenge of how the design of public space, particularly streetscapes or small parks, can provide comfort and refuge for individuals impacted by trauma and traumatic stress. It is said "trauma survivors frequently talk of living in a different world" (Matthies-Boon, 2017).

Citizens of Cairo, Egypt, especially political activists, have been subjected to violence and trauma on an intense basis and the psychological impacts of a traumatic event can cause extreme reactions and mental stress. Currently the design of public space, especially urban streetscapes or even Al Azhar Park in Cairo, do not offer much relief to those affected by trauma. They have a high volume of people and activity and can be loud and stimulating. However, it may be possible that small interventions such as greenspace utilizing the design principles of evidence-based, therapeutic landscape design may be able to help relieve some of this problem. There is significant research behind the healing effects of nature and outdoor spaces designed to be restorative or healing and the positive impacts these spaces have had on hospital patients and victims of trauma. However, these "healing spaces" are most often site-specific and on a private or institutional garden scale. The goal of this research project would be to take the design principles used to create therapeutic landscapes and apply them to everyday public spaces such as streets, trails, or small urban parks. Creating a comfortable environment is important because the public realm is experienced by everyone and has traditionally not been designed with concern for those with mental illness. This research project would be on a considerably larger scale than the usual "healing landscape" but with the large number of traumatized citizens, refugees, and even tourists in the Arab world using public space every day, I feel that taking a second look at how it is designed is worth considering.

Share of population with mental health and substance use disorders

Share of population with any mental health or substance use disorder; this includes depression, anxiety, bipolar, eating disorders, alcohol or drug use disorders, and schizophrenia. Due to the widespread under-diagnosis, these estimates use a combination of sources, including medical and national records, epidemiological data, survey data, and meta-regression models.



Source: IHME, Global Burden of Disease

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Figure 1.1: North Africa (blue-green) reports a 17.16% share of their population with a mental health or substance use disorder.

“psychiatrists in Egypt report seeing increased instances of trauma, depression, anxiety and PTSD” (Dean, 2014)

1.2 *Project Goals and Objectives*

Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt is intended to create an end product that contributes to the knowledge of therapeutic landscape design on improving the public space experience for those impacted by traumatic stress and severe stress, specifically in Cairo, Egypt and other similar regional, socio-economic, and political settings. The project was carried out in order to collect as much information on evidence-based, therapeutic landscape design and the symptoms and everyday challenges of people who have been affected by a traumatic or highly stressful event or series of events, so that this information, synthesized into a series of design guidelines, may help guide and shape the design and re-design of public outdoor spaces. It is my hope that the guidelines created as a result of this project effort will allow for the creation of public spaces, such as parks, streetscapes, plazas, and squares, that are more comfortable and welcoming to visitors affected by traumatic stress and severe stress than traditionally designed public spaces. It is also the intention of this project that the design guidelines for public outdoor therapeutic spaces may be published separately in an academic journal and to the American Society of Landscape Architects.

1.3 *Design Goals and Objectives*

The main design goal for the Projective Design section of this project is to integrate existing evidenced-based landscape design strategies with new design strategies synthesized from interviews of mental health and political conflict professionals. The design process utilized a patient-centered design process that included a series of design review sessions with reviewers with direct experience in Egypt and the region's public realm. The design strategies and information gathered from site inventory and analysis were interwoven with the manipulation of traditional landscape elements such as plants, water, lighting, paving, etc. to create a design that is welcoming and pleasing to all visitors of all ages and abilities.



1.4 *Site Location and Context*

Cairo, Egypt was selected based on the continuing presence of violence and terror due to political unrest in the country and region as well as other sources of trauma and stress such as poverty, pollution, traffic, lack of healthcare, abuse, domestic violence, etc. The specific site is a 0.75 kilometer stretch of the Nile Riverfront near the Maadi district of Cairo. The site was selected due to its location in an active area in Cairo near a busy military hospital and the Constitutional Courthouse. The site's context provided a unique opportunity to provide a therapeutic greenspace that could be utilized to bring people together from the courthouse, hospital, and nearby residential developments. The site is along the Nile River so the greenspace can optimize the river as a therapeutic resource and open the river banks back up to the public. There is also little additional designed greenspace such as public parks available to the people in this area.



Figure 1.3 Map showing selected site location for this project and context.



Figure 1.4 Map showing Maadi District of Cairo



Figure 1.5 Map showing relation of Tahrir Square to the project site in Cairo and context.

2

**The Social and Political
Design Challenge of
Cairo, Egypt**

2.1 *Egyptian Revolution (2011) and Historical Trauma in Cairo*

Inspired by a successful revolution in Tunisia, on January 25, 2011 citizens took to the streets of Cairo, Egypt, congregating in Tahrir Square, a central roundabout square in downtown Cairo, to protest poverty, government corruption, and other challenges faced by the Egyptian people and to call for President Hosni Mubarak, who ruled the country for thirty years, to step down. Eighteen days of protests and civil unrest resulted in President Mubarak stepping down and handing power over to the Egyptian military forces. Additional protesting only weeks after the eighteen-day revolution resulted in the Egyptian military using brutal force against protesters, leaving hundreds of people dead and wounded from violence and torture. The new military regime continued their efforts to stem continuing protests when on October 9, 2011 twenty-seven protesters were killed by gunfire and by being crushed by armored vehicles, resulting at least eight hundred deaths and over six thousand injured since the beginning of the unrest on late January Mungin, 2011 and Childress, 2013).



Figure 2.1: Historical timeline of key events in the Egyptian Revolution (Image by author).

2.2 *Current Conditions and Challenges to Mental Health in Cairo*

Citizens of Egypt, especially citizens in Cairo near the public areas where political activism is most present, experienced violence and other sources of trauma at an extreme level over a prolonged expanse of time leading to a continuous exposure to trauma with no foreseeable end. "Continuous Traumatic Stress (CTS)" was developed by psychologists in apartheid South Africa and refers to ongoing traumatic experiences in contexts of structural violence, including repressive state violence or pervasive community violence" (Straker 2013). Egyptians have experienced police and military brutality, torture, sexual violence, near death experiences, poverty, abuse and fear the same for their relatives and friends. In an analysis of forty young Egyptian activists published in the Journal of North African Studies, every single participant had experienced at minimum one of these traumatic events themselves and witnessed the trauma of others (Mathiess-Boon, 2017). CTS regards symptoms of trauma such as anxiety, fear, withdrawal, dissociation, aggression, difficulty sleeping or relaxing and nightmares as normal, almost expected human reactions to severe traumatic stress resulting from dangerous political and social surroundings. "CTS thus places the roots of traumatic stress not within the malfunctioning of the brain, but firmly within violent social and political contexts that shatter the safety of one's world, rendering trauma both an individual and a social phenomenon" (Mathiess-Boon, 2017). The factors differentiating this type of traumatic experience is that there is currently no capability of closure for the victims, no "reward"

for going through the suffering. This represses a victim's ability to *reintegrate* or *reinterpret*, two ways to overcome or come to terms with a traumatic event. *Reintegration* is considered to be a way that victims with the help of supportive others and a safe holding space may come to terms with the event and move into a new world where the pain of the trauma may be accepted and tolerable while recognizing that the victim's world has been fundamentally altered. *Reinterpretation* means a victim can re-associate the trauma with positive outcomes if they can see progress or be in a better place after the trauma which makes the world appear to them as less threatening and more oriented (Mathiess-Boon, 2017). Both of these recovery processes are restricted to victims in Egypt because they cannot see any clear progress or end to the consistent violence and fear. Additionally, in a traditionally patriarchal society such as in Egypt, mental health also highly stigmatized and seen as a weakness, further inhibiting any other type of treatment or help available (Matthiess-Boon, 2017 and Dean, 2015). With the interminable violence and traumatization of large populations of people in Egypt from isolated, but intense, political uprisings, the threat of long mental effects has been heightened to a level of mass social trauma. With the absence of sustainable coping mechanisms such as *reintegration* and *reinterpretation* this challenge does not seem to have a foreseeable end. However, greenspace has been known to increase one's ownership and connection to community, which may over time help a victim's ability to reintegrate themselves back into their community and reinterpret the environment as a safe place (Arne Arneberger and Renate Eder, 2012; Thompson et al., 2016).



Figure 2.2: Protestors and security forces clash during the Egyptian Revolution in Suez (Aljazeera, 2016).



Figure 2.3: Traffic in Tahrir Square in downtown Cairo (Image by author, 2019).



Figure 2.4: Slum located in Cairo, Egypt (Al Jazeera, 2016).

2.3 *Social, Symbolic, and Physical Barriers Faced by Caireans*

Cairo also has very limited availability of public open space. As one of the densest cities in the world, Cairo has only about 0.8 square meters of green space per capita (sqm/cap) with a population of almost 20 million people (Tadamun, 2014). The city is marked by a “clear absence of a public realm or venue that accommodates all members of the Cairene community. Cairo’s public spaces represent contested spatial, social, and symbolic configurations that are a product of the growing multiplicity embedded in the urban fabric” (Attia, 2011). Citizens are separated into social groups or classes and are placed into separate realms. This socio-spatial distribution thus creates separate identities based on their social levels within the larger community.

This causes the urban public realm to become contested with diverse ideologies, leading to a general decline in the use of public spaces (Attia, 2011). This decline is occurring at all levels within Cairo’s river sides, residential communities, public gardens, and even public squares and is the result of a social segregation which affects the production of successful places in the city (Attia, 2011). Egyptians also do not have the right to public space in law and only started to reclaim it in practice since 2011 with the occupation of Tahrir square by protestors against the governmental regime and subsequent vendors to support the physical needs of the people occupying the square (Tadamun, 2014). This lack of open space suggests that there is not sufficient land area for people to exercise their need to freely and comfortably enjoy the city, even though there is still

a great demand for them. Citizens still try to use any available open space they have for many activities including commerce, religious gathering, play, social interaction and even Mulids, which are traditional festivals taking place in the public streets of Cairo, celebrating culture and traditions. Today, the city streets have most often been reduced to a "simple space for movement" (Attia, 2011).

Al Azhar park, a large, thoughtfully designed park in Cairo however, is a good example of how the demand for greenspace in the city is strong and how citizens take advantage of the presence of such a space where citizens from every walk of life may come to interact and enjoy being outdoors without social or economic barriers. Although, the park does still have a modest entry fee (twenty-two Egyptian pounds), keeping it from being a fully "public space" (Tadamun, 2014). There are other small examples of larger greenspaces in Cairo, such as Maadi Isand Park and block parks (though some are better kept than others) and green spaces in median strips. However, these still often require an admission fee or are located in affluent areas. Publicly accessible spaces are indicative of a city that has a say in its land use decisions. In Egypt however, the government often gives preference to private developers and has little interest in working with communities. There is also sometimes a lack of transparency in the decisions made regarding land use (Tadamun, 2014). Social injustice is also seen by the privatization of the Nile riverfront. The river's banks are mostly used by private institutions, restaurants, private clubs, and private or costly floating boats leaving little space along the river for the general public. Gabr in his article, Perception of Urban Waterfront Aesthetics Along the Nile in Cairo, Egypt says the Nile

waterfront has experienced numerous changes in the form of designed projects to take advantage of the river's potential for attracting visitors and users. He mentions three bank conditions along the Nile creating varying accessibility to the river. These include the exclusively private uses mentioned above as well as other privately owned or leased projects that are accessible to the general public, such as cafeterias where guests are expected to pay for their leisure time. The third type of change is the few publicly owned and fully accessible places where visitors are free to wander along the waterfront without having to worry about spending money (Gabr, 2004). The urban realm has come to reflect the interests of the dominant classes and citizen of power and influence while other groups are seen as a threat and unwelcomed from public social spaces through physical, social, and symbolic barriers (Attia, 2011).

Political power is another major factor influencing public space in Cairo. Tahrir Square, the main public square and focal point of the city, has seen extreme polarization of control and use by the government and citizens over its almost one hundred fifty-year history. Following the 18 days of intensive protesting in Tahrir Square, the public gained an increased sense of ownership over the space, which was reflected in their public initiatives in cleaning up the square following the ousting of the former president. The emergence of graffiti covering the surrounding murals is another example of the renewed approach to public spaces, where art was used as means to voice and express national identity (Attia, 2011). The square now will range from being packed with citizens, protestors, and vendors to warded off and "beautified" by government officials. However, this beautification is quickly

trampled when the square is again overtaken by citizens or vendors and their temporary living places (Dana, 2013). There are still political differences that escalate and many different people of different backgrounds use the square. Therefore, "Tahrir Square has thus gained a new role: it is not only a traffic nodal square, but also a venue for events, festivals, and demands" (Attia, 2011).



Clockwise from Left: Figure 2.5: Tahrir Square today; Figure 2.6: Roundabout in Maadi used as a small gathering space; Figure 2.7 Neglected and gated off park in Maadi (Images by author).

2.4 *Social Stigma Against Mental Health Treatment in Egypt*

Mental wellness has long been a social and cultural taboo in Egyptian society due to the long-held traditional belief that seeking professional support is a sign of weakness. Many Egyptians who have participated in violent political events are also mis-trustful of the resources they do have available for fear of being reported for protesting and the possibility of being detained (Dean, 2015). Many people also say you should seek solace in a Mosque or religious setting instead of seeking professional help as they see the mental difficulties as a challenge of faith, not health (Dean, 2015). However, the subject of mental health in Egypt has been a rising topic due to the mass outcry of social media over several suicides allegedly caused by recent political clashes, corruption, economic challenges, and the lack of political or social progress Egyptians are facing, resulting in a sense of depression and hopelessness (Dean, 2015). In addition to the challenge of stigmatism, "except for relatively small scale initiatives such as the Nadeem Centre for the Rehabilitation of the Victims of Torture, mental health services in Egypt are substandard" (Matthies-Boon, 2017). Public mental health institutions are rare and most often comparable to the pre-modern asylum institutions where electric-shock therapy, physical restraint, and non-consensual medicating is practiced. Patients are associated with "madness" and "criminality" instead of struggling with a diagnosable illness and are often admitted by their families or the state "for personal and political reasons" (Matthies-Boon, 2017).

The social media attention and the conversation being sparked on mental health post-revolution has shed some light on the mental health situation in Egypt, instigating the opportunity for further progress and exposure of the need for better care and acceptance. Twenty-two year old activist, Sara Mohamed has said “We should start asking people more [about how they are] and raise awareness about [how to] take care of each other after what we all faced during these days” (Dean, 2015). Safe, open public spaces, such as parks and green streetscapes, designed for therapeutic purposes, may provide an opportunity for people to come together and encourage Mohamed’s way of thinking.



Figure 2.8: Protests turning violent on January 28, 2011 (Al Jazeera, 2016).

“We should start asking people more [about how they are] and raise awareness about [how to] take care of each other.”

3

**Trauma and Healing
with Design**

3.1 *Trauma and Nature's Healing*

What is "Trauma?"

The American Psychiatric Association defines PTSD as "a psychiatric disorder that can occur in people who have experienced or witnessed a traumatic event such as a natural disaster, a serious accident, a terrorist act, war/combat, rape or other violent personal assault" (APA, 2015). PTSD is most often associated with three categories of symptoms; 1) intrusion, where victims experience flashbacks in the form of strong memories and nightmares that intrude, often unexpectedly, into current life, 2) avoidance, where victims avoid close emotional relationships with family, friends, and colleagues, as well as situations that could remind them of the traumatic event and experience numbness and 3) dissociation from everyday life, hyper-arousal, or an acute sense of alertness from a perception of being in constant danger, causing them to be irritable or explosive and have a higher risk of violence against others or themselves (Cooper Marcus and Sachs, 2014; Herman, 1997). The mental as well as physical symptoms of PTSD disrupt the everyday life of a trauma victim causing them to have a higher sensory awareness, feelings of vulnerability and social isolation, difficulty with self-regulation, and feeling a loss of control.

Symptoms are traditionally treated in two ways, using 1) psychosocial and 2) pharmacotherapy methods. According to Brock Anderson in his 2011 thesis, “psychotherapy must address two fundamental aspects of PTSD: deconditioning of anxiety and altering the way victims view themselves and their world by re-establishing a feeling of personal integrity and control” (Anderson, 2011). That is why I studied whether trauma victims may be able to re-establish that sense of security and peace if experiencing the restorative and calming effects of nature.

Symptom	Treatment
Intrusion	Psychotherapy (Individual or Group)
Avoidance	Psychosocial
Dissociation	Pharmacotherapy
Hyper-arousal/Hypervigilance	Cognitive Behavioral Therapy (CBT)
Anxiety	Cognitive Processing Therapy (CPT)
Social Isolation	Prolonged Exposure Therapy (PE)
Feeling a Loss of Control/Vulnerability	Eye Movement Desensitization and Reprocessing (EMDR)
Heightened Sensory Awareness	Stress Inoculation Training (SIT)
Trouble with Self-regulation	

Table 3.1: Overview of common trauma symptoms and treatments (Image by author, content from Cooper-Marcus and Sachs, 2014).

Mental and Physical Effects of Nature

The positive effect of nature on the mind and body have been well documented (Cooper Marcus and Sachs, 2014; Francis et al., 2012; Link, 2016; Nordh and Ostby, 2013; Sachs, 2016; and Wagenfeld et al., 2013). Outdoor natural spaces provide opportunities for mental restoration, privacy, reflection, meditation, recreation, and social interaction. Naomi Sachs, founder and director of the Therapeutic Landscapes Network, has conducted significant research and collected data on the effects of nature on the human mind, body, and spirit. She states that exposure to natural outdoor environments improves mood and increases self-esteem, decreases depression and ruminative thoughts, improves memory performance and attention span, increases recovery rates in injured or sick persons, reduces risk of certain diseases, reduces stress, decreases blood pressure, stimulates “happy hormones” such as dopamine, serotonin and oxytocin, and improves their general perception of health (Sachs, 2016). Certain outdoor activities can also be beneficial. Farming, gardening, recreation, and participation in physical therapies outside has been known to allow trauma victims to regain a sense of control, drive, and purpose, qualities which are often lacking in victims suffering from PTSD (Christian, 2014; Cooper Marcus and Sachs, 2014; Finn, 2014; Wagenfeld et al., 2013). Researchers and design practitioners have also identified certain aspects of outdoor space that are more

beneficial than others. For example, relatively “rustic” or undisturbed landscapes may be effective for victims who need to “get away from themselves and the world” while other victims prefer designed elements for therapeutic or recreational elements (Link, 2016). Greater quantity of “green” (including grass as well as trees, flowers, and other plants) was most often preferred over hard surfaces. Water features, a protective tree canopy, a variety of opportunities to sit alone or with others, a high degree of enclosure but with clear sightlines, screening from noise, frequent seating, and natural views are more effective in providing health benefits as they are more likely to encourage “healthy behaviors” such as recreation, rest and restitution (Nordh and Ostby, 2013; Kragstig Peschardt, 2014).

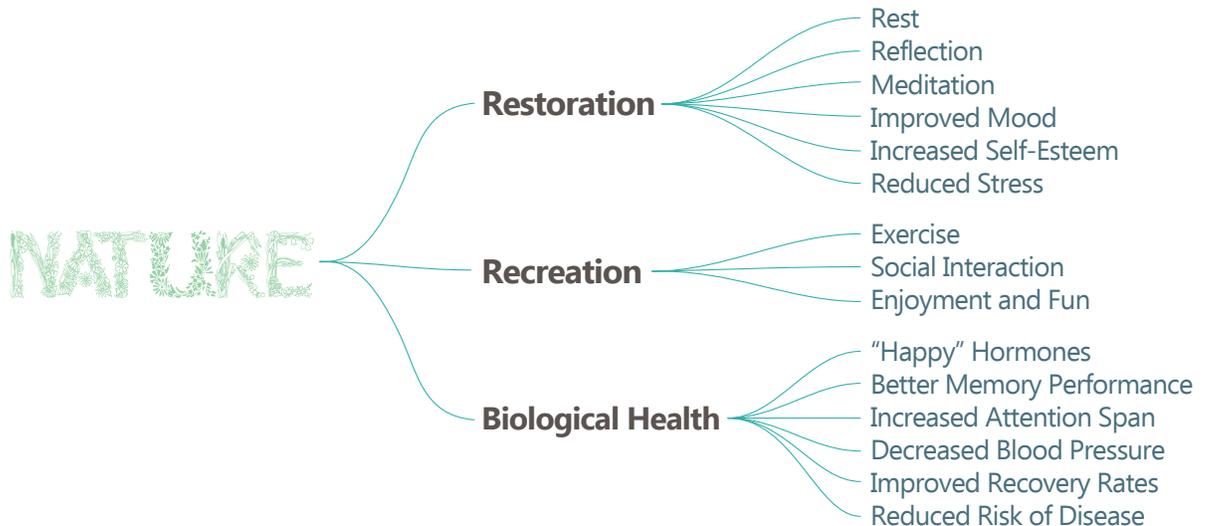


Figure 3.1: Psychological and physical health benefits of exposure to nature. (Image by author, content from Cooper-Marcus and Sachs, 2014).

3.2 *Design with Nature and in the Public Realm*

Design of spaces specifically for victims of trauma and PTSD is a newer concept and therefore still needs more research to inform evidence-based design principles. However, there is some literature outlining design guidelines and features that may be beneficial in aiding the healing process of this population. The book, *Therapeutic Landscapes: An Evidence Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces*, written by Clare Cooper Marcus and Naomi Sachs, includes a chapter on designing outdoor spaces for veterans with Post-traumatic Stress Disorder (PTSD), as well as Traumatic Brain Injury (TBI) and other psychological issues. Cooper Marcus and Sachs argue that the most important design philosophy is one where there is close collaboration between physicians, clinicians, caregivers, and designers to work together to come up with a patient-focused design (Cooper Marcus and Sachs, 2014). This concept is also backed by Amy Wagenfeld, Connie Roy-Fisher, and Carolyn Mitchell in their article, "Collaborative Design: Outdoor Environments for Veterans with PTSD." Cooper Marcus and Sachs also outline certain design guidelines to make the outdoor space most beneficial to people affected by trauma, including family and friends of victims and their caregivers as well as the victims themselves. These guidelines include the need for flexibility in the design of spatial enclosure. Opportunity for private reflection in a

quiet, secluded area as well as social interaction in an open, public area is necessary. In Cairo, this may mean a small reflection pond shaded by some canopy or palm trees or an open public square for activity and exercise. Other physical design guidelines suggest designing for a sense of control, which as mentioned earlier may include participating in certain activities; designing for accessibility and comfort since many trauma victims may have experienced a physical injury or impairment; designing for physical and emotional safety and security which takes into consideration the symptoms experienced by those suffering from PTSD; preventing too much exposure to sun or the elements or anything visually distressing such as glare or bright colors; being attentive the types of sensory stimuli available, creating a "familiar" environment; designing spaces for ritual and reflection such as fireside and memorial areas, and allowing for interactions with children, service dogs, and other victims (Cooper Marcus and Sachs, 2014). Matthew Finn (2014) concurs with these guidelines but he also stressed the importance of providing spaces specifically for physicians to perform psychotherapy. Further research done by Michelle Perkins 2011 identified certain preferences for outdoor healing spaces by surveying veterans. She found the most preferable spaces for veterans are where they can "get away," just "be in nature," and "meditate." She also found that veterans prefer water features, natural sounds such as rustling leaves or birds chirping, exposure to wildlife, a high degree of enclosure but with very clear sightlines, and that the spaces be flexible with moveable features (Perkins, 2011).

There is also significant research behind the design of public open space (POS) and streetscapes. One of the classic books on streetscape design is *Great Streets* by Allan B. Jacobs. Jacobs gives many examples of great streets around the world and highlights the design features that make them so successful. Many of these streets have certain things in common. They are pedestrian oriented, tree-lined, safe, human-scale, very socially active, and have opportunities to walk and sit. He mentions other requirements for successful streets are accessibility, bringing people together, publicness, livability, comfort, participation, and responsibility (Jacobs, 1993). A more contemporary resource on street design is *Urban Streetscape Design* by Petra Funk. Similar to Jacobs, Funk gives many examples of great streetscapes and public squares around the world that still exist today. She also highlights the design features that are responsible for their success and attractiveness. She goes into considerable detail in her description of the streets and public spaces including paving, lighting, landscape planting, street furniture, enclosure, modes of transportation, and parking. Many of the successful design features she mentions are similar to those presented by Jacobs but she also highlights the sustainability design features that are starting to emerge in streetscapes around the world (Funk, 2015). Another emerging trend in the design of streetscapes, resulting from a rise in concern for pedestrian safety, is artfully

designed defensive barriers against threats from vehicular terrorist attacks in public plazas and tourist destinations. These barriers are designed to blend into the landscape design but also provide safety to pedestrians and bicyclists. They often include trees, bike racks, fountains, art installations, raised planters and seating instead of the traditional bollard or concrete barrier to help draw attention away from the threat of vehicular danger while also making the sidewalk more pleasant (Shaver, 2018). Good streetscape design is part of providing a therapeutic outdoors space, especially prioritizing the comfort of the pedestrian, but it may not be enough to combat the stresses and symptoms of someone impacted by trauma. Therapeutic landscape design, informed by patient and professional input combined with good, time-tested streetscape design strategies may be able to provide the relief needed.



Figure 3.2: Current streetscape conditions in Maadi (Image by author).

3.3 *Public Space and Mental Health*

Even though Jacobs and Funk highlight the positive qualities of good streets, most do not target any specific population or higher purpose other than the transportation of people and social interaction. In addition, many urban streetscapes also feature very negative impacts on mental health such as traffic noise, which can cause physiological and cognitive alterations, sleep disturbances, and psycho-social stress (Dzhambov and Dimitrova, 2014). These psychological disturbances may especially affect those suffering from PTSD. According to PTSD UK, "those with Post Traumatic Stress Disorder (PTSD) can often develop difficulties with sounds such as an exaggerated startle response, fear of sound (phonophobia), aversion to specific sounds (misophonia), and a difficulty in tolerance and volume of sounds that would not be considered loud by normal hearing individuals (hyperacusis)." The organization also states that many loud sounds can trigger a startle response causing a person to trigger painful memories of the trauma (PTSD UK, 2017). MyPTSD, an online support forum for people suffering from PTSD highlights some of the actual reported troubles PTSD victims have with public space such as difficulty with crowds and loud noises. Forum participant, Frenzy3674, stated he had trouble with being very intensely aware of every person in the room and perceiving them as a threat, bumping into people, being unable to escape, and reading neutral faces as

hostile faces and needing to seek a “safe place” every 10 minutes to take a break. Another participant, Heather, said she had trouble with traffic, noise, and “sensory overload (Heather, 2011 and Frenzy3674, 2017). Because of a PTSD victim’s sensitivity to sound and activity, busy public spaces and urban streetscapes may be very stimulating and challenging to their mental well-being. Creating elements in a landscape or streetscape to mitigate audial and visual stimulants might help to alleviate the stress on PTSD victims.

Vegetation has been known to mitigate some of the problems of noise and activity. According to, Ina Saumel et al. (2016) “vegetation can attenuate noise via diffusion depending on the shape of vegetation barriers; leaf size and branching characteristics affect resonant absorption properties. At the same time, the perception of natural soundscapes such as bird song along roads can decrease the perceived level of traffic noise” (Saumel, et al., 2016). Vegetation installments can be useful in simply reducing sound but more designed elements for decreasing auditory stimulation and providing privacy away from activity may be beneficial.

**“unable to escape, and reading neutral faces as hostile faces and needing to seek a “safe place” every 10 minutes to take a break.”
-MyPTSD participant**

Mental health for urban areas is a serious issue. The streets of some urban cities can even be the cause of mental health problems. Isaac Riddle (2013) in his article, *In War and on City Streets, the Similar Threat of PTSD*, "people living in urban areas are more likely to experience PTSD than even soldiers in Iraq and Afghanistan. Young people living in high-crime neighborhoods have comparable exposure to soldiers in war zones." He states that one third of children living in America's violent urban neighborhoods have PTSD, nearly twice the rate reported for troops returning home from war zones in Iraq. (Riddle, 2013). Clearly, mental health is a concern for many living in urban areas where streetscapes and the public realm is more accessible and a part of everyday life. Francis et al (2012) conducted another study on mental health and public spaces. They found that the quality of public open space (POS) is actually more important than the quantity of POS in health related situations. The quality of POS was determined by studying the "protective factors" for mental health in the physical environment such as comfort, safety, attractiveness, possibility for participation in activities, and presence of adequate public or private seating. Other factors that were considered were the restorative, meditative opportunities, and opportunities for people to socialize and build relationships, and presence of public art or other visual features. Results were determined by measuring psychological stress after exposure to various types of physical

environments. They found that people in high quality POS were twice as likely to show low psychological distress than people in low quality POS. In addition, physical elements had more of an effect than emotional or social elements and flexibility of spaces is important because different people have different requirements of POS. Karin Kragstig Peschardt also did research on the effects of public space on mental health in her 2014 doctoral thesis, *Health Promoting Pocket Parks in a Landscape Architectural Perspective*. Peschardt studied the characteristics of certain pocket parks in Copenhagen Denmark and users' perceived restorativeness. Her results indicated the main health benefits of pocket parks are their social aspect, exposure to quiet nature, and the opportunity for rest and restitution away from busy urban areas. There are clearly many positive and negative attributes of public space in general. However, certain types of public outdoor spaces such as parks, urban gardens, urban farms, streetscapes, and pocket parks, may be targeted for a more specific purpose such as mental restoration and health.

4 Methods

4.1 *Success in Therapeutic Design (Precedent Studies)*

Conducting precedent studies on existing built works of therapeutic landscapes was essential to designing a space that is evidence-based and effective in promoting health. Therapeutic design has to have a strong background in research to understand how certain types of design strategies have helped or harmed the individuals the designed space is intended to serve. In addition to what I have learned through the literature review, a thorough study of the more effective therapeutic landscapes presented in the literature and their design elements helped to inform the entire design process and support the final design. It was also important to think of the regional landscapes and traditional approaches to landscape design to promote a sense of familiarity for the users. Islamic Gardens have been effective in providing oases in the Arabic region for thousands of years. These types of gardens are intended for respite, reflection and have a strong sense of control and order, which are common strategies present in therapeutic landscapes as well. Six successful outdoor projects in therapeutic and traditional Islamic garden design were thoroughly studied, 1) The Green Road project in Bethesda, Maryland; 2) the Warrior and Family Support Center Therapeutic Garden in San Antonio, Texas; 3) Xiangya 5th Hospital in Xiangya, China; 4) Christiana Care Wilmington Hospital Healing Garden in Wilmington, Delaware; 5) Al Azhar park in Cairo, Egypt; and 6) Aga Khan Garden at the University of Alberta Botanic Garden in Edmonton, Alberta, Canada.



Figure 4.1: Concept sketch of the council ring at the Green Road Project
(Image courtesy of Jack Sullivan).

The Green Road Project in Bethesda, Maryland

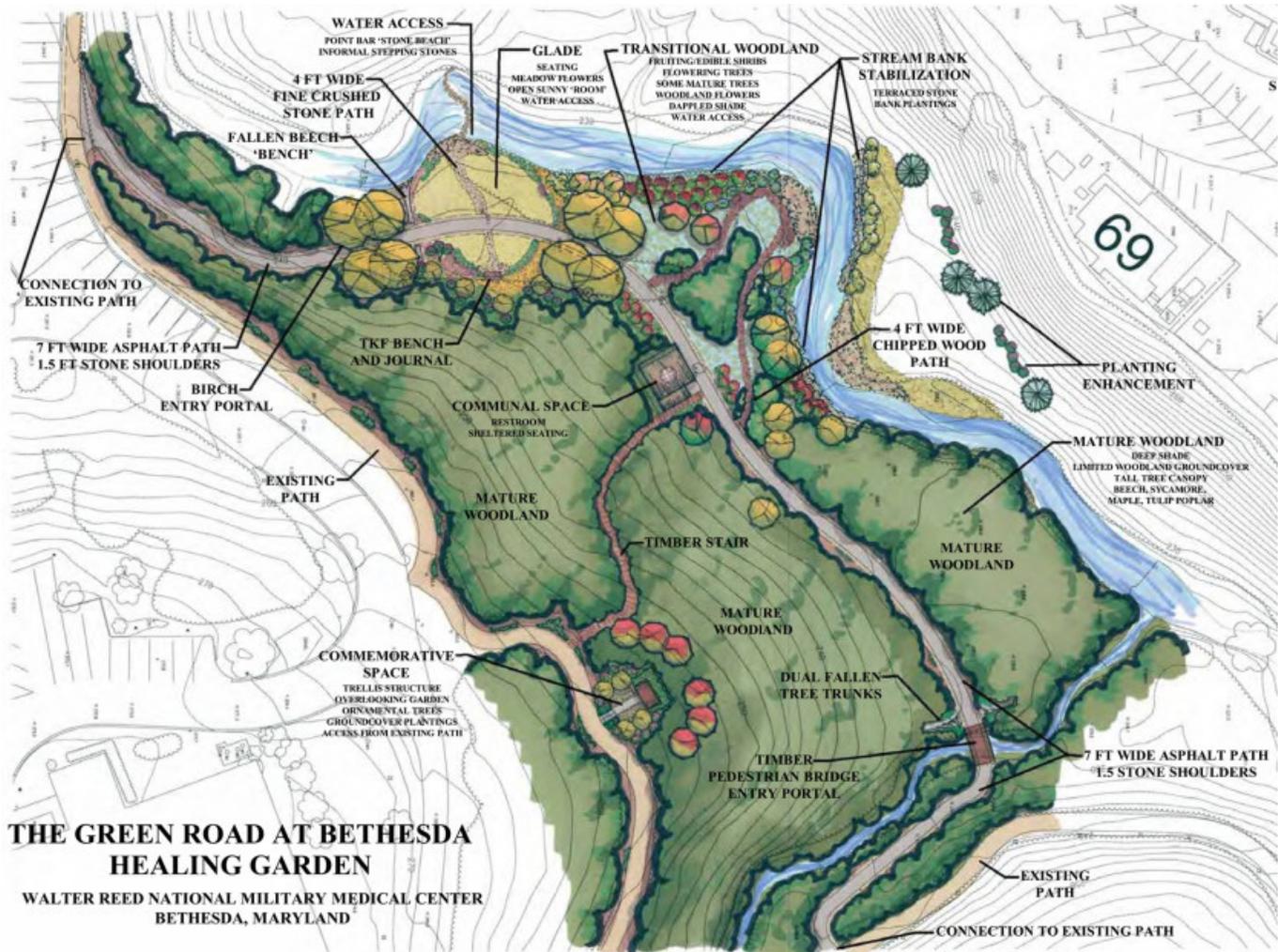


Figure 4.2: Master plan of the Green Road Project in Bethesda, Maryland (Image courtesy of Jack Sullivan).



Figure 4.3: Images of design features within the Green Road (Images courtesy of Jack Sullivan).

Design Strategies Which Contribute to Improving Mental Healing

- Very patient-centered design process with participation in the design process from caregivers and health providers at the Walter Reed National Military Medical Center and PTSD patients and families themselves
- Very naturalistic, rustic wooded design allowing for flexibility in spatial enclosure and activities
- Spaces for group and family therapy
- Clear sightlines, entry, and exit
- Clear, meandering pathways for easy circulation

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Does not have a clear perimeter
- Space may have too much flexibility and patients may become overwhelmed by their choices

Warrior and Family Support Center Therapeutic Garden in San Antonio, Texas

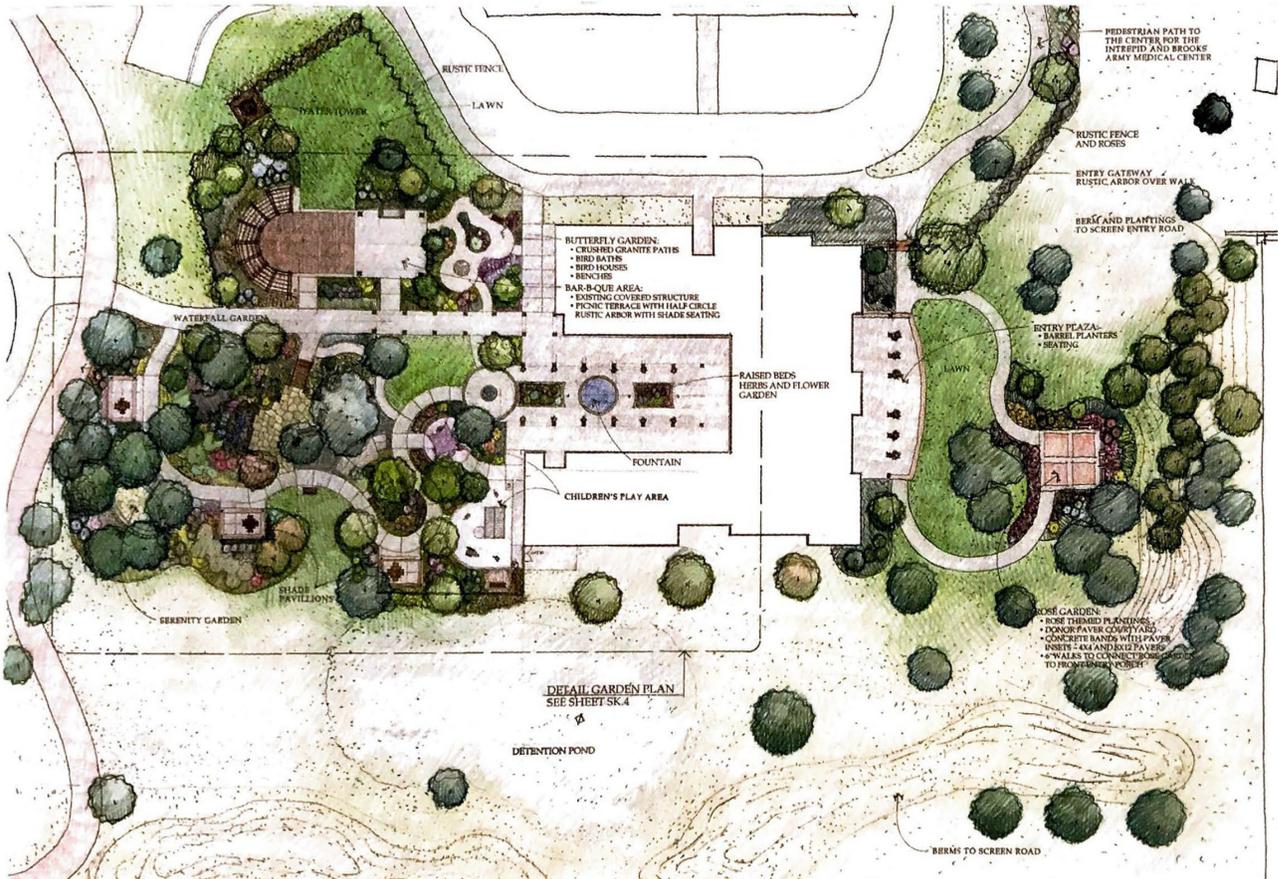


Figure 4.4: Site plan of the Warrior and Family Support Center Garden in San Antonio, Texas (Image courtesy of Naomi Sachs).



Figure 4.5: Images of design features within the garden (Images courtesy of Naomi Sachs).

Design Strategies Which Contribute to Improving Mental Healing

- Serves for very specific passive and active therapeutic purposes at the Support Center
- Very good spatial flexibility. Garden is designed with two primary spaces: one more active with social spaces such as grilling area, plaza, children's play area, and putting green. The other is more serene with a curving walk and limestone waterfall with seating.
- Well-defined area perimeters
- External noise stimulation is mitigated by a perimeter wall

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Limited to a small garden with a security wall
- Spatial enclosure from wall may make some people feel trapped
- Glare from concrete social area may be too much for some users

Xiangya 5th Hospital in Xiangya, China



Figure 4.6: Site plan of Xiangya 5th Hospital in Xiangya, China (Image courtesy of Adam Anderson of Payette).



Figure 4.7: Section of the hospital courtyard (Image courtesy of Adam Anderson of Payette).



Figure 4.8: Images of design features within the hospital campus
(Images courtesy of Adam Anderson of Payette)

Design Strategies Which Contribute to Improving Mental Healing

- Thoughtful design process of a large exposed courtyard that allows for many different types of private and social spaces
- One of the largest healing landscapes ever built
- Very naturalistic design of a beautiful regional landscape

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Lacks a strong sense of safety and security because of the scale of the large open campus
- Some areas may be closed off and used only for hospital purposes

Christiana Care Wilmington Hospital Healing Garden in Wilmington, Delaware



Figure 4.9: Overhead view of the garden
(Images courtesy of Geoff Anderson of Robinson Anderson Summers, Inc. Landscape Architects)

The Christiana Care Wilmington Hospital Healing Garden is an example of a hospital utilizing the space surrounding its grounds for healing purposes. The hospital courtyard pictured above is open to the public and can be used by anyone including staff, patients, patient families, visitors, or people just strolling by who may need a place to rest. The garden being available to the public is unique as many hospital healing gardens are more private and only accessible to hospital staff and patients.



Figure 4.10: Images of the central water feature area within the hospital campus courtyard (Images courtesy of Geoff Anderson of Robinson Anderson Summers, Inc. Landscape Architects)

Design Strategies Which Contribute to Improving Mental Healing

- Lush garden design helps emphasize the health benefits of “more green” in a very limited small space
- Central fountain provides a quiet space for reflection
- High degree of enclosure allows for a strong sense of security
- The design utilizes a very subtle Islamic Garden Style in a western context

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Simple concrete used for circulation paths may create glare
- Small garden scale may feel constricting to some users
- There are not many mature shade trees or overhead canopy which may make users feel overly exposed

Al Azhar Park in Cairo, Egypt



Figure 4.11: Site plan of Al Azhar Park in Cairo, Egypt (Image by the Aga Khan Trust for Culture).

Al Azhar Park is a great example of public greenspace available to all residents and visitors of Cairo. It is designed with influences from traditional Islamic garden design, which is a style familiar to the people of Cairo. This design style also creates a very calming and serene atmosphere with its quiet fountains and waterfalls and lush plantings in a desert climate. The garden also is very large and provides a range of social and private spaces for its users. Al Azhar Park serves as an important resource for Caireans as they have very little access to other designed public greenspaces.

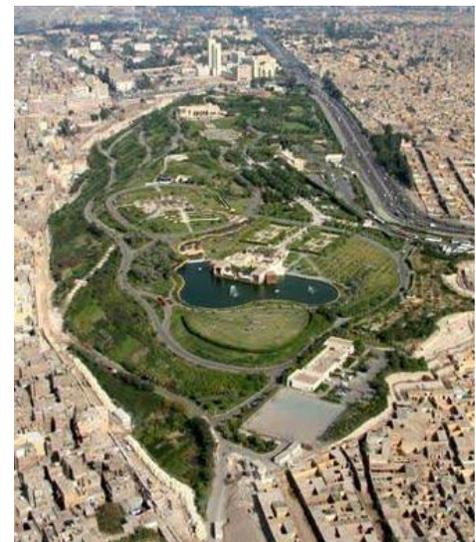


Figure 4.12: Overhead view of Al Azhar Park (Image by Aga Khan Trust for Culture)



Figure 4.13: Images of design features within Al Azhar Park (Images by author).

Design Strategies Which Contribute to Improving Mental Healing

- Good spatial flexibility but can be limiting on private reflective spaces
- Good safety lighting
- Many circulation options upon entry
- Very good shared social spaces, especially near water features and open lawns
- Good circulation for private and public walking experiences
- Large quantity of large social water features

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Entry fee to enter
- Exposing design setup, not much privacy
- Not much seating upon entry or variety in seating options
- Can still hear Cairo traffic very clearly
- Berms create unclear sightlines and hidden spaces

Aga Khan Garden at the University of Alberta Botanic Garden in Edmonton, Alberta, Canada.

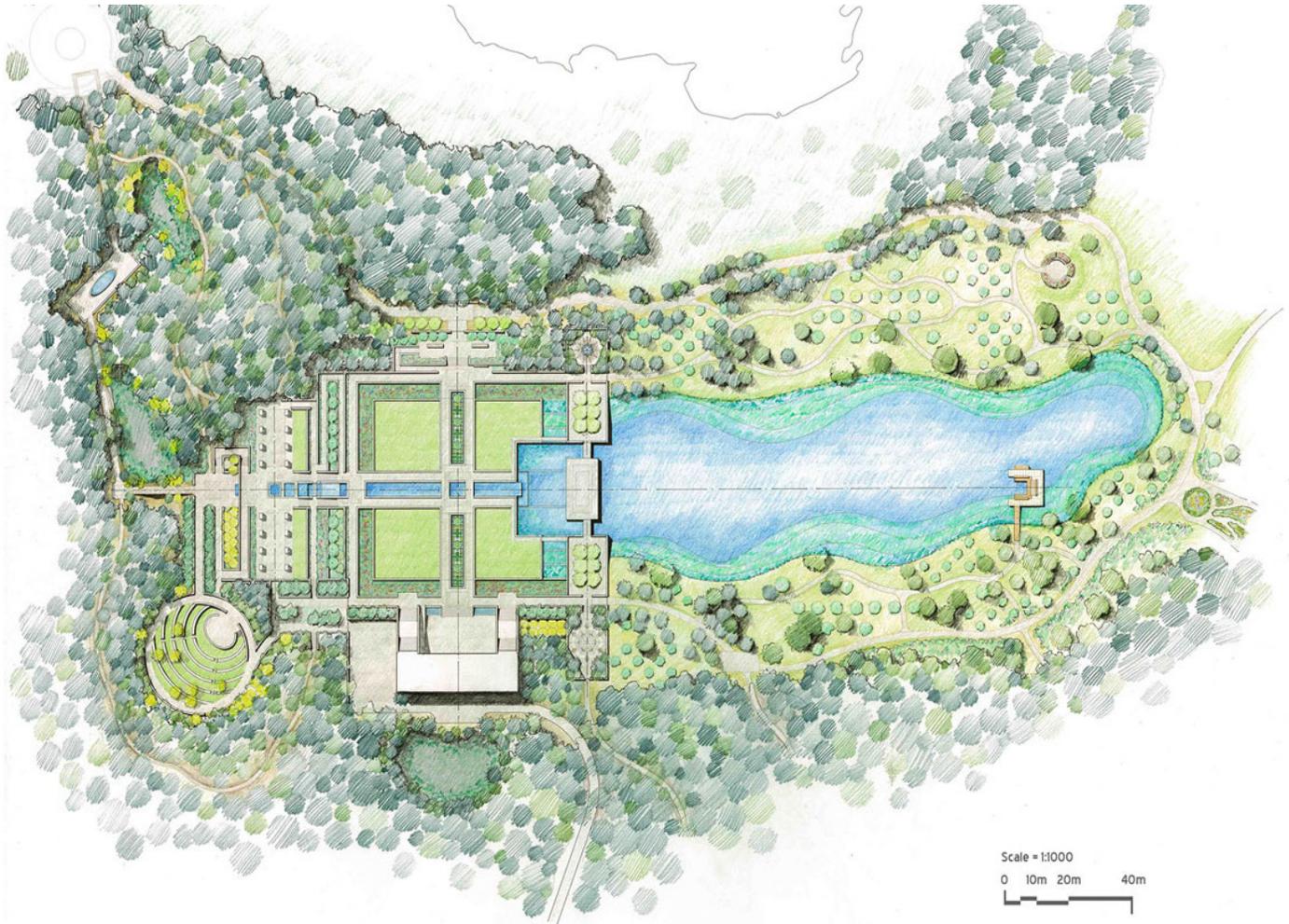


Figure 4.14: Site plan of the Aga Khan Botanical Garden in Alberta, Canada (Image by Nelson Byrd Woltz Landscape Architecture).



Figure 4.15: Images of design features within the garden (Images by Nelson Byrd Woltz).

Design Strategies Which Contribute to Improving Mental Healing

- Very serene environment with traditional Islamic Garden Style
- Familiar design style to historical public spaces in Cairo
- Many places for thought and reflection
- Clear entry with seating
- Flexibility in circulation and spatial organization but has a clear path hierarchy
- Water features with calm, soothing sounds

Design Elements That Could Challenge Mental Healing or Limit Access to the Benefits of Public Space

- Entry fee to enter
- Lack of spaces for community gathering or group therapy
- Some spaces could be too hidden or enclosed as to feel unsafe
- There are large open and exposed areas

4.2 *Field Investigation and Site Analysis*

Site inventory and analysis was conducted, including gaining an understanding of not only the site, but the surrounding context as well. This process included a trip to Cairo to conduct on-site inventory and analysis as well as collecting information and data before the trip. Site inventory and analysis allowed me to gain an understanding of the physical, natural, aesthetic, and ephemeral qualities of the site and will include an inventory of existing conditions as well as gathering information from city resources, and research into the city fabric and characteristics as well as the site visit to Cairo. Cairo, Egypt was the city selected for my research project based on the occurrence of intense trauma and violence present in the city during political uprisings, the presence of poverty, the high level of stress many Cairo citizens are under, and its status as the political capital of Egypt (Matthies-Boon, 2017; Suto, 2016; Dean, 2015; United Nations Development Programme, 2018). Due to these current conditions and civilian-military confrontations in the city, there may be a higher population of trauma victims in the area. The city of Cairo itself, the local population, and the surrounding downtown area are vital factors in the success of the project research. Understanding the popularity of certain locations in downtown Cairo, as well as locals' and tourists' preferences for walking, biking, and riding in vehicles was highly influential in understanding how people will use the

proposed site and its relationship to its surrounding context and the social preferences of people in Cairo. A trail running through downtown Cairo along the Nile River was the focus of my research and design efforts. This area has many local business, social clubs, restaurants, residences, and shops and is frequented by locals as well as tourists. Downtown Cairo proposes a good opportunity to address the design of an outdoor space that is used by many people in the community and could be busy enough to be a cause of discomfort for those affected by trauma.

Prior to visiting the site in Cairo, I gathered information on the local businesses and attractions, major institutions in the area, climate conditions, ecological conditions, and identified major dilemmas and opportunities for the site and its surrounding context. This information helped build a base for my understanding of Cairo and the region before I had the ability to go there.

Visiting Cairo was vital to my understanding of the physical, sensory, and social environment that exists there, particularly in the Maadi district. During the trip, I conducted the site analysis by written note-taking and sketching of observations made on-site while walking around as well as during additional exploration of the site's context by walking around Maadi and other areas around Cairo. Specific emphasis was on observing potential psychological stimulants, such as loud sounds, crowds, and high

levels of activity which may be threatening to someone impacted by trauma. Taking photographs of my site and site context was also an important part to documenting the site's current conditions. In the evenings during the trip I also engaged in reflective writing and sketching in order to better understand and analyze the observations I had made earlier in the day.

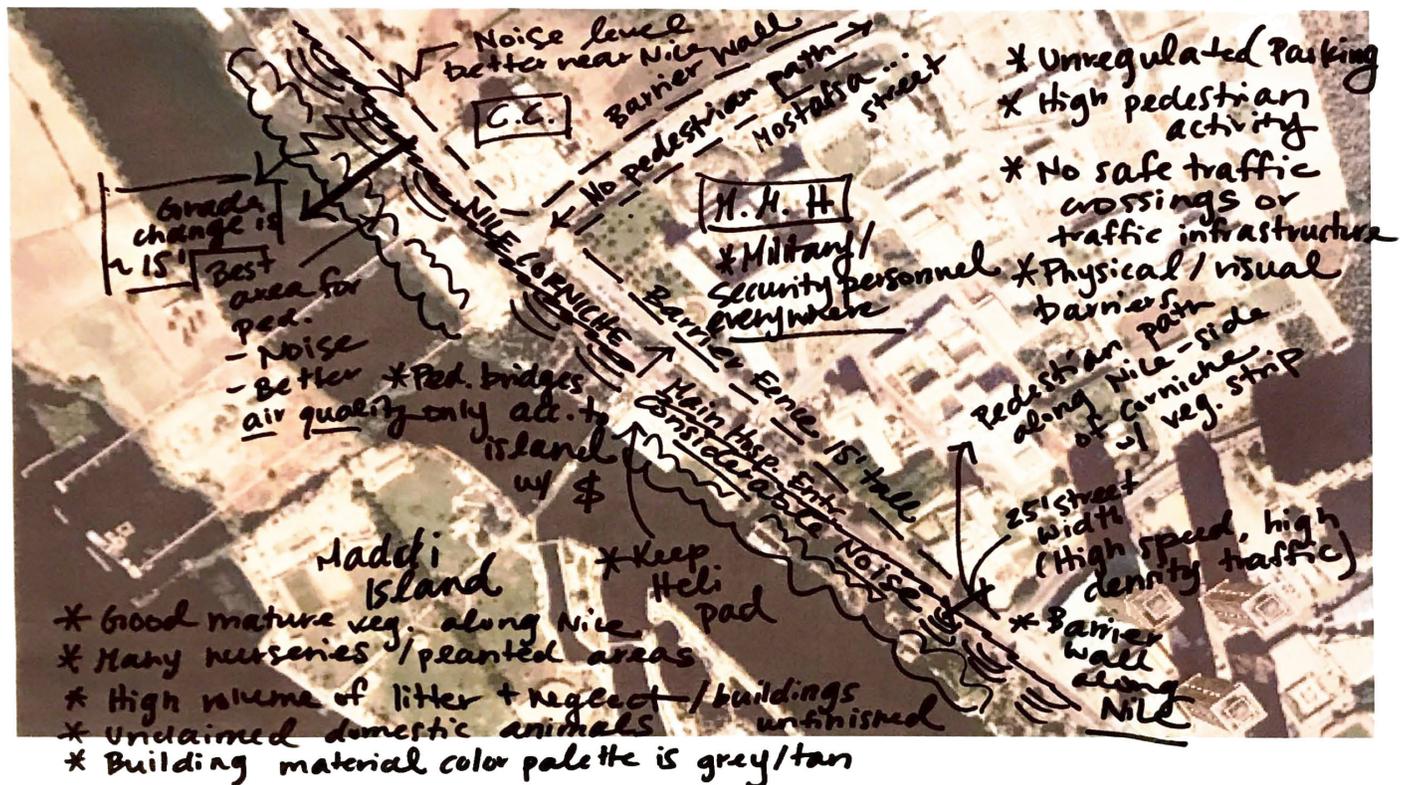


Figure 4.16: Map of site observations noted during on-site inventory (Image by author).



Figure 4.17: Images of the site along the Nile river in Maadi (Images by author).



Flowering Vine
Cairo, Egypt
4 January 2019
This vine was found
climbing along the
wall that stretched
along the Nile River.
It seemed to be
growing naturally.
This vine could be
used to vegetate a
living wall or for
decorative purposes.



Flowering Vase-shaped Shrub
Cairo, Egypt
4 January 2019
These shrubs seem to grow
and thrive naturally in
neglected areas in
Cairo which is interesting
with the little amount
of moisture and large
purple-pink blooms.
The plant was found in
a parking lot along
Osman Ahmed Osman Road
in Maadi, Cairo, Egypt.

Figure 4.18: Vegetation studies of plants along the Nile river site (Images by author).

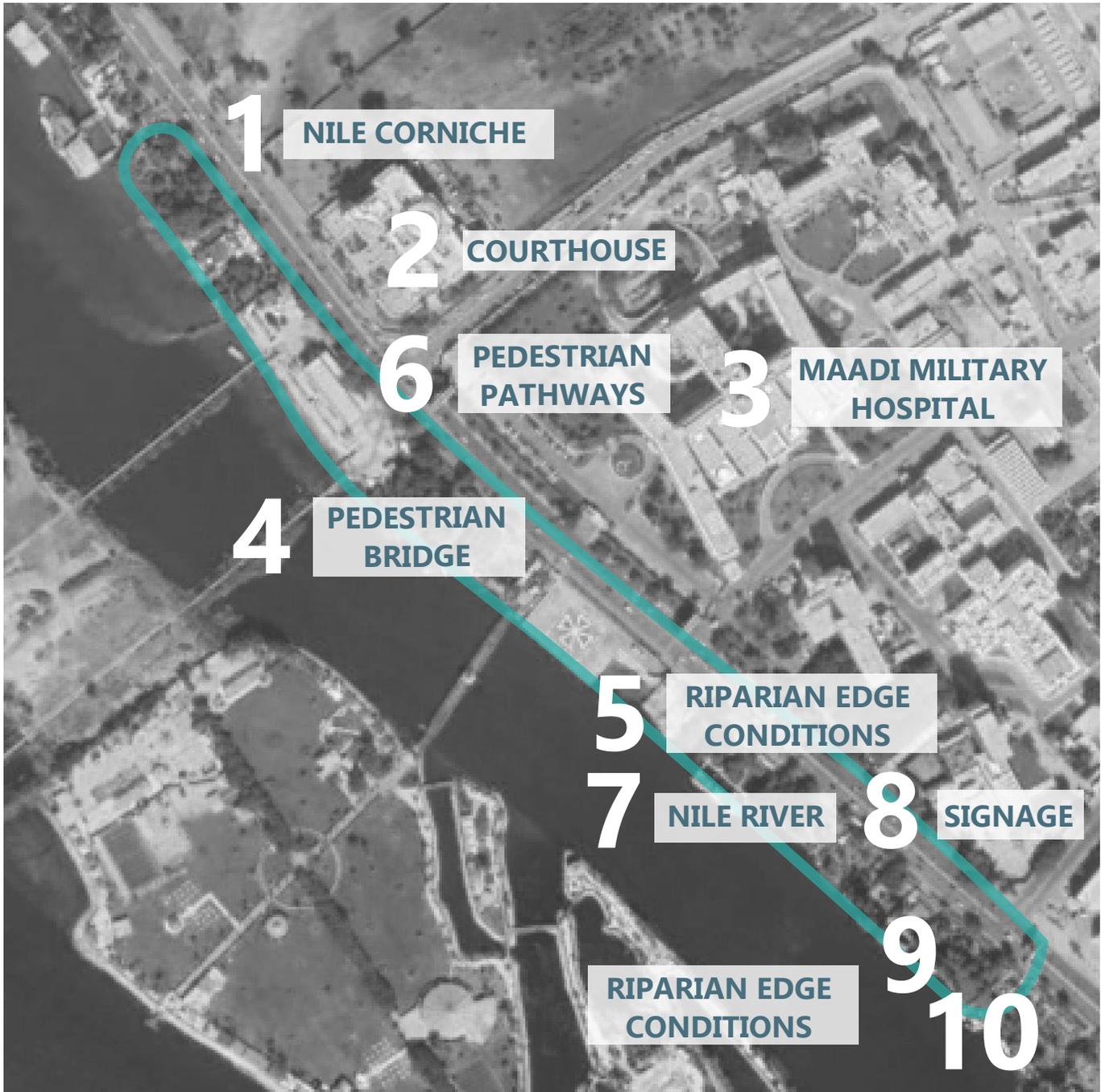


Figure 4.19: Location of important site elements and context (Images by author).



Figure 4.20: Images of important site elements and contextual influences (Images by author).

4.3 *Interviews and Data Analysis*

In order to collect direct information on how victims of trauma and traumatic stress experience public outdoor space without directly asking victims about their struggles, a series of interviews were conducted of professionals and experts in the fields of mental health, political conflict, refugee care, and therapeutic landscape design.

Part 1 of these interviews was individual interviews which were conducted with a group of six professionals working with refugees or who are familiar with Egyptian culture, including PhD-level mental health providers working with refugees, a social worker from Israel who works within that high conflict region, a former military officer with expertise in Arabic studies who has worked with war victims both within the United States and internationally, a MS-level government official working with refugees in Australia, and at least two academic professionals working in the areas of trauma and/or international studies. All the participants for Part 1 of the study are professional colleagues of Dr. Briana Nelson Goff, professor in Family Studies and Human Services and faculty member in the Conflict Analysis and Trauma Studies program at Kansas State University, who is serving as a member of the graduate supervisory committee for this project. These interviews were about forty-five minutes to

an hour long, conducted and recorded using Zoom, and include around fifteen to twenty questions with some discussion relevant to the interviewee's background.

I also interviewed experts in the design of outdoor therapeutic spaces. The procedure of the interviews was the same as mentioned above with mental health professionals but with different questions pertaining more to design and design research. Analysis of the Part 1 interviews was done to inform the creation of preliminary design guidelines that would later be reviewed by the mental health and landscape design professionals to gain further feedback and improve the guidelines. The analysis process included recording and transcribing the interviews, highlighting important pieces of input and advice from each interview and synthesizing the new information with that which was collected from an extensive review of the literature on evidence-based therapeutic design. The synthesized information and resulting design concepts were then organized into a series of matrices that were titled, *Overarching Concepts, Circulation, Hardscape, Vegetation, Play, Lighting, Water Features, Maintenance, and Site Analysis*. The data within each matrix was evaluated on its relevance to designing for users impacted by trauma. The most important design concepts for trauma-informed landscape design were identified as well as lesser important concepts. Finally, detailed design guidelines were created from this analysis.

Part 2 of the study was a design review with individuals in the Manhattan, Kansas area who are from Egypt but have relocated to a new region of the United States. Part 2 participants were over the age of eighteen and their participation was confidential but not anonymous, as the author personally completed individual interviews with participants of the design review. Participants in Part 2 were asked a few demographic questions (age, length of time in Egypt, length of time in the United States, reason for relocation to the United States and will be coded with a code number for identification. All personal identifying information including names was omitted from the interview transcripts. Some of the above mentioned participants were from the Egyptian Student Association at Kansas State. Two Egyptian students volunteered by providing their names to me through a request posted on their student Facebook page and through an email introduction from the Kansas State International Student Center. The procedure included sitting down with the volunteer, usually in a setting as easily accessible to them as possible, such as a comfortable public setting, and verbally explaining the purpose of the project and the design to them and then letting them review the graphics and plans on their own. I informed them that the goal of this project is to understand how they may negatively react to certain features or appreciate certain features based on their experience, personal challenges, and vulnerabilities resulting

from their time in Egypt/Cairo in order to inform a better design that will provide more relief to them and others like them in an outdoor environment by mitigating some of their negative reactions. It was made clear that they did not need to explain what their negative reaction is, just what design element caused the negative reaction. These responses were then compiled to review as feedback and revise the design accordingly. Dr. Briana Nelson Goff also served as my mentor in understanding how to work with a vulnerable population such as foreign students that may be impacted by the violent events in Cairo and advocated for them throughout the project process.



Figure 4.21: Diagram of interview process (Image by author).

5

Design for Trauma: Guidelines and Application

5.1 *Design Considerations for Trauma-Informed Outdoor Public Spaces*

Design Considerations for Trauma-Informed Outdoor Public Spaces, or simply called the “design guidelines” created in this project were informed by an extensive review of the literature on therapeutic landscape design as well as input and advice on how to design for people impacted by trauma from professional experts in therapeutic landscape design, mental health, political conflict, and refugee care. These areas of expertise were chosen to inform the guidelines because they are all relevant to the Cairo, Egypt region as well as to trauma-treatment in general. The design guidelines were also reviewed by these professional experts after their initial creation so as to make them as accurate to the professional input and feedback as possible. Certain design guidelines are more essential to a trauma-informed design than others and therefore are also illustrated by graphic sections.



1 *Site Analysis*

1.1 Sensory Stimulants

1.1.1 Make note of all audial, visual, tactile, and nasal stimulants existing on the site or in the surrounding context that may be too overwhelming or overstimulating for a user, especially audial and visual stimulants.

1.1.2 Make note of how these stimulants currently may be being mitigated or reduced in impact. Understand other possible site elements or features that may also be used to mitigate these stimulants, such as walls and structures, site topography, existing vegetation, and light conditions.

1.1.3 (Negative) sensory stimulants may include loud noises from traffic, people occupying the site and surrounding areas such as children screaming, construction work, glare from reflective surfaces, bold sharp patterns, bold bright colors, large site structures, etc.

1.2 Spatial Activity

1.2.1 Make note of how many people occupy the space and where, especially if the site may be occupied by crowds.

1.2.2 Make note of where people congregate and how long. Also make note of where people occupy the space by themselves.

1.3 Microclimates

1.3.1 Understand where more comfortable and less comfortable microclimates exist on the site. Note what environmental or structural elements are creating those microclimates.

1.3.2 Make note of what microclimates people are gravitating toward.

1.4 Existing Vegetation

1.4.1 Make note of existing mature vegetation and how that could be utilized or eliminated in the proposed design. Also make note of how existing vegetation may be shaping space or creating a comfortable environment.

1.4.2 Make note of whether existing vegetation may be creating unnecessary stimulants.

1.4.3 Make note of whether any vegetation may cause any injury or illness for site users.

2 *Overarching Concepts*

2.1 Clear Visibility

2.1.1 Clear visibility and sightlines are essential to provide spatial clarity and gives users a sense of security from being able to scan all areas of the site for any potential threats or visual challenges.

2.1.2 Design all vertical features with a maximum height of less than 3-4 feet.

2.1.3 Avoid hidden spaces, hidden corners, or hiding spots caused by vegetation or hardscape.

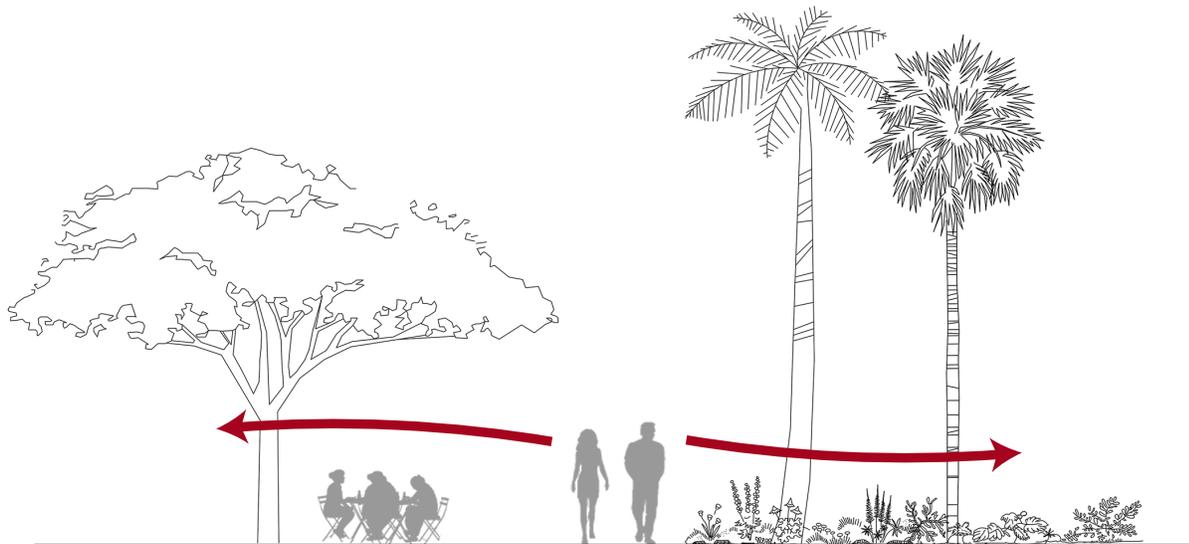


Figure 5.1: Section illustrating clear visibility (Image by author).

2.2 Spatial Flexibility

2.2.1 Providing opportunities for users to experience a variety of private and social spaces is important for conveying freedom and choice as well as a sense of control over their activities.

2.2.2 Private spaces are very important for personal reflection, and quiet-time. They can also be very useful for intimate conversation and conversational therapy.

2.2.3 Social spaces are very important for their ability for people to interact with other people and build connections and relationships. These spaces also provide a place for group therapy, memorial, and community events.

2.2.4 Provide a clear path to quiet, private spaces near social spaces in case a user or activity participant may become overwhelmed and may need to escape and get away.

2.3 Muted Color Palette

2.3.1 Stick to neutral, simple colors that reflect natural and the regional context. Avoid harsh colors such as reds and oranges.

2.3.2 Color choice should be mostly consistent throughout the site design. Significant variation may cause unnecessary stress.



Figure 5.2: Section illustrating using a muted color palette (Image by author).

2.4 Avoid Extreme Enclosure

2.4.1 Extreme enclosure may cause feelings of claustrophobia and discomfort. Avoid high walls and tight spaces with hardscape and vegetation choices.

2.4.2 Higher degrees of enclosure can be tolerable with clear visual sightlines over vertical elements. For example, “cubicle-like” spaces may be beneficial if a more private area is desired.

2.4.3 If a higher degree of enclosure is desired, at least two exits are required.

2.5 Safety

2.5.1 Conveying a sense of personal safety is the most important design feature for a public space designed for therapeutic purposes. Designing for safety may be carried out in many different ways (See guidelines 2.1, 2.6, etc.)

2.5.2 Personal safety may also be achieved by minimizing site elements that may act as harmful objects such as large boulders and lightweight moveable furniture.

2.5.3 Safety is also maintained by policing the park and making sure an authority figure is present to safeguard users. This may also create a challenge however as people may feel as they are being “watched.”

2.5.4 Minimize high vertical faces or places where people may fall or jump off.

2.6 Safe, Secure, Clear Perimeter

2.6.1 A safe perimeter may include a wall or gate that is lockable. Try to keep a gate or wall from being too tall that users cannot see over the wall unless necessary for user safety. Vegetation such as vines and shrubs may minimize that visual dominance of the wall.

2.6.2 A safe perimeter without a gate or wall includes having a clear distinct edge of where the space ends and another begins such as a park edge to a street sidewalk. It is also important for users to easily see the perimeter of the space, preferably the entire perimeter if possible.

2.6.3 Keep trees and other vegetation such as shrubs and grasses from obscuring sightlines into and out of the space.

2.7 Signage

2.7.1 Clear signage at all entrances and exits to the space is necessary for users to have a clear understanding of the space and where they would like to go. Spatial clarity is essential.

2.7.2 Clear signage is important to maintain along all main paths and secondary paths.

2.7.3 Use clear signage as a marking of entering into new spaces such as a small garden, restroom facilities area, communal gathering space etc.

2.7.4 Make sure all text on signage is legible and easy to read. Some signage may need to be in a secondary language if necessary.

2.7.5 Make sure all text and graphic imagery on signage is in simple, neutral colors. Avoid red.

2.7.6 Make sure signage construction materials minimize glare and reflection.

2.8 Simple Topography

2.8.1 Try to avoid major changes in topography to maintain clear sightlines and minimize the chances of falling.

2.8.2 Utilize guidelines laid out in the American Disabilities Act (ADA) to maintain accessible circulation.

2.8.3 Try to minimize large flights of stairs which may be challenging for some users due to physical disability.

2.9 Minimize Openness and Exposure

2.9.1 Avoid large areas of pavement without vertical features such as trees and perimeter walls. (No more than 15-20 feet of open exposure.)

2.9.2 Avoid large areas of shorter vegetation such as lawn without some vegetative buffer or furniture buffer.

2.9.3 Allows entryways to have a sense of transition from high enclosure indoors to a “medium” enclosure with the use of overhead planes or shorter planters or planted areas nearby. Also provide comfortable seating in these areas.



Figure 5.3: Section illustrating minimizing openness and exposure (Image by author).

2.10 Regionally Influenced and Familiar

2.10.1 Looking at how outdoor spaces have been traditionally designed in the region may give users a sense of comfort and familiarity upon entering the outdoor space. Make sure to avoid imitating traditional design strategies that may conflict with the trauma-informed design guidelines.

2.10.2 Looking at internationally utilized design strategies for outdoor public spaces may also give users a sense of comfort and may make the space more legible to users.

2.11 Accessible to the Public

2.11.1 Trauma-informed outdoor public spaces should be open and available to all users of all ages to benefit from the healing power of nature. It is advisable to have established working hours.

2.12 Control

2.12.1 Giving users a sense of control over how they would like to use the public space, such as what path to take, where to sit, what to explore, may help re-establish some of the control that was lost due to their traumatic experience.

2.12.2 Giving users a sense of control also allows them to manipulate the space to maximize their enjoyment and relaxation experience. This could also allow users to tailor the space to their individual and family needs.

2.12.3 Specific examples of giving users a sense of control is providing moveable seating (make sure seating is heavy enough through not to be stolen or used as a weapon), clear path hierarchy with options to go on a larger public path or smaller more private paths, and providing spaces ranging from open and public to quiet and reflective.

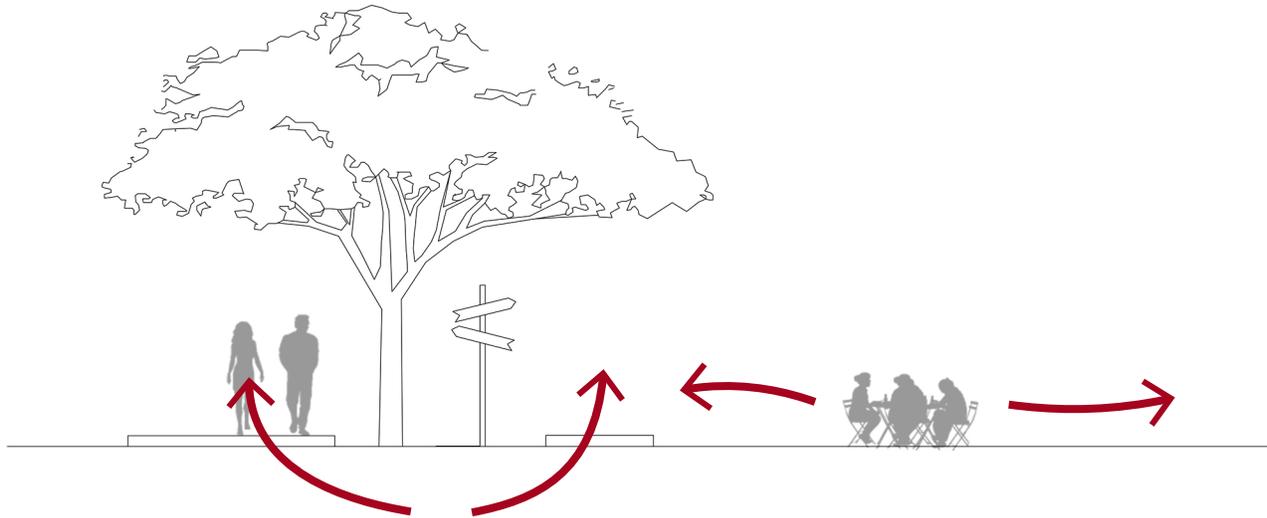


Figure 5.4: Section illustrating giving users a sense of control (Image by author).

2.13 Spirituality and Sacredness

2.13.2 Spirituality and sacredness is a powerful tool in healing victims of trauma. Spaces for memorials, quiet reflective thinking, and community gathering can be useful in creating a sense of spirituality and sacredness.

2.13.2 Understand local cultural practices to see what types of spaces or spatial elements may be required to practice spirituality, remembrance, and reflection.

2.14 Spaces Within a Space

2.14.1 Some public outdoor spaces can be very large. It may be possible to create smaller specifically designed spaces, such as a community garden or serenity area, within the larger public spaces to give users a range of activities to participate in and places to visit.

2.14.2 Smaller spaces within the larger public space may be good opportunities to create higher senses of enclosure and privacy. These spaces may also be locked or closed off at times for private uses such as to conduct therapy.

2.14.3 Make sure all smaller spaces follow all other trauma-informed design guidelines such as providing a clear perimeter and legible circulation.

2.15 Creativity

2.15.1 Creating places for creativity in the public space is important for challenging the brain to think about things other than the trauma or stress. This may be especially important for children's play areas.

2.15.2 Places for creativity for children and adults may include art-making or building areas, gardens, and open spaces for imagination-play with their families or other children.

2.15.3 Places for creativity are important in re-establishing self-esteem and a feeling of competence and accomplishment.

2.16 Easy Parking

2.16.1 Provide ample parking that is adjacent to the main circulation route and easily visible from the main roads leading to the site to avoid creating confusion and stress for users.

3 *Circulation*

3.1 Transition Areas

3.1.1 Having an area of clear transition between the indoors and outdoors, larger spaces and smaller spaces, social spaces and private spaces gives users the awareness that their environment is about to change and allows them to prepare accordingly.

3.1.2 Areas of transition should typically include seating.

3.1.3 Some areas of transition may include patios, building thresholds, archways, and covered seating areas.

3.2 One Main Path

3.2.1 There should be one large, main path running throughout the entire space, marked with clear directional and informational signage.

3.2.2 Having one main path or circulation route throughout the entire space allows for better spatial clarity and helps users better understand where they are to avoid unnecessary confusion or stress.

3.2.3 The main path should be at least 8-10 feet wide and should allow for two wheel-chair bound persons to pass each other by with ease.

3.2.4 The main path slope and design should follow all American Disabilities Act (ADA) design regulations.

3.3 Visible Exits

3.3.1 Main exits (at least two) should be clearly marked and visible from anywhere in the space.

3.3.2 Exits for any smaller or more private space should be clearly marked and visible.

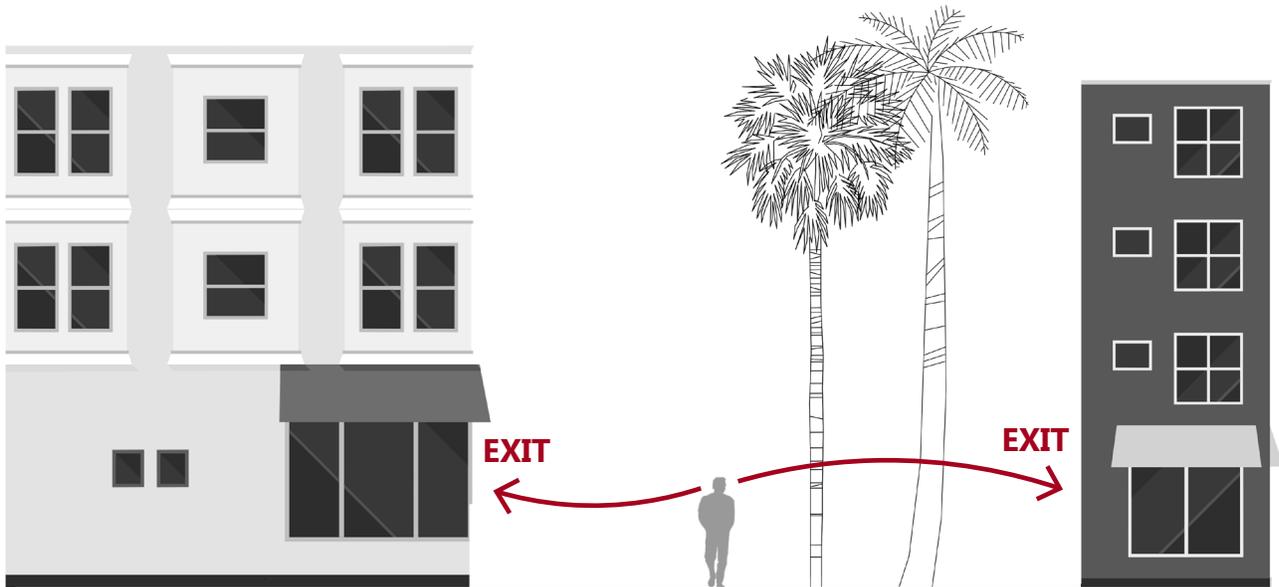


Figure 5.5: Section illustrating visible exits (Image by author).

3.4 Multiple Exits

3.4.1 At least two exits should be provided for ANY space (large or small, social or private) to provide users the ability to escape from the space if needed, even if one exit is blocked off or inaccessible.

3.4.2 All main exits should be clearly marked and proper signage should be used for smaller, private spaces to indicate exits.

3.4.3 Multiple exits (at least 2) should be used even in small secluded areas that are walled or gated off, surrounded by vegetation, etc.

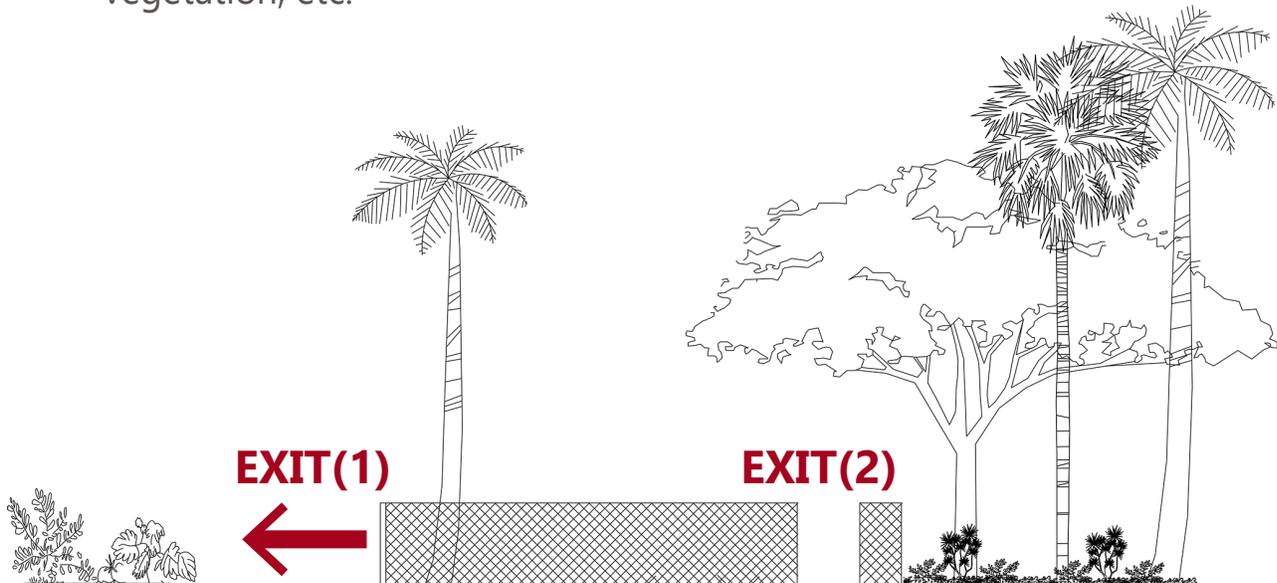


Figure 5.6: Section illustrating having multiple exits (Image by author).

3.5 No Hidden Corners

3.5.1 All pathways, or circulation routes, should be clear of hidden corners or hidden spaces to avoid users feeling that something may be able to jump out at them.

3.5.2 Hidden corners can be avoided by keeping pathways straighter and free from obstruction.

3.5.3 Pathways should not be walled or lined with tall shrubbery or other vegetation.

3.5.4 Tall built structures should not be constructed directly adjacent to pathways, particularly maintenance sheds or other small buildings.



Figure 5.7: Section illustrating having no hidden corners on the walkway (Image by author).

3.6 Seating by Entrances

3.6.1 Comfortable seating should be provided by at least all main entrances and exits.

3.6.2 Provide a range of social to private seating types.

3.6.3 Consider allowing seating to be moveable around entrances and main circulation areas.

3.7 Clear Path Hierarchy

3.7.1 Having clear path hierarchy creates better spatial clarity.

3.7.2 Clear path hierarchy is essential in providing users indicators of options for finding spaces of both social interaction and private reflection.

3.7.3 Clear path hierarchy includes clearly indicating between the main path through the entire space and other secondary and tertiary paths that may lead to different areas.

3.7.4 Smallest paths still should maintain the 3 foot minimum required by the American Disabilities Act (ADA).

3.7.5 Path hierarchy may also be indicated with the use of different materiality. Make sure path materiality is acceptable to the American Disabilities Act (ADA) regulations.

3.8 Opportunities for Exercise

3.8.1 Circulation routes can be great opportunities for exercise and walk and talk therapy. Make sure paths are wide enough for groups of people to run/walk by each other.

3.8.2 Utilize guidelines laid out in the American Disabilities Act (ADA) to maintain accessible circulation but also creating routes that may be more challenging for users to promote opportunities for more challenging exercise.

3.8.3 Consider creating some pathways or circulation routes with a range of terrain for additional exercise challenge.

3.8.4 Make sure any freestanding outdoor exercise equipment is positioned along American Disabilities Act (ADA)-approved paths.



Figure 5.8: Section illustrating opportunities for exercise along walkway (Image by author).

4 *Hardscape*

4.1 Minimize Glare

4.1.1 Minimize glare on all hard surfaces.

4.1.2 Avoid surfaces that may create unnecessary reflection of light.



Figure 5.9: Section illustrating minimizing glare (Image by author).

4.2 Simple Textures

4.2.1 Maintain simple textures for hardscape materials to avoid unnecessary stimulation or distraction.

4.2.2 Using simple textures in materiality choices, such as sand, matte concrete, gravel, etc. help to avoid surfaces that could produce glare or sharp contrast from shadows or other distracting visual stimulants.



Figure 5.10: Section illustrating keeping hardscape textures simple (Image by author).

4.3 ADA Approved Paving

4.3.1 All paving materials should be approved by the American Disabilities Act (ADA).

4.3.2 Paving materials should be designed to be accessible to all users but also minimize high contrast and glare (see 4.1).

4.4 Avoid Large Concrete Structures

4.4.1 Large concrete structures may seem visually overwhelming to a highly stressed person. Their gravity and weight can seem too overpowering to a person who may already feel powerless.

4.4.2 Large concrete structures can feel very institutional and could initiate re-traumatizing memories.

4.4.3 If large concrete structures are necessary, mitigate their visual impact with human-scale vegetation and smaller hardscape structures.

4.5 Varied, Ample Seating

4.5.1 Provide users with a variety of seating options, including both social and private, movable and non-movable seating arrangements.

4.5.2 Provide some seating options that are more prominent and open to the public and some options that are more secluded and allow for private reflection and intimate conversations.

4.5.3 Provide seating for larger groups that may be used for community events or group therapy sessions.

4.5.4 Seating should not be too exposed and should have a sense of cover and protection.

4.5.5 Seating should not have any places where something could be visually hidden. This may trigger a stress response from people who may see that something harmful could be hidden there. Simple, minimalistic designs are preferable.

4.6 Moveable Seating

4.6.1 Provide moveable seating options, especially in larger open areas.

4.6.2 Provide a range of social to private seating types.

4.6.3 Moveable seating may allow a user to create their own space or “escape.”

4.6.4 Giving users the option to use moveable seating can give them a sense of control that may have been lost in a traumatic experience.

4.7 Overhead Planes

4.7.1 Creating overhead planes allows a user to feel secure in their surrounding and that nothing can attack them from above. It is also important that the overhead plane not be too constricting and create a sense of claustrophobia.

4.7.2 Overhead planes can be created out of anything from tree canopy to built structures and art installations. Be aware of overly-stimulating built elements.

4.7.3 Overhead planes can be especially important in creating secluded, private settings while maintain clear sightlines.

4.7.4 Overhead planes are also especially important in transition areas or in providing shelter from extreme weather elements, while still allowing users to make use of the outdoor space.

4.7.5 Provide at least one covered, sheltered area, preferably with seating.

5 *Vegetation*

5.1 No Large Shrubs

5.1.1 Avoid using large shrubs or other tall vegetation that may block sightlines or create hidden spaces.

5.1.2 Some shrubs may be used of dense enough that nothing can be stowed or hidden in them.

5.2 Lush and Naturalistic/Native

5.2.1 Utilize a regional planting palette.

5.2.2 More naturalistic planting design can create more of a calming, soothing, relaxing effect on users.

5.2.3 Lush, full planting palette conveys life and vitality. Strive to create a planting palette that is full, healthy, and conveys the natural regional environment.

5.3 Simple Colors

5.3.1 Utilize a simple, naturalistic, planting color palette. Avoid using highly stimulating colors such as red and orange, which may provoke traumatic memories of fire, violence, blood, explosives, etc.



Figure 5.11: Section illustrating using simple, naturalistic colors for plants (Image by author).

5.4 Shaded Microclimates

5.4.1 Providing comfortable outdoor areas is very important for highly stressed people. Providing plenty of shade, especially in regions with very hot climates, is important.

5.4.2 Provide dense shade that can create a cooler microclimate but also is not spotty and does not create stimulating high contrasting patterns on the ground.

5.4.3 Provide seating in these shaded microclimates.

5.5 Screening (Eye Level or Below)

5.5.1 Vegetation can provide a good, permeable screen to create more intimate, private spaces. Make sure screening does not impede sightlines above 3-4 feet or create a sense of claustrophobia.

5.5.2 Use smaller shrubs and medium-height grasses and forbs to create a permeable screen.

5.5.3 Vegetative screens can also be used to lessen the visual impact of built structures such as walls, gates, or maintenance buildings.

5.5.4 Screening is important for areas intended for small group events as well.

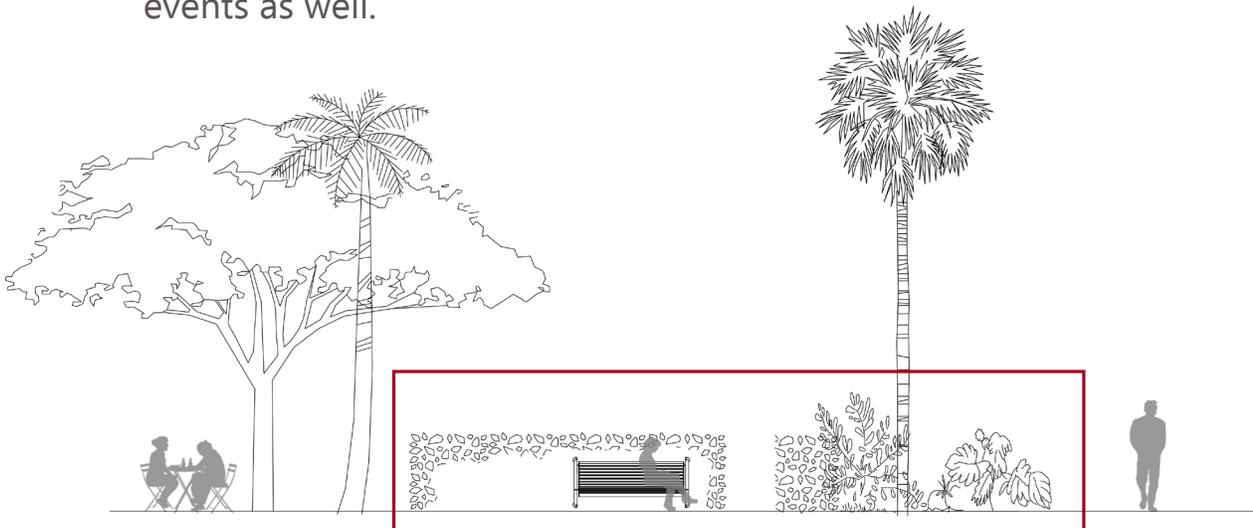


Figure 5.12: Section illustrating using vegetation as screening (Image by author).

5.6 Ample “Green”

5.6.1 Use more of the color green (soft, muted, naturalistic shades of green) in planting and in hardscape design.

5.6.2 “Green” design elements can especially be utilized in regions where lush planting areas are less probable.

5.7 Minimize Strong Scents

5.7.1 Avoid using plants that give of strong, stimulating scents. These may be too overwhelming for a user that is highly sensitized to their surrounding environment.

5.7.2 Some scents that are subtle and can only be sensed within close range to the plant can provide welcome distraction and positive sensual stimulation for users.

5.8 Privacy

5.8.1 Vegetation can provide important areas for giving users their privacy. Use screening shrubs and grasses as well as tree canopy to create smaller areas of privacy for self-reflection, individual or small-group therapy, or intimate conversation.

5.8.2 Vegetation can also be used to buffer external sounds and activities from nearby areas to create a better private environment.

5.8.3 Make sure vegetation intended for privacy does not impede visual sightlines or the safety of users.

5.8.4 Make sure private, secluded areas are not near children's play areas to avoid children getting lost or separated from their parents.

5.9 Close Contact

5.9.1 Create planting areas or planters that are able to be touched and physically interacted with by users. This sensual stimulation may allow users to be positively distracted from their constant awareness of their surroundings.

5.9.2 Avoid using any plants that may cause injury or sickness to any user.

5.10 Sound Mitigation

5.10.1 Vegetation and vegetated berms or walls are very effective in mitigating audial stimulation. This is especially important for private, reflective areas.

5.10.2 Avoid creating planting for sound mitigation that may create hiding spots or impede sightlines.

5.10.3 Dense shrubs, grasses and trees may be able to re-direct sounds waves. Plantings do mitigate and direct sounds better when used with the topography.

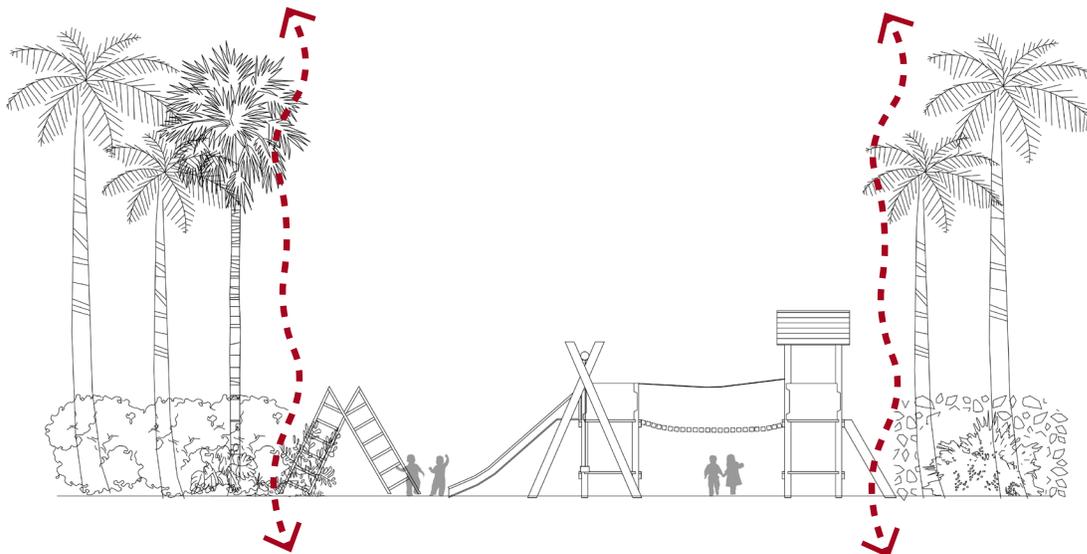


Figure 5.13: Section illustrating using vegetation for sound mitigation (Image by author).

5.11 Gardening

5.11.1 Gardening in rural and urban spaces can give users a sense of ownership in the space and allow them to feel a renewed sense of purpose.

5.11.2 Small gardens should be designed with the trauma-informed guidelines mentioned and a very clear intent of what is private and what is public.

5.11.3 Gardens should be designed to fit the needs of the local community as well as the individual needs of the user. Feedback from community members and garden users is essential in creating a useful garden.

5.11.4 Provide social spaces around the garden so users can interact and connect with other users.

5.11.5 Also create small areas of privacy and escape adjacent to garden for users who may need to step away to recollect themselves.

5.12 Urban Farming

5.12.1 Urban farming efforts may also give users a renewed sense of purpose.

5.12.2 Urban farming efforts may be incorporated into denser, urban public settings.

5.12.3 Provide an area near the urban farming effort for farmers and visitors to interact.

6 *Play*

6.1 Spaces For Different Ages

6.1.1 Since many different users go to public spaces it is important to provide “play areas” for users ranging from toddler to adolescent age (1-18) with older users having a sense of separation from younger users.

6.1.2 Places for parents to safely supervise their children and where they can maintain visual contact at all times is essential.

6.2 Quiet Play v. Active Play

6.2.1 Create areas for children and adolescents to engage in active play with other users as well as engage in quiet, reflective play to give children the opportunity to get away from the noise and energy.

6.2.2 Quiet play areas still need to be supervisable by parents but may have a sense of independence for the user.

6.2.3 Active play areas may include traditional play equipment (see 2.3 for play equipment design considerations) and allow children to interact with each other and their families. Quiet play areas may include smaller play equipment, sand boxes, places to challenge themselves and build things, or places to interact with nature.

6.3 Promote Exercise

6.3.1 Play spaces should promote the opportunity for children and adolescents to exercise and challenge themselves.

6.3.2 Create places for children to climb, crawl, jump, run, and walk so they can participate in a range of active activities.

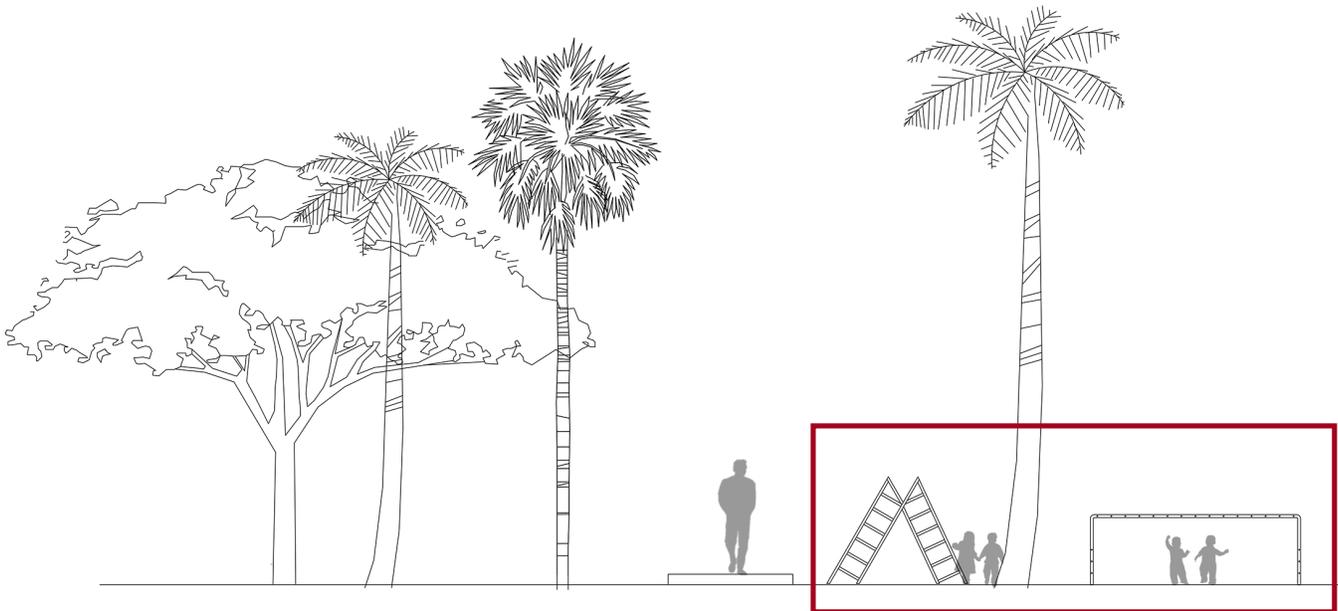


Figure 5.14: Section illustrating promoting exercise in children's play areas (Image by author).

6.4 Simple Colors

6.4.1 See 2.3 and 5.3

6.5 Nature-play

6.5.1 Nature-play design elements can allow children to engage with their imagination and creativity, which may distract them from other challenges, stimulants, or fears that they may be facing in their environment.

6.5.2 Nature-play designs may include wooden logs and stumps, climbing areas, natural streams, sand or kinetic sand areas, etc. The intention is to let children manipulate and engage with their environment safely and creatively.

6.6 No Hiding Spots

6.6.1 Children and parents who are already highly stressed need to maintain visual contact with each other. Avoid creating hiding spots where that visual contact could be lost.

6.6.2 Avoid large play structures that have many blind spots for parents.

6.6.3 Avoid large, dense planting and vegetation in play areas.

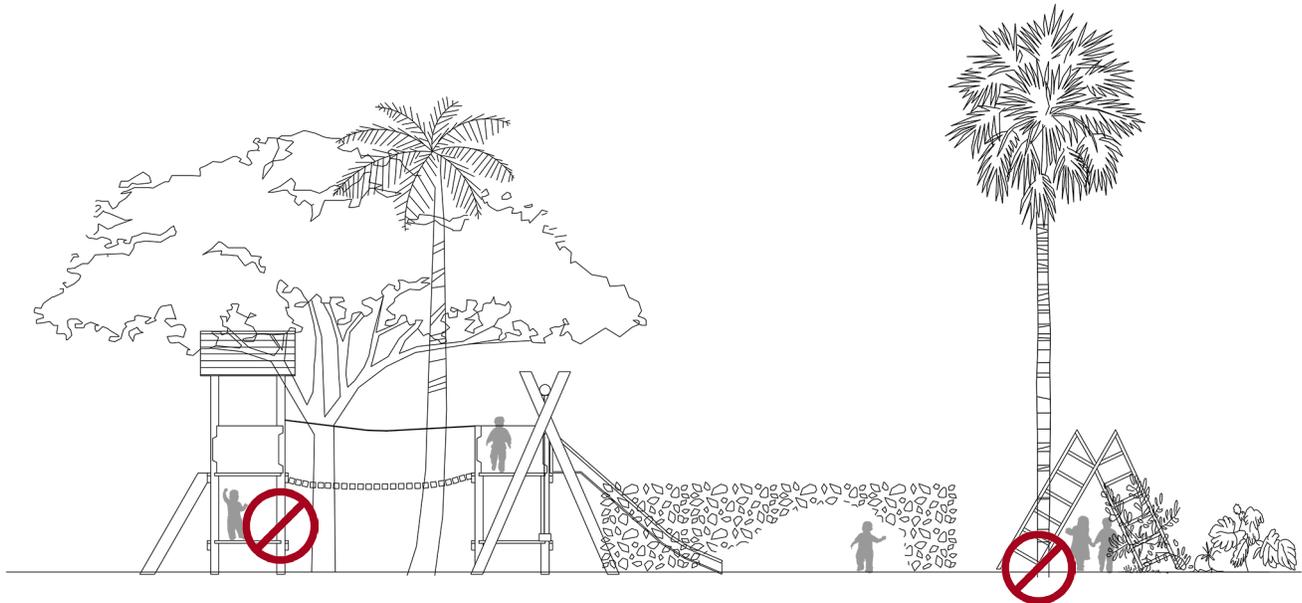


Figure 5.15: Section illustrating avoiding hiding spots in children's play areas (Image by author).

6.7 Parent Seating

6.7.1 Provide comfortable seating areas for families directly adjacent or inside of play areas. Consider implementing additional adult activities or activities for older children in these areas as well.

6.7.2 See 4.5

6.8 Sound Mitigation

6.8.1 Mitigating sound stimulants from play areas (such as screams and loud laughter) is important for maintain the integrity of the other quiet areas for play and reflection. Utilize sound mitigation techniques (see 5.10.3) to reduce the audial impact of play areas.

6.8.2 Vegetation, topography, and built structures can also be used to buffer external sounds and activities from nearby areas to create better nature-play environments.

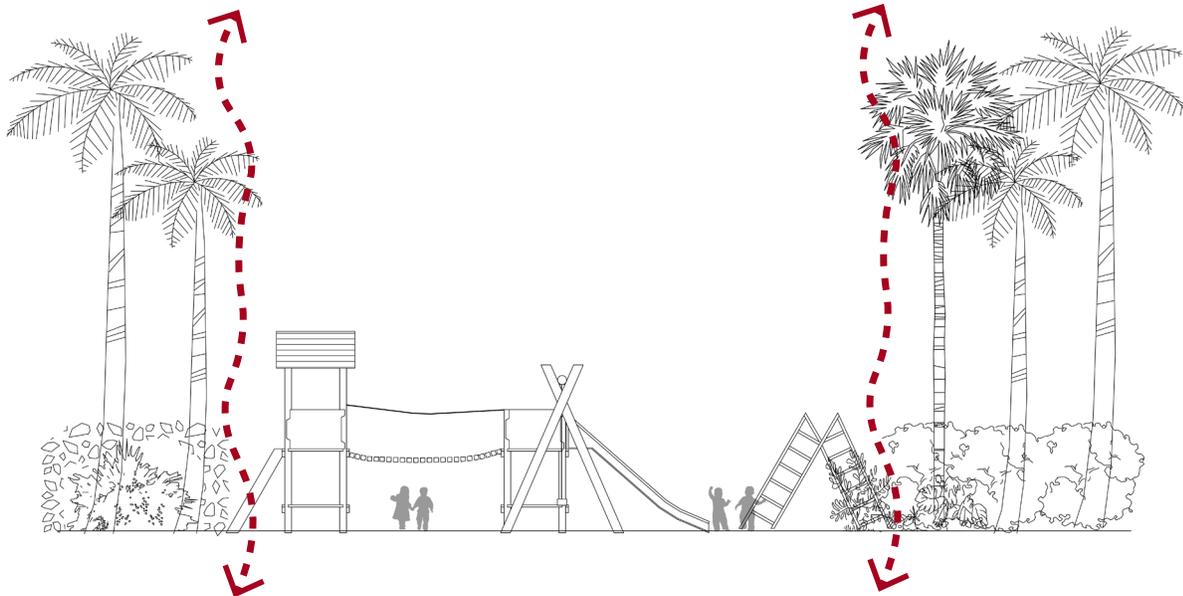


Figure 5.16: Section illustrating mitigating loud sounds from play areas (Image by author).



Figure 5.17: Children's play area at Al Azhar Park in Cairo (Image by author).

7 Lighting

7.1 Ample Security Lighting

7.1.1 Security lighting is essential for giving users a sense of safety and security during evening hours. Provide ample security lighting to avoid creating any dark or hidden spots in the space which may create unnecessary uncertainty or stress for users.

7.1.2 Make sure security lighting is not too bright or concentrated. Use light diffusing techniques and proper fixtures to avoid creating discomfort or stress for users.

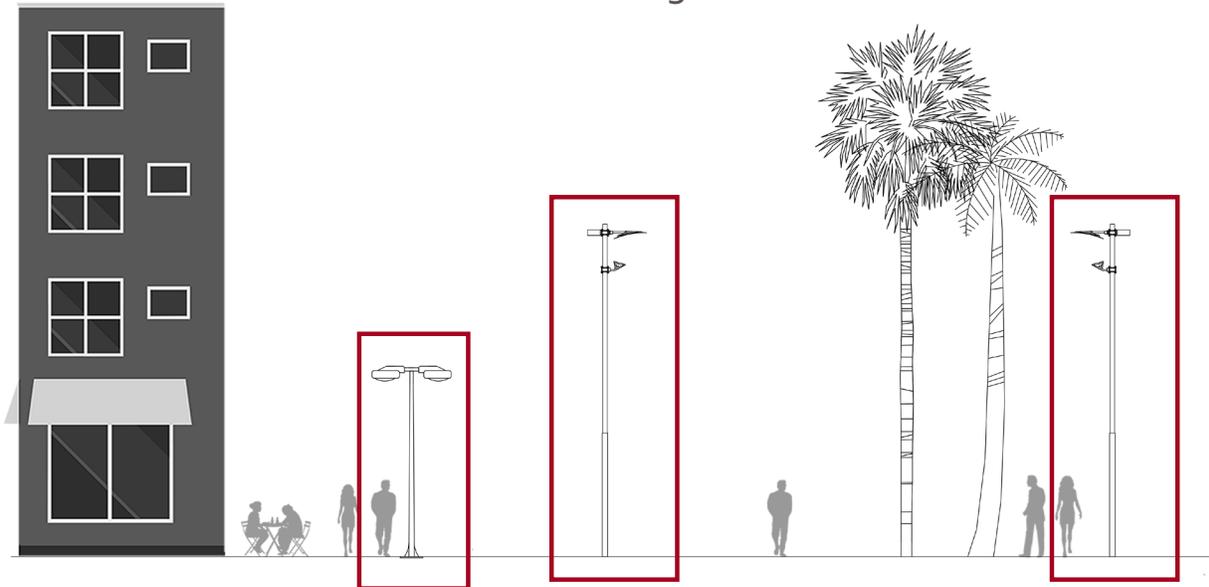


Figure 5.18: Section illustrating providing ample security lighting (Image by author).

7.2 Minimize Glare

7.2.1 Avoid using fixtures or lighting methods that may create glare.

7.2.2 Glare can be reduced by preventing the bulb from being clearly visible by choosing a fixture that shields the bulb from direct view.

7.2.3 Glare can also be minimized by reducing reflective surfaces.

7.3 Subtle, Soft Lighting

7.3.1 Use soft, subtle lighting fixtures such as human-scale posts, bollards, and landscape lighting.

7.3.2 Integrate lighting into the landscape as much as possible to allow light sources to blend into the surroundings.

7.3.3 Avoid creating stark, high contrast patterns with artificial lighting.

7.4 Avoid Colored Lighting

7.4.1 Avoid using brightly colored lighting. Utilize a natural-light color palette that gives off soft, warm glows.

7.4.2 Do not use red or orange lighting.



Figure 5.19: Nighttime security lighting along main path at Al Azhar Park in Cairo (Image by author).

8 *Water Features*

8.1 Soft Sounds

8.1.1 Use water features that create soft background noise.

8.1.2 Avoid using water features that create roars or rushing sounds such as large water falls.



Figure 5.20: Section illustrating using water features that create only soft sounds (Image by author).

8.2 Reflecting Pools

8.2.1 Quiet reflecting pools are an effective way to give users access to water without creating too much sound.

8.2.2 It is good to create a sense of privacy around reflecting pools. Reflecting pools are good to use in quieter, more private areas for quiet contemplation, personal reflection, or small intimate conversations.

8.2.3 Allow vegetation such as water plants and grasses to be incorporated into the design of a reflecting pool. This may allow the space to have a more natural aesthetic and keep the water from becoming too static.

8.3 Quiet Fountains

8.3.1 Quiet fountains can allow the space to have a range of aesthetics from a more ordered, artificial look to more naturalistic while also allowing for soft background noise to fill the space. This may be effective for covering other undesirable sounds.

8.3.2 Be very careful that the sound level created by the fountain does not become too overpowering.

8.4 Naturalistic Streams

8.4.1 Naturalistic stream water features may be very effective in creating soft, bubbling background noise and creating a naturalistic aesthetic for the space.

8.4.2 Naturalistic streams can also provide a great tactile experience for people to physically interact and play with the water.



Clockwise from Left: Figure 5.21: Reflecting Pool; Figure 5.22: Quiet fountain at The Green Road in Bethesda; Figure 5.23: Restored stream water feature at The Green Road in Bethesda

8.5 Accessible From All Areas

8.5.1 Ensure that all users may have access to water feature elements in both social and private areas.

8.5.2 Make sure all pathways and circulation areas follow American Disabilities Act (ADA) regulations.

8.6 Private and Public

8.6.1 Water features are effective in both public and private settings. Public water features such as larger fountains or ponds as well as small play fountains or splash pads can provide a place for families and visitors to connect and interact with each other. Private water features can allow for quieter activities and relaxation.

8.6.2 Make sure public water features do not feel too exposed (avoid plaza-like exposure) and private water features do not feel overly enclosed as to give a feeling of claustrophobia.

8.6.3 Provide comfortable seating in both private and public water feature areas.

8.7 Visible From Entrance

8.7.1 Make sure water features are visible from the main entrances or that there is very clear signage indicating the location of both private and public water feature areas.

8.7.2 Use a map or other directional signage to indicate where water features may be located throughout the entire public space.



Figure 5.24 Section illustrating water feature being visible from the entrance (Image by author).

8.8 Shallow

8.8.1 Make sure all water features are shallow and do not create a drowning hazard for any visitors, especially in areas for children and adolescents.

8.8.2 Provide (subtle) physical barriers around water features if absolutely necessary to avoid creating a drowning hazard.

9 *Maintenance*

9.1 Minimize Neglect

9.1.1 Minimize neglect of vegetation or hardscape to maintain the vivacity and liveliness of the space. This may keep users from feeling down or unnecessarily stressed due to the neglected appearance.

9.1.2 Minimizing neglect is very important to avoid re-traumatization of a person impacted by trauma due to the neglect or abuse that they may have experienced themselves.

9.2 Safety

9.2.1 Make sure all maintenance tools and equipment are kept away from park users so they cannot harm themselves or others.

9.2.2 Make sure that all maintenance personnel follow safety guidelines and operate heavy equipment during off hours to avoid unnecessary loud sounds or hazard to users.

9.3 Non-profit Sponsoring

9.3.1 Consider appealing to non-profit organizations (such as the Aga Khan Trust for Culture or USAid) for construction and maintenance needs of trauma-informed public spaces.

9.4 Patient/User Participation

9.4.1 Consider integrating patient or user participation into the maintenance routine to allow them to better connect and interact with the natural elements of the space. This may also allow them to have a renewed sense of purpose and commitment to the space.

9.4.2 Keep in mind extra safety precautions if patients/users are integrated into the maintenance routine.

9.5 Secure Place for Tools and Storage

9.5.1 Make sure a secure storage area is provided for all tools and storage used for the maintenance routine.

9.5.2 Consider mitigating the visual appearance of a maintenance or storage area with vegetation.

6

**Rest and Reconnect,
a Walk Along the Nile**

6.1 *Design Narrative and Intent*

The Nile River has been an invaluable resource for the Egyptian civilization from the beginning. Yet, this resource is now mostly unavailable to most Caireans. Rest and Reconnect, A Walk Along the Nile strives to reopen the Nile River to all Caireans and utilize its inherent therapeutic properties by creating a public park, consisting of variety of passive and active spaces along its banks that serve the many users that may visit. The design specifically addresses the needs of users who may be affected by severe stress and traumatic stress by following set design guidelines that were created to relieve and reduce the impact of challenging stimulants that inherently exist in traditional outdoor public spaces. The design also strives to create a variety of restful, relaxing and recreational opportunities for visitors so that all people of all ages may enjoy the park. The design includes a boardwalk directly along the edge of the Nile, public and private seating areas, social spaces for community and group therapy events, private areas for reflection and intimate conversation, and play and exercise areas for families to have fun together. Creating comfortable seating with a range of vantage points and degrees of seclusion was also a priority in the design so that users could find spaces to sit that most suit their needs.

*all figures by author unless otherwise noted

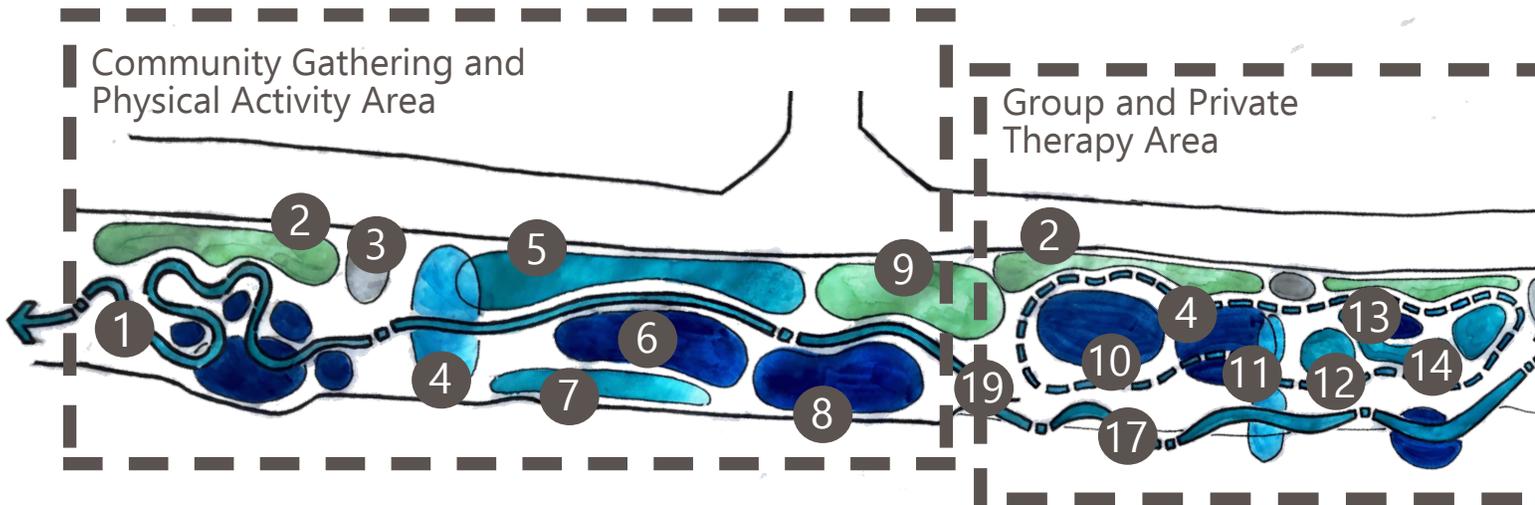
Additional attention to design details was another essential consideration in this project so special attention was made to color palette and paving material selection as well as lighting and maintenance. Users of the proposed park along the Nile would also have access to many naturally de-stressing landscape elements such as water features, lush native planting designs, and as mentioned earlier, the Nile River itself. These elements also offer their inherent aesthetic beauty which creates an overall pleasant experience for visitors.



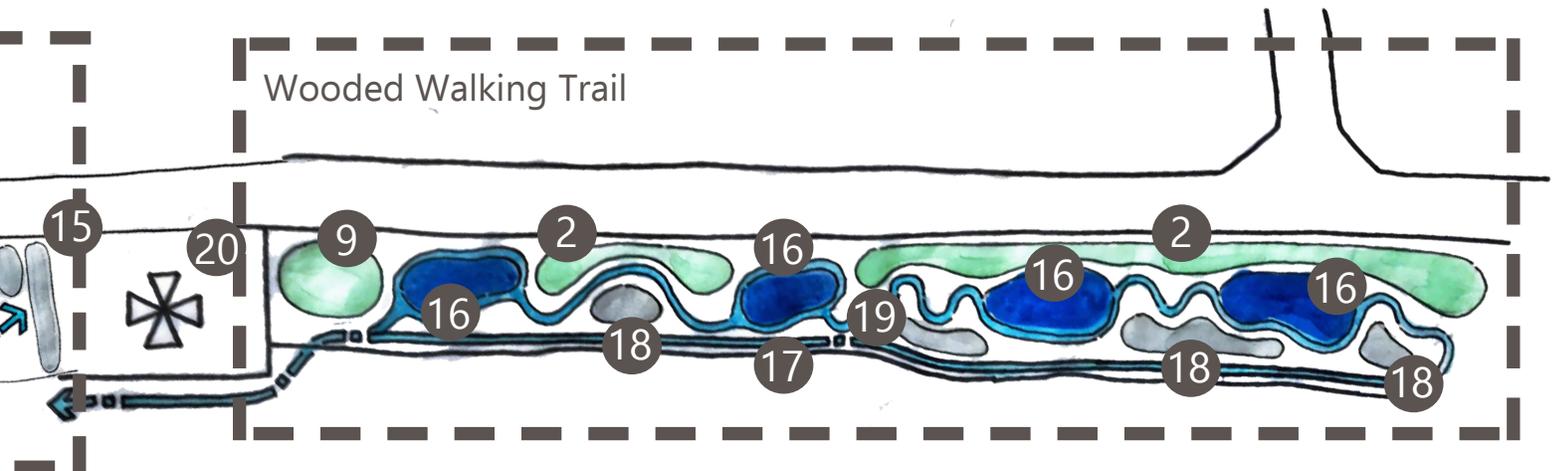
6.2 *Design Graphics*

The design graphics for this project focus on the main overall concepts as well as detail design necessary to create a space that provides relief for users impacted by severe stress and traumatic stress. The overall design is divided into three main focus areas; 1) the Community Gathering and Physical Activity Area, 2) the Private and Group Therapy Area, and 3) the Wooded Walking Trail. The design utilizes the natural features of the Nile Riverfront to create these three main spaces. The three main spaces also feature private and public areas to accommodate the need for a user to “get away from it all” if necessary.

Riverfront Park Conceptual Masterplan



- | | | |
|----------------------------------|----------------------|-------------------|
| 1 Exercise Trail | 9 Sloped Entry Berm | 17 Boardwalk |
| 2 Vegetated Sound Buffer | 10 Active Play Area | 18 Planted Area |
| 3 Maintenance Area | 11 Passive Play Area | 19 Main Path |
| 4 Water Feature | 12 Group Therapy | 20 Helicopter Pad |
| 5 Vegetated Private Seating Area | 13 Private Therapy | |
| 6 Open Public Gathering | 14 Gardening Area | |
| 7 Private Seating by the Nile | 15 Lookout | |
| 8 Public Seating by the Nile | 16 Oasis | |



Community Gathering and Physical Activity Area



Physical Activity Area Plan

Scale: 1"=50'

0 25 50 100



The Community Gathering and Physical Activity Areas serves to promote both mental health and physical health. The Physical Activity Area serves to allow visitors to improve their overall health by promoting both private and social physical activity opportunities. The community gathering area acts as a social space for visitors to enjoy being with others but also includes private seating or "getaway areas."

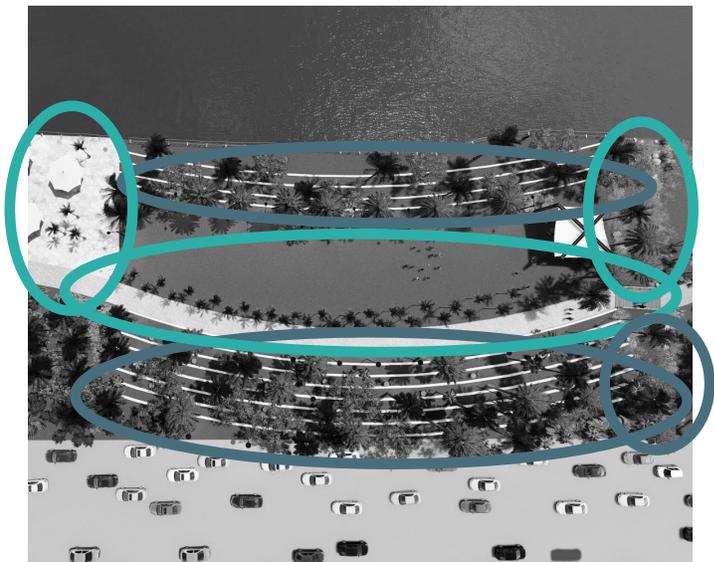


Community Gathering Area Plan

Scale: 1"=70'



Diagram of Spatial Flexibility



Private 
 Social 



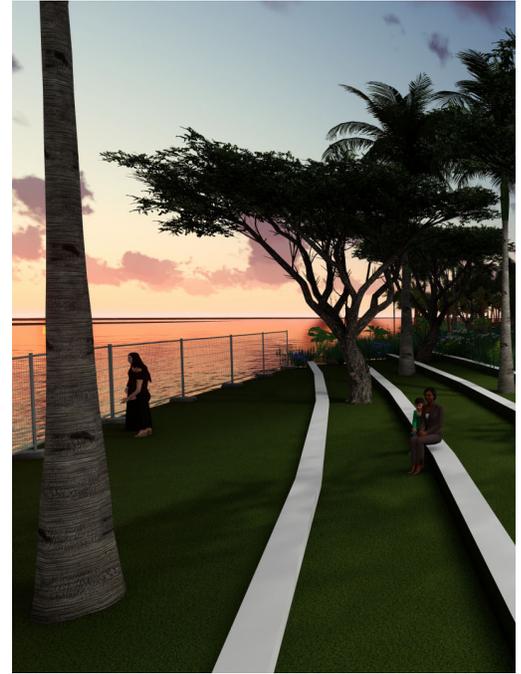
Group Exercise Pad



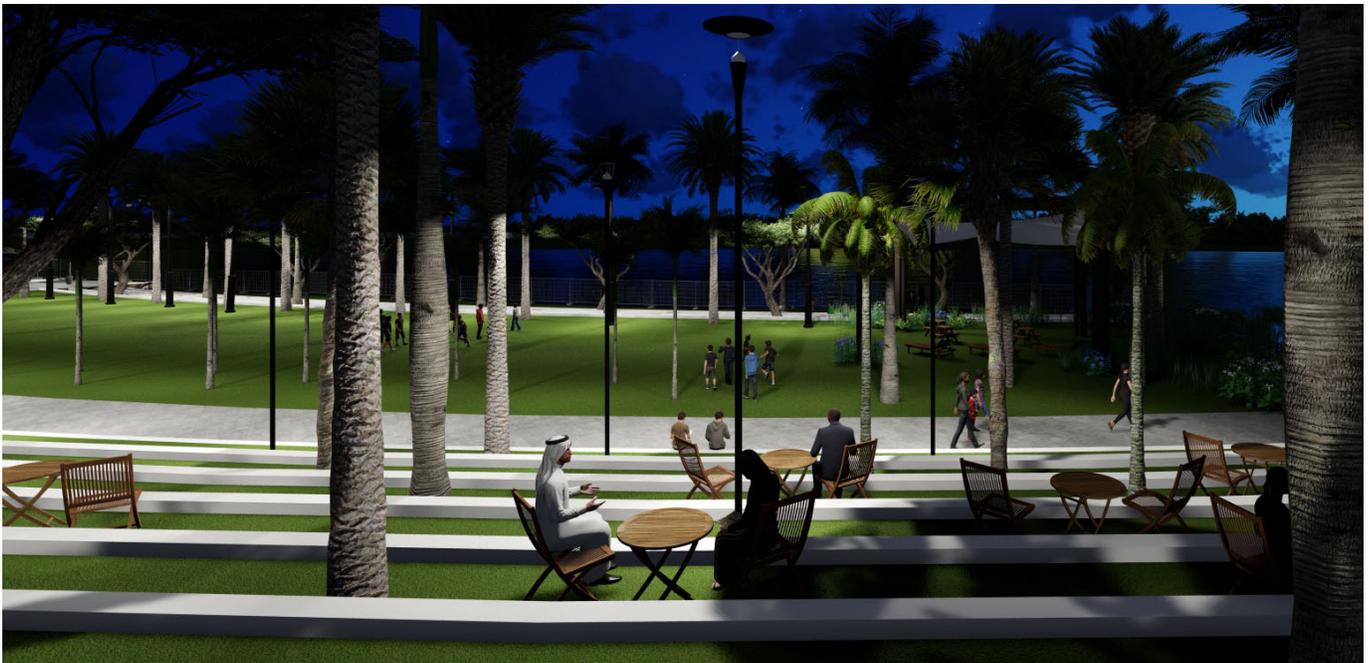
Private Exercise Area With Outdoor Equipment



Public Seating by Nile River



Private Seating by Nile River



Terraced Private Seating in Gathering Area

Private and Group Therapy Area



Private and Group Therapy Plan

Scale: 1" = 100'



The Private and Group Therapy Area serves many important purposes. Overall, it acts as many different spaces with different purposes that work together to provide places for people to interact with each other or their therapists or if necessary, spend time alone to reflect and reconnect with themselves and nature. This area also acts as simply a public park area for people to get together and have fun. This area includes group and private gathering spaces, both open to the sky and covered, active and passive play areas for children to connect with each other and adults in their lives, and a raised boardwalk along the Nile for people to access the riverfront as a healing resource.



Private Meeting Areas



Group Meeting Area



Active Play Area



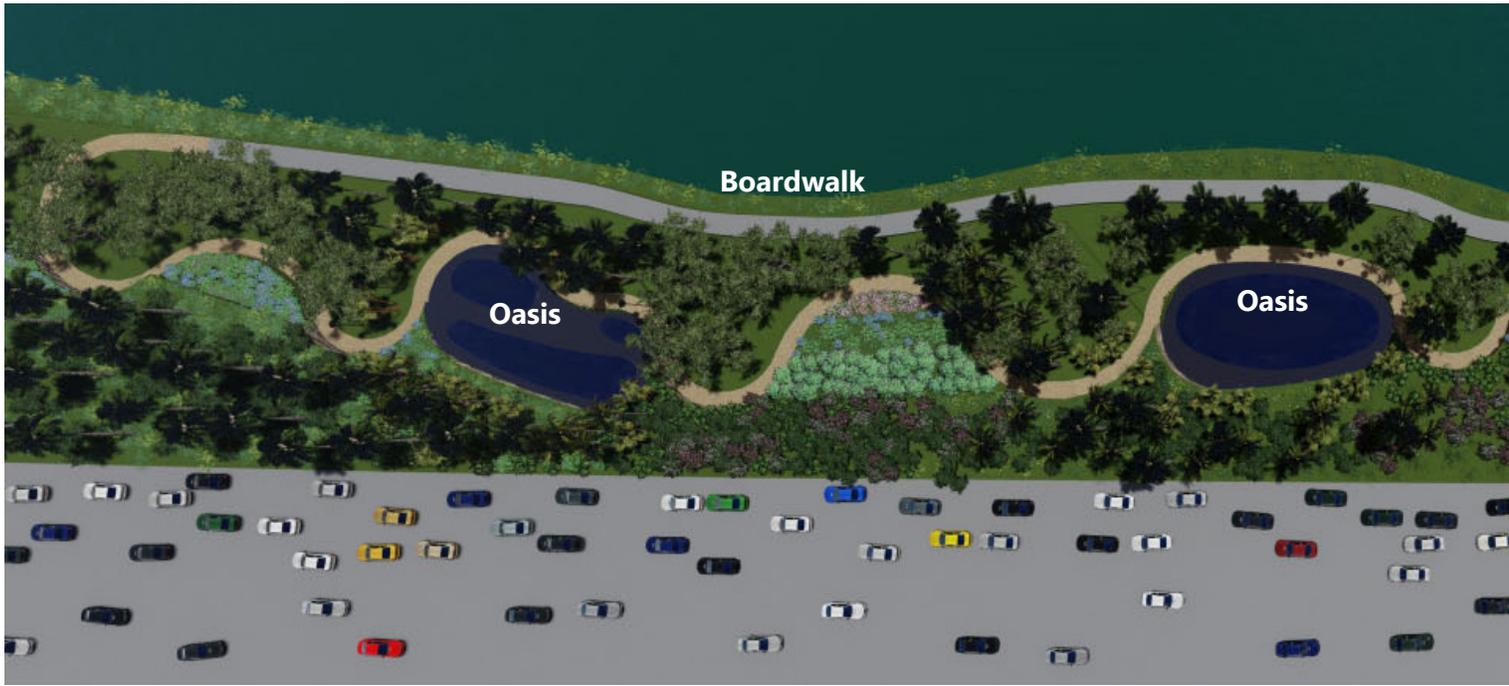
Passive (Nature) Play Area



Overhead View of the Group and Private Therapy Area

Wooded Walking Trail

The Wooded Walking Trail is the most passive area of the proposed design because it is intended to give users the most raw-nature experience at the site. The Wooded Walking Trail utilizes existing mature vegetation and tree canopy along the Nile to create a setting that feels like you're walking through a very "untouched," or "rustic" riverfront area. The trail meanders through areas of dense vegetation on either side of the trail and areas that open up to the sky, also called "oases" which give users the opportunity to re-orient themselves and relax along their walk or run.



Wooded Walking Trail Plan

Scale: 1" = 100'





Densely Wooded Walking Area



Boardwalk

Oasis

Oasis

**Sloped Entry
Berm**



Oasis in Daylight



Oasis at Night

Naturalistic Stream Water Feature



Bridge Branching the Gathering Area and Physical Activity Area Over the Stream



View of the Naturalistic Stream Feeding Into the Nile

7

Conclusions and Recommendations

Creating Trauma-informed Design

Designing for trauma-informed public spaces, whether indoor or outdoor, requires an understanding of many of the different sources of trauma affecting the intended users, which makes collaborating with not just mental health and design professional experts, but also the actual prospective users of the space essential. This will allow the designer to keep in mind the possible sources of trauma and their effect on the human mind and body throughout the entire design process from site analysis to material and furnishing selection. This was done in this project by receiving initial insight into the world of trauma and its impacts by speaking with professionals in that field but also hearing from people with direct experience in Cairo and the region. This effort is termed a “collaborative design process.” The collaborative design process was a vital goal of this project’s research design. Speaking with professionals in mental health, therapeutic design, political conflict, and refugee care allowed for a better understanding of the very specific, individual challenges, reactions, and daily life experiences that a person affected by trauma might have, which are not available just by consulting the literature. This interview process also allowed for a better understanding of the very extensive range of trauma sources that can occur in this world, especially by geographical differences and by large-scale historical traumatic events which can still have an impact in the

future. Without this invaluable insight from a collaborative design process, this project would not have been able to significantly contribute to the knowledge-base and understanding of the considerations for trauma in therapeutic design. Therefore, the collaborative design process, mentioned to be a very important design strategy in the literature, was successfully applied to this project. However, due to time and resource constrictions, further efforts to include more stakeholders and patient or patient representatives is necessary to create a fully trauma-informed design. Some of these stakeholders may include patients directly impacted by trauma (with a professional properly trained to work with this population), family members of those impacted by trauma, nurses and caregivers, city planners and policy-makers, American Disabilities Act (ADA) Coordinators, etc. to hear input from the full range of people who may be able to provide insight into how to make the public space better for everyone, especially those dealing with traumatic stress. Speaking with specifically professionals in mental health, therapeutic design, political conflict, and refugee care also gave a solid foundation for understanding the trauma that users in a region like Cairo may have experienced but in a future trauma-informed project, the interview participants must be manipulated and tailored to the region or city that the design is proposed for.

Projective Design

The Projective Design portion of this project also addressed the needs and design process specifically required to create a therapeutic design project located in Cairo. This meant that the design and design process was intended to create a therapeutic space for users impacted by trauma but also a space that fit into the vernacular of Egyptian public space and satisfied the needs of Egyptian citizens and visitors. This design process included considerable site inventory and analysis of a region that was not immediately accessible throughout the initial design and information-collecting process, creating a unique challenge in a project intended to provide therapy for its users and requiring some assumptions to be made that were later confirmed by an actual visit to Cairo. The site inventory and analysis was essential in creating a design that would work along the Nile River and that would also speak to the very important contextual influences around the site. The design for Cairo also had to consider the physical, social and symbolic challenges and barriers that are present in Cairo and understand how to work around them. Therefore, even though the design guidelines created in this research project are intended to be applicable to many different sites and regions, the Projective Design was a pilot project

implementing those guidelines but was also very situated in Cairo and focused on how to best implement the design proposal in Cairo. This means that if the design guidelines are to be applied to a project in a region different from Cairo, then the design process and design guidelines must also be very tailored to that specific region.



Figure 7.1: Mature vegetation along the Nile River in Cairo (Image by author)

Right now, Cairo does not have hardly any places intentionally created for people to gather and socialize, rest, or recreate and does not allow its citizens to freely experience nature's benefits. Traditional landscape design does address this need and includes many helpful design elements that may also provide stress relief to people impacted by trauma, especially when landscapes are addressing the basic need for greenspace in an urban environment. However, the manipulation of plants and water and other elements of the landscape specifically for people impacted by trauma allows more people to enjoy the benefits of public greenspace without fully compromising their already strained sense of safety and control of their environment. It allows traumatized people to be able to go to a public outdoor space with their friends or family with the variety of spaces and resources necessary to enjoy nature and try to re-build a lost sense of connection they may experience with themselves, their environment, and their loved ones.

Why is this better?

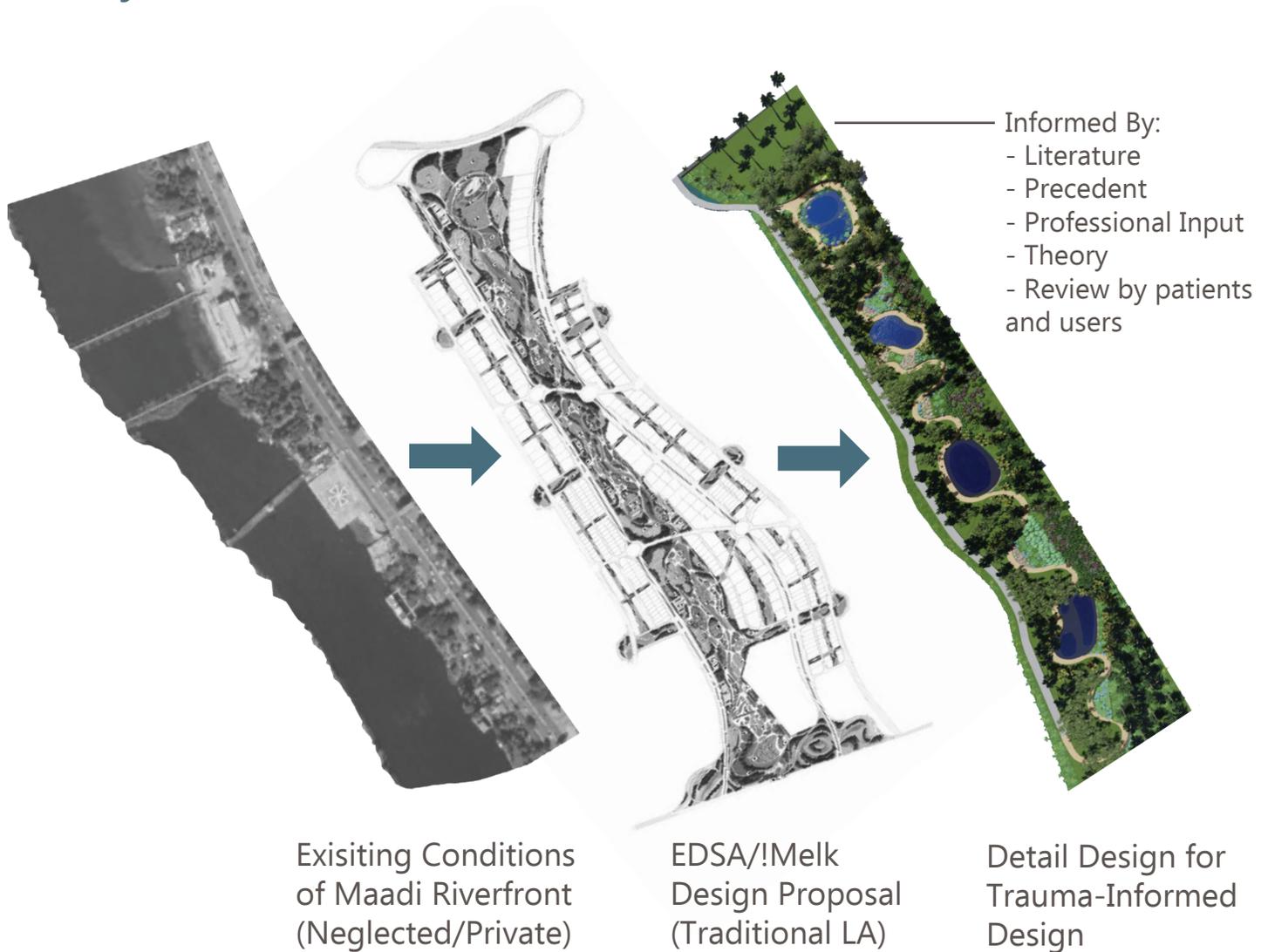


Figure 7.2: Diagram of current conditions vs. traditional landscape design vs. trauma-informed design (Image by author)

8

**Broader Applicability of
the Research**

Where Else Could This Matter?

The new information and ideas created in Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt can be applied to many different design projects and policies affecting public space users around the world. Specifically, this research project can be especially helpful in informing design projects of waterfronts, especially rivers or other linear parks and trails. Designing waterfronts to be trauma-informed is very important as water itself has many healing properties and it is important for all users to be able to access the healing properties of this resource. This research project can also be applicable to new public space projects in other North African countries. The strategy of inserting small designed public greenspaces on underutilized green areas could be an important thing for North African cities, or even other dense, congested cities around the world similar to Cairo, to consider. Green area is a valuable commodity in the North African region and making these spaces trauma-informed is essential due to the current instability and unrest in the area. The suggested planting palette and material selection for this project may also be especially helpful for other projects to consider in the North African Region.

Finally, the research from this project can be applied to the policy governing the design and creation of public space. Users impacted by trauma oftentimes have a disability that makes the public realm a very challenging place to be for them even though we may not visibly see it like a physical disability. Yet, it is understood that all people experience the public realm as they live their daily lives of going to work, school, the store etc including those impacted by trauma. Policy must consider this vulnerable population and their needs when it shapes the design or re-design of new public spaces. This is especially important for cities like Cairo, or for example, others in the African Green Cities Index such as Tunis or Nairobi, as they strive to be greener and healthier.

9

Future Research

What Could Be Next?

Future research on this topic could include how the design guidelines can be integrated into public policy and further development of the guidelines that consider feedback from city officials and city planners who most often work with policy. This area of research may also include how best to verbally and graphically present the design guidelines to public policymakers in order to make them most effective and allow them to be implemented quicker. Further research may also consider going into more detail with the design guidelines and consulting specialists in horticulture, lighting design, hardscape and paving design, etc. on what exactly could be the best plants, products, and designs for people impacted by trauma. This may also include reaching out to more mental health professionals to get their feedback on further design detail.

If a trauma-informed public outdoor therapeutic space is ever built, future research could also include conducting a Post-occupancy Evaluation to assess the effectiveness of the design guidelines and revise them accordingly. This may include asking users specifically impacted by trauma about their experiences in the space with the help of a trained mental health professional.

Finally, future research could consider how the design of any urban external outdoor space is designed and whether that may be better designed to provide relief to people impacted by trauma. This may include anything from building entryways and facades, to crosswalks, to sidewalks, etc. This may be especially important for how hospitals, clinics, and other health providers design the space around their buildings.

References:

- American Psychiatric Association, DSM-5 Task Force. 2013. *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. 5th ed. Arlington, VA: American Psychiatric Publishing, Inc.
- (APA) American Psychiatric Association. 2015. "Help with Posttraumatic Stress Disorder." American Psychiatric Association. <https://www.psychiatry.org/patients-families/ptsd>.
- Anderson, Brock, J. 2011. "An Exploration of the Potential Benefits of Healing Gardens on Veterans with PTSD." Master's Thesis. Logan, Utah: Utah State University. <http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1057&context=gradreports>.
- Arneberger, Arne and Renate Eder. 2012. "The Influence of Green Space on Community Attachment of Urban and Suburban Residents." *Urban Forestry and Urban Greening* 11 (1): 41-49.
- Attia, Sahar. 2011. "Rethinking Public Space in Cairo: The Appropriated Tahrir Square." Cairo, Egypt: Cairo University. http://www.cpas-egypt.com/pdf/Sahar_Attia/Rethinking%20Public%20Space%20in%20Cairo.pdf.
- Christian, Sena. 2014. "Farming Could Save Veterans, and Vice Versa." *Newsweek*, November 16. <http://www.newsweek.com/2014/11/28/farming-could-save-veterans-and-vice-versa-284621.html>.
- Cloitre, M., Courtois, C.A., Ford, J.D., Green, B.L., Alexander, P., Briere, J., Herman, J.L., Lanius, R., Stolbach, B.C., Spinazzola, J., Van der Kolk, B.A., Van der Hart, O. 2012. *The ISTSS Expert Consensus Treatment Guidelines for Complex PTSD in Adults*. Retrieved from <http://www.istss.org/>
- Cooper Marcus, Clare and Naomi A. Sachs. 2014. *Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Dana, Joseph. 2013. "D.I.Y. Urbanism and Cairo's Public Space Revolution." *Next City*, February 11, 2013. <https://nextcity.org/features/view/cairo-urbanist-revolution-tahrir>.
- Dean, Laura. 2015. "Turmoil in Egypt Takes Its Toll on Mental Health." *Public Radio International*, January 3, 2015.

- Dzhambov, Angel Mario and Donka Dimitrova Dimitrova. 2014. "Urban Green Spaces' Effectiveness as a Psychological Buffer for the Negative Health Impact of Noise Pollution: A Systematic Review." Noise and Health 16 (70):157–65.**
- Finn, Matthew A. 2014. "Posttraumatic Understanding: The Connections between Posttraumatic Stress and Environmental Design." Atlanta, GA: Perkins + Will. http://projects.perkinswill.com/files/PosttraumaticUnderstanding_2014.pdf.**
- Francis, Jacinta, Lisa J. Wood, Matthew Knuiman, and Billie Giles-Courti. 2012. "Quality or Quantity? Exploring the Relationship between Public Open Space Attributes and Mental Health in Perth, Western Australia." Social Science and Medicine 74 (10): 1570–77.**
- Frenzy3674. (2017, March 30). MyPTSD Forum: Anxiety, Panic, and Hypervigilance, "Hypervigilance and Crowds" [Msg 2]. Message posted to <https://www.myptsd.com/c/threads/hyper-vigilance-and-crowds.71754/>**
- Funk, Petra. 2015. Urban Streetscape Design. London, England: Design Media Publishing Limited.**
- Gabr, Hisham S. 2004. "Perception of Urban Waterfront Aesthetics along the Nile in Cairo, Egypt." Coastal Management 32 (2): 155–71.**
- Green Hearts Institute for Nature in Childhood. 2014. "What Is Nature Play?," 2014. http://www.greenheartsinc.org/Nature_Play.html.**
- Ghanem, M. M. Gadallah, F. A. Meky, S. Mourad, and G. El-Kholy. 2009. "National Survey of Prevalence of Mental Disorders in Egypt: Preliminary Survey." Eastern Mediterranean Health Journal 15 (1): 65–75.**
- Heather. (2011, January 12). MyPTSD Forum: Anxiety, Panic, and Hypervigilance, "How crowds can bother us?" [Msg 4]. Message posted to <https://www.myptsd.com/c/threads/how-crowds-can-bother-us.14190/>.**
- Herman Judith. 1997. Trauma and Recovery: The Aftermath of Violence- From Domestic Abuse to Political Terror. New York, NY: Basic Books.**

- Jacobs, Allan B. 1993. *Great Streets*. Cambridge, MA: Massachusetts Institute of Technology.
- Kessler, Ronald C., Sergio Aguilar-Gaxiola, Jordi Alonsoc, Corina Benjet, Evelyn J. Brometg, Graça Cardoso, Louisa Degenhardt, et al. 2017. "Trauma and PTSD in the WHO World Mental Health Surveys." *European Journal of Psychotraumatology* 8: 1–2.
- Kirmayer, Laurence J., Joseph P. Gone, and Joshua Moses. 2014. "Rethinking Historical Trauma." *Transcultural Psychiatry* 5 (3): 299–319. <https://doi.org/10.1177/1363461514536358>.
- Link, Jeff. 2016. "The Road to Evidence." *Landscape Architecture*, November 17. <https://landscapearchitecturemagazine.org/2016/11/17/the-road-to-evidence/>.
- Matthies-Boon, Vivienne. 2017. "Shattered Worlds: Political Trauma amongst Young Activists in Post-Revolutionary Egypt." *The Journal of North African Studies* 22 (4): 620–44. <https://doi.org/10.1080/13629387.2017.1295855>.
- Nordh, Helena, and Kjersti Ostby. 2013. "Pocket Parks for People: A Study of Park Design and Use." *Urban Forestry and Urban Greening* 12 (1): 12–17.
- Perkins, Michelle. 2011. "Soft Touch for a Silent Voice: Creating Outdoor Healing Environments for Veterans with Post Traumatic Stress Disorder." Master's Thesis. Eugene, Oregon: University of Oregon.
- Peschardt, Karin Kragsig. 2014. "Health Promoting Pocket Parks in a Landscape Architectural Perspective." Dissertation. Copenhagen, Denmark: University of Copenhagen, Fredericksberg. https://www.researchgate.net/profile/Karin_Peschardt/publication/268814072_Health_Promoting_Pocket_Parks_in_a_Landscape_Architectural_Perspective/links/547846220cf2a961e484e082/Health-Promoting-Pocket-Parks-in-a-Landscape-Architectural-Perspective.pdf.
- PTSD UK. 2017. "Hyperacusis and PTSD." PTSD UK. <http://www.ptsduk.org/hyperacusis-and-ptsd/>.
- Riddle, Isaac. 2013. "In War and on City Streets, the Similar Threat of PTSD." *Next City*, February 11. <https://nextcity.org/daily/entry/in-war-and-on-city-streets-the-similar-threat-of-ptsd>.

- Sachs, Naomi A. "Architects of Healing." Presentation at the Annual American Society of Landscape Architects Meeting and Expo, New Orleans, LA, October 20-24, 2016.
- Saumel, Ina, Frauke Weber, and Ingo Kowarik. 2016. "Toward Livable and Healthy Urban Streets: Roadside Vegetation Provides Ecosystem Services Where People Live and Move." *Environmental Science and Policy* 62 (August):24–33.
- Shaver, Katherine. 2018. "Why Your Favorite Bench Might Be There to Thwart a Terrorist Attack." *The Washington Post*, August 27, 2018. <https://www.washingtonpost.com/local/trafficandcommuting/why-your-favorite-bench-might-be-there-to-thwart-a-terrorist-attack>
- Suto, Ryan J. 2016. "Bilateral Complicity: The next US President and Egypt." *Lobe Log* (political blog). Spetember 2016. <http://lobelog.com/bilateral-complicity-the-next-us-president-and-egypt/>.
- Suto, Ryan J. 2016. "Public Health as Foreign Policy: Trauma in the Arab World." *Lobe Log* (political blog). October 6, 2016. <https://lobelog.com/public-health-as-foreign-policy-trauma-in-the-arab-world/>
- Swank, Jacqueline M., Sang Min Shin, Carla Cabrita, Christopher Cheung, and Brittany Rivers. 2015. "Initial Investigation of Nature-based, Child-centered Play Therapy: A Single-case Design." *Journal of Counseling and Development* 93 (4): 440–50.
- Tadamun. 2014. "The Right to Public Space in the Egyptian Constitution," February 16, 2014. <http://www.tadamun.co/2014/02/16/the-right-to-public-space-in-the-egyptian-constitution/?lang=en#fn5>.
- Thompson, Catharine Ward. Eva Silveirinha de Oliveira, Benedict W. Wheeler, Michael H. Depledge, and Matilda Annerstedt van den Bosch. 2016. "Urban Greenspace and Health: A Review of Evidence." Copenhagen, Denmark: WHO Regional Office for Europe. http://www.euro.who.int/data/assets/pdf_file/0005/321971/Urban-green-spaces-and-health-review-evidence.pdf?ua=1.
- United Nations Development Programme. (2018). About Egypt. Retrieved from <http://www.eg.undp.org/content/egypt/en/home/countryinfo.html>

Wagenfeld, A., C. Roy-Fisher, and C. Mitchell. 2013. "Collaborative Design: Outdoor Environments for Veterans with PTSD." *Facilities* 31 (9/10): 391–406.

Image and Figure References:

Image 1:

Curtis, Ben. 2011. Protestors Clash with Riot Police in Cairo. Photograph. <https://www.aljazeera.com/indepth/inpictures/2016/01/egypt-revolution-160124191716737.html>.

Image 2:

Moore, John. 2011. Egyptians Climb on to Tanks after Hearing the News of the Resignation of Hosni Mubarak on February 11. Photograph. <https://www.aljazeera.com/indepth/inpictures/2016/01/egypt-revolution-160124191716737.html>.

Figure 1.1:

Ritchie, Hannah and Max Roser (2019) - "Mental Health". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/mental-health' [Online Resource]

Figure 1.2:

Sullivan, Jack. 2016. The Green Road. Photograph.

Figure 1.3: Image by author.

Figure 1.4: Image by author.

Figure 1.5: Image by author.

Figure 2.1: Image by author. Data sourced from:

Al Jazeera. 2016. "Egypt Revolution: 18 Days of People Power," January 24, 2016. <https://www.aljazeera.com/indepth/inpictures/2016/01/egypt-revolution-160124191716737.html>.

Childress, Sarah. 2013. "Timeline: What's Happened since Egypt's Revolution?" *Frontline*, September 17, 2013. <https://www.pbs.org/wgbh/frontline/article/timeline-whats-happened-since-egypts-revolution/>.

Figure 2.2:

Abd El-Ghany, Mohamed. 2011. Protestors and Security Forces Clash during the Egyptian Revolution in Suez. Photograph. <https://www.aljazeera.com/indepth/inpictures/2016/01/egypt-revolution-160124191716737.html>.

Figure 2.3: Image by author.

Figure 2.4:

UrbanPeek. 2011. Slum Located in Cairo, Egypt. Photograph. <http://urbanpeek.com/2011/06/13/a-wake-up-call-cairo-slums/>.

Figure 2.5: Image by author.

Figure 2.6: Image by author.

Figure 2.7: Image by author.

Figure 2.8:

Associated Press. 2011. Protests Turned Violent in Suez on January, 28. Photograph. <https://www.aljazeera.com/indepth/inpictures/2016/01/egypt-revolution-160124191716737.html>.

Table 3.1: Image by author. Content from: Cooper Marcus, Clare and Naomi A. Sachs. 2014. Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces. Hoboken, New Jersey: John Wiley & Sons, Inc.

Figure 3.1: Image by author. Content from: Cooper Marcus, Clare and Naomi A. Sachs. 2014. Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces. Hoboken, New Jersey: John Wiley & Sons, Inc.

Figure 3.2: Image by author.

**Figure 4.1:
Sullivan, Jack. 2016. The Green Road.
Photograph.**

**Figure 4.2:
Sullivan, Jack. 2016. The Green Road.
Photograph.**

**Figure 4.3:
Sullivan, Jack. 2016. The Green Road.
Photograph.**

**Figure 4.4:
Quatrefoil, Inc. 2008. The Warrior and
Family Support Center Therapeutic
Garden Plan. Photograph.**

**Figure 4.5:
Sachs, Naomi. 2008. The Warrior and Family
Support Center Therapeutic Garden.
Photograph.**

**Figure 4.6:
Payette. 2019. Xiangya 5th Hospital
Courtyard. Photograph. [https://
www.payette.com/project/
fifthxiangyahospital/](https://www.payette.com/project/fifthxiangyahospital/).**

**Figure 4.7:
Payette. 2019. Xiangya 5th Hospital
Courtyard. Photograph. [https://
www.payette.com/project/
fifthxiangyahospital/](https://www.payette.com/project/fifthxiangyahospital/).**

**Figure 4.8:
Payette. 2019. Xiangya 5th Hospital
Courtyard. Photograph. [https://
www.payette.com/project/
fifthxiangyahospital/](https://www.payette.com/project/fifthxiangyahospital/).**

**Figure 4.9:
Robinson Anderson Summers. 2019.
Christiana Care - Wilmington Hospital
Healing Garden. Photograph. [https://
raslainc.com/project/christiana-
care-wilmington-hospital-healing-
garden/](https://raslainc.com/project/christiana-care-wilmington-hospital-healing-garden/).**

**Figure 4.10:
Robinson Anderson Summers. 2019.
Christiana Care - Wilmington Hospital
Healing Garden. Photograph. [https://
raslainc.com/project/christiana-
care-wilmington-hospital-healing-
garden/](https://raslainc.com/project/christiana-care-wilmington-hospital-healing-garden/).**

**Figure 4.11:
Aga Khan Trust for Culture. 2005. Al Azhar
Park in Cairo, Egypt. Photograph.
[https://www.akdn.org/gallery/
creating-urban-oasis-al-azhar-park-
cairo-egypt](https://www.akdn.org/gallery/creating-urban-oasis-al-azhar-park-cairo-egypt).**

Figure 4.12:
Aga Khan Trust for Culture. 2005. Al Azhar Park in Cairo, Egypt. Photograph. <https://www.akdn.org/gallery/creating-urban-oasis-al-azhar-park-cairo-egypt>.

Figure 4.13: Image by author.

Figure 4.14:
Nelson Byrd Woltz Landscape Architecture. 2018. Aga Khan Botanical Garden in Alberta, Canada. Photograph. https://archnet.org/sites/16792/media_contents/133033.

Figure 4.15:
Nelson Byrd Woltz Landscape Architecture. 2018. Aga Khan Botanical Garden in Alberta, Canada. Photograph. https://archnet.org/sites/16792/media_contents/133033.

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Figure 5.23:
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Figure 7.1: Image by author.

Figure 7.2: Image by author.

Appendix A

IRB Approval, Addendum, and Forms



TO: Dr. Amir Gohar Proposal Number: 9543
Landscape Architecture/Regional and Community Planning
1089 Regnier Hall

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 12/13/2018

RE: Approval of Proposal Entitled, "Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for one year from the date of this correspondence, pending "continuing review."**

APPROVAL DATE: 12/13/2018

EXPIRATION DATE: 12/13/2019

Several months prior to the expiration date listed, the IRB will solicit information from you for federally mandated "**continuing review**" of the research. Based on the review, the IRB may approve the activity for another year. **If continuing IRB approval is not granted, or the IRB fails to perform the continuing review before the expiration date noted above, the project will expire and the activity involving human subjects must be terminated on that date. Consequently, it is critical that you are responsive to the IRB request for information for continuing review if you want your project to continue.**

In giving its approval, the Committee has determined that:

- There is no more than minimal risk to the subjects.
- There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

TO: Dr. Amir Gohar
Landscape Architecture/Regional and Community Planning
1089 Regnier Hall

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: 02/28/2019

RE: Proposal #9543.1, entitled "Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt."

MODIFICATION OF IRB PROTOCOL #9543, ENTITLED, "Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt"

EXPIRATION DATE: 12/13/2019

The Committee on Research Involving Human Subjects (IRB) has reviewed and approved the request identified above as a modification of a previously approved protocol. **Please note that the original expiration remains the same.**

All approved IRB protocols are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced in-progress reviews may also be performed during the course of this approval period by a member of the University Research Compliance Office staff. Unanticipated adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB, and / or the URCO

It is important that your human subjects activity is consistent with submissions to funding / contract entities. It is your responsibility to initiate notification procedures to any funding / contract entity of any changes in your activity that affects the use of human subjects.

Graduate Research Into Therapeutic Landscape Design for Severe Stress and Traumatic Stress

Informed Consent Form

Hello, my name is Janna Schulte and I am a graduate student in the Department of Landscape Architecture and Regional & Community Planning. I am doing my graduate research on how evidence-based, therapeutic landscape design strategies may be implemented on a larger, outdoor public scale such as in parks or streetscapes, to provide relief and comfort for users who have experienced severe or traumatic stress.

The title of this research is "Streets of Comfort: Design of Urban Streets and Parks for Users Impacted By Severe Stress and Traumatic Stress in Cairo, Egypt." The intention of the project is to understand how therapeutic landscape design may be used to mitigate the negative psychological impacts experienced by people who live with this extreme stress in a busy public space. The study will be done by developing a research-based, pilot project on a site in Cairo that may be extrapolated to other public areas around the world, particularly in countries and cities highly impacted by trauma, political conflict, poverty, violence, abuse, pollution, excessive traffic, etc.

A collaborative, cross-disciplinary design approach including professionals in mental health, political conflict and refugee care, clinicians, caregivers, design professionals and people who have experienced the area or stressing events themselves is essential in developing a user-centered design, especially a design that truly meet the wants and needs of the intended user and mitigates the negative psychological impact that may occur in traditionally noisy, active crowded spaces such as busy parks and streets.

Therefore, I would like to ask you to participate in this design study to help inform the proposed design as much as possible by providing expert information and advice in your area of expertise through a formal interview process. The questions will be on a few topics involving trauma and the public realm. I anticipate these interviews being about thirty minutes long, conducted and recorded using Zoom, and include around 15-20 questions with some discussion. For example, a couple of my questions may be: "What are some of the ways a person suffering from traumatic stress can safely find relief from a situation that could be too stimulating or stressful?" or "What specific qualities of a busy downtown street or public plaza may a person suffering from traumatic stress find overwhelming or particularly stressful?"

Please see important information and terms of participation on the following page(s).

Possible Risks or Discomforts:

Trauma is a difficult subject as you know. There may be the possibility of bringing up negative memories of traumatic experiences or human struggles through the discussion of this topic.

Resources and Support:

Sometimes participation in research projects, particularly a project that asks about sensitive information, can be distressing for participants. If your participation in this study has caused you concerns, anxiety, or otherwise distressed you, please be aware that you may contact Dr. Briana Nelson Goff, a member of this research team who specializes in trauma studies and is a faculty member in the Conflict Analysis and Trauma Studies program at K-State for assistance. Her information is listed below:

Briana S. Nelson Goff, PhD
Professor, Department of Family Studies and Human Services
Kansas State University
bnelson@ksu.edu
(785) 340-3835

Anticipated Benefits:

If you decided to participate in this study, it is my intention that you would experience hope that some of the new therapeutic design strategies resulting from this study, intended to give relief and shelter from an overstimulating environment, would eventually be utilized in the design of many public spaces and benefit those who may have challenges in these spaces due to experiencing extreme stress. The study may also influence future policy regarding the design of public space. It is also possible that you may be recognized for your contribution to this study.

Extent of Confidentiality:

All interview questions you answer will be audially recorded for reference during the design process and eventually transcribed into paper format. All records will be kept in locked cabinets or secured computer systems with access only by the PI, student researcher, and two other supervisory committee members. Documents/spreadsheets with personally identifying information will be stored on a university networked, shared drive in a restricted folder to which the PI, student researcher, and supervisory committee members have access. Only members of the study staff will have access to the data, and then only when such access is required for their work on the study. The answers and advice you provide will be summarized into a set of design guidelines published in a report that will be available for reference on other therapeutic design projects. **However, no names or contact information you provide will be released or published and will be kept in strict confidentiality between the research team mentioned above, you, and myself unless otherwise requested as mentioned above in "Anticipated benefits."** The transcript or recording may also be released back to you for your reference if you request access.

Terms of participation:

I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name

Participant Signature

Date

Witness to Signature

Date

Contact Information:

Janna Schulte, Graduate Student Researcher
Department of Landscape Architecture and Regional and Community Planning
Kansas State University
Janna32@ksu.edu
(785) 324-0398

Dr. Amir Gohar, Principal Investigator
Department of Landscape Architecture and Regional and Community Planning
Kansas State University
gohar@ksu.edu
(510) 859-5988

IRB/URCO Contact:
Rick Scheidt
rscheidt@ksu.edu
(785) 532-1483

University Research Compliance:
comply@ksu.edu
(785) 532-3224



Graduate Research Into Therapeutic Landscape Design for Severe and Traumatic Stress

Informed Consent Form

Hello, my name is Janna Schulte and I am a graduate student in the Department of Landscape Architecture and Regional & Community Planning. I am doing my graduate research on how evidence-based, therapeutic landscape design strategies may be implemented on a larger, outdoor public scale such as in parks or streetscapes, to provide relief and comfort for users who have experienced severe or traumatic stress.

The title of this research is "Streets of Comfort: Design of Urban Streets and Parks for Users Impacted By Severe Stress and Traumatic Stress in Cairo, Egypt." The intention of the project is to understand how therapeutic landscape design may be used to mitigate the negative psychological impacts experienced by people who live with this extreme stress in a busy public space. The study will be done by developing a research-based, pilot project on a site in Cairo that may be extrapolated to other public areas around the world, particularly in countries and cities highly impacted by trauma, political conflict, poverty, violence, abuse, pollution, excessive traffic, etc.

A collaborative, cross-disciplinary design approach including professionals in mental health, political conflict and refugee care, clinicians, caregivers, design professionals and people who have experienced the area or stressing events themselves is essential in developing a user-centered design, especially a design that truly meet the wants and needs of the intended user and mitigates the negative psychological impact that may occur in traditionally noisy, active crowded spaces such as busy parks and streets.

Therefore, I would like to ask you to participate in this design study to help inform the proposed design as much as possible to accommodate your needs and vulnerabilities as a person who knows Egypt and may be impacted by the stressing events that have occurred there. I am asking that you give your own personal opinions and feedback on the proposed design by examining the design documents and explaining what may make you feel comfortable and uncomfortable and a brief explanation of why after a short reflection on your experiences in Egypt.

Please see important information and terms of participation on the following page(s).

Possible Risks or Discomforts:

It is not anticipated that undue emotional distress will occur within the study. No physical distress is expected to occur with this research study. Some participants may have direct experiences with political conflict, violence, and trauma that occurred in Egypt. Although no part of the current study directly asks about prior experiences or current symptoms, nor is the study anticipated to be a reminder of previous violence and trauma, we are interested in experiences of survivors of political conflict and trauma with development of the proposed therapeutic design and healing environments. While participating in the study and you become distressed (e.g., highly anxious, crying, angry), you may halt participation at any time. Please be reminded of the voluntary nature of the study and the option to terminate or continue the study.

Resources and Support:

Sometimes participation in research projects, particularly a project that asks about sensitive information, can be distressing for participants. If your participation in this study has caused you concerns, anxiety, or otherwise distressed you, please be aware that you may contact Dr. Briana Nelson Goff, a member of this research team who specializes in trauma studies and is a faculty member in the Conflict Analysis and Trauma Studies program at K-State for assistance. Her information is listed below:

Briana S. Nelson Goff, PhD
Kansas State University
bnelson@ksu.edu
(785) 340-3835

Anticipated Benefits:

If you decided to participate in this study, it is my intention that you would experience hope that some of the new therapeutic design strategies resulting from this study, intended to give relief and shelter from an overstimulating environment, would eventually be utilized in the design of many public spaces and benefit those who may have challenges in these spaces due to experiencing extreme stress. The study may also influence future policy regarding the design of public space.

Extent of Confidentiality:

All design feedback you provide will be audially recorded for reference during the design process and eventually transcribed into paper format. All records will be kept in locked cabinets or secured computer systems with access only by the PI, student researcher, and two other supervisory committee members. Documents/spreadsheets with personally identifying information will be stored on a university networked, shared drive in a restricted folder to which the PI, student researcher, and supervisory committee members have access. Only members of the study staff will have access to the data, and then only when such access is required for their work on the study. The feedback you provide on the negative and positive design elements will be summarized into a set of design guidelines published in a report that will be available for reference on other therapeutic design projects. **However, no names or contact information you provide will be released or published and will be kept in strict confidentiality between the research team mentioned above, you, and myself.** The transcript or recording may also be released back to you for your reference if you request access.

Terms of participation:

I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name

Participant Signature

Date

Witness to Signature

Date

Contact Information:

Janna Schulte, Graduate Student Researcher
Department of Landscape Architecture and Regional and Community Planning
Kansas State University
Janna32@ksu.edu
(785) 324-0398

Dr. Amir Gohar, Principal Investigator
Department of Landscape Architecture and Regional and Community Planning
Kansas State University
gohar@ksu.edu
(510) 859-5988

IRB/URCO Contact:
Rick Scheidt
rscheidt@ksu.edu
(785) 532-1483

University Research Compliance:
comply@ksu.edu
(785) 532-3224

Design Review and Interview Recruitment Protocols:

Egyptian Student's association at Kansas State Public Facebook Page Recruitment Post

"Hello everyone,

My name is Janna Schulte and I am a graduate student in the department of landscape architecture and regional and community planning here at K-State. I am currently in the process of conducting a Master's Project and Report that will be completed this spring. My project involves utilizing therapeutic landscape design strategies to re-design/re-envision busy streetscapes and outdoor public spaces (such as parks) to provide comfort for people who experience a high amount of stress. My project site is located in Cairo, Egypt, which as you likely know has experienced significant political violence in the past several years, indicating the potential of citizens of Cairo experiencing symptoms resulting from severe and traumatic stress. I will be addressing an active site and streetscape in Maadi (Cairo) near the military hospital, the Egyptian Constitutional Court, and the Nile River. I am looking to get design feedback on a site design for the area from people who know Cairo well and may have experience in Cairo's streets and parks, such as going to Al Azhar Park, or other public areas around the city. However, I would love to get feedback from anyone in your student group regardless of your experience in Maadi/Cairo. If interested in participating, please comment below with your name and I will message you privately to give you more information. Thank you!"

Email Introduction to Lincoln, Nebraska Participants and Professional Interview Participants

Hello,

My name is Janna Schulte and I am a graduate student in the department of Landscape Architecture and Regional and Community Planning at Kansas State University. I am currently in the process of conducting a Master's Project and Report that will be completed this spring. My project involves utilizing evidence-based, therapeutic landscape design strategies to re-design/re-envision active streetscapes and outdoor public spaces to accommodate and provide relief for users who have experienced severe stress or traumatic stress. My project site is located in Cairo, Egypt, which as you likely know has experienced significant political violence and terror in the past several years, indicating the likelihood of citizens of Cairo experiencing symptoms resulting from traumatic stress. I will be re-designing a site and streetscape in Cairo near a busy military hospital, the Egyptian Constitutional Court, and the Nile River. Much of the literature on therapeutic design states that a patient-centered design process that involves the designer, professional experts and caregivers in the mental health field, and mental health patients is essential to a successful design. Therefore, I am reaching out to you to ask for your expertise and opinions to inform my design strategies. To do this, I would like to conduct a formal interview where I would ask questions on a few topics involving trauma and the public realm. I anticipate these interviews being about 30 minutes long, conducted and recorded using Zoom, and including around 15 questions with some discussion. For example, a couple of my questions may be: "What are some of the ways a trauma victim or PTSD patient can safely find relief from a situation that could be too stimulating or stressful?" or "What specific qualities of a busy downtown street or public plaza may a victim of trauma or PTSD patient find overwhelming or particularly stressful?" Dr. Briana Nelson-Goff is a member of my supervisory committee and is the instructor of several trauma courses here at Kansas State. She has been helping me to better understand the study of trauma and has given me your names to contact as experts in the field. I would sincerely appreciate your participation!

Survey Introduction

Hello,

My name is Janna Schulte and I am a graduate student in the department of Landscape Architecture and Regional and Community Planning at Kansas State University. I am currently in the process of conducting a research study that will be completed this spring. This study involves utilizing evidence-based, therapeutic landscape design strategies to re-design/re-envision active streetscapes and outdoor public spaces to accommodate and provide relief for users who have experienced severe stress or traumatic stress. My project site is located in Cairo, Egypt, which as you likely know has experienced significant political violence and terror in the past several years, indicating the likelihood of citizens of Cairo experiencing symptoms resulting from traumatic stress. I will be re-designing a site and streetscape in Cairo near a busy military hospital, the Egyptian Constitutional Court, and the Nile River to be a public park and streetscape that would provide comfort for people in Cairo impacted by this severe stress. In order to better understand how well the proposed design would fit within Cairo and provide comfort to the users, I am asking for your help in reviewing the design proposal so far.

Please complete a short survey about yourself and your time in Egypt below.

Survey Link:

https://kstate.qualtrics.com/jfe/form/SV_3g5MMBxloGajPaR

Graduate Research Into Therapeutic Landscape Design for Severe Stress and Traumatic Stress

Debriefing Statement

Thank you for participating in the study “Streets of Comfort: Design of Urban Streets and Parks for Users Impacted by Severe Stress and Traumatic Stress in Cairo, Egypt.” The primary purpose of this study is to determine how the principles of therapeutic landscape design may be applied to a busy public space in urban Cairo, Egypt to provide relief for users who have experienced severe or traumatic stress in the area.

By completing this study, you have contributed to a project that will provide information about how to help individuals who have experienced severe or traumatic stress and may have trouble navigating and feeling comfortable in outdoor public spaces enjoyed by so many who do not experience the daily challenges and struggles of living while affected by this extreme stress. It is hoped that this information will assist future designers in finding ways to be more effective in creating comfortable outdoor parks and streetscapes that take into account the needs of an overly-stressed population. Thank you for your participation in this research.

Sometimes participation in research projects, particularly a project that asks about sensitive information, can be distressing for participants. If your participation in this study has caused you concerns, anxiety, or otherwise distressed you, please be aware that you may contact Dr. Briana Nelson Goff, a member of this research team who specializes in trauma studies and is a faculty member in the Conflict Analysis and Trauma Studies program at K-State for assistance. Her information is listed below. Provided below the research team and Dr. Nelson Goff’s contact information is also a list of common responses to traumatic events and things to try if you may experience one of the responses listed.

If you have any questions about the study or would like to receive a report of this research when it is completed, please contact the graduate student researcher at the information below.

Again, thank you for your participation in this study!

Janna Schulte
Graduate Student Researcher
Department of Landscape Architecture and Regional and Community Planning
Kansas State University
Janna32@ksu.edu
(785) 324-0398

Amir Gohar, PhD
Principal Investigator
Kansas State University
gohar@ksu.edu
(510) 859-5988

Support Contact

Briana S. Nelson Goff, PhD
Kansas State University
bnelson@ksu.edu
(785) 340-3835

Common Responses to Traumatic Events

Although trauma affects people differently, there are some common reactions that you may experience. These signs and symptoms may begin immediately, or you may feel fine for a couple of days or even weeks, then suddenly be hit with a reaction. The most important thing to remember is that these reactions are quite normal. Although it may seem abnormal, it is very normal for people to experience emotional “after shocks” following experiencing or remembering a traumatic event. Some common responses to traumatic events are:

Physical and Emotional Reactions

- Insomnia Flashbacks or “reliving” the event
- Fatigue Jumpiness; tendency to startle
- Hyperactivity Irritability
- Pains in the neck or back Anger
- Headaches Feelings of anxiety/helplessness
- Heart palpitations or pains in the chest* Feeling vulnerable
- Dizzy spells Feeling overwhelmed
- Appetite changes Low motivation, listlessness

*If symptoms persist, consult a physician

Effects on Productivity

- Inability to concentrate
- Increased incidence of errors
- Memory lapses
- Increased absenteeism
- Tendency to overwork/underwork

Usually, the signs and symptoms of trauma will lessen with time. If you are concerned about your reaction, note the specific symptoms that worry you. For each symptom, note the:

- Duration – Normally, trauma reactions will grow less intense and disappear within a few weeks.
- Intensity – If the reaction interferes with your ability to carry on your life normally, you may want to seek help.

After a Traumatic Incident: Things to try

- Physical exercise alternated with relaxation may help with some of the symptoms and reactions. Consult your doctor or nurse if they persist.
- You are normal and having normal reactions. Don’t label yourself as abnormal.
- Talk to people, such as family members, friends or coworkers; talk is the most healing medicine.
- Spend time with others. Resist the tendency to isolate.

English

Hello,

My name is Janna Schulte and I am a graduate student in the department of Landscape Architecture and Regional and Community Planning at Kansas State University. I am currently in the process of conducting a research study that will be completed this spring. This study involves utilizing evidence-based, therapeutic landscape design strategies to re-design/re-envision active streetscapes and outdoor public spaces to accommodate and provide relief for users who have experienced severe stress or traumatic stress. The project site is located in Cairo, Egypt, which as you likely know has experienced significant political conflict in the past several years, indicating the likelihood of citizens of Cairo experiencing symptoms and effects resulting from severe and traumatic stress. I will be re-designing a site and streetscape in Cairo near Maadi Military Hospital, the Egyptian Constitutional Court, and the Nile river to be a public park and streetscape that

would provide comfort for people in Cairo impacted by severe stress. In order to better understand how well the proposed design would fit within Cairo and provide comfort to the users, I am asking for your help in reviewing the design proposal so far.

Please complete a short survey about yourself and your time in Egypt below.

>>

English

Please see additional document to give informed consent.

English

Please enter your first name and last name in the form below.

First Name Last Name

What is your gender?

 Male Female

What is your year of birth?

Year of birth

Are you of Egyptian descent?

 Yes No

Have you lived in Egypt longer than 3 years?

- Yes
- No
- No, but I have lived there longer than one year.

What is the total length of time you have spent in Egypt?

What is the total length of time you have spent in the United States?

What is the reason for your relocation to the United States?

Do you still have family members living in Egypt?

- Yes, 1-3 family members.
- Yes, 4-6 family members.
- Yes, 7-9 family members.
- Yes, 10+ family members.
- No

Were you in Egypt from January 1, 2011 until January 1, 2015?

- Yes
- No
- Yes, longer than 1 year.

What is the highest level of education that you have completed?

- Middle School (Grades 6-8)
- Freshman (Grade 9)
- Sophomore (Grade 10)
- Junior (Grade 11)
- Senior (Grade 12)
- High School Graduate
- Some College
- Graduated 2-year College
- Graduated 4-year College
- Post Graduate
- Prefer not to answer

What is your home mailing address?

Street Address
Line 1

Street Address
Line 2

City

State

Zipcode

What is your email address?

Email Address

What is the best daytime telephone number to reach you at?

Daytime
Telephone
Number

What is the best evening telephone number to reach you at?

Evening
Telephone
Number

Please leave any additional information that you would like us to know in the space provided below.



Interview Question: *some questions may be omitted if not relevant to the participant's professional background								
1) What could be some typical reactions a person suffering from PTSD, severe stress, and traumatic stress might experience in a public space such as a busy street, park, or plaza?								
2) What are some of the most stressing daily life activities of a person suffering from PTSD, severe stress, or traumatic stress?								
3) What are some typical ways those suffering from PTSD, severe stress, and traumatic stress can find relief from a situation that could be too stimulating or a stressful?								
4) Have you ever heard of or conducted therapy treatment in an outdoor setting? If so, how did it go? Would you say that it was successful?								
5) What are some typical reactions a person suffering from PTSD, severe stress and traumatic stress might have to a dog park, urban farm or community garden, children's playground, or outdoor seating area?								
6) Generally, do those suffering from PTSD, severe stress, and traumatic stress find more relief in quiet, calm, and private outdoor spaces or active, social spaces where they can interact with others? Why?								
7) In your professional experience, what are some of the best ways people suffering from PTSD or people experiencing severe stress or traumatic stress find relief from their symptoms?								
8) What do you potentially see as beneficial to those affected by PTSD, severe stress or traumatic stress to experience a naturalistic outdoor space? What do you see that could potentially be harmful?								
9) What types of spaces do those suffering from PTSD, severe stress and traumatic stress find threatening, unsafe, or uncomfortable?								
10) When walking down a street, what types of "normal" elements would stick out to a person suffering from PTSD, severe stress, and traumatic stress? For example, a car horn, busy crosswalk, traffic noise, people shouting, etc.?								
11) Have you ever experienced a situation where a patient or client was overwhelmed by "sensory overload?" If so what was the experience like and how did that patient or client recover?								
12) What type of design elements (for example private seating, grilling area, playground, water feature) do you think would be beneficial to a person suffering from PTSD, severe stress and traumatic stress?								
13) Have you ever been to a healing garden or outdoor therapeutic space? If so, what did you think would help or harm your patient or client?								
14) What do you see as being physically or emotionally challenging for a person suffering from PTSD, severe stress, or traumatic stress when they walk out their door into any outside setting?								
15) Could you explain the impacts of Continuous Traumatic Stress (CTS), specifically in the areas of political violence versus traditional traumatic stress?								
16) What may be some of the differences in symptoms of someone suffering from Continuous Traumatic Stress, such as a citizen in a city plagued by frequent political violence, versus someone who had a solitary incident? Is there anything I should be specifically aware of in designing for this population?								
17) What specific rehabilitative techniques intended for people suffering from PTSD, severe stress and traumatic stress could you see occurring outdoors whether that be physical or mental?								
18) What natural sounds (ex. birds chirping, water, wind, leaves rustling, wildlife, etc.) or artificial sounds (cars, children playing/laughing, people talking, cell phones, etc.) may be challenging to hear as a person suffering from PTSD, severe stress and traumatic stress? What may be beneficial? Can they be both?								
19) Are there any common colors or textures I should stay away from to avoid stimulating traumatic memories?								
20) What exercises or physical activities (if any) can people suffering from PTSD, severe stress, traumatic stress, or PTSD do to relieve their symptoms or relax?								
21) What physical activities may be challenging to a person experiencing PTSD, severe stress or traumatic stress?								
22) Overall, what are the most important considerations to keep in mind in creating as comfortable of an environment as possible for a person impacted by PTSD, severe or traumatic stress to be in?								
23) Overall, what are the most important considerations to keep in mind in creating as comfortable of an environment as possible for a person impacted by PTSD, severe or traumatic stress to be in?								
24) What are some considerations for a refugee or survivor of political conflict experiencing public spaces such as a plaza, park, streetscape, or public square?								

Interview Question:	
1) What do you think is the number one consideration or important design strategy in designing for people suffering from PTSD, severe stress, and traumatic stress?	
2) Have you ever designed or been involved with therapeutic landscapes internationally, if so what were some considerations of doing that?	
3) With gardens or site you have worked on before, is there anything you would consider doing differently post-occupancy? What has been very successful there?	
4) Planting palettes range so much depending on the region but are there certain forms, colors, fragrances, that seem to work well generally in therapy design? Cairo is in an arid region but there is possibility for irrigation.	
5) I have been trying to think about circulation with where to break and where to provide length with a path as well as linear vs. circular paths. What would you suggest? Linear provides clarity and meandering can have blind spots ahead yet meandering is more interesting and "distracting."	
6) Generally, do those suffering from PTSD, severe stress, and traumatic stress find more relief in quiet, calm, and private outdoor spaces or active, social spaces where they can interact with others? Why?	
7) In your professional experience what are some of the best ways people suffering from PTSD, severe stress, and traumatic stress have reported finding relief from their symptoms in the garden you have worked on?	
8) What has been the most effective in handling noise mitigation, especially from vehicular traffic?	
9) Can you think of any other precedent projects that may be beneficial for me to look at?	
10) My project focuses on the design of a streetscape in Cairo, Egypt, a very busy, car-oriented city. I want to think about how that streetscape can be more accommodating to a people suffering from severe stress, and traumatic stress. Just off the top of your head as a very experienced professional in the field of therapeutic design, what could be some of the important things that you would think could be stressing to this group of people? What design strategies might you implement on a streetscape out of your first initial reaction?	
11) The site is located adjacent to the Nile River in Cairo. I am trying to understand if this could be a valuable asset in my design. Have you ever designed with larger waterbodies such as this and could you see it being an asset?	
12) I am likely going to have the opportunity to visit the site in Cairo. Is there anything I should be aware of in particular that may be affecting the capability of the site to provide a therapeutic environment?	
13) Thinking about materiality, is there any colors, textures, or patterns I should avoid? Any I should consider incorporating.	
14) I am having difficulty in thinking about handling sightlines to avoid presenting challenges or uncertainty to user entering or moving through the sight. How have you handled this issue in your experience. What has worked and what should I avoid?	
15) How have you thought about seating with comfort, social, single seating?	
16) I am going to be interviewing some mental health professionals to get their feedback on my project and to work with them on developing a patient-centered design. I already have some ideas but do you have any suggestions from your own inter-disciplinary experience with mental professionals and patients for the topics I should question them on?	

Appendix B

Design Consideration Evaluation Matrices

Overarching Concepts

Minimize openness and exposure	Regionally influenced and familiarity	Accessible to all users	Control	Spirituality and sacredness	Spaces within a larger space	Creativity	Easy Parking
x			x		x		
x			x		x		
x			x	x	x		x
x			x				
x			x	x		x	
x	No		x				
x	x	x	x	x	x	x	x
7	1	1	7	3	4	2	2

Circulation

	Transition areas	One main path	Visible exits	Multiple exits	No hidden corners	Seating by entrances	Clear path hierarchy	Opportunities for exercise
Broughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x	x	x	x	x		x	
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel		x	x	x	x			x
Kozar, David (Refugee Care and Government Aid) Queensland, Australia			x	x	x	x		x
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries					x			x
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;		x	x	x	x	x	x	x
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,			x	x	x		x	x
Literature Sources	x	x	x	x	x	x	x	x
	2	4	6	6	7	3	4	6

Hardscape

	Minimize glare	Simple textures	ADA approved paving	Avoid large concrete structures	Varied, ample seating	Moveable seating	Overhead planes
Braughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota		x		x	x	x	x
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel	x	x					No
Kozar, David (Refugee Care and Government Aid) Queensland, Australia	x	x				x	
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries	x		x				
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;	x	x			x	x	
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,		x	x		x		
Literature Sources	x	x	x	x	x	x	x
	5	6	3	2	4	4	2

Vegetation

	No large shrubs (Unless dense)	Lush and naturalistic/native	Simple colors (limit red and orange)	Shaded microclimates	Screening (eye level or below)	Ample "green"	Minimize strong scents	Privacy	Close contact	Sound mitigation	Gardening	Urban Farming
Braughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x		x	x	x	x	x	x		x		
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel	x	x	x	x	x			x		x		
Kozar, David (Refugee Care and Government Aid) Queensland, Australia		x	x		x					x	x	x
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries			x		x			x		x		
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;	x	x	x	x	x			x		x	x	x
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,			x	x	x		x	x	x	x		
Literature Sources	x	x	x	x	x	x	x	x	x	x	x	x
	4	4	7	5	7	2	3	6	2	7	3	3

Play

	Spaces for different ages	Quiet play v. Active play	Promote exercise	Simple colors	Nature-play	No hiding spots	Parent seating	Sound mitigation
Broughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x		x	x	x	x	x	x
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel		x	x		x	x	x	x
Kozar, David (Refugee Care and Government Aid) Queensland, Australia		x	x	x		x		x
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries								
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;			x	x		x		x
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,		x	x	x	x	x	x	x
Literature Sources	x	x	x	x	x	x	x	x
	2	4	6	5	4	6	4	6

Lighting

	Ample security lighting	Minimize glare	Subtle/Soft lighting	Avoid colored lighting (red and orange)
Broughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x	x	x	x
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel	x		x	x
Kozar, David (Refugee Care and Government Aid) Queensland, Australia				
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries	x			
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;	x	x		
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,		x		
Literature Sources	x	x	x	x
	5	4	3	3

Water Features

	Soft sounds	Reflecting pools	Quiet fountains	Naturalistic streams	Accessible from all areas	Private and public	Visible from entrance	Shallow
Broughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x	x	x		x	x	x	
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel	x	x	x	x			x	
Kozar, David (Refugee Care and Government Aid) Queensland, Australia	x			x			x	
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries								
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;	x	x	x	x	x	x	x	
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,	x					x	x	
Literature Sources	x	x	x	x	x	x	x	x
	6	3	4	4	3	4	6	1

Maintenance

	Minimize neglect	Safety	Nonprofit sponsoring	Patient participation	Secure place for tools, storage	Sustainability
Broughton, Jacqueline (Marriage and Family Therapy) Minneapolis, Minnesota	x	x		x		
Deckel, Dr. Rachel (Social Worker and Trauma Specialist) Ramat Gan, Tel Aviv, Israel		x				
Kozar, David (Refugee Care and Government Aid) Queensland, Australia		x	x			
Kushner, Dr. Adam (Surgery, International Refugee Care) NYC, worked in 20+ countries	x	x	x			
Mantz, Joshua (veteran, Asymmetric Mind, Arab studies) San Jose, California;	x	x		x		
Utrzan, Dr. Damir (PhD, youth trauma, refugee care, law) Bosnia; Minneapolis,	x	x				
Literature Sources	x	x	x	x	x	x
	5	5	3	3	1	1

Precedents

	Clear visibility (Sightlines)	Spatial flexibility (Privacy v. Social)	Muted color palette	Avoid extreme enclosure	Safety	Safe, secure, clear perimeter	Signage
Al Azhar Park in Cairo, Egypt	x	x		x			x
Aga Khan Botanical Garden in Alberta, Canada		x	x		x	x	x
The Green Road Project in Bethesda, Maryland	x	x	x	x	x	x	x
Warrior and Family Support Center Therapeutic Garden in San Antonio Texas	x	x	x	x	x	x	x
Xiangya 5th Hospital Courtyard in Xiangya, China	x	x					x
Christiana Care Wilmington Hospital Healing Garden in Wilmington, Delaware	x			x	x		x
	5	5	3	4	4	3	6

Simple, accessible topography	Minimize openness and exposure	Regionally influenced and familiarity	Accessible to all users	Control	Spirituality and sacredness	Spaces within a larger space	Creativity	Lush, accessible planting	
		x			x	x	x		8
	x				x	x		x	9
x		x		x	x	x	x	x	14
x	x	x		x	x	x		x	14
	x	x	x			x	x	x	9
x			x					x	7
3	3	4	2	2	4	5	3	5	

Appendix C

Interview Transcripts

Adam Kushner Interview Transcript

January 23, 2019 | 1:45pm

JS: So could you tell me a little more of your background? Briana gave me a little insight but could you just touch on your area of expertise like just what you have been working on and what you've been doing. Just in case, there are certain questions that I would read that would be more relevant or less relevant so I can make the questions more specific. I just think I just don't want to waste time on things that may not be as relevant so if you wouldn't mind, just kind of giving a little bit more background, I would appreciate it.

AK: Sure. I'm a general surgeon and I have a Master's in public health.

JS: Okay.

AK: Trained in the US, licensed in the US, never practiced in the US, only done international work so groups like Doctors Without Borders, other individual organizations, mostly the disaster relief, mainly post conflict, Sierra Leone, Liberia after the civil wars, some political conflict as well. I was in Syria in 2013, Lebanon before that helping to assess whether to go into Syria, or not.

1:39

With public health, I went in after the Indonesian tsunami. I've worked in Central and South America so I've worked in lots of different places so, surgery and clinical work, teaching, some human rights work, worked with landmines for a while.

2:08

The issue of that so there is some post-conflict issues as well for those populations and then of course at Johns Hopkins physical care needs and some charities

JS: Yeah so that's very helpful. Yeah, I know your work internationally as a surgeon I just did not realize it was a very large amount of countries.

AK: But yeah, I mean, probably, at least twenty where I have worked.

2:42

JS: Yeah, okay and so I saw that you're in Alaska, is that, right?

AK: Yeah well my wife's an OBGYN and has also done International work with Doctors Without Borders in the Congo and Niger.

JS: That's amazing.

AK: And when we were in Baltimore she got her, she got a PhD in surgical epidemiology but got her OB e in Baltimore and then we came here two years ago and here we are.

3:11

JS: That's amazing.

AK: All settled in.

JS: Is it really as bright and sunny at night as I can imagine?

AK: Uh in the summer it is but in the winter it's not so nice. We're adding four minutes of sunlight per day.

JS: Alright, well thank you. That's definitely very helpful. A lot of the questions are kind of ranging from general knowledge about, you know, trauma and I think I've kind of gotten those answered. I'm sure...

AK: Okay before we start I just want to clarify the term trauma, because your standpoint and my standpoint I think is very different. You're thinking about it from the mental perspective and I...

JS: Yeah. So, I mean, kind of, with political conflict, I think that's why I was kind of interested in hearing from your perspective, because you think, like, you're dealing with the physical trauma that results from things like political conflict or terror events or things like that. And, you know, in a region, like Cairo, I actually went there for a week, and it's very, you know, I mean, even from what I saw, it's like, I was only there for a week and I could, I don't even know this has anything to do the revolution at all, but like, I mean, simple things, like I mean, people just without limbs, you know, everywhere, and I was not expecting that I guess and, I mean, they certainly have a healthcare system and they have a relatively good healthcare system for a developing country. So, I, like it again, if I read off, because I have about twenty-two questions, and some of them are relevant, but, again, if you don't really feel like it's relevant with your background, you can simply state that, and you can move on because I don't really want to waste either of our time so, but, just because I have, I've interviewed a couple of people already who have given me some really great information on, like, how people experience public space who have been impacted by many different types of mental trauma, like, experiencing childhood abuse to like, being in an extreme car accident so

5:42

I've got a lot of good information on that, but I'm, I'm looking for your perspective, maybe on more of kind of an international scale of, like, the people that you have worked with who have had that I don't, I don't know like, if you kind of perform your surgery and then kind of move on, or what exactly your personal experience is with a continued experience with the effect of the injury or whatever on the mental state. I don't really...

6:14

AK: I mean there's not a lot of that I mean there is some but you know as surgeons, we prefer our patients asleep and I'm waiting.

JS: Oh yeah, probably.

6:29

But, so, there's, and specifically for me, I usually do a long-term mission that would be three months so there's not a lot of long term follow up. It's, it sometimes happens. I have seen in some cases where I well, one in particular is a case when I was in the DRC I did an operation to save his leg and then came back six months later to a different hospital and spoke with someone from Handicap International and heard he was actually doing well. And so usually, we don't get that kind of follow up.

JS: Okay well maybe, let me look into these questions real fast.

7:22

Okay, one thing that it might be really, may be really helpful is to think about, like how I guess, I mean, and again, you may not have too much of an opinion on this, but like, how that kind of physical trauma might affect your mental state and how it might affect your daily life activities and participation in daily life activities?

8:04

AK: Um okay. From a personal perspective or from what I have viewed?

JS: Um, either really.

AK: Okay so what I'm starting to think is maybe part of it is the... and I guess, you know I wear multiple hats and um, the teaching side, and this may be shifting a little bit. We I'm starting to think... so I grew up in New York City so big, urban, congested. I really like that. Yeah, so you know Cairo is a big urban, congested city, and I'm just also wondering if maybe part of the issue is you've uncovered an area that there's no research. Which in some ways is very difficult, and it's always very hard. I say that because what I got my MPH back in '98-'99, and went to Johns Hopkins and I said I want to surgery and international work and nobody can help me. I mean people didn't really laugh at me but they sort of said, that's not really done and so I kind of said, cool, because that means that I know that there is a need, I mean I see it, it's clear there is a need but there's no path, no one's done anything. And yso you go down the historic path like everybody else and you read the literature and say, oh, you learn incrementally. I couldn't do that and so it actually worked out really great for me because I like to do my own thing. So, I just did whatever and it was ground-breaking and so part of it is just to narrow it down and define it so I think

9:55

actually, what you're doing is, you're talking about urban setting, Middle East, but not necessarily conflict. So you're just, well as soon as you say Middle East and conflict people are going to think Iraq, Syria, Yemen.

10:15

But you might want to steer away from that because those are separate issues.

JS: Yeah,

AK: And that may be something your work may lead to. Maybe what happens is when, you know, the US military goes in and blows s*** up and then US AID comes in to follow up, well, they incorporate your work.

10:40

And so, in a large city, so I think, part of the issues also urban versus rural so what about the people who are coming in from the country-side? How do they view what's there and is that because, you know, maybe the people in the city here like, yeah this fine. I'm okay with it, you know, there's a park across town and I go there. Whereas the people who are rural are like, oh, I wish there was a tree on every corner. I don't know. Well, that's a totally irrelevant tangent.

11:11

JS: Yes and I will say like that of that is that it is absolutely a valid point. I think like what my, my research is, sort of assumed I guess, based on some others' research and what they have found is that there are tangible benefits to green space. No matter like, and its proximity, like, you get more of those benefits the closer you are and so it's kind of trying to like, also a big part of it because it's Cairo, is inaccessibility to the Nile river and it's benefits and the Nile river has been such a foundational aspect to the development of the Egyptian culture and it basically completely walled off now.

12:12

And so my project specifically is kind of a trail green space that's actually along the river, but it's kind of incorporating, its more thoughtful, it's more evidence-based than just, well I'm going to plant some trees there. It's like, why am I planting these trees? Why am I creating clearly visible site-lines that don't have like, hidden spaces, whereas that would be totally fine to me or other people that have not directly

12:41

experienced trauma, but would be debilitating, or just more stressful to someone who has experienced, maybe like war trauma and cannot handle not being able to see where they're going or something like that. So, and I get it is kind of hard to do this, because there isn't, there isn't much research on public space design other than like, simple things.

13:11

Like, trees are good, lighting is good. Providing please space is good and and like, you know, the standardized principals that have been developed over time, but they just and like they just don't and like with the ADA, that made a lot of progress in the design, especially in public places but the ADA is not practiced in most other areas of the world so, like

13:42

AK: So is Egypt a signatory to the Treaty on Disability? Do you know? Like the **International Treaty on Disability**

JS: No, I don't believe so like, I, from my professor has told me, they might be on that, but I don't think they practice it.

AK: I actually don't even think the US is a signatory.

14:00

JS: Uh well, that's interesting and kind of sad and you know, like, what it comes down to is just having a patient-centered design, and trying to have it be as informed as possible and with that and with your background, like with what you just said, whether it's rebuilding, or kind of like already changing what's there. I think with Cairo it's definitely already changing what's there. Because, you know, it's not like Syria, where it's just war torn destruction. It is so, I don't know a good word for this, but, like, it is just

so poor and kind of like downtrodden that there is, I think that there's definitely availability for I mean, those types of places to be

15:14

Like, it's almost so, like, some of the landscape and the buildings that I saw in Cairo are so run down. I guess you could say that, it's almost like, I mean, there's just piles of rubble everywhere, and there's just, you know, just trash and building that are so, I think it could be both, I think the main focus I am trying to do though is just, to provide green space along the Nile that is very purposeful and very restorative and very thoughtfully designed and accessible to all. Because there are gardens and parks in Cairo it's just, they're twenty two Egyptian pounds, or they're thirty pounds and I just, like the intention is just to create this greenspace that is very informed and very evidence-based to provide more support for evidence based design basically.

AK: Yeah, so going back to New York, so basically if you walled off Central Park, I could see a lot of unhappy New Yorkers.

JS: Yeah, definitely. And there's even an initiative done by the Ministry of Health in Egypt, right now to create this trail so it's actually something that is going to happen.

16:35

There is professional architecture firms, like, HOK and AECOM, that are, like, international firms that are submitting a proposal for this project. So, it's not, I mean, my project would not professionally be considered for that because I am a student, but if I could create something, that would be, like, design guidelines that could help inform that project in the future. It would be more beneficial. I guess. So, oh, the main point is to create a way to do this and to collect the information so...

17:12

AK: I guess from my experience, so I haven't dealt with the patients enough to understand their perspective so I can't talk through that. Yeah and another issue is also, being in a lot of places, it, you know, it can be I guess my sense is that I'm not, I mean I was in Egypt maybe ten years ago...

JS: Yeah, it's a little different.

AK: Well maybe not, I mean some of the things you're describing are like what I remember. I guess just with the PTSD, or the traumatic side, I guess maybe not narrow it down to PTSD but, I mean, is it.

18:07

You know, knock on wood. I don't think I've had real symptoms but you know I have been in some real difficult situations and so

JS: Okay, absolutely.

18:24

AK: I don't go into places and look for the exit. I don't go in somewhere and look to see if there could be snipers on the roof, you know, I don't go hearing loud noises and think oh this is bad. You know, but is that something that you'd want to try and mitigate?

JS: Yes

AK: Got it. Yeah.

18:46

You know, I guess looking at it from, well I would assume that there's evidence out there for whatever things for trauma survivors.

JS: Yeah.

AK: When it comes to trauma survivors without symptoms, I don't want to say it doesn't matter, well I don't know, I don't want to say...

JS: There's a bit of this. Yeah Yeah.

AK: I mean it simply doesn't bother you, so is it important?

19:10

JS: I see, absolutely, and it so ranges.

AK: Yeah. So, I guess you could enhance. I like it when I go to a nice park. I'm not necessarily craving a nice park though. Yeah, I don't know.

19:31

JS: No, that's okay, and again, like, I think just your insight on, you know, what type of information I'm looking for, you know, in what you said about, like, maybe your expertise, because really, I didn't know before or after the interview, like, whether you did even have experience with, like, patients, other than them being knocked out on the table really. But I mean, I guess the question for me to ask you is, like, when you say you're in the, like, in the thick of things, I guess you could say, like, when you went over, after the, Indonesian tsunami, well, maybe if you could shield, some of the people that had experienced that, from anything that you saw while you were there. Maybe, I mean, I don't even know if that is

20:34

Relevant but, I mean if you could mitigate any of the negative, like, anything from all the places that you visited, if you could shield someone who's in a tough spot, who feels hurt and exposed feels exposed, and feels threatened and feels like basically, the worst thing that could ever happen to them has happened to them and you're in there and you're, you're a surgeon, and you're there to help them. Is there anything I guess you could say that you would like to shield them from, or protect them from that is in their environment?

AK: Well actually, that is kind of reminding me of something so a good avenue for you to pursue is kind of the 9/11 memorial. Okay so I was in Indonesia after the tsunami. It was so pre-devastated I was working with a native organization so I wasn't doing surgery she should be good to you for your is

doing a little. Okay and the reason I say that was so, I was working with a bunch of drivers, translators and they were pretty upset. What people didn't really realize, but there were like seventeen universities there and it was a pretty well to do city. It wasn't just a dump and so everyone credited all the NGO's that went in and did all this work and that's just bullshit. People knew how to boil water. They knew how to take care themselves. Its just al their houses were wiped away and two hundred thousand people just died. And so I remember one of the

22:19

Drivers, one of the guys we were working with was saying, you know, we're never going to recover, and well I kind of looked at it kind of like New York whereas in the moment it's terrible. But yeah, what was interesting is as a New Yorker, and I went back ten days after because I was in Texas and I thought about it even at the time that 9/11 was just going to be another chapter in New York's history. It's interesting to hear the folks from Oklahoma City, who were upset about all the attention that New York was getting and the difference, you know, the federal building in Oklahoma City, still defines Oklahoma City even to this day. 9/11 even in New York, I don't want to say it's been forgotten but "eh"

23:13

JS: Yeah, I know September 11th kind of comes around and we put out our flags.

AK: Yeah, and if you are there then I guess I should go down and see it and but, you know, I'd be curious how they, what they did down in the southern tip of New York and did they think about those things?

JS: I see.

AK: Because part of it when people moved out and business were down they were trying to get people to move back and that is sort of what you're talking about. I know its more on the reconstruction side, but not exactly.

24:01

You know, certain area, but maybe look at all of Lower Manhattan because all of it was sort of re-done and rebuilt. **Were there things that were taken into consideration not to trigger that.** For some people that's were you have issues. So, maybe some of those people actually just left the city because yeah you know, they couldn't handle it. So that's kind of, kind of a link and its not so much about mitigating the harmful stuff. It happened, there's nothing you can do about it. It's not like okay suck it up, but this bad stuff happened and...

JS: Yeah, like how do you get past.

AK: Some people never do.

JS: Mhmm

AK: **And that's where this science is, well why do those people never get over it and where does that come from?**

JS: Yeah, okay. No, I think that's very insightful like, how they kind of, well to me what I'm kind of hearing a little bit is also how does New York? How did New York, still remain New York, I guess in a way like people still how, how did people still want to go back there and live there even though such a traumatic event occurred. I guess, like, what made people want to stay where that happened or live where that happened and it may be part of them are new and weren't even a part of the community really yet.

0:43

AK: Most of them weren't even a target but I guess, you know, just on the 9/11 side for me, being back ten days after being in Texas and you know Texas they're all about like "USA" and blah blah blah, but I came back to New York and there were American flags everywhere. That was not a New York thing I mean we're all Americans but literally every building and every street corner. They were American flags and it's kinda like, wow that's great but that's not New York. The city has actually become more friendlier since then.

JS: Wow.

AK: Yeah, before that, people didn't make eye contact. You did the, you just kind of walk past people and didn't really care. It definitely changed. No, I mean there was also economic stuff going on, but I think that was something that in a way the trauma kind of changed the DNA.

1:48

JS: That's all so interesting, because a lot of the people that I interacted with in Cairo were still like, extremely proud of their country and still wanted me to see Cairo as a good and important city and I think that's really interesting because your initial thought is like, someone who experiences, something extremely negative, like, they're reaction is to be a refugee or like, get the heck out but really, what I experienced while I was there was that most of the people that I talked to wanted to make the city better they for were proud of the city or they wanted the city to be what it was before the revolution, which may, or may not have been that much better but most of the people that I talked to thought that Egypt was worse off after the revolution. I did think that was really interesting and I guess it kind of relates to what you said about the American flags. It's just like people's way of, like, healing a little bit, do is, like the solidarity of the American flag or whatever they wanted to do and I think that's interesting because, you said it's just was not a New York thing, and makes you wonder if like, just that all of the people that I talked to in Egypt wanted to tell me about the revolution. They wanted me to know, that this is Tahrir Square. This is where the revolution happened where there is twenty two thousand people there and sorry,

3:18

two million, two million people were there and thirty five thousand of them were killed by snipers and however many thousand were killed by tanks and other gunfire and they wanted to tell me those things and I thought that was really interesting because I, most, well a lot of people who have experienced trauma, don't really want to well, I mean, a lot of people don't really want you to relive, or talk about those things and I thought that was, I just learned a lot about the well, just how much it varies I guess, because when you take a trauma class, they tell you this criteria, one, this is criteria A, this is criteria B, you know, and these are the symptoms this is how it's treated all this kind of stuff and that was my

knowledge, basic knowledge, until I started doing these interviews and then I learned a lot already and went to Cairo. I appreciate what you said, so far

4:18

because it is different kind of insight and that is what Briana told me. She told me you may not have an answer every one of my questions but that you would have a very unique perspective.

AK: Yeah, I kinda just tell it how it is.

4:37

JS: Yeah, and that's kind of what you need to do when you're talking about these types of subjects is to be honest, because it's talking about raw human emotion and raw human reaction and like, that's what you're trying, well I'm trying to like, react to, I guess, and tailor my design skill towards is those raw human emotions that come up, whether you want them to or not and you have to speak about that frankly and you can't really say, well, you know that does bother me but it will be okay because the more you go and the more you go, the more its going to bother you until you don't want to go there anymore and so yeah, but I really, I mean, looking into my other questions I really don't think that I want to, because I mean I do appreciate your insight. It's just, I think like your expertise, maybe would have been a little bit more helpful if you had more interaction with the patient post-surgery.

5:48

But you just don't and that's totally fine. Like, I just think that that, maybe it was what Briana made it sound more like, and I mean, I appreciate your participation and everything that you've said, but I just don't really want to take up more of your time because, I mean, the other questions are things like, are there any colors and pictures that I should stay away from, which a person who has a PhD or has spent twenty years caretaking for someone who has experienced, like, war trauma, probably would know that better. So, it's just, I mean.

6:33

AK: Well, yes and no. I mean I'm happy to run through anything or something like that. I think it's also very culturally, dependent.

JS: Oh, absolutely.

AK: Yeah, I would say, you know, probably avoid red.

JS: Yeah, I'd agree, that's about what everyone has said.

AK: But on the other hand red is the Red Cross. It is Doctors Without Borders.

JS: Yeah, its like the American flag.

7:02

AK: Yeah, so anyway, in yeah, I guess that would just be a personal preference. My three year old son would say, no, you know, it needs to be blue.

JS: Oh yeah, because blue is his favorite color and I think the more, I'm gathering, like, the more information, well just like a lot of research is just how like, very naturalistic settings impact us.

7:33

Like your sensory stimulation, your blood pressure, your all of those types of things, biological indicators and I have that research in paper form, you know, so like, there is that literature out there.

7:50

I'm just kind of like, I'm trying to understand people who have been on the ground in countries that have experienced trauma.

AK: Okay. So what I would do is I would go ahead and just write up your guidelines now.

JS: Okay.

Have a crappy draft. It's going to be crappy.

8:17

JS: Oh, yeah.

AK: It's okay. And then you can, well if you've met the criteria and interviewed enough people and then start sending it around to some experts.

JS: Okay. Like feedback.

8:35

AK: The reason I'm saying that is, is actually from personal experience. When I was getting my MPH, I got to Hopkins and I was like I want to do international surgery and no could help me and so I knew ehat I was not going to do was land mines because at that point it was Princess Diana blah, blah. With my job, that was the only thing that I could do because it was the only intersection of surgery and public health. I started learning and teaching myself and reading the literature and everything about land mines and actually made myself an expert, which sort of sounds like the stage you're at. You look around. You read all the literature and there's really nothing out there. You're as smart as, you are now one of the world's experts. Okay, and it sounds funny, but, you know yourself, there's nobody else that knows anymore it's not like, you are so smart, but it's just like, nobody has cared.

9:33

JS: Interesting, okay yeah.

AK: So, by definition you are the worlds expert. Um, and so I did that and then I ended up meeting a guy and he's like, oh, its great that you've done all this stuff, meet me this weekend and we need to come up with the standardized survey too, kind of, like the guidelines.

JS: Yeah.

AK: I had no idea and he showed me six different survey tools from Red Cross Cambodia, and Doctors Without Borders Mozambique and so as a student I sat down and I put up

10:04

something and we had a single survey, which whatever. He started sending it around to health organizations, the Red Cross and within a few weeks we heard back, “wow, you guys are way ahead of us, we had the international mandate on this in Geneva but then a dozen people flew in, sat down and made a better survey. So once we had the buy in from everybody, we went off to Azerbaijan and Kosovo and pilot-tested it and then it was actually incorporated into the United Nations official database for when I'm clicking data for when I'm treating injured victims and so the point being you see a need and nobody has done anything.

11:00

So you've read the literature, you see the need and you've done some interviews and gathered some background, whatever, you know, we'll try to give more to make it better, but I would just start doing it.

JS: Yeah.

AK: And then, you know, maybe as part of ongoing interviews, then start sharing with people and say, hey, does this sound like, I was smoking crack when I was writing this? Or are there some parts that are okay?

JS: Interesting. Okay.

11:31

AK: So then, you can, you send it to the international landscape architects, and some of the, you know, the traumatic stress folks and in whatever and say, well what do you think, you know. It may get stolen.

11:47

That's just the way, you know, people steal information but it's amazing what we can get done if you don't care and gets credit. If the goal is to actually help people down the road. If people don't see a need for this, and you get the ball rolling that's great.

JS: Yeah, okay.

12:08

AK: Well that was a little but of a disconnection but...

JS: No, that's okay. Yeah, I mean, I was kind of already working. I do kind of have, like, I do, I don't even want to say the word draft, but I've been, I've started that a little bit just from synthesizing a little bit. I've only conducted, like, three or four interviews so far, but just kind of conduct just synthesizing some of what I heard and I just need to kind of combine that with the literature a little bit more and start working on those.

12:50

AK: Yeah, and the reality is there's no literature so that's great. I mean who's going to say, “no you're wrong?” You want people to say, “no this is crap.” Then when you sit there and say, what's better then they're forced to actually give some input.

JS: Yeah. Okay. That was very teacher-y but also very helpful. Thank you.

AK: Well I'm supposed to be the interviewee oh well.

JS: No. That's a good idea.

AK: **And then publish it.** Seriously, like it needs to be published. Write it up and get it into one of the journals.

JS: Okay well, I will do my best. I want, I just am not sure.

AK: And the one thing that again, using my own experience, not that I am so smart but just that but I've been doing it. There was no global surgery, like it didn't exist and a couple years ago I had never written a paper. I didn't know how to do it and we realized to move forward, we needed a research paper.

14:09

So, I started looking around saying, well, most of the papers out there are kinda crappy and I may not be able to do better but I can do just as crappy. Now I've got like a hundred and eighty papers, which I guess is good, but the main thing is, it's actually started a research base. Now, surgical programs and medical schools are saying, oh, they is research in this field. You come in, and so that's where, you know, just get it into a format, get some people to look at it and say, hey, we're throwing this out here and then critique it.

JS: I will definitely talk to my Major Professor about that because it is an interesting point and we do publish our final document but it might be interesting to look into publishing the guidelines separately or something that is more focused on the guidelines.

15:12

AK: Yes, a couple of years ago, when Ebola in West Africa was a big issue I was talking to a friend of mine and we were like wow, that's pretty shitty, you know, Ebola, imagine having to operate on somebody. You're like wow, that's pretty bad. I wonder if there are guidelines and there were no guidelines for surgery and Ebola.

JS: Wow.

AK: Yeah so we were like that's terrible that there's no guidelines. So we said, lets create some so then that night we went back and forth developed a draft. The next day she sent it to the executive director of the American College of Surgeons and that afternoon it was up on their website because until then there was nothing and yes, a lot of people criticized it, a lot people said well, the WHO hasn't approved it so we're not going to use it. Finally five years later, WHO has finally gotten it.

JS: Right, they're on board.

AK: Yeah. What it took was someone to say, okay we have to start somewhere.

16:29

JS: Yeah, alright, that's a great idea. Well, I guess, thank you. I mean, the interview wasn't exactly what I had anticipated but it was very helpful. I mean when I watch, well Pretty much right after this, I'll watch

it again, I'll definitely reflect a little bit more but I do really appreciate your insight and just generally on the project as a whole. I think that was the most beneficial part of speaking with you.

17:03

AK: And there will be people who can help you more with the specifics.

JS: Yes, well thank you so much. Things were a little rough the past couple of weeks. My wife had the flu so...

JS: Yeah, don't worry, like, I, I'm just happy to hear from people like you.

AK: Okay.

JS: Yeah, thank you very much and I saw that you emailed me your consent form was it the signed content form?

AK: Yeah the one that Briana sent?

JS: Okay. Cool.

AK: No witness, unless you want my dog's signature.

17:37

JS: That's alright, I don't think having a witness is a big deal. Alright thanks again. Okay. Alright bye.

END

Damir Utrzan Interview Transcript

January 25, 2019 | 12:00pm

DU: I work with other organizations working on asylum and then other forms of relief for minors, and I've given presentations on the training lawyers to work with minors seeking refugee status in the US.

JS: Cool, wow. I knew some of that just from the background I had gotten from Briana but that is actually very interesting because one of my cousins by marriage is actually from Croatia and is an immigrant himself. So he same came over probably about the same time you did. He's about your age, I would say maybe, but

DU: Yeah, its the last time that they had still had that program, because it was running out. I think that's the last wave of refugees from Bosnia who came over around that time.

0:48

JS: Yeah, so on this project, I'm kind of trying to, my intention for speaking with you guys is just, especially you in your experience is to gain information that I don't necessarily have because my background is in lanscape architecture and I've spoken a lot with Dr. Goff and she's informed a lot of my project, because in the intersection of mental health and nature and how those benefits can be brought to more of a public realm because right now, and it's very commonly practiced on a small scale such as like healing gardens and hospitals or small personal gardens for like, post-traumatic stress treatment centers for veterans but they're usually very site-specific and they're very I guess you could say, on a much smaller scale and so the way I'm thinking about it, is kind of taking some of the evidence-based design principles that have been researched and collected and kind of broadening them and adapting them to be more applicable on a larger scale such as like, a public park.

DU: Sure, in the US primarily or anywhere in the world?

JS: So my focus area is Cairo, Egypt

DU: That's what I thought but it also sounded like it could be used in other places.

JS: Yeah. My original intention was to do it in the United States but I had a really unique opportunity because my professor is actually from Cairo, Egypt, my major professor. When we were trying to think about a site earlier in the year, or almost last year, we just kind of got to talking about the recent events in Egypt with the political conflict from the Revolution and trauma induced by, like, torture from military personnel and just the lack of trust with the government, poverty, pollution, traffic so all of those kinds of things that are going on so I actually broadened my sample population for who I'm trying to design for from influenced by traumatic stress, but also just severe stress from, like, those things like poverty and crazy traffic and just everyday stressors that occur there. So that's kind of what I'm trying to design for in this park and that includes anyone from an eighty year old woman to three year old little boy, so, because it is a public space and that's where the challenge kind of comes in, is designing, for such a broad range of people and the intention is just to make the environment as friendly to people that have experienced trauma as possible so I just have a list of interview questions that I can go through and you, feel free to say, what you feel like, you could, like what you feel like you're more comfortable speaking on, what you would maybe do not know as much on. I feel like, you probably will have a lot to say from your background, but I'm hoping so. Anyway, but you don't...

DU: And I just want to mention too, I don't know how much Briana's talked to you about this or other people but in in the traumatic stress field, we, you know, research has shifted a lot over the past couple of years on what defines trauma, and right now, its at a place where it dichotomizes between human-made events and natural disasters and, and then it goes into different categories of trauma broadly speaking when we do categorize them in just two dichotomies, it's much easier to implement interventions if you if you need me to.

JS: Okay. Yeah. And I did take Briana's Into to Trauma class just to kind of get an idea of the main concepts and important information in that field, but I'm thinking like, my questions are very specific to the environment and how people experience that but if it is okay with you I'm going to get started.

DU: Okay, I have multiple monitors around and I'm looking at some notes so.

5:09

JS: You're totally fine. I did want to ask to what your time schedule is?

DU: I have enough time to do this. I don't have to be anywhere until 3pm.

5:19

JS: Okay. Perfect, thank you. Okay, so thinking more about, cause this first question is kind of, was kind of general, but I'm interested in how a child or an adolescent would experience this but what could be some typical reactions a person who's experienced a traumatic event or severe stress may experience in a public space, such as a park, plaza, square, something like that?

DU: Yeah, so from the pediatric psycho-social perspective, the setting or environment isn't as important as the type of trauma, so when we look at types of trauma that particularly impact youth, and by youth, I mean, children and adolescents up to eighteen years of age, you look at acute trauma or repetitive trauma, complex trauma and to some extent, historical trauma. Complex trauma and repetitive trauma are the most impactful of those four because they're all relationally-based.

6:20

The relational impact on youth is critical because of their psychosocial development. The brain develops from back to front. Um, its evolutionary and so you have your basic processes. These are just breathing, heartrate, things, you don't think about that are controlling from the back of the head. Your prefrontal cortex typically doesn't develop until twenty-nine, thirty. We used to think it used to be twenty five.

JS: That's actually really interesting. I didn't know that.

DU: Yeah so when you look at youth who make stupid decisions, it's just because they literally don't have the cognitive capacity to make right decisions, or the processing power. The other thing is, there is a difference between men and women. Women mature faster than men. Women are also more emotionally intelligent than men which has implications for trauma and as the brain develops, something that occurs is myelination, which is a fatty substance that surrounds a neuron and it helps it fire quicker. That's how, you know, you say your phone number over and over and over and at a certain point, you don't even have to really think about it. That's myelination and we know that complex trauma

and repetitive trauma impacts that fatty sheath that surrounds the neuron and impacts memory formation and retrieval in youth and um, I'm sorry. I'm trying to look through some other things here. The other thing that's really interesting or important to note is most if not all, of these definitions are Western from the DSM-5 or ICD-11, which is coming out now, and as a clinical scholar, when I work with people from another country and instruments have to be validated and they have to be reliable, for example, a very common question for assessing PTSD is in the past 30 days, have you felt blue and you and I can think of blue as feeling down but for some people like refugees from Burma blue is literally the color. So that instrument wouldn't be valid and it wouldn't assess their PTSD symptoms.

8:21

Then when we look at more of the specific effects of trauma, we think about the attachment system and attachment is just, well everyone has heard but it's just a framework that helps us self-soothe. So when babies are very little they scream, sometimes, for no reason, because their brain hasn't developed to the point where they can calm themselves down. If there's a caregiver then they provide a proxy for that soothing. If a traumatic event happens in that developmental period, it throws off the attachment system.

8:51

That infant learns subconsciously that the world isn't a safe place and that others will not be there to help me. That leads to mistrust of themselves and others and also impacts their cognitive framework of who they are, who the world is and their general beliefs, and that's also changed significantly since the 1940s, we used to think that Dr. Spock's book; Benjamin Spock said that children are little adults. They're not. They're very, very unique in that regard. When we look at dissociation, that also something that affects everyone, but has a more apparent or stronger effect on youth. Disassociation is like amnesia, de-personalization, eyes glazed over and the de-personalization is disconnecting from the mind and youth will do that more often and it'll be an easier trigger than adults as a result of a traumatic experience. Again, it doesn't really matter where it occurred, like in what setting or context, but it disrupts the emotional or relational, the attachment system that leads to various mental health problems. Why context or setting isn't as important is because they don't have the capacity to differentiate between them. Does that make sense?

10:09

JS: Yeah, definitely.

DU: Okay then, Sorry.

JS: No. Go ahead. No, that's okay, continue.

10:17

DU: The other thing is, so, sometimes, or oftentimes anxiety and depression are observable and when they're combined, it's PTSD. So instead of one axis, it's two axes that make up PTSD but more often than not in youth what we've seen is internalizing problems so anxiety and depression that manifests in behavioral disorders. So like Oppositional Defiant Disorder, not listening to rules, breaking rules, and if left untreated it leads to Conduct Disorder. Sometimes, or more often than not, I see that a lot, but uh, if youth of a similar background experience are grouped together, it'll lead to something called Peer

Contagion that then if left untreated can manifest other deviant behaviors that are anti-social personality. It used to be referred to as psychothapy, but that's not a real term anymore, its anti-social. So we have the Nature versus Nurture concept, their genetic effect on development and adults learn to a large extent because they can make sense. They had the language to describe what's happening to them. They're less susceptible, which is why a lot of intervention existing for children are very, very limited. It wasn't actually up until 2013 that you could diagnose PTSD in a child under 18 years of age.

JS: Really, huh.

11:48

DU: Yeah, now you can diagnose a child and it would be called a, it's a preschool or three-something specifiers, so its PTSD in a child under six or eight years of age.

JS: All right. I guess my specific interest in, like, what you mentioned is with the behavioral disorders, left un-treated. What do you see as maybe some challenges for a parent or a child who experience that and being in the public sector? You know, not private at home. Like, maybe what challenges could you see that?

DU: So, I've done research with Syrians who have lived in Egypt during the Arab Spring that toppled the government and as much as Egyptians suffered, so did the Syrians, for example, there was a time, and I don't know if it still holds true, but where Syrian weren't able to go to schools in Egypt, or they had to overcome a lot of bureaucratic obstacles to do so and, and the challenge with that in public spheres is the marginalization, the distrust, the misinformation that perpetuates and compounds all these multiple effects. So not only do you have a child that feels bad and has various behavioral, mental health problems but also parents that are powerless and we know that parents who perceive less control over their child so regardless of whether or not they have power, but if the parents perceive less control have children who have more internalizing problems. Now you can start to see the shift of the attachments system from childhood and the very young and what it looks like in a child that is maybe school age and this is not conscious, you know, children can read and perceive emotions, thoughts about without being, in others, without being able to verbalize what that is.

13:50

JS: Okay, I know generally some of the anticipated reactions or stressors or triggers you could say in an external environment from, like, noises, crowds, all that kind of stuff. Would you see that as similar to how that would occur with children or are there others?

DU: Yeah, so it's very similar. I'm trying to look up something here that I wrote.

JS: Oh, take your time.

14:36

So the field has moved. I mean its seems like it changes every six months. It's not referred to as much as a trigger anymore as a stimulant because in order to be triggered you have to have some sense of awareness and children may not have that. It's very hard to anticipate those triggers and we know for children, it's very similar, identical to adults, however it leads to more psychosomatic symptoms; stomach pain or gastrointestinal pain or discomfort being the most common and we have something

called the Vegas Nerve that goes from our stomach to the back of our brain so when we have a gut feeling it's actually a nerve impulse and it's not just some weird pseudo-scientific phenomenon and again, kids can't explain what's happening, what's going on, but they will have stomach pain, which is a physical manifestation of anxiety.

JS: Hm, wow, I didn't know that. Okay, so have you ever conducted or seen therapy conducted in an outdoor setting?

15:45

DU: So, I have, not specifically with refugees but when you work with youth, more often than not, it's not traditional in the sense of using a therapeutic model because it's not a one size fits all. Children typically will not open up and engage with you unless they have a relationship with you so if you go in with a kid and try to ask them about their deepest darkest secrets its going to backfire very quickly. So I've played basketball with kids. I've just walked around with them, you know, anything that can kind of take away their attention and their focus from the present. But then also, that actually applies to indoors as well, such as with video games, which is also a stimuli in itself. The difference being that I've noticed, and I don't know too much about this research is there is gender differences, whereas, you know, more often than not I've been outside with girls and inside with boys, like, video games with boys and outside playing basketball with girls and all of them that I've worked with are under thirteen. What's interesting about that is there are when, when we think of interventions most of those are evidence-based interventions that are approved by a central government clearinghouse. The reason why people are like, you know, drawn to evidence-based intervention, is one, more often than not, they work and two, the government pays for them. If they're not evidence-based an insurance company is not going to pay for it. It's one of those things where money does matter in that regard but the strongest predictor of a positive therapeutic outcome is a relationship and that has been well established by research is how good of a relationship you have with that person.

17:38

JS: Okay, have you ever experienced any, like challenges while you're outside in that environment with girls or boys, is there anything that that goes on, like anything, even naturalistic sounds, artificial sounds, the activity, or any activity that anyone has found to be, like any child, or younger person has found to be stressing or that they have a especially appreciated or something that they really, like, you know, attached to or really loved, or thought was comforting?

DU: Well I think just speaking to, I'm trying to think of the word, an organic replication of everyday life that makes sense. Okay. So, anything that feels natural and organic, which when we think about a therapeutic relationship and why it is important is because it's organic and not forcing it in any way, and the one thing I can think of, it's not necessarily any sound that is soothing or may be more helpful but I more often than not think of sounds that could be triggers or stimuli. When I worked in Chicago, ambulances are kind of part of the course. They're everywhere. A train can be screeching, tire noises can be a trigger. So anything that is eliciting those exposures to trauma. It's interesting that you know, while drawbacks of working with children, include their cognitive inability to process information, which leads to impaired receptive communication and let's see here receptive and expressive communication meaning information problems taking in, problems putting information out; outside it isn't as much of a

problem because they're distracted and focus on, well they can't pay as much attention on multiple things like juggle multiple sources of information that is required by a developed brain.

JS: Okay. Yeah, that's interesting. You kind of answered the next question so I'm just going to kind of list stuff and elements that are typically found in "the park" and I'm going to just get your opinion on what you think would be or may be beneficial and what could be challenging? So the first is in landscape architecture, there's two trends in children's play there's traditional play, that you know, has been tried and tested for years but it's just getting more creative and it's getting more... They're just kind of coming up with a lot more elements, and like, play equipment, but there's also naturalistic or "nature-play," which is very focused on just leaving the child to explore their own imagination and giving them a very naturalistic environment that they don't really get anymore, because we live in such an urban environment now, and so I'm kind of thinking about nature-play a lot in implementing a play area for children because of the evidence-based, well evidence that has been found to be positive from simple nature such as leaves, trees, water, all that kind of stuff so I'm thinking of incorporating nature-play into the park, and I'm just wondering what your thoughts were on that?

DU: So it's interesting when I was in college, I actually worked for a major park district and was overseeing the design and installation of a playground and now, that was probably seven to eight years ago. But, you know, that's a really positive shift, not only from what you mentioned but playgrounds for the most part are very loud and designed to elicit that and that's not necessarily a good thing for a kid who is already overly-stimulated because we know that ADHD is one of the most misdiagnosed externalizing problems, more often than not its trauma, misdiagnosed as ADHD, its over-stimulation because kids don't know how to process so if you put them in a place that's designed to stimulate, it's only going to create the cycle of over-stimulation whereas with nature, you know, it, it puts them in that again, "organic environment," where they can process and think for themselves but also, you know, I don't know about other countries, but I would imagine that, you know, all these wild playgrounds kind of the traditional implementation of what they look like are very similar, whereas most natural, very specifically designed playgrounds that aren't as stimulating are novel and not as much prevalent in other parts of the world.

JS: That's absolutely true and Cairo is unique because it, one, it's got one of the lowest percentages of green space, per capita in the world and so they really only have one major park, which is Al Azhar Park and it was designed by the Aga Khan Trust for culture ended up being a very well-designed park, but it's very traditional you design park like, it doesn't necessarily take into consideration some of those.

23:08

Things like, I guess Western design and I'm trying to think about it in to be culturally sensitive. So I'm trying to think a little bit about, like, Islamic garden design as well because I'm Cairo. Egypt is eight percent, Islamic culture and stuff. So, it's kind of hard to do that because it's on designing very, I'm linear, and very clean and cut.

23:39

Trying to kind of figure out how I can kind of incorporate already in the comfort that comes from the traditional design garden that they're familiar with as well as nature play. But I guess with that, it's just.

23:58

I think like.

24:02

And I don't know, I'm, I'm thinking about this like, so, the serenity that comes from and it's on the guard it and the idea and then this on a garden is true slight happen until they're usually very lush. They're very com. Beautiful. There's usually oh, water feature in the center. I'm just wondering if that you could see that at all being beneficial to a child you already over stimulated. Anyway, so, yes, and.

0:00

About this, like, she'll just serenity that come from and it's on the garden and the idea and then the, and so they're usually very lush. They're very com. Beautiful. There's usually, oh, water feature in the center. I'm just wondering if that you could see that at all being beneficial to a child you already over stimulated anyway, so, you know, and and all.

0:31

Maybe why or highlights? Yes, there's a difference between religion culture in the Middle East is one of those places where religion culture are interwoven, therell separate? There's a woman mayor Burke does, because we want and a religious a requirement there are times where it's just a, a cultural half of the beliefs and the reason that important because then you have differences between CIA, Muslims in sooner. Yeah. And that's why.

1:01

Syrians are Muslims, they weren't really welcome end of the difference. That's the other reason why I say it may not be helpful as far very young children between three and eleven ten eleven just because of developmental a milestone and are coming to terms that you were mortal. Okay, and that you, you know, they're, they're periods you ask any parents and or anything either your.

1:31

Example, wasn't any time where I was thinking about that, or where I was wondering about religion, realizing their brain that developing and all these factories. If they're human beings, and can it seems die in general, you own religion into it, you actually risk and kind of exacerbated that's why, you know, when you look at naturalistic settings, without necessarily cooperational religion, or.

2:01

Church there are so successful like, in a nature there you want and if they're building on existing infrastructure, as nature, without necessarily making major additions, or changes, possibly control all extra in yesterday, or most to make sure that multiple groups of children, you, you can't really right.

2:26

Design that for all these groups, be inclusive parents. They're often more of a problem children's themselves. I don't know if that makes sense. Yeah, absolutely. I'm ready to ask about urban and community farming or community garden means and maybe what your thoughts are on that for any age. Really? But also specifically on children and their ability to kind of work.

2:56

Or, like, I don't know if that is something that you've experienced and I know some like veteran's have been on their therapist, tipping utilizing urban farming in order to kind of provide a sense of purpose again. And I'm just wanted to know, maybe your thoughts on that as well as an element in a public park. Yes. Whole level mention children's brain developed but from there, the approximate. This'll develop.

3:26

You can, I'm at the bottom, which means they go to different stages where like, their fine motor stuff that I love, you know, farming or doing anything with your hands as beneficial to other a logical development. And I can do their relationship with an adult that their surroundings, and takes our mind very similar to like, was veterans'. But if you're thinking about refugees on here, that specifically what I'm.

3:56

Probably not, because we know who just from research that unless people's basic needs are met that. And there are no interventions are going to help. Okay.

4:08

You know, for example, refugees in the US, or if they're waiting for asylum, and there's uncertainty I'm going to look like, especially in the current social climate experience something was referred to as crossover ambiguous last.

4:22

And there's just about nothing that I can do.

4:27

Don't need it for example, my my fiance is an immigration attorney man, or research is on environmental and all, that's impacting racing. There's nothing to a client that makes them feel better, but if she emails and tells them okay your us, how Michael casing there's some things that are like, this or night. Okay. All, you know, there are, I think that's due to the Western disconnect between what we think.

4:57

Helpful and the reality of if you don't have one of them, your house, nothing, I'll send them out. Yeah. And that five hiring a lot of research. Now, speaking to implementing a model in and in an refugee interventions addressing most pressing need first. Okay. Yeah, I'm kind of still wanted ideas remain design concepts and I'm just healing garden is to have public.

5:27

And private scenarios, I guess you could say, in the way of, like, there's a lot of social interaction and minimal social interaction, only challenge with minimal social interaction is like, or, like, providing a private space is parental supervision and therapist supervision. And I guess that's kinda hard because it's like a public park, it's, it's linked traditionally not that hard to control because you're in a smaller environment and if you keep track of people in this morning.

5:58

I'm trying to think about providing like, safe, you know, right? The places where a child can just kind of to be on their own and just relax. And kind of enjoy the quiet pray that each time in a naturalist environment that they may not have the home, because, and extremely density and people live and Barry done housing situation. And trying to think about creating the space that is just a reflective spot that is.

6:29

For a child to read relax, but I guess it's not your opinion on, like, how important is the parental supervision call? It obviously it's very important. But like, I'm trying to think about, like, a range of privacy too. I'm exposure enough to where like, the parents feel safe to okay, that their child's over there by themselves. I just wanted to get your thoughts on that. I guess.

6:57

Than what you think would be better the more important to provide. Absolutely. These parents can totally see their children. Like, there's no question about it and compromise. A little bit of privacy. I guess, but I just wanted to have on that. Yes, hold on for the, for example, if someone was on a a, a, a member of the is to for review board. Okay. As a scientist and end up both similar. You're not going to. I wouldn't be surprised.

7:27

Pair that with me to that, or to assist in trauma and families, I'm off enough. I mean, when they violence and execution is is very, very common guys and there's a research scientist, for example, and I'd be a medical. That's not a grain. And even then it kind of broke up a little bit, and it was a research scientist. Let's say, you came to me, it seems anyone, I of being promoted testing I would not occur because that's.

7:58

Higher than the benefits does that make sense? Yeah, it does. Yeah and that said, I'm not speaking or study in general. Okay because that way, you know, when we think of the benefits, what are, what are the benefits? You know, child me, I'm the explore learn saying has some privacy what is a detriment? A parent's going to get nervous? A task going to get nervous? They need feel like they're being trust into a very similar situation. That trainers under some trauma.

8:28

Okay, and, you know, those risk or to send me or I'm too is I anticipated benefits and I say anticipated on whether or not only two. Okay. Yeah no, I appreciate that opinion because I've heard make things about that because it works. Well, for adults, because the don't have a little bit as you mentioned much more self awareness their brand development is, I try to align. So it has been very successful right?

8:58

And don't know didn't have to think about how to think about the attachments system. We really need video parents. How interactions? Yeah look back at their parents to see if there's a way that pardon my language, but that's how it's going to lose their. Yeah, I can imagine and if you separate them to know, I mean, it's probably going to cause the funniest you could argue that's going to cause you. Okay. All right. Thank you. I'm okay.

9:33

So, in your professional experience, this is a general question, but can also be targeted towards pediatric as well but what are some of the best ways? I'm people suffering from. I'm traumatic stress. Distress has found. I'm really from their symptoms in everyday life.

9:56

Are there every day? I like those differences between children parent's accountant, adults interventions mentor in, or not geared towards children or parents, you know, you want to intervene with the time. They actually work the parents that that's the proxy. So relief as a would be empowering the parents, I mean, we've found in research humble samples, for example, then empower the parents about less likely, the children are going to happen.

10:27

Depression, and that's just proceed empowerment and feeling like you have a sense of agency and that's important. So, refugees are displays populations because trauma decimate your central over what's happening string. And if we can give them control, or even the smallest things. Hey, I'm going to do this. I do and do that right? Not sellable a impact on recovering healing and that as a separate parents and children.

10:57

Yep so siked. Okay, so.

11:10

I kind of mentioned this earlier, but I'm kind of going to re ask this question. I'm in a way of thinking about, as basic oven. Naturalistic sitting as you can imagine. I'm afford it. Does or anything like that. What elements do you see as beneficial? And what do you like, simple element I guess, from all of the experience working with refugees children like.

11:38

The human experience, I guess, could you say, what do you see as beneficial? And what do you see as an unsafe threatening? Uncomfortable? I'm kind of thing where it's hard to you. So much between people but in other words, this answers, your question, but anything that's neutral. And not necessarily extreme certain words, we know the town's can't trigger people know that therapists use white noise machines.

12:08

That I'm sitting in common, there is no problem, but there are nothing starting to build this thing for us an example but, you know, neutral colors elements that do not a vote one way, or another. Yeah. And then that that's challenging. Because there was no, but in general, it's challenging because okay. You know, neutral to me, need many different things to maybe, I think something that kind of goals for multiple.

12:39

Multiple groups, chemical by bringing all it would be neutral aspects of define their colors shape, or nothing with two provoking or two stimulating sample when I interviewed a minor in Central America for a silent evaluations. You would sit in the room. That's one that that's a button that I have. No, like, it wouldn't be monitor, like, closer and clean and they replicate as a a, a, the clinical nature and then.

13:09

Often times perpetrators of torture our positions, medical professionals file, coming into the bank you know, those are, I would say aspects that applied to various different groups of people, particularly children may not be verbal, but the thing okay. That's interesting. Yeah.

13:33

Such a lookout so do you want to go to a pediatrics clinic, for example mostly a lot of the colors are right and the central they are like, Ah, they're, they're like transparent, yellow green. Yeah, yeah. Right. And they're very round say something and you'll arts and there's a lot of light. So, those are aspects that are really trends transferrable across settings. Okay. Yeah, that's very helpful. I'm.

14:08

Have you personally ever been to a healing garden or outdoor therapeutic space? And I'm just what we're opinions on that little. First was in college had like a piece starting in the first. There is nothing really stimulating about it. It just is, and that's all those aspects that is universally.

14:33

Received by different people in way, they can be who they are on time and or maybe the difference between children and adults. But I don't necessarily think it does, there's nothing it's unique and special without being unique that that's kind of hard to. Yeah, I think I know you're talking about absolutely. I mean, it's kind of interesting because I mean, I've just done some research on so many different types.

15:03

Appealing guardian for different purposes, and everything from cancer you autism to a more veterans and I'm there definitely are like, the transferable qualities. I guess one on the most, it's tranquil, because you can just be there and it's very, especially, because it's intimate with yourself, even though it's sent to similar across the board from all these different garden. Like, it's just a special moment that you don't necessarily get very often.

15:34

I definitely understand, you know, trends or whatever. I'm even though it very nice. Very does impact investing in your central SA over here in the space. We can kind of get in touch with you are and whether you understand what that means, or not in court, right? Because we teach adults, just children at the capacity, any sort of therapy teach them. How their emotion okay.

16:04

Capability or emotions and we jump into, you know, reliving some most dangerous, partially reliable just park therapy, or is it for children? It's just, excuse me like gamut them. We have.

16:21

Their pain and unfold naturally soon as relationship. This is kind of like, I think clinician and a therapist if you're going to conduct therapy and an outdoor setting. I'm not necessarily saying that this would occur and it's partly because it, they don't really even have that opportunity in kind of really but what would I mean, what are some of the main design elements that maybe, you think about, I mean.

16:52

And group therapy is actually really popular for refugees overseas and part, because there are not enough counselors, or sample, they've been research projects on the Kenya and different parts of Africa where, you know, you do group therapy whether it's with children with parents, adults, families, whatever and all of them that I can think of well, physically, we're set up in a circular place and that's because I want to circle symbolizes. No beginning. Each other would be outdoors. So, people's backs aren't against the door for example, one way of reducing we traumatization.

17:32

So, actually, that is a very popular, a form of intervention or traumatize refugees in settings right? There aren't adequate resources to access. And it's very interesting insight. Sorry how to part? Parts of your questions? No, that's okay. That was very helpful. I mean, I mean, I, I imagine.

17:52

I think I got it in the back of my head about, like, group therapy and providing social spaces, but the circle is an interesting aspect, but I'm particular because relationships are dealing. Yeah. And I'm like, yeah, and in Africa.

18:09

All the ones that I would have been part of my mentor has different. I'm even outside and in circles. Yeah. All right. So, can you anything being, like, physically challenge? I mean, depending on the type of trauma. Yeah, so that's like a natural disaster or we're trying to defend it will physically to build a date you, but can you see anything like like, physically talent? Like, I've heard of many people conducting physical.

18:39

Key for competition in an outdoor setting and I'm not saying again to that could happen in the public park but even, if it was like a garden skill, how could you maybe see that be designed are created in order. So, that people who experience trauma can feel safe and an outer setting where they're doing physical activities and trying to participate in, like, physical therapy.

19:08

That you're familiar with that. So banner called now, and then I look as a professor of psychiatry at Boston University, medical school in essentially, defined ptf decrease again. We didn't know the way he found that out as see he's from the Netherlands, but you did those residency in the US and saw veterans returning yesterday at number one and then you saw the symptoms and he couldn't work. See. I didn't know anything up one of those the.

19:38

And if you believe that something was more for you, it's going to work. Pretty example. Mindfulness was very helpful. I think that's a lot of course, it it's not going to work for you. Okay. So, it's not necessarily what type of activity, but whether or not the people believe, it's going to how did it? Okay. That's most important aspects. Like, Michael is does work incredibly. Well, not only for people believe that's kind of work where people are going to get agitated and don't think it's going to work that they may not.

20:10

Okay, so in Egypt from a lot of the articles and research that I've been doing, they've been talking about mass social trauma and continuous traumatic stress. And that is kind of a hard subject to research. I'm personally that I found, and I was just wondering with your experience, like refugees, and, I mean.

20:37

Got general population, and what I guess what the difference it could be in a person experience, like, mass social channel where, like, the entire, I mean, you in twenty other people that, you know, experience, significant violence in that resulted in trauma. Like, what could be, maybe some of the connotation of that, versus someone who could be impacted by an isolated then or so, there's.

21:09

It's referred to us historical trauma or yeah, and it started first glance or or the terminal juice following the second in at the genetic genetic change families that have been in concentration. So, I can start generation children suffer from anxiety and depression related to then term an update. Great. In return.

21:38

Wow, yeah, if you look up a, it's intergenerational trauma historic trauma excellent below large group of people. There's a lot of research on my. Okay. Yeah, yeah it's very helpful. I'm kind of a narrative, send the stories in addition to this article a new one came out. I think the last year, I'm just literally your genetic makeup team was resolved with okay.

22:05

And then can like along, like, I guess the difference between an isolated event in, like, one, isolated event and trauma versus, like, continuous traumatic stress in, like, a civilian environment that is in, like, a war zone or, like, for it just sends it was the eighteen days where there's continuous violin and continuing. I mean, you could say.

22:35

Piece of the military power over the civilian population and I think what I read about it, that's content that is created a significant mistrust because the people the government, or the people who are supposed to take care of you. And they're obviously not. And I was just wondering how that could impact seems like a public space is often seen as like, a specific states, or like, a governmental space since it's shared. And it's.

23:06

And I'm wondering, you know, if like you and carrier square the place for the air on digits, in relation, mostly take to places one of the main shared spaces and Cairo. And it's just, I mean, I went to go for about a week, and why they're, and they're still hundreds of people there, but it's blocked off every Friday. It is not the place that it used to be and I'm just wondering, like, if you could explain, a little bit of the effects.

23:35

Maybe a continuous, and how that might impact maybe Egyptian and start on public space and shared space because that is where it kind of some of the trauma happened and what not. Yeah. So all want to say that allows noticing, and then we using terms differences between disciplines scientific clinical and all of feels a define it as repetitive. Trouble. Okay either they agent right? Literature search. We continue.

24:05

Trauma still find very little trauma, because those are a clinical researchers. I go research means that essentially in a implement, and in the CEO whether rather than just your radical where at the continuous trauma, it's more theoretical a research eyeing and you bring up a really good point. For example, when I do, you think with people who are refugees, but they're very to being associate insane receiving the photos of town. Just talking.

0:03

And and, and that's one of those things that people are MSC trust and children may not be cognizant of that. But it's their parents and the caregivers are on their lives in Sprint those beliefs.

0:17

I mean, and like, and I, and I, when I did go to, like, I went to the main park, and I went to the end, but it's not a government parking owned by Dr organization. And so you have to pay a certain amount of the to get there and they were people and I mean, there was people all over the kids part there is people all over the little water features around a little lake. Like, this.

0:47

Everywhere, and I wasn't necessarily like, because it costs money and then being, I just didn't really understand. He knows it kind of solidify. Some of my Western assumptions. Like, if you could see because, like, to me parks are great. Like, you know, I was going to market looking around, I love watching children, play and whatever and I guess, maybe it kind of little site that people generally do like, those things I guess.

1:18

At least and I think that was really helpful for me to see because I did kind of have the perception of, like, Square and not, they close it up. And then it's kind of like a hostile environment anymore, because has been five years since last big they happen, but it's definitely a change environment. And it was beneficial to see that people were using public space. So I'm wondering in this design. The.

1:48

So, I should also explain that the design is also part of kind of a national trail initiative that actually, a proposal by the ministry of help in Egypt and the part site that I selected is going to be along the river because then I will, revert is completely world off to could esthree and access. And so people just don't have access to the resource that they have been intimately.

2:18

Into what their culture is intimately intertwined with for thousands of years. And now, people don't even have access to the banks and soon of the main idea is to open a part of the now revert back to it as you access. But it is affiliated with the ministry of health and the government into, I'm wondering if in my project, I should even like, stay that necessarily, like, should even make that.

2:48

A part of my project, or should I just kind of leave that verbage ten completely out? I mean, it's like a simple Don do which the cultural social cultural context that is there? I'm wondering if affiliation with the government might be a negative thing. You know, the trauma that was, rather do not disclosing it, or people are going to find out. Yeah. Or they get. So so just trying to do you not disclosing it.

3:18

Think it's much worse than transparent about it. Okay cool. Any other thing is and guys and apologize. I'm not familiar with your field, but also pulling in in in asking people's thoughts suggestions those in the community, you know, even use our Western in their color and I se, we are incorporating local perspective, not closing the relationship.

3:48

And actually be beneficial in another channel. Okay. Let me think about it, you know, if it's logged off and, you know, all the sudden it becomes open to what you together and say, what the government. It's okay. Yeah,

4:03

Okay, yeah, definitely. And part of my process is to, like, take the information that I've gain or accumulated from these interviews into a set of design guidelines that will be reviewed and then the design guidelines for.

4:19

or this part, and the park will actually be reviewed by I'm like, design contract, simple design, review what do you like what are you not? Like? What makes me feel comfortable? what'd you? Let your kids go there by son addiction refugees that be on it has contact with in Lincoln, Nebraska and some data necessarily have to being refugees, but students on campus to our education and have experience and it gets in public space. So it's part.

4:49

The design process, just to review with them and then do for the reviews, and come up with like, a final contract in which the ultimate goal it's the design guidelines and the projected design. So, I think that's great. And you kind of covering all the necessary basis to again, those are really, really great things where you can never be able to check list they have to, or should think about that. Maybe obvious someone you for the discipline but not to others.

5:20

Me too I'm almost done actually I don't. Yeah. That yeah, so.

5:39

So really thinking about refugees of, from political conflict, and experiencing public spaces, not just like someone who is experience trauma but a refugee or should I wrote political conflict experiencing a public space? Plaza park streetscape in a different, like, for example, Syrian refugees, or Syria and people.

6:07

In an injection environment, did you see anything being threatening about a part plaza? Streetscape republic square so, did you see someone who's up? Or foods? People? Not necessarily traumatized yeah. Refugee. I'm like, I don't know. I'm just trying to convey in designing for such a large population, and trying to think about that I guess was low just people who or I mean, they still.

6:38

I mean, like, I said, severe stress people who are severely stress not necessarily traumatic stress. But for him, you might be someone who is also severely stress. Maybe. But I'm dumping the refugee and not be traumatized.

6:55

Is an international human right's law definition, and the universal exploration of human rights and domestically it's in the immigration national naturalization act of nineteen. Fifty six in nineteen. Sixty two. There, you get that legal designation persecuted. Okay. And and as trauma, so you can't really separate those two. So what would you call someone like, team from theory?

7:23

You like, came from Syria so is it possible for someone to, like, come from Syria and be more like a? Migrant then? Yeah. Okay. An immigrant those are legal terms that are really, really critical is someone, who has entered the US border, for example? Or the border of any other country seeking asylum, once they've entered that country. Okay with someone who's been granted asylum.

7:55

Is someone who asked me voluntarily for economic reasons? Okay. Yeah, I'm so, for example, library to having a PHD in being assigned test, I can get citizenship and just about any country and we're all under the category in the US. At least it's a referred to us persons unique talent and, you know, the us a little bit different with with these laws for the most part, those are the biggest differences and.

8:25

Those are the biggest misconceptions, perpetuated by industry media interchangeable use a legal terms yeah, definitely cable dollars. Nine last official question. I'm is there anything else like, in me working with people I mean, I know I've heard a lot about being an effort. A lot from be on a brown about, like, being very aware of cultural on endurance working and like, talking to people with.

8:55

Design reviews and whatnot and so I think I've got most of everything covered when it comes to like, going to interact with people when I asked him to review and I work but I was just wondering if there's any other stuff that you might have on that

9:09

You might have on that interaction and how to make it as positive as possible. Yeah. So, I think it's something that I think of an employment, all my research and this goes back to the IRB is, for example, doing research with, I don't know, just mothers in the US and you tell me that you're going to tell him all about your life to make them feel comfortable. Hey, what like, why don't I get it? But it's also not justifiable. I mean, that I'm going to work with refugees and.

9:30

How about your life to make them feel comfortable? Hey, what like, why don't I get it? But it's also not justifiable. I mean, that I'm going to work with refugees, and I'm going to tell them about myself to the extent they want to within reason and keeping boundaries I would be exposed, because we look at cultural nuances, for example, Syrians, when I've done interviews with them, like coffee.

9:36

I mean, that I'm going to work with refugees, and I'm going to tell them about myself to the extent they want to within reason and keeping boundaries I would be a supposed to pay, because we look at cultural nuances, for example, Syrians, when I've done interviews with them like coffee tea cake.

9:56

that interview on salt thing if I didn't accept that? Okay so, just a when they ask you about World War II, where you from, where are you interested in that? That's actually part of the research and that's okay. That'd be sort of being transparent, so they know what your motivation send interests are in your billing kind of like that relationship. Okay well, thank you. And I think that's moved to the questions that I had in mind. I'm and I kind of talked a little bit more about other things.

10:26

Didn't necessarily have so I definitely appreciate that. I'm most interesting. Yeah, it's kind of cool. Because I've just been writing and writing and writing and writing and writing and now I'm finally getting to actually do some of the work. So I'm excited about that. And it's going to be very short time frame, because if the masters at about one and a half years, so content, but I really excited to do the work and see what comes out of it and Johnson conclusions and but the design.

10:56

Together, so that they can get reviewed and actually, hopefully contribute something to the effort. So yeah, we'd love to if you kept in touch and kind of, let me know as you progress. We are coming up

against super interesting as far as I know. There is anything like those for you will traumatize populations. Yeah. Well, I, if you wouldn't mind, I probably would appreciate, like, once they get kind of get my design guidelines together if you wouldn't mind, like, reviewing a draft of those, but.

11:27

So, I think probably within the next month, I would say, I'll probably put those together, but yeah, that'd be sent me an email or several emails. So yeah no, that's okay. Well, I'll definitely keep you updated and I very much appreciate your insight on this because it's been very unique. I have not gotten to hear anything about the differences between my childhood perception of trauma and versus adults and all that kind of stuff. That's very important to my work.

11:56

So, looking forward to this interview, so, reach out, if I can be of any other help. Okay. Okay. Well, thank you. Very much and I will let you do it by you.

Jacqueline Braughton Interview Transcript

January 15, 2019 | 3:00pm

JB: My focus is on specified treatment modalities for moral injury so I do a lot with spirituality and ethical violations within trauma and PTSD so I also worked at a residential treatment and chemical dependency program where there's one...

JS: Sorry, one moment but continue sorry.

JB: So residential treatment facility, court-mandated therapy and treatment so I've done therapy with both those with a criminal record and those who did not, anywhere from small-time offenders with drug-related charges, assault and murder charges to someone just coming in and saying I need this treatment there lots of trauma there and then I also worked in school based and did a lot of trauma treatment with kiddos ages five to eleven. I mainly specialize in teenage and above and so, in terms of trauma treatment as well I'm EMDR trained I'm also trained in narrative-exposure therapy and psychological first-aid.

JS: Wow, that's a pretty broad range.

1:48

JB: Yes, lots of experience and then research and scholarship-wise my specialty is in dual trauma couples and those are very much Briana's niche. Yeah, so, in terms of what I'm currently working on for my dissertation is I'm looking at the mediating role of trauma in stability, adaptability and relationship satisfaction in dual trauma couples.

JS: Yeah, that definitely sounds like Briana's specialty.

JB: But yeah, and so, because of my background, my master's in a marriage and family therapy so very systems oriented. We're seeing a lot of reciprocal effects of how trauma impacts everyday life.

JS: Yeah, that's really important for my research.

JB: I think, because of my, well I'm guessing, because of just how I've had a lot of experience in a lot of different kinds of demographics and that that's probably why Briana was like, I think you should talk with Jackie.

JS: Yeah, definitely. Well, she didn't, so it's just crazy because she gave me a brief, well we had a meeting earlier this week, and just kind of talked briefly about everybody's background, because I'm interviewing about five people and you were one of the five and before that meeting she definitely did not quite convey just how much knowledge everyone had and I was just like, oh, my gosh, awesome. So I'm pretty excited for these interviews to get going because I'm very, I mean, other than the research that I've been able to do for the past, four months, trying to prepare myself to do this project I'm not as knowledgeable in this area of expertise so, I'm definitely excited to, well I mean it's an interest for sure. Like I got interested in this field, even though my background is in landscape architecture, which is completely different than most of the people I'll be talking to's background but I just, I went to like a little seminar about how nature can be integrated into therapy and therapeutic environments. The first person who got up and spoke was a like, he was a patient himself and for therapy for several years because he had experienced childhood abuse, and then in the future, went into the military and

experienced trauma and so he was just kind of, he told his story and said how, like, nature and natural environments had been a powerful influence on his healing and so he kind of just started with that and his personal experiences and then the next person who went was, well has her PhD, and like, she has a PhD in urban design, but also has done like, a lot of research with the biological tells of, like, stress and especially traumatic stress and all the ways of how you can measure your stress level and how it can increase and decrease based on your environment so she does a lot more with like the biological and evidence-based research on whether those methods of being in an outdoor environment are actually effective and she presented a lot of the numbers and the data and everything. That was really amazing because I just hadn't been introduced to that type of work in landscape architecture. Then the third speaker was an actual designer who had worked with clinicians, patients, and all different types of people to develop these patient-centered designs so that they're actually very effective environments and not just kind of something we put together, because we assume all of these things and the main thing that she expressed was working with people who have had hands on experience with the patients who would be getting treatment in those environments. That is actually why I talked to Dr. Goff in the first place, because of taking her trauma class because I just got interested in it and I thought it was a really interesting field and I just took it because I wanted to, and then I was just like, wow, and then I learned more about the environments being created for war veterans and the retreats and all of these other places that people can go and its just become a personal interest of mine so I'm just really excited to get started on this because I just learn so much every time I ever talk to someone who knows what they're talking about in this area.

6:50

So, but, yeah, I know that I kind of had a short description of what the project is in the email, but just as a reminder, I'm focusing on how everyday outdoor environments, such as streetscapes, parks, plazas, or just when you walk out your front door, like, anywhere in the public realm and how that can potentially be designed better to accommodate people who have experienced traumatic stress or even severe stress on the level of extreme poverty, extreme pollution, extreme or just the threat of violence every day and that's kind of why the project is focused in Cairo and my major professor is actually from Cairo, Egypt. So, yeah, it's kind of just focusing on how can that environment that we experience, everyday and don't really think of as stressful if you haven't been impacted by trauma and how that environment is experienced differently by people who have experienced a traumatic event and how it can be designed better to accommodate them and just make it more comfortable, kind of in a way like, how the American with Disabilities Act accommodates physical disability, but trying to think about how we can accommodate mental disability, which is really broad so, trying to appeal to a large very large sample size because there's all different kinds of people in Cairo, from people who have never experienced anything to people who were directly involved in the Revolution to people who are, you know, don't have enough food to eat, can't support their family so it's a very broad range and that's kind of why I'm trying to reach out to a lot of people with a lot of different backgrounds and so yeah, I'm excited to get started and I'm not working on a dissertation, just a master's report so we only have about four months to do everything so its just kind of a little like pilot project just getting started and building the information and knowledge and synthesizing all that to create a projective design that could be effective and just getting started on setting maybe a precedent for future research.

JB: I think that's phenomenal.

JS: I just think it's kind of cool because it's evolved so much since I started working with Dr. Goff and other professors who've been helping me and people who've helped me to kind of shape it and make it more approachable to me but also, like, more effective to the point where it could be continued research down the road. So I'm ready to get started on it because I've been waiting and waiting and writing and writing and I'm excited to actually do the work now.

9:49

JB: Yeah. I see you're doing a like, content analysis kind of study.

JS: Yes. And then all of the information that I gather from professionals and then I'll also be speaking with people who are directly from Egypt, then synthesizing, well but they're kind of, that process is a little bit different. So basically, I'm going to be synthesizing all the information and doing a content analysis of what I gathered from my professional interviews and creating design guidelines that will help guide my design process and also meeting with other, like landscape architecture professionals, who have experience directly with therapeutic design and synthesizing all of that into those guidelines, which will inform my projective design for an entire site that I just visited with my trip to Cairo and then that design will be reviewed by people with direct experience in Egypt with the culture and potentially, well I didn't specifically target people who had experienced trauma directly because my background isn't in, like, I don't have enough experience I guess to interact directly with people who may have diagnosed with PTSD or anything like that. So, just people who are refugees or relocated persons and they'll review my design and just simply say what they think would work, what would not, what would be comfortable, what would be uncomfortable, what they would appreciate and all that kind of stuff and then I would review and revise the design. So the final product would be kind of a book, and then explaining the process of my research and everything that I came up with and then also a projective design as a precedent for future design efforts.

JB: That's awesome!

JS: Yeah, thank you. So, if you're ready, I can get started on some of the questions. I didn't know if there is, I'm trying to keep it to about, like, thirty minutes to an hour, but I've already used twenty minutes of time so is there any limit on your time?

JB: I would have to be done by at least 3:45pm

JS: Okay, I can handle that.

JB: Sounds good.

JS: Alright. So since I don't really have that much general knowledge other than what I've learned through taking Briana's class and then also from my own personal literature review I did last semester, so some of the questions may seem kind of, just maybe like, simple to you, but I'm, I'm still going to ask them. So okay, so the first question would be what could be some typical reactions a person suffering from PTSD, severe stress, or traumatic stress may experience in like, a public space like, a street, park, or plaza like what might be kind of some negative or positive reactions I guess that they might have?

13:00

JB: So, there's a couple things that are coming up in my brain, you know, it's also dependent upon the type of trauma that occurred so when I think of plazas I go to veterans where there is a lot of openness and kind of where no one is around where, you know, a lot of people can congregate, but there's really no way for them to get out of the line of sight.

13:29

JS: Sure okay.

JB: That can be really anxiety-provoking. So a lot of reactions you may get from that would be hyper-vigilance so really looking at exits, back to walls, not going into open areas, kind of staying around the perimeter, a lot of just kind of scanning, the heart rate is going to go up. So for some people, depending upon what happens in that area so say, if there is like a crash or something happened, you might have anyone from disassociating, having flashbacks, to a big startle response and they like drop to the deck or drop down or hide or freeze. You could also have a lot of recurrent memories that are happening so, again, based on the type of situation, or the type of trauma, so if they were assaulted and something that looked very similar that can also, like, trigger these memories that come up. It's this increased worry and higher arousal and what's going on in your brain at that point is your brain has clicked off your prefrontal cortex and is basically running on your Limbic and emotional brain system like your amygdala and you're already getting into the fight or flight or freeze response and so, when you look at someone, you're going to also see a range of reactions between a very hardened, kind of like, blank look, you might be someone that looks really petrified. You might see crying, or sweating or kind of darting eyes or you might have someone say, I need to get out and then they just leave.

JS: Okay, that's great. So, like, in that way, kind of, like, thinking about, like, you start thinking about the exits and kind of like, with what you said about having to get out, thinking about, like, maybe places of like escape or solitude in a way.

JB: Yes, so places of escape. So when you're in public places, dependent upon your trauma, you're looking at ways that you can always get out and where you can hide or somewhere where you can get help. Most often, it depends.

JS: It depends, yeah.

JB: That's what hard is like recommendations in terms of design is going to look very different for say, like combat vets or a refugee than it is for someone who had, you know, a physical assault or childhood sexual abuse. But a big thing that I would say, in terms of design is light.

JS: Okay. Yeah, and so most often, if you were to go to someone's house who has kind of a severe stress reaction, PTSD, and you can, there's a lot of other disorders that come, are kind of co-morbid with traumatic stress. But you're going to see a lot of light happening. Then to the point of, like, some people have flood lights around their houses.

JS: Wow. Okay.

JB: Because you don't know what's there if you can't see it and so, in terms of parks, or public settings where it gets dark. So, I think about here in Minnesota, like, with daylight savings and winter solstice and all that stuff, it gets dark at like four o'clock and I will like self-disclose I've never had a physical assault happen but it has happened to people a lot of people, especially at big universities but it's a little

concerning even for me to walk out at six o'clock at night when its pitch dark to go to my car and if there were more lights it would feel a lot more safe because you know what's going on.

JS: Okay.

JB: Does that makes sense?

18:12

JS: Oh, absolutely. Yeah, I'm in architecture and you can end up staying in studio until like, four, five, six am and I definitely have experienced that. Where you go walk by the library and there's tons of light and then you get to the parking lot, and there's not and you're like, okay, I've never experienced anything like that personally as well but it's definitely a concern for me, let alone someone who has experienced trauma or has a heightened startle response. I mean, yeah, that's definitely so, I guess in that instance, when we're thinking about light, even in daylight times like with an outdoor environment, there's many different types of enclosure that you can experience. So, like, depending on tree canopy or hardscape or like, so like, to me, my instinct is, like, you know, a tree canopy kind of creates a little bit more, not like an entirely dark environment but a more environment because it's not as hot but it is definitely like, darker and there's some kind of from, like, hedges, shrubs, vegetation, all kinds of stuff creates like darker spots. Would you say that's something to avoid even in the daylight?

19:35

JB: It just depends. I think that for some people so, **having a place that is a little bit more secluded, where you can...** So, here's another kind of aspect of things and this is why it might feel a little contradictory. **Having places where there is lower arousal and when I say arousal I mean lower amounts of people, lower noise, lower amounts of just sensory is helpful because it can slow people down and get their rational brain back or their prefrontal cortex.** Right? So then they can executively function and that can be really nice because it can get people out also in a way that feels really manageable. So I would like, for example, if I think about clients, you know past and present, there's some clients that would never go to like, a plaza area where like, the Mall of America. Yeah and how wide and huge and all of the sensory pieces but they are **more likely to go to somewhere like a conservatory, because there is kind of a nature aspect and it's a little bit more closed in. Basically, they can control more.**

21:05

JS: Control more, okay yeah.

21:11

SO the caveat to having more kind of secluded areas is that there needs to be more than one exit.

JS: Okay, more than one, that's really important.

JB: Because if you think about it in terms of people who have had, so this is about people who have had inter-personal trauma, so the human caused, so if someone has human-caused trauma, and if we had to make up, like, a scenario that, that's what their brain is already going to it goes, "Well, what if that person just shuts the exit, where do I go then?" so its nice to have multiple exits. In terms of natural disasters that's very different in your symptomology because I think it is dependent upon your geography. **So some people might not go somewhere where there's very little large like concrete**

structures, like, if they lived in California, there's a lot of earthquakes or something like that, then its like well I'm not doing to do that because you never know kind of deal.

JS: Absolutely. Yeah. That definitely makes sense and that answers that question very well so thank you. So, you know, you said you kind of think about the daily life issues and struggles so what could be some of the most stressing like, daily life activities of a person suffering from PTSD, severe stress, traumatic stress or something like that, just in everyday life activities that could be challenging?

22:58

JB: Well we have a range between everything from just getting up out of bed for some people. Some people going and getting their mail if it's not like right by their house or like in their house, getting groceries, going to work. So, for example, like, public transportation, so then for people it depends on their socio-economic status. Yeah, but some people will not take public transportation because you can't really control who comes on, who doesn't and so that can be highly stressful just getting to your job and then also within your job, dependent upon how much sensory, um kind of how much sensory effects are happening. Also what kind of enclosures you have so in this case, cubicles can be nice because you can kind of look up in, like, look at the lay of the land but its also a caveat kind of because then there's more places for people to hide. So for some people, also if they were assaulted at work, work can be your hardest thing. Connecting with people on a regular basis is really, really difficult because most often, if you have very high severe, chronic PTSD or complex trauma, you don't like, the regular general public doesn't know enough about it and so it can be difficult to find spaces that feel connecting and also compassionate so like I can't go to the mall with you because that's just not going to happen. Right?

JS: Yeah. Absolutely. Makes sense. Okay. Yeah, that is very helpful, especially what you said about public transportation because I didn't really think about that, but it's definitely part of the public environment and I just wasn't thinking about that and the way that is very constricting and you do not have hardly any control over what happens in that environment. Okay, so with that, thinking about, like, those reactions and kind of what that would be like for people, what are some of the accepted ways that those suffering from PTSD, severe stress, traumatic stress can find relief from the situation that could be too stimulating or stressful? I know you said find like an escape which definitely makes sense, but is there anything else that you could think of that would be sort of allowing for you to calm down or de-stress or that kind of thing?

JB: You know, whenever I think about it, I think home. So when you think about PTSD in and of itself is under kind of the guise of an anxiety disorder. So something that's going to help somebody just come back down to baseline so cool or warm tones, but we're not doing a bunch of different kinds of tones and things that are implementing nature can be really helpful, different kind of textures, places for people to be able to sit down if they need to, kind of away from everything, or like, in different areas that they are still able to see around them but they can kind of take a step. Water features can be really helpful for people watching and kind of things that feel inviting that are not too busy. Okay, that make sense?

JS: Oh yes, definitely.

JB: Like if you think about almost like a like massage rooms, or like, spas. So, and then I think about like, having benches or places for people to, like where they can wait for their loved ones if they go in somewhere that doesn't feel like, that's still kind of safe. So, that might look like, having a small, like, pavilion or I don't know, something like, overhead. They still feel like they can be there and they see what's going on, but they don't have to worry about something overhead

JS: Yeah, makes sense actually. Yeah, when you don't like, if, for example, they kind of don't want to participate in something but they can still feel involved, definitely makes sense, I didn't think about it that way.

JB: Also, not having really huge bushes but having landscape but thinking about, you know, not having something that is so big that somebody can hide in it and I'm or if you're having, like, one of those bushes, they're so compact that nobody really could.

JS: Okay. Yeah, so no hiding spaces.

JB: Yeah, also limiting spaces. So, a big thing that I've seen that I adore, and this is like a personal and professional thing so a friends just remodeled like her, and her husband have a house, and they remodeled it and they have just like, two, full walls of windows, which is gorgeous and I love that but that would be something that I would limit for people that if all they have is just windows, windows, windows, windows...

JS: You feel exposed.

JB: So if that occurs having times where there's windows, but then just walls, you know, or like, I have some sort of structure where it feels like, people don't feel so exposed.

JS: Okay. Yeah, but I agree. I do love that too.

5:45

Sure, you're just like yeah, that is so beautiful, but I can totally see how that would be a challenge as well. Okay so, in your professional experience, have you ever conducted therapy in an outdoor setting?

JB: I, well let me think. It's hard, because I've done some things like in terms of like with kids in active, not necessarily like outside, but like in a gymnasium or something like that. In terms of therapeutic environments it can be really helpful to have a space where kids, or even adults or like, somebody can do something active. In that setting, so for example, one thing people really struggle with is like irritability and anger because they've seen something really horrific. It can be really scary to figure out what to do with all of that energy and to have spaces where it feels like, Oh I can, you know, throw this basketball or I can do this, you know, like, we can do something and use that energy in a really productive manner and that can be really helpful.

7:15

JS: Okay, yeah, that makes sense.

JB: I know other people have done kind of walk-talk therapy where they've gone by lake or even they've gone just like, around the block by someone's house, dependent upon how they're feeling. Often, those people are not, like they don't have PTSD and so, because there's so many things that they have to think

about, and part of your job, or my job is that in terms of healing, we want them to be aroused a little bit, but not so much so that your body goes, oh, we're going to cut off your rational brain, or your prefrontal cortex, and now we're just in like, fight, flight, or freeze. Those things can be really hard.

8:12

JS: Yeah, definitely. Yeah, okay, um, so I just figured I'd asked this question just because like, I have a general knowledge of places where people have conducted therapy in an outdoor setting, not even really conducted therapy, but just like, you know, like you said, walk and talk therapy. Do you know of any other places or examples or positive, I don't want to exactly say retreat, because that is kind of a little bit of a larger scale than what I'm thinking about but, anyway, maybe smaller scale environments that, like, you may have even heard of that have been helpful in treating this type of mental disorder?

9:10

JB: Yeah, so walkways, specifically because we're in an urban setting and people can be really easy like, if their clinic is connected to walkway, to go out and walk and just to feel like, okay we need to take a break. I can just walk and talk and breathe or other people will go out and sit, like if they have, like, a patio something on the back, nothing in the front of the clinic, but something in the back where it's like, secluded enough for somebody can sit down and just like, okay what's, well like I've heard of people just like having a picnic on a bench, looking at clouds and kind of talking and doing that sort of thing. Or, having almost like play room where it's like, you could be a little bit more active. But, the only other times that I have heard or know of people doing things outside is when they've done, which like it's called like, IN-VEVO and so it's an exposure type-therapy and so they've like, for co-therapy, one of my co-therapists had one of my clients before I came on with them, they would go to the grocery store, because we're very close to a grocery store they walk over and they would just get them used to being in the grocery store.

10:50

JS: Yeah, yeah, I could definitely see that, just that type of exposure, I guess, but okay. So in generally, kind of expanding on what is comfortable and what's not, I know that you said that it's good to have a place of kind of retreat in a way, but what benefits could you see from more active, social spaces where, like, social interaction can happen? Do you see any benefit and that kind of environment in a way?

11:18

JB: Yep, there's definitely a benefit to that because when we are looking long-term, we want that, right?

JS: Yeah. Absolutely.

11:27

JB: Right, we want those experiences where you're connecting in a really positive manner. So, I think there still should be spaces like that. I think there should still be, like, you know, large plazas or large open spaces and be a lot of people, because it's really good to be able to walk into that. Now there needs to be more of a variety of all different types. So that, when someone is going through treatment, it doesn't feel like they have an all or nothing.

JS: Yeah, absolutely. Yeah.

JB: I, I love them and I think that's phenomenal and we should have them and I do think that there are really good in therapeutic value.

12:25

JS: Okay cool. Sorry, I'm trying to read this to see if its bsolutely necessary. So thinking about a very, like, extremely naturalistic environment like, not an urban environment like, a forest or an open plain or something like that just those simple characteristics. What about maybe those characteristics could be beneficial and what could be harmful, just like pure nature?

12:54

JB: The quiet can be really, really comforting. I'll say that, but like if it's completely silent, probably not. Yeah, its better if there's some sort of kind of, you know, wind or a stream or leaves kind of rustling. That can be really helpful and most often, when you're in those kinds of rural, or remote places, you're deprived of a lot of sensory effects that are happening so you probably just kind of naturally relax a little bit.

JS: Okay.

13:41

JB: And again, it depends on the kind of trauma because if I was talking to a Vietnam vet this would be very different kind of a thing...

JS: Yeah, that's what I heard.

JB: So that's the piece of like, you know, having those spaces can be really helpful because it feels remote. It feels more safe but for other people it can feel very triggering based on their type of trauma and smells can also trigger things or even hearing like, if they feel, like if they're not comfortable with being in open or in a rural setting, any of the random noises that happen, just because, you know, animals, etc. blah blah blah, you know can be really anxiety provoking.

JS: Okay.

JB: So, and it can also at times, dependent upon so if we're talking about like a wide open fields, like I'm thinking about like farm fields. That can be really great, but it can also feel really scary because like, you're out in the public. Like, if you've ever been in corn field, it's really easy to get lost.

JS: Yeah I'm from western central Kansas so I've been in a few fields in my life too.

JB: So if you don't know where you're going, it can get kind of freaky.

JS: Yeah, absolutely.

15:11

JS: Yeah, so have you, so one of the things that I've kind of read about is urban farming and it's effect on some war veterans because of like, their ability to experience productivity and like, a sense of accomplishment. What are your thoughts on that in like, a sense of community gardening like, a lot of what I read about are kind of more isolated and they're like at a clinic, like, if the urban is like at a clinic?

What do you think about that on terms of, like, a public scale, like accessible to many different people like, and it's effect on, like, a general, because in, Cairo and in Egypt, mental health is highly stigmatized and so, like, they don't really offer those types of services very often, even though it actually is kind of growing field a little bit there. There's a lot of places popping up along the Red Sea that are kind of, like retreats and places that are for people who are wanting to have a retreat away from the city and that kind of thing. But, like, there wouldn't be necessarily like a clinic that people could go to in Cairo and so the idea is kind of, like, to provide what maybe the clinic could offer in a way that is subtle and on a larger scale, not in the way, like, clinical therapy but like, some of the environmental or the supportive elements.

JB: Yeah, so yeah, I think that you'll have a range of some people that I think it would be good to have smaller lots of land within a community like, a larger area, like you can come and go and kind of here is your area, or like, and thinking about, you know, for some, having a plot of land that's yours and it's a part of this great big thing and then that can facilitate right growing. There's a bunch of really great gardening metaphors that we could use; healing and growing etc. but it's also connecting with people or talking about community or communal gardens where everyone has a specific job, so it's like, okay, well, this this week, you're going to be on weeding, whereas next week, you're going to be on this, all working together. I definitely think that those could be a really great option for providing supportive connecting things that are really helpful for people to have something that they're doing that can be a begin and end, without it feeling forced to like, oh, just go make friends and connect with people.

18:06

JS: Yeah, yeah. So the next thing is kind of, like, what you really should stay away from so, like, what kind of what elements in a natural are built environment are directly threatening and like, directly feel unsafe, uncomfortable, threatening to the point where you would definitely like, instigate maybe a response or something like that?

18:37

JB: In like a naturalistic setting?

JS: Um, in like, maybe in like an urban context, but since it's in Cairo, I mean, like, one of the densest cities in the world, and so it's going to have some sort of urban context even though it, it might be this huge park that could feel very naturalistic but it's still going to have some sort of, I mean any type of element, anything from, like, you said, hiding spaces which is definitely something that makes sense. Like that would definitely seem threatening just because you wouldn't know what's around the corner but anything like that, that would be like, absolutely stay away from, if that makes sense.

JB: I would say if there's no light or if there's very minimal light. I would say you're doing them a disservice, if it's somehow on a cliff, or places where people can easily jump, or get pushed off. I would stay away from that. Some, if there is any implement that could easily drown out, like someone couldn't hear somebody else coming up against, like, behind them or something. That would provoke someone. Like, I don't, I can't hear anything. I can't hear myself think kind of thing. It's just too much or any place that you have to, and this would be kind of in a, I don't really know when this might occur, but any place that you like, corral a lot of people, like a "in and out" sort of deal with, or you don't provide any like kind of escape.

JS: Okay. Yeah that's just an important question just in case there's anything that I'm not thinking of that maybe you think of and whatnot but so I'm sure so, like I know we only have about twenty minutes, so I'm kind of trying to look at some other questions and see what is the most important but have you ever been in like, a healing garden outdoor therapeutic space?

JB: I don't know if I've been to someplace that is actually designed for therapy.

JS: Yeah specifically designed. Yeah, that's okay. That's fine. I just figured I'd ask, because there's certain things that people because not every designed space is successful and so post-occupancy evaluations are really important in understanding what's good or bad and I just figured I'd ask.

So, in Egypt, in, like, many of the environments that I'm designing for, there's like, mass social trauma and continues traumatic stress like on a level that is not isolated to the individual and that is like the kind of environment I'm trying to design for so like, people who have experienced so many different types of trauma and I was just wondering, I don't really, it's kind of hard to find information on, like, continuous traumatic stress and like prolonged exposure to trauma and I've kind of found some good resources but I just didn't know since you have a lot more experience in this area if you could kind of explain that to me a little bit more. Like, what makes someone who's experiencing continuous traumatic stress different than someone who has experienced an isolated incident?

JB: Okay, I'm going to give you two different scenarios.

JS: Okay.

22:47

JB: So, one scenario, I'm going to say, somebody had, we'll make it both interpersonal. One, physical assault that happened and they're like at a nightclub or something like that. Somebody got upset and they kind of got involved in it and they were assaulted.

JS: Yeah.

JB: Now think about somebody, that is in an intimate partner violence situation.

23:18

So, you're experiencing regular emotional, physical, and verbal abuse. So, the differences between that and an assault is an assault was a one-time that happened probably with somebody that you didn't know or your brain associates that incident with that type of event or that environment, right?

JS: Yeah,

JB: we're at if you have complex trauma or continuous traumatic stress that's coming from a couple of different areas then your sense of safety in and of yourself and in the world is completely taken away, which means then it's not just the environment, but now, it's, it's not just one, it's all environments and it could be any person.

JS: Okay that makes sense.

JB: Yeah, and it's not when you start getting people who really struggle to be able to connect with other people, because humans are not safe. You have people that have really high anxiety for a long period of

time that are just always aroused, because, and I say aroused as in like getting anxiety because their brain isn't able to shut off. So if you think about your brain as a security system and like, the amygdala and stuff and your thalamus. So your thalamus is like your security like, message center and so, if that is always blinking, if that's always on, then you are always on and so typically if you have an isolated incident, treatment for PTSD like, you're much less likely to get, I guess I'll say you have a lower risk, that doesn't mean that you won't. So a lower risk for PTSD or development of and so that would look like generalized anxiety.

1:25

You also you typically get through the treatment and healing process a lot sooner and a lot quicker because you typically also have then this other support system that's really positive and helpful. If it is an isolated incident, when it is not your norm, when it is your norm then that's when you look at treatment going on for a couple of years and doing a lot of different kinds of treatment.

JS: Yeah. Okay and so, for someone like, you know, you said like, nowhere is safe for a person like that. Like, I guess what I'm trying to think about is, like, nowhere is safe maybe like, so, is there any environment, I guess, that you could even see that like that person, I mean, I guess, yes, they're heightened, their startle response is always on and like, always going, but is there any kind, like thinking about those kinds of spaces that we talked about earlier with like, a social environment versus a more isolated environment for like for a person who has that continuous traumatic stress, which kind of environment do you see as maybe being more beneficial? Even if they can't feel safe safe, but even just a little bit more relief?

JB: Yeah, and I think that should be your goal. The goal isn't that every single person feel safe because with that much trauma, that's just not going to occur without a lot of other stuff happening. It doesn't mean that it won't but anyways, I would say places with decreased sensory effects, places that are more calming in nature that probably don't facilitate, um like, it can have traffic by any means have traffic, but that, there's multiple ways of, multiple exits and that you, you're not like, corralling people and so and this is kind of general.

JS: Yeah, absolutely. Yeah.

JB: Anything that you can kind of, just decrease their arousal, those are going to be really, really helpful and going to be good.

JS: Okay and that's definitely very helpful. So you mentioned this earlier about, like, textures, and what not, um thinking about design, color and texture is very important. And I mean, you think of a certain amount of colors in an actual environment, but you can also institute many different other colors. So is there any colors or textures that I should necessarily need to stay away from, or is there anything that I should kind of strive for in the sense of color and texture?

JB: Yeah. Well, I would say that if you are going to like, the first thing that comes to mind is I would not paint bright red.

JS: That's probably a good way to go.

JB: Yeah, somewhere where like, those kinds of, any color that's going to spark a really big energy boost in those spaces may not be the best fit. That's not to say you can't incorporate them but I would say that

they should be kind of minimal or that they're more of like, a soft tone or something like that so that it doesn't feel like oh my gosh.

Js: Yeah, definitely.

JB: So textures so what I would do, in terms of your population, is I would get to know the historical trauma that they've gone through and figure out the textures that are associated with that and I would limit those. So for example, I had the... narrative exposure therapy is a type of treatment modality where you do, like, lifeline and for some people you use like a rope, for other people, as I say that, not helpful because a rope could be a part of their trauma and that could be really traumatizing. Okay and so that, those kinds of pieces, you have to kind of be mindful of, or even anything that's yeah, again, with Native American or indigenous populations. Well, I would not have like incense burning, I don't do that anyways, but that wouldn't be something that I would do in terms of what's going to be respectful for people's culture and spiritual belief system.

JS: Yeah. Okay. Yeah, that's definitely helpful. I mean and I kind of have done, you know, and some of the historical research on the historical trauma and I've done a lot of research on the Revolution and whatnot but I mean, there's all kinds of stuff because Egypt has been around for like, thousands of years so there's a lot of stuff to think about, but that is a good point. Then I guess things like texture as a sort of like creative stimulant. So I've read a lot about, like, you know, creativity, being kind of a good thing for people who are going through therapy and a lot of what like, especially with children and like textures and colors and everything and I am still trying to design for children as well as adults because I mean, anyone can experience a natural environment, which is also a challenge, because it's just such a range but, I mean, that's kind of why it's just touching the surface, but is there anything positive about, like, texture and color stimulation and like, creative thought, that you could think about with children, maybe what could be good and like, because I'm also trying to incorporate kind of "nature-play," which is a very new idea in landscape architecture that's just like, literally, don't give children play equipment. Really like, give them nothing or small prompts and make them use their imagination and their creative thought and all that kind of stuff and maybe just your thoughts on that and other types of therapeutic play or anything like that.

7:55

JB: So a big thing trauma thing that we use is sand tray.

JS: Okay.

JB: So that involves a couple of different things but kinetic stand or regular stand is really nice for people. I also love anything with creativity and like fidgety stuff. So if you have even kind of, like, cool plants that people can touch or like bark or something like that, that kids can like go to or a fountain that they can kind of play with the water or feel the water kind of roll off their hand can be really cool with like, rocks in it or something like that that they can grab and things of that nature would be really helpful because they would be really calming and energizing for them.

JS: Okay.

8:46

JB: Places that they can build things so, if you have, like, you know, rocks or sand or, I'm trying to think or even like, logs or something like that on the side that they can build little forts or do whatever can be really helpful. Sticks and sand, people write things and yeah.

JS: Yeah, okay, just a few more minutes, but I'm trying to get as much as I can. But so, I know you have a lot more experience with refugees as well and like, what do you think are some of the biggest things I should think about, so is there anything like, I should know because well I told you, my second review process is with people who are kind of, like refugees or displaced persons and is there anything that I should be aware of with like, interacting with these people? Basically, I'm going to be asking them like very simple questions. Like, what is good? What is bad? But is there anything that I should know and like, Dr. Goff is kind of helping me but she is not physically going to be there. So, it's not really a big concern, but I just think that I should like, ask to see if there's anything that I should be aware of in working with refugees or displaced persons?

JB: Especially because your interview is not about the details of their trauma. They will be mindful that you're not even bringing that up so it would be like, hey, I'm looking at, like, say your language. You're so couple of different things before I get to language, that kind of just popped into my brain. Know your culture. So I would get to know the culture and if there is a community leader, or if there's community events I would attend them so it feels like you can get to know the culture. And like, like, a respectful way of introducing yourself because there may be gender roles. And so, it may be that you don't speak to the woman or a female identified, and you speak to the male identified, or that, you don't, you know, shake your hand or you do, that kind of thing. So, in of that, that shows a lot of respect. Speaking in a way that is going to be like, you're, you are assuming that they will be able to talk to you and that they know things. I would use very simple language. Whenever I've used, whenever I have worked with refugees clinically and in research, try using really simple terminology. This is most helpful. So when you use your language simple terminology, I would say what things feel good to be in or what things would you be okay having your kids plan in or, you know, what things make you feel really calm or joyful like those spaces. So, I would tend toward thinking about things that make you feel safe and feel good. You could say what kinds of spaces, would you not, so you're not telling them, but would you not want your kids to be in? So that way you're not saying hey I'm talking to you because you experienced a bunch of trauma, right?

JS: Yeah, yeah.

12:36

Also that you can at any point, if something and you can say this at the beginning, dependent upon like their English level and stuff at any point that you want to stop the interview, or that you need to take break, or you don't know what I'm saying and so, the biggest thing that I would say, then is also asking where they would like to meet. Okay so I did, I have done a lot of therapy and a lot of research at people's houses.

JS: Okay.

JB: If you don't feel comfortable with that, because that is totally fine, because I didn't always, having Briana come with or having somebody else there could be super helpful.

JS: Okay. Yeah.

13:26

Then knowing cultural things that if you choose to do that, then, what are kind of the cultural or respectful manners that you can employ.

JS: Okay, sorry almost done, writing this down.

Okay, let me just, that's very helpful. And like, I was kind of aware of, you know, a lot of, so that stuff about, like, you know, the gender culture because gender is kind of a big issue, well not a big issue but a consideration in Egypt, there, not as much like, there's a percent about eighty percent Islamic and about twenty percent Coptic Christian there so, it is still like a mixed culture, and there's a lot of different expectations, and I did get the chance to be like, well according to my IRB, I couldn't really ask direct questions to people when I was there. But, like, I mean, our tour guides and people just kind of, they liked to talk about, like, Cairo and you know, their life and everything. So, I just kind of got a little bit of insight while I was there into, like, what the, like how people expected to be to meet. Like, I met my professor's family and that kind of stuff so I think I have a little bit of insight, but definitely have to think about that a little bit more on just the little things, like where I'm going to meet them and all that kind of stuff so that's definitely helpful but...

15:01

JB: Okay, yeah, well when in doubt, ask what would be best for you and you can say, I'm still learning the culture and apologize. So you don't, you don't want it so it's like, they have to teach you. But also like, not like oh, I know everything about your culture.

JS: Yeah, yeah, definitely not. Okay, well, I know you said you need to go by 3:45 so I just wanted to say thank you so much because everything was very, very helpful and you answered about every single one of my questions so that was really great. I wanted to also tell you that if you want, like, a copy of this recording, or like, a transcript once I'm done transcribing everything you're definitely welcome to it and if you think of anything else you think might be important in designing for, you know, designing for mental disability and whatnot feel free to let me know, anytime, any day but yeah, thank you again so much for your participation it was extremely helpful.

JB: So I also just thought of another colleague so if for some reason one of your colleagues doesn't work out, I have another one in mind that works specifically with refugee populations and has a little bit more scholarship with mass trauma. So just let me know.

JS: Okay. Yeah, definitely. Okay, thank you.

16:31

Okay. Thank you so much, it was nice meeting you Jackie.

JB: It was nice to meet you. Everything sounds fantastic, like I love it.

JS: Yeah, okay. Thank you, I'm looking forward to it really. I've been waiting and waiting and waiting. So all right, Thank you. Bye.

END

Joshua Mantz Interview Transcript

January 15, 2019 | 1:15pm

JS: Can you start with sharing a little bit of your background? I have some information from Briana but in order to tailor the questions more towards your background, I would appreciate a little more insight.

JM: Honestly, it is conflict that is unconventional, asymmetrical warfare.

JS: Okay.

JM: More like what you might think of if you think World War II with the collision with civilians and what we're seeing today with this concept of insurgencies, counterinsurgency, asymmetric warfare. It's not new, it's been seen throughout history, but the problems of it today, its significant and its going to continue to grow so it also increases the moral and ethical complexity okay of members participating in that conflict and, in essence our military was essentially completely untrained to deal with this kind of war and kind of what I'm trying to do, so I've actually trained clinicians in asymmetric warfare and overlaid it with psychological trauma.

JS: Okay. And when you say couldn't send, can you see, like exactly what you mean by clinicians? Like, what kind of treatment they provide?

JM: So think about it more in the context of behavioral health clinicians and mostly those who, who work with trauma or a trauma therapist of some kind.

JS: Okay, that's very important because I really didn't know all of that stuff. So, I knew that you worked, well that you are the CEO of Asymmetric Mind because Briana had kind of, given me a little bit of your background and she told me about your experience with being a veteran and your advocacy for people working for basically what you just said but that's very helpful because I didn't really realize you actually helped train clinicians because that's definitely something that will be very relevant to the questions I'm going to ask.

2:12

JM: So, yeah, this is actually new, Briana doesn't even know what I just told you.

JS: Oh, okay.

JM: Yeah. Not in terms of, well I actually just, that the product that I recently launched called the Asymmetric Therapists Course.

JS: Okay.

JM: It's a pretty robust online course, with live webinars and video that trains clinicians to appreciate the complexities in asymmetric warfare, through the lens of psychological trauma right? So its created in a way that they can they can quickly understand it. It is really the synthesis of the last fifteen years of work that I've been doing and just actually launched it January 3rd.

JS: Wow, so very recently

JM: Yeah, just getting the first couple cohorts through already and it's getting phenomenal feedback.

3:09

JM: Yeah, and honestly, it's the work that I'm most excited about it. It's just so complex that it took fifteen years to really synthesize it.

JS: Yeah, I can imagine. Well, I think I can briefly touch on, so I'm actually not a like, my degree won't have really anything to do with mental health or trauma or any sort of thing like that. My background is in landscape architecture and I found that interest in trauma and mental health because of a presentation or lecture that I went to that was on how nature impacts the mind and how nature can help relieve symptoms and challenges caused by traumatic stress and so the seminar that I went to was, like, the first person who got up and spoke was a person who had direct experience with trauma; military trauma, childhood abuse, and illness, like all of those like, altogether in one lifetime. He kind of just stated that from the time he was little, he went and would hide, you know, because he had like, vegetation in the back yard and he had this really special shrub that he would go hide literally from his abusers. Then once he got into the military, he would kind of, well his way of de-stressing was to go and walk out and just walk out in the open space whether it was vegetated or not it was just kind of his way of finding peace and being able to relax and kind of restore his mental state. I guess you could say as much as you could and then when he got out, he ended up having cancer and there was a healing garden in his hospital and he and his family really experience a lot of relief from that. Then the next person who got up and spoke was a designer who did a lot of the actual biological research behind the effects of nature, how it impacts your stress levels and they use certain types of like, well they measure the hormones in your brain and they measure your blood and a lot of them were physically, biological factors that show how much nature does impact your mental state and whatnot and it's very like, scientific, very evidence based, and that was kind of the next step of the seminar and then the last person was an actual designer who kind of talked about the design process and how, how important it was to involve not just other designers who create, like, outdoor spaces for people impacted by mental health, cancer, people who children creating these kind of space for children has become very important but one of the biggest things that they stressed was involving mental health providers, clinicians or people who have experience in that area as well as patients and people who have direct experience with the type of trauma. Since my project is kind of a four-month long, it's not really an extensive study, my professors and I thought that maybe instead of getting direct input from patients and people directly affected by trauma, in order to minimize their re-traumatization or them experiencing things that wouldn't be necessary for the study and my lack of professional experience in that area. I don't necessarily have the credibility to do something like that. We thought that it would be important to involve people who were health providers, or were people who had that direct experience, but maybe wouldn't be as vulnerable to re-traumatization and that's why we kind of reached out to you guys and we're trying to get a broad range of experience. So my project specifically focuses on public space that everyone experiences every day from streetscapes, to parks, to squares to just walking outside your door, just how the design of those spaces could be improved and be more receptive to people who have experienced psychological trauma and how you can kind of mitigate some of those stressors even just a little bit. It's kind of a pilot project, kind of a test project that is very underdeveloped, but we're building up the knowledge and building up the resources that are needed to actually do that and so the first step is kind of getting feedback on, maybe what you guys, those health providers, or people who have experience with that your knowledge on what does cause, what are those stressors? What are those

things that would cause discomfort and to relive those painful memories and whatnot just from the basic outdoor environment that everybody uses that people may not understand could be a very highly stimulating environment for people who have experienced psychological trauma. So, that's why my project is focused in Cairo, Egypt is because it's a place that experiences, has experienced political conflict and war trauma to the point where it's considered to be a Mass Social Trauma environment and then also they experience severe stress in the way of extreme pollution, extreme poverty, domestic violence, abuse, all that kind of stuff. So they have traumatic stress as well as severe which is why the project is not just focused on Post-traumatic Stress Disorder but PTSD, severe stress, and traumatic stress. So that's kind of the background of what I'm trying to do and then the end product would be kind of a set of design guidelines that would have, like, a synthesis of all the information I would gather from you guys, as professionals with experience in this area, as well as working with a few refugees that are from Egypt and synthesizing all that information into a set of guidelines that tell you what kind of you should and shouldn't do when you're thinking about designing for a public space that is receptive to people who are influenced by trauma and traumatic stress. So it's a lot of stuff to do in a short period of time so that's why we're trying to get these interviews started so I really appreciate your quick response and your willingness to participate.

JM: Yeah, you know, yeah great project. It's ironic you know the PhD program I'm in right now, is in consciousness studies, also, encompasses well it's a degree in Consciousness, Philosophy, and Cosmology. Cosmology being grounded in science right? One of our professors is just absolutely brilliant. He's an Emmy-winning documentary producer on the universe. He's a mathematical cosmetologist.

JS: Oh wow and where is this?

JM: Im in California at the Institute of Integral studies in San Francisco. It's a very forward thinking school. Yeah, and the reason that I bring this up is his name is Brian Swimme. Its an easy read because it's just so beautifully written but it's a book called the Universe Story. I'm good. The documentary that won the Emmy it was kind of based off of that, but I'd recommend going straight to the book and what he does is it, it just tracks the evolution of everything from the very inception of the universe to the emergence of us just sitting here right here right now. You know, actually like a key theme of the entire school, regardless of discipline is just how do we, how do we better participate? One, what is being human mean and how do we participate with nature instead of separating ourselves from it?

JS: Okay yeah. Sounds really interesting.

JM: It's actually a new field of study that they just coined last year called, Auto-cosmology "auto" meaning myself, and cosmology how do I as an individual participate in the beholding of the cosmos, right? So what we have kind of seen, especially over the last hundred years with Capitalism and Globalization is this very stark separation from nature.

JS: Absolutely, yes.

JM: So what you're doing is that, essentially bringing importance back to the arts and the artistic nature of the universe itself, it's a really powerful thing. So, yeah, I know you only have four months but that book would be one that I would check out. He's, he's absolutely brilliant and so humble.

12:49

JS: Sounds like pretty brilliant guy from what you said so I'll definitely look into that because that is my kind of personal interest as well so thank you for sharing that but I'm going to go ahead and start with the questions if that works for you and all of these questions, and I know more about your background now, but if you don't think one of the questions directly kind of applies to you, or you're not totally sure you can just tell me and that's totally fine because I'd rather expand on some of the questions that you feel you have more experience with rather than just try to answer everything. So, yeah, but I'm just going to go ahead and get started. So in your personal experience and your professional experience with Asymmetric Mind, what could be some of the typical reactions of person suffering from PTSD, severe stress, and traumatic stress might experience in a public space, such as a busy street or a park or plaza?

JM: So uh, trauma is very unique in its manifestation during the post-trauma phase and one of our common assumptions about trauma is what we call the hyper-arousal symptoms. Yeah, they are commonly known, you know, anxiety, nightmares night-sweats but yeah these tend to be derived from fear-based situations, dramatically frightening situations.

JS: Yeah, okay.

JM: So hyper-arousal symptoms are one thing that could emerge for that and be triggered further by a chaotic environment like an inner city. The other thing that is much less discussed but I think much more important is the opposite of that which is "hypo-arousal."

JS: Okay.

This is really driven by the traumatic loss, the grief process, and dealing with those that we lost as well as moral injury, the ethical and moral implications of psychological trauma.

15:05

JS: Could you speak more on hypo-arousal? I haven't really heard as much about that.

JM: Yeah, so when we think of hypo-arousal, think of the feeling of emotional numbness okay, feeling dead inside, much more akin to severe depression.

JS: Okay.

JM: The opposite of that, which would be, you know, severe anxiety, right? Yeah. So what can happen you know, I define trauma as a situation in our lives that fundamentally disrupts the way the world should work. When there's a huge deviation from that, it can start to compromise our moral and ethical foundation and compromise our world and that can drive these deep feelings of isolation that leave people feeling hopeless. You know, even if you're in the middle of a busy city, you can still feel alone, right?

JS: That's really interesting because I haven't really heard much about that. I mean, I had definitely heard of those types of reaction but I didn't really think of that in the way of, you know, being in a busy environment and experiencing that as well but all right.

JM: It's very dependent person to person, you know if you're in a deep state of depression, then there's essentially no sense of self, right?

JS: Yeah.

JM: Or that sense is very compromised, so you can experience that walking right through a city street because its perpetual, you know, so yeah, it could, I think it can span the spectrum, vary so much person to person.

JS: Yeah and that's what is so difficult about it is the fact that it's so person to person, especially as me as someone who's very inexperienced in this area of study, other than what I have tried to accumulate over the past, four months developing my proposal and there's just so much to learn about even like, I mean, I don't want to say, it's generalized reactions and whatnot, but like, consistency, I learned a lot about, like, the consistencies between people who are survivors of trauma but I don't really know much about, like the individual things and reactions and all that type stuff that happens with trauma and again, that could kind of come in where I would interact with people who have experienced, directly experienced trauma but I don't think we're going to be able to get to that point in my study but hopefully, if someone ends up taking this further, or if I end up taking it further, I would be able to explore some of those things and in order to inform the design even further and to make it even more receptive to the individual but alright, thank you. So this doesn't have to do as much with, like, public space or the environment, but just a general question. What are some, just the most stressing or challenging, daily life activities of a person suffering from a PTSD, severe stress, or traumatic stress?

18:41

JM: That's a big question. Yeah, it's, again, it's a hard question to answer broadly but I appreciate what you're trying to do.

18:56

For people who are struggling predominantly with hyper-arousal, call that broadly "anxiety," right? So, you know, the kind of common thing is going out and being exposed to crowds and feeling as, I mean, look at the classical definition of trauma right, **is a perceived or actual threat to my life, or somebody that I witness that we are very close with.** Yeah, that's the classical definition of trauma. **Yeah, so when people are exposed to environments and the staple of trauma, especially of that kind is that it tends to make us feel trapped in the constructs of the world, physiologically trapped and the body, essentially, is living today as though it re-living the traumatic experience for the past.** So, so in the context of an urban environment, right? We can relate this to modern combat, modern conflict as a whole, right? I already said there's an extra variable on the battlefield today. Let's just call it the battlefield. **There is an extra variable and that is the presence of the local civilian.**

JS: Yeah, yeah, absolutely.

JM: Especially in a revolution, an insurgency, a counterinsurgency, **It is a living, breathing, dynamic system that is political, economic, military, the whole spectrum right?** The challenge within that environment is that an insurgency is a subversive, illegal attempt to overthrow or undermine an existing governing body and it is unconventional because an insurgency at the beginning, because it is an illegal activity, doesn't have the power to take on a full blown conventional military. Right? Yeah, so it's only survived, especially in the beginning, it's only survived through it's secrecy and it lives as part of a shadow government or an underground organization. **So the problem here is that the enemy is not visible, they're underground or blending in with the civilian population, right? So for example, a service member or a police officer entering an environment like that, they don't know who the threat is.**

JS: Yeah, that's so true.

JM: We know everywhere in the world, most people are just people. Yeah you know, I kind of think of this as like, a seesaw diagram. Eighty percent of people just want to live a normal life you know, they're driven by basic human motivation and human behavior. But if we think of that as the eighty percent in the middle, they want nothing to do with violence, nothing to do with taking up arms. But the other end of that spectrum, so we've got roughly ten percent and this is historically accurate information but roughly ten percent of the population might be the insurgent force right? The other ten percent is the counterinsurgent force.

JS: Okay.

JM: For the counterinsurgent force, they cannot see their enemy, cannot know their enemy, they're basically walking into an environment of ambiguity and they're doing so under extreme threat So, to kind of wrap around and circle back to your question, there is, people in that environment are exposed to chronically threatening situations, because there's no way to know who the enemy is so I have to stay in a heightened state of arousal. And if I remain trapped in that, similar environments, even in your hometown can feel unsafe. So crowded environments can really catalyze those same feelings of anxiety again.

JS: Okay. Yeah, that makes sense. It really does. I didn't really think about it that way, just the fact that the everyday environment, when you're in that counterinsurgency state of mind, like that's just your everyday environment that you experience and then you come back and you're in a heightened state, and then you come back and it's still that mindset everyday. You just kind of stay in a heightened state, because like, that's what you're used to so it's kind of an interesting perspective.

23:54

JM: Some people could perceive everything as a threat which is both adaptive in the right context, positively, adaptive right? Like if you are in combat or if you are police officer, that's a good thing. It's a positive quality. You need that to survive. The challenge is when somebody is off the job, or somebody comes back from the deployment. The potential threat is there but the risk might be a lot lower but we're acting as though the threat is still extremely high. Definitely related to hyper-arousal there but definitely valid for a lot of people.

JS: So the next one is similar, but a little bit more about how to get away from some things so what are some of the, maybe not typical ways, but accepted ways that people who have experience trauma, traumatic stress, severe stress might find relief from that highly stressing everyday environment? Like, what are some of the ways that they could try to calm themselves down or relax a little bit? Like, what are some of the yeah, typical ways those suffering from PTSD can find relief from a situation that could be stimulating or too stressful?

1:30

JM: Yeah, again, it's very hard but I mean, but in some cases there's the obvious one, which is remove yourself from the situation and that could be considered adaptive or maladaptive based on how far it's taken but the challenge with that is it could become disruptive to someone's life if they become too isolated. So, in the context of the study you're doing and without knowing any of the other questions, let

me just, let me, just throw this out. Creativity is the inverse of psychological trauma I've come to believe. So, if trauma is known for leaving us trapped in our past, then we need to do something to disrupt that feedback loop and in order to gain greater perspective on life and hopefully transcend through that experience. So in many respects in terms of, if we think about it, like, in the context to say, Post-traumatic growth, people's creativity is a huge component of that whether that we are in nature therapy whether it be Equine therapy, you know, all of that is focused on connecting with the foundational principles of nature and getting in the rhythm of the universe itself. So Brian Swimme, like, every time he talks, he poetically comes up with these beautiful statements and I don't know how he does it but he says we as human beings are part of a single stream of energy that is the Universe and you know, from a philosophical standpoint, you know, there's a lot of thought out there that the universe is rhythm and tapping into that level of creativity, in whatever capacity it is does have power to disrupt the way people think about those difficult situations meaning that the work you're doing is important.

JS: Yeah. Thank you.

JM: It's engaging in the arts in the broadest of sense and that is healing. Hope that helps.

JS: Definitely. On that note, the question is, have you ever heard of, or conducted therapy treatment in an outdoor setting? If so, how did it go? How would you say that it was successful? The question, I guess, could be more in the way of I mean, have you ever witnessed someone participating in some of those therapies you mentioned?

JM: I have both witnessed it and been through it myself.

JS: Oh, okay.

JM: I actually just got off a radio interview, with a group that Briana is very familiar with. Briana and I actually worked together on establishing, you've probably heard of it; a retreat called the National Veteran's Wellness and Healing Center Angel Fire so you may want to ask her about that. We actually replicated it and brought it to Kansas one time. Well, one of the key components for that and many other kind of more holistic therapies, holistic-clinically valid treatment models exists in the form of integrated retreat experiences, right? One of them that is still out there today and I think is a golden model is the National Veterans' Wellness and Healing Center in Angel Fire, NM. Angel Fire is located in the Rocky mountains. It's, it's gorgeous. There's a sacredness just being there. The natural therapy there is a huge component of that just by default, it's also leveraged extensively in the retreat process. Not just from the, the earth and nature itself, but also leveraged in the animals right? Equine therapy is used very heavily out there and its one of the most powerful demonstrations of Equine that I've ever seen the way that they do it because it has a direct relationship to trauma. They also rely very heavily on the Native American population out there. Bringing in myth and ritual and, you know, the power of the archetype to reconnect with that which is bigger than ourselves.

JS: Yeah, definitely.

JM: Yeah so very deep sense of spirituality, and actually, that in itself, that's a really, really powerful model and they kind of blend that with traditional therapeutic practices to create this product, it's just amazing.

JS: So, and what might be some of those traditional therapeutic processes that you mentioned, what might some of those be? I mean I know, generally, what some of them are, I'm just interested in what some of those traditional therapeutic processes are effective in an outdoor context.

7:46

JM: I think it all depends on the clinician and the modality they're using. I think that's an interesting question. I mean, out there, I mean broadly thinking of it in terms of individual therapy and group therapy, couple's therapy and group therapy that are combined. Within that, there's a blend, any good clinician tends to use a blend of modalities, whether it's Cognitive Behavioral Therapy, or, you know, EMDR or prolonged exposure or narrative therapy. Yeah there's a billion of them. I think that there's like a hundred and forty some. There's actually a lot, quite a few programs now out there that leverage nature therapy extensively and I think the core of that is connecting people back to nature, you know, getting rid of the human-nature divide and ultimately leading to the alignment with, or creating a feeling that we truly are part of something much bigger than ourselves.

JS: That's awesome. Yeah, I just wish that I could go visit some of those places, cause I've, you know, done research on some, there's even one that's on the Red Sea in Egypt, actually, but I just wish I could go. I wish I had the time and money to go and there's all these places because I'm sure they are just so powerful and it is just so my personal interest of like, you know, seeing how nature and how in nature, you can kind of reconnect with it in that way and that's kind of what landscape architects really do in a way is try to bring nature where nature does not inherently exist in like a city environment or how nature and people can kind of continue to grow together instead of further creating that separation and divide that exists in our culture today and I think it's really amazing that I didn't really have that perception until I started learning more about, like, I took Briana's trauma class and I go to a lot of like lectures and presentations on that subject and how, I don't know, it's just a very powerful thought. It's such a simple thing, you know, in terms of like, just reconnecting with nature. Like, that seems like it'd be so easy just go out into your park, go out to nature and whatnot but it's really a complicated thing. It's just a really fun thing to learn about because, I don't know there's a lot of knowledge out there that is available, but you just don't think about it.

JM: We've got very deeply embedded cultural constructs that really starting to take off after the Industrial Revolution.

JS: Yeah, definitely.

JM: Capitalism is kind of disturbing, you know, there's, there's a lot of global destruction happening and, you know, the question is, how do we get back in alignment with nature, really, which is the very source of which all of us came from. So, a kind of a way to maybe think about this, it's if we, if we can really and this is a big intellectual leap to make but once you make it, it's, it's like profound. It's like, there is no line between nature and human, There is no "going to the park." We are the park, like even in the form we are right now, and it's just a matter of what our, is what we're doing productive in the whole, or is it detrimental to that?

JS: That's an interesting thing to just think about.

JM: Yeah, definitely. I'm a little off subject.

JS: That's okay, it's still important. That's all very helpful because I'm not only trying to look into some of those other retreats so you mentioned kind of how they, well it's a much broader scale than what I've been typically looking at, but it's still, well if it's effective than it's definitely worth looking at. But, in that context, though, of an outdoor nature retreat can you think of anything that is still stressing or challenging for that person trying to experience therapy there? In that context of like a retreat or natural environment, but also, like, a more urban natural environment, such as like a riverside park, or a little nature trail, anything that is a little bit of exposure to nature. Can you think of anything that would still be stressing or challenging such as for example, something like hidden views from trees or something like that, just simple things like that.

JM: I guess, for many people it is below our level of consciousness but it has a real effect. I think what you might be really asking is can we perceive when there's a disruption a beauty in whatever context that is. What I mean, is like, nature has emerged in itself to be this, well what many of us would consider to be awe-inspiring and beautiful right? The innate concepts of meeting in art that we have in our mind that are emerging right? One thing that we, as humans, can certainly do, is disrupt that right, we can, imperfectly destroy that and that's things that you see in urban environments everywhere. In the same breath, like the city, right? You know, I live in San Jose, California right now it's going through a pretty deep beautification process downtown. They're incorporating the arts. They're painting all buildings, painting all the walls. So, I hope that makes sense. You know, so beauty is something it's a deeply philosophical topic, right?

JS: Absolutely.

JM: Yeah and I'm only in the infancy of studying it and understanding it but there's certain times where we seem to have this innate ability to experience the awe of something, to be in awe of nature and I think the bottom line is we as humans have the ability to, you know, inadvertently destroy that environment, which therefore compromises our mental and emotional state, subtly even though it can feel very real.

JS: Yeah. Sorry, I'm writing stuff.

15:46

JS: I know it's kind of an elusive answer, but,

JS: No, that's okay, we kind of have this idea of nature in its pureness, we call it sublimity, like just the sublime and how powerful it can be, and like what you mean by awe-inspiring and when you see that disrupted, I could see it being kind of mentally challenging and disconnecting. The disruption of something that we see as very pure and very untouched and I don't know, "good."

JM: If we're innately driven to strive for that which is beautiful, for the sublime and if the mind is trying to connect that dot and there's barriers in the way of doing that then that's a source of tension

16:59

JS: Yeah, I think that's a really good answer actually in that way.

JM: There's so much to think about.

JS: Oh yeah. There's so much to know and it's just the start of it for me, because, I mean, once I get into it, well I've been waiting and waiting to do these interviews because I had to get approved by the IRB so it's like once I finally get all this information and start kind of trying to analyze it and understand it, it's like so much but, you know, but I just have to make a good try of what I'm trying to do and to do it the best that it can be. So, okay. So, generally, and it might be both. I'm sure it's probably both, but in your experience just like with who you have interacted with and in your personal experience, do people who have been suffering from PTSD, severe stress, traumatic stress find more relief or more enjoyment in quite, calm, and private outdoor space where they can kind of have self-reflection and kind of be in their own environment, like there's not a lot of stimulants or social spaces where they can interact with others and experience social interaction and why might you think that one is better than the other or that they are both equally important but why would you say that?

18:44

JS: Yeah, I mean I think people can get value out of both. There's power in isolation and stability and at the same time, there's also power in human connection so the question is, are people surrounding themselves with the right relationships in their lives and, you know, are they assets to their transformative process? Or are they a detriment? So, you know at times one of the attributes of trauma, or kind of a result of trauma is leaving us feeling disconnected or feeling isolated from others, right? Yeah, and what's interesting about humans, plants, animals, nature, right, is it doesn't discriminate towards anyone, and it's truly the source where we've all emerged from so that can be, that is a powerful mechanism to reconnect people and as long as it's the right relationships in somebody's life, you know, that's a crucial part of healing and transformation as well.

JS: Okay, when you say "the right relationships" what might be some of the benefits you would experience in a social environment with people who are the right relationships? In a word, vulnerability, and, you know, trust is the single most important variable when it comes to the process of healing and transformation. It represents thirty percent of the total therapeutic outcome between a clinic and a client, and when I say, trust, I mean, by research, they call it a therapeutic alliance, a therapeutic relationship, but really what it comes down to is trust and with trust we allow people to become vulnerable, and when we can become vulnerable, we can start to express the root cause of whatever emotional or mental pain they're experiencing and if there's a shared connection or understanding, then we've validated the experiences of the individual. That validation is like, step number one in terms of overcoming adversity.

JS: Okay and then on the opposite side, I guess, what could be some of the positive effects of being in like your own environment, where you can have self-reflection in a very peaceful, whether it's indoor outdoor setting, where you feel that sense of relaxation?

22:03

JM: There's a book, I've only read it once and by no means am I an expert on this but it's called "Wired to Create." It's a quick read but it's basically a book on the current research on creativity. You know, what are the key factors of creativity? One of the concepts emerging is that isolation is a very powerful mechanism for creativity. I experienced it myself. Like, I'm usually in a pretty deep state of isolation in a positive sense most of the time. If we really want to resolve these things, we really need to connect with ourselves and that requires a lot of introspection and a lot of thought surrounding our emotional

feelings. You can tie this to the power of mindfulness and everything else but that, that is essentially what being alone in nature can derive, help us in both reconnecting with that which is greater than ourselves and ourselves.

23:24

JS: That makes sense. Its kind of like, something that I guess, I also expected, it's just I don't want to assume anything. So, it's part of why I'm asking some of these questions, because it's easy to assume because of, you know, the current research and what a lot of people are saying it's like, but I've never personally experienced anything like that so it's good to hear it from some, well the people who have experience with that.

Okay, so I'm thinking on, like, a very naturalistic, like, basically, you're in a forest or something like that or, or for example, a desert in New Mexico, anything that's very untouched, very naturalistic. What I guess would you see, as beneficial to those, I mean can you think about anything that's kind of more simple than those big concepts, like, simple enjoyment or simple positive experience that you would have in any very naturalistic environment versus artificial?

0:00

JM: **Yeah you experience novelty. In a word novelty.** Our world is increasingly complex and increasingly specialized, you know, and the thing is, especially in the natural sciences where we're chasing these lines of research deeper and deeper and deeper into the rabbit hole, which is important. But the problem is, when you, when you have such narrowed vision, you get tunnel vision and it can make you forget about everything else that exists around us. So in nature, we can see a, we can experience the novelty of some of these universal powers that express themselves throughout the universe. You know, like, staring at an oak tree, to this day, like science cannot explain what photosynthesis is, like they can explain how photosynthesis works, but they cannot explain how plants developed the ability spontaneously to harness energy from the sun or how an oak tree grows and how every leaf has its own perfection and the structure, this cycle of growth and renewal, growth and renewal. There is tremendous parallels between the evolution of nature and the resolution of psychological trauma and that's a really long conversation.

JS: No doubt.

JM: But what I'm saying is the core word is definitely novelty.

JS: Okay. Yeah. That's very insightful. So specifically what types of spaces or elements do you think those suffering from PTSD, severe stress, traumatic stress may find specifically threatening, unsafe and uncomfortable like, not just to where it's like they are mildly, you know, well not mildly affected, but like, in everyday things, I guess, like, what could be specifically very threatening, unsafe and uncomfortable potentially. I know it probably varies very much per person but if there's any general, generalities at all that would be helpful.

2:41

JM: This might be one to just help you start the discussion. **Think of like constricted views like and what we're able to see. Where the landscape of nature tends to be vast and wide open. Human constructed environments tend to be contained with limited viewpoints right? They leave us feeling trapped and and**

reinforce that feeling of being trapped so, yeah, it's kind of the same thing with corporate culture you know, like, open spaces, open office plans. There's a lot of things to that, the openness that can mimic nature. That's probably the most accurate one that I could come up with on the spot here.

JS: Yeah. That totally makes sense and I've read a lot of literature on the design principles that have gone into some of the successfully designed places with mental health, whether it's well, it varies a lot whether it's mental health and many different like, people who experience anxiety, people who experience depression, which are two very different things, but also they can happen at the same time. So, one of the main design elements that has been successful is giving people options that they can physically see, like if you're in an outdoor space, you can see where you can go. You have that broad view and you have a variety of places that you can go and you can see them all and none of them are hidden or have a sense of extreme enclosure where it's more of a trapped feeling like you said, so, I think that's definitely very thoughtful as well. But it's hard, you know, because I want to like, well one design guideline says give people a sense of enclosure so that they feel safe and the other design guideline says don't because people will feel trapped. So, I guess you just kind of have to give them a variety of experiences but that's where people like you and other people kind of come in to give the truth, irrespective of what works and what doesn't because I know it just varies so much. Anyway, that's what I'm trying to figure out.

Okay, so this one is a little bit different, but have you ever experienced, or witnessed when a patient or client was overwhelmed by sensory overload like, where they just couldn't handle the current situation? If so, what was that experience like and how did the patient or client or person recover or be able to calm down?

5:49

JM: Yeah, again, I've seen that many times, especially when I was in command where you're transition unit at Ft. Riley so yeah, probably every day we had a, and we were dealing with a lot of severe patients and yeah, it was not that uncommon, but, you know, the process would be in that case, you get people to their primary therapists, okay, and a lot of times the therapist, you know, would be able to inject some techniques that can help bring down the physiology of the client. Breath work is a really important one. Here, we go back again to trying to reinforce this mindfulness technique, get people back in touch with their body. There's unfortunately, there's a lot of different ways to answer that question, but that's probably, I think in some sense by creating these a natural spaces, for lack of a better word, I think it can help people maintain a healthy physiological baseline and maybe reduce the opportunity for them to get triggered.

JS: That is the goal.

So I have a couple more. Yeah, I was really only planning on this being thirty minutes to an hour, but, you know, sometimes you get into it, but okay so the other main question, because a lot of them are just kind of expanding off of what you've already said, but the one thing I really wanted to ask you with your experience in high stress environments for a prolonged period of time and could you maybe kind of explain well, you kind of did already, but there's this thing called Continuous Traumatic Stress and it's a physically like actually studied entity and that is definitely occurring in Egypt. I guess other than just being in that heightened sense of awareness, what effects do you think you would experience as a person, like it, maybe a civilian living in a continuous traumatic stress environment like right now, in

Egypt, it isn't really quite like that because the revolution was several years ago, but say, it was somewhere else like, you know, a war-torn environment, what could be some of those things a civilian might experience in one of those environments.

JM: Yeah. I mean, briefly, I might give you a slightly different answer to this. I mean just from personal experience, like one, I think **toxic levels of stress you know, from being in perpetually threatening environments is probably the most damaging thing to people's mental, emotional, and physical state. The elevated physiology that goes with stress has a lot of physical implications.** In my case, you know, I've lived with Crohn's Disease since 2005-2006, and you know, after living with it so long and having it pretty much under control at this point, toxic stress right? Number one trigger for Crohn's Disease. I know a lot of other people with immune-disorders, who, who tend to say the same thing so, you know, there's just, there's a lot of implications to toxic stress, kind of on the spectrum. It's like this concept of silent inflammation, you know, there's a doctor named Barry Sears that developed this diet, which is a hormonally-balanced diet and basically it says that, you know, even if we eat something unhealthy, we might not feel impact but there's almost like a silent affect. That's called silent inflammation, inflammation that occurs in the body, below our level of perception that can still do damage to us even though we're not constantly aware of it and it is one of the root causes of chronic disease over time so like **cumulative trauma, this is like cumulative inflammation and here, you have, when you're in a perpetually stressful environment, it can kind of create that silent trauma.**

JS: Okay, alright. Well, I think that a lot of your answers were very insightful and I really, really appreciate it, because, you know, sometimes, I don't know what I should expect. Sometimes I may get the long, detailed, scientific answer or this very highly philosophical answer and here I kind of got both. I really appreciate your input and I'm hoping to keep you updated maybe on the progression of the project.

JM: Yeah, let me know how it goes.

JS: If you think of anything else at all, feel free to email me or let me know. I just wanted to tell you how much I appreciate your participation, because it's absolutely essential to the success of this project.

11:36

JM: You got it. You're doing a great thing and, you know, let me know I can help and definitely tell Briana that I said hello. I definitely will. She told me that pretty much after every interview that she wanted to talk about it so I definitely will, but thank you again and I hope your other conference call goes well so okay. Thank you very much.

JM: You too, take care. Bye.

END

Naomi Sachs Interview Transcript

January 19th, 2019 | 12:00pm

JS: I've just got to read the yeah disclaimer thing, just the anticipated benefits and all that good stuff. Okay. So I'm asking you to participate to help inform the proposed design as much as possible and to do a patient centered project. Questions would be similar to just like how a trauma victim would maybe react to some things differently or how people that you may have worked with before have worked on projects like these. Possible risks is just that trauma is a difficult subject, as you know, and that there is a possibility bringing up negative memories about human struggles through discussion of this topic. Anticipated benefits is just my intention is that you would experience hope that some of the new therapeutic design strategies resulting from the study intended to give relief and shelter from an over stimulating environment and benefit those who may experience challenges in the spaces due to experiencing a traumatic event and would eventually be utilized in the design of many public spaces.

1:23

It is also possible that you may be recognized in my work if you desire. Okay, extent of confidentiality. All responses and information you provide will be visually recorded and saved for reference during the design process and eventually transcribed into word form. Transcript and recorded video will only be available to the principal investigator of this project, Dr Amir Gohar, myself, my supervisory committee members, Dr. Anne Beamish, and Dr. Brianna Nelson Goff. The information and advice you provide will be summarized into a set of design guidelines, published into a report and will be available for reference. However, no names or contact information you provide will be released or published and will be kept in strict confidentiality with the research team mentioned above, you, and myself, unless you choose to be recognized in my report, which is totally up to you. The transcript recording may also be released for your reference if requested. Finally, terms of participation. I understand that this project is research and that my participation is voluntary? I also understand that if I decide to participate in the study, I may withdraw my consent at any time and terminate participation at any time without explanation, penalty or loss of benefits or academic standing which I may otherwise be entitled. I verify that my signature below or in your case, verbal consent, indicates that I have read and understand this form and willingly agree to participate with the terms described and that my signature acknowledges that I received a signed copy of form which I will give to you. I just didn't have the opportunity to print it out so yeah.

NS: I give my verbal consent.

JS: Okay. Thank you very much and, as I mentioned earlier, I'm just going to read some interview questions that I have written down, but it's open to discussion and further elaboration. The next session is soon, and if you need to go, I can always email you other additional questions, but the main priority is just yeah, I'm just trying to get the perspective of someone, who's, worked with people who have mental health issues. I know you and Claire's book that you worked on mentioned a very participatory design process in the Warrior and Family Support Garden and how you worked with clinicians and with patients and I'm just trying to like think about that so what is the number one consideration? I guess you could say in working with patients impacted by traumatic stress, like just trying to be receptive as a designer and very understanding and responsive, so that they know that their input is being valued.

NS: I think, the number one concern is that even small amounts of stress are magnified with people who are already stressed and so sensory stimulation like noise or even scents or really bright colors might be exaggerated but something like that might be welcome when someone's more relaxed, like kind fun and alive and there's lots of people and it's great but if you're not feeling well, it's just not good.

JS: Yeah, awful. I've looked at a lot of forums and a lot of just support groups and just a lot of the feedback that they have given me. I read one that was even like a person would sit in a room with ten people, ten people, and it was still just like the thought that everyone was watching them, and everyone was like aware or so

5:40

NS: The ability to, the sensory processing ability, is diminished yeah. I think once possible, like let's say there's an article, that's going to come out in her journal and I think either the next issue or the issue after that. It's a crisis center for domestic violence in women so there, it's a very specific population, right, it's the women and their children. Yes and there it's domestic violence and sometimes substance abuse so it's much more straightforward to design for that population if you're asking, you know if you're doing research about what are the issues and how, and then I can ask you specifically, what makes you feel safe and what are your primary concerns, and then you can really design for that. And I think the same thing with veterans, gardens. I mean even there, there was a challenge of certain landscapes, were triggers so it's totally different so people who served in Iraq and Afghanistan, desert landscapes are their trigger but people who served in Vietnam and Korea, it was the opposite, but the lush yeah. And then you're like, okay well, it's going to be something in between.

JS: Yeah Yeah.

7:10

NS: But, It sounds like what you're doing is trying to design for just general people who've experienced trauma,

JS: Yeah and for Egypt it's kind of a mass trauma situation where the main concerns are just a sense of security and just feeling comfortable being in an exposed space like a public park and they do have a public park called Al Azhar Park and it's pretty new and it's just, it's a lot of lawn, it's like kind of challenging, because I mean it's a good design. I just think like it's a lot of lawn and in a place like Egypt that is a desert, it's kind of a challenge, so I think they were thinking more of a Western idea of green space and I'm trying to think about like I've looked into like Islamic garden design and designed and how some of those characteristics are intended to give an idea of like respite and peace and reflection and that's kind of really what I'm trying to figure

NS: Oh yeah, trying to approach like the Garden of Eden

JS: Yes, so like I'm trying to think about that and like what's familiar to these types of people and promote that since it can be comforting just from what's familiar and the kind of moves onto my next question.

8:37

NS: Just going on that, I would say just providing that sense of security and safety, which you can't always do that, but you can try to provide security as much as possible, but you can more than that provide a sense of it or like privacy, you might not be able to create a space where someone could just go in and be totally private but by providing a screen of grasses or palm trees, it's a sense of prospect reference. I think that control is really related to stress and to security and so giving people actual control or a sense of control might be a way to empower people. Okay, so, did you see Laurie Olin's talk this morning?

JS: No, I didn't

NS: Alright so yeah, he was the keynote and they may have recorded it but yeah it was talking about the importance of movable seating and that's something we talked about and included in our book. If you have movable chairs you, you are in control. I can take this chair and I can put it across from you so I can put my feet up and put three chairs in a row sleep on them. I can arrange my family. I could put my chair facing away from everyone because I just want to pretend I'm in my own room.

JS: Yeah

10:07

NS: So opportunities like that or places where someone can choose I'm going to sit in the shade. I'm going to sit somewhere quiet, I'm going to walk. There's more than one entry that I can go in. I think that's a big one

JS: That's yeah, that's really good to know. I mean I've definitely read about control and how loss of control is one of the main like problems in post-traumatic stress disorder. It might just because you experience that utter loss of control in a traumatic event so I think that's a really good point and, on the sense of I guess like, security and feeling safe, one of the hardest things I'm personally trying to figure out is the idea of sight lines and in having clear sight lines, I guess, and I know that that's an important strategy.

I just guess I'm just not sure how that's implemented because in certain designs, it's like very common, to have an ambulatory path. Yeah. You know, and I guess to me an ambulatory path kind of has un-clear sight lines, because, you may not know what's around the corner and I'm just wondering how that's been navigated before in certain projects and like how you've and how you've designed what to take into consideration in thinking about clear sight lines.

NS: I think it just really depends on the size and the shape of those bays, but yeah, not to just get out of it by saying it's all contextual but yeah, I think at entry points, and especially for people who are stressed it's and this true for people with mental and behavioral health disorders, autism, and all sorts of things and in sometimes just regular people. Yeah typical people, okay so providing a legible space at first, and then it can kind of get more interesting and intriguing as you go in but from the entry point, like having a threshold, I think is also important, like something telling people you have entered this space and you have entered this contract that is safe.

Yeah so providing an entry.

JS: Okay.

NS: I think, especially if the park is a safe space. You know, and maybe we can talk about like STEP TED ideas, but then yeah having at least the first part of it being very legible. So, even when someone's not in the space, they can look and say, oh, okay, I see what's going on. Like oh okay, there are no scary people in there I see somewhere I might want to take my child. I see it's not too crowded. I see my friends over there. I know that when I go in there will be a nice water feature. There might be plants and also that they can see the exits, right?

JS: Yeah

NS: So there's a way to get out

JS: Absolutely, okay. Thank you.

NS: And tell me, in Egypt, and it may vary depending on the location, but where you're doing your landscape, is it, is there any segregation of like men and women.

JS: Yes, so yeah, where I am it's kind of a super unique area, because, like literally, the site is, well there's the military hospital here.

14:26

The constitutional court of Cairo is right here. There's a main road right here. The Nile River goes right here. Then there's this huge open vacant space that's underutilized right here and then there's informal settlement or "slums" right there and then literally and there's this road. Then Maadi is an upper middle class settlement right here. So it's a very, very contextually important site, and the idea kind of is that not only do I want to kind of like merge, allow this space to be more open to the public. Also, I'm hoping that it would be like, there's just all of these things to think about, like just this separation between the government and the people and because that's huge right now and then also there's separation of the classes and how this space over here might become incorporated into the project as more of a Civic Park as well and just how people can kind of have more ownership of that space and the fact that it's next to the Constitutional Court and that people who work at the courthouse might also use that space and just have that interaction there and then just people from the informal settlements being able to be there as well as from Maadi, because Maadi does have some parks but the informal settlements do not.

15:53

So it's like, their parks are tiny little, basically like roundabouts, so yeah,

NS: So in Maadi?

JS: So in Maadi its like a suburb. Sorry I kind of got off subject but what was the original question? It was like thinking about all these things,

NS: About segregation of men and women.

JS: Okay, so yeah, so it's challenging because there's also a very important Christian site that was along the original trail that Mary, Jesus, and Joseph went through and their trip to Egypt away from King

Herod. So, like there's a lot of Coptic Christians and then there's also the Muslim Brotherhood as well. So there is all kinds of connotation and I didn't really know about all this stuff until I really started doing research so.

NS: And I'm curious. Why? Why did you choose this site in Egypt?

JS: So it coincides with our studio that we're doing as an assigned project at Kansas State so, like our studio or our fifth year studio is a proposed, like the president of Egypt proposed, this trail that's going to be going along the Nile river and so our studio project is how like designing this trail and an additional, adjacent plaza.

NS: Oh, okay

17:13

JS: Like exposing, like providing more green space to an underserved community in that way, and so I just like, I started learning about the site through that way and just how much of an opportunity I guess it could be to provide a space that is yeah, like reflective and calm, like a place of refuge, I guess, for people who have experienced mass social trauma. So like, in a very intense every way.

NS: But probably the lower class. Yes, and its several different ways so it's not just political trauma. It's also poverty and like the dynamic between men and women and all kinds stuff and, and I think my professor, he's helping me to understand that slowly. So it's like, being a Western American woman, it's hard to understand, but I'm going to be going there over in January. So that'll be, and again it's a pilot project, so it's definitely, I'm not going to be able to understand everything, but just trying to get as much input and feedback as possible is my goal. But there is, and I think that's what makes it a challenge between like the men and women situation, because I'm also trying to appeal to children as well

18:43

and so I mean I just want the space to be as approachable as possible to everyone, despite what religious sect you are, whether you're a man or a woman and so it's there.

NS: But is that possible?

JS: I don't know. I think it depends on whether you're aligned with a certain religious sect, because if you do, then I guess you wouldn't have access to the space anyway.

NS: Right, and I guess I would say that one thing to be really careful of, because as a Western woman is to look at, well I guess your professors is doing this with you, but to look really carefully at your assumptions and yeah, and it may be that what you think these people quote unquote "want" or need, you know like everyone should be together or should we be together? Well, maybe that's not the case, and maybe it is and there's just no way to do that so really, I think it's really good that you're learning about the history, and the culture, because we do that way too often, either going to other countries, or other communities, like even here in Philadelphia. Like oh there's homeless people here, oh have a park and without understanding, what's really going on and who will be affected and how.

20:09

JS: Now, I guess that's a conversation that I think I'd have to go into further detail with my professor just because he grew up there and knows the situation and he hasn't really brought that up honestly, so I'm not sure, like if he's just trying to help me know my limitations as a student and how far my project can go but I'm definitely have to ask him about that. Then I think it might be good because I'm developing my interactions that I'm going to have with the Egyptian society. So I think that'll be kind of a good thing to talk with them, because I won't be able to understand that through research unless I hear it from people who know so that's a good point and tell me.

NS: Yeah okay so tell me again this is on the property of a hospital?

20:58

JS: Yes, so right now like I said it's a conceptual project, so it's kind of like an ideal situation of that property being available but the other opportunity is the adjacent open space that's right next to the Constitutional Court. It's just it doesn't have this direct relationship with the Nile and the trail that's going to be going next to the Nile. So, if possible, I could kind of use that and like focus more on the civic relationship between the Constitutional Court and the people. I just think that it would be an interesting opportunity to incorporate the hospital because we're approaching mental health in a way that it's not been just because the hospital, they don't treat mental health, because it's not so stigmatized and the place does that treat mental health is considered a crazy place where people put their relatives that they don't want deal to with anymore.

NS: So it may not be your place to I mean to talk about mental health, like they're... successful, the really successful places, public spaces, they make people feel good and they have the power to make people feel better than when they started out and it doesn't matter whether someone is in perfect mental health, which doesn't exist, or whether they're ready to have a nervous breakdown.

JS: And I don't think I'm trying to like just pound mental health. I think what I'm trying to do is kind of just designing with a sensitivity I guess and just like think about those principles that have been so successful in the past and maybe there's not going to be a sign for a "mental health garden." It's more just like, this is a garden that has these design principles that isn't a garden or site because it is on a larger scale. The focus is on things like noise, medication, clear sight lines having an approach, that's comfortable and like all of those strategies that have been...

23:06

NS: Right, accounting for safety and security.

JS: Right. So it's not so much that I'm like just trying to like treat Egyptians of those things. But it is an awareness, something that I'm trying to understand and whatnot, and it's definitely a consideration, because I'm not going to have sign a that says mental health garden, because, like before you might have something that say, "Warrior and Family Therapy Garden" or something like that. That would be great, but then it's like, "Oh, I don't want to go there because it's seen as a weakness"

NS: I would imagine in some cultures, even something that says healing garden well that implies that I'm sick and in need of healing, even though I am like, not so good design practice is um, I guess, I mean I would be, I'll, be curious. Your students, the student organization, especially those. So uh, did you say this is in Cairo.

JS: The site is in Cairo. The research, the student organization is my university student organization and then also I'm in contact with a, he's a pastor, that's from Egypt, and he conducts missionary work so he's here and there all the time so he's another person that I'm going to be interviewing.

24:31

NS: Yeah okay. So, I mean luckily, it is Cairo, so you probably have got quite a few of your people would be from there and so, I think just asking people like what, **what would make a public space feel safe and secure, starting with that very open, question.**

JS: Yeah.

NS: **Is it a fear of mugging, is it a fear of terrorism? Is it a fear of being.. Having your children stolen? Is it just a general uneasiness?** Um, do women want a separate place where they can go and take their scarves off or not in Cairo? I mean, do women wear scarves? I would, I would imagine that some do.

JS: I think so. I think it's touristy enough, though, to that there are yeah, both, I think. There's a lot of tourists that still go there, even with all the events that have been happening, especially along the Nile river.

25:44

And in the constitutional court, so I think it's a consideration for sure, and I think it's a really good question, because it's not something that I have thought about is like, would it be good to provide a separate space and what not so I think that is a good question.

NS: Yes, right, if they want to take their children there, are they more likely to

26:04

you know, go if they can take their scarves off and if they can let kids their run around. Maybe there are certain design or programmatic solutions that enable that or facilitate that.

JS: That looks so true.

NS: It's like a big Plaza, then...

JS: Yeah. Like exposure, is kind of a challenge.

NS: And you know like, should there even, should there be bollards or something else that so a truck can't drive.

JS: Yeah. which I'm thinking about that too. Defensive landscapes and how that could be artfully integrated.

NS: Yes, so are people going to use it at night, you know? Who's going to maintain the park? Who's going to surveil the park?

JS: Yeah, there's a lot of things to about think,

NS: Which are all, you know, going to be in your design your guidelines too but it might be that at the very beginning of the design guidelines is like to talk to people. You know, really figure out what they want, what they desire or just their dreams and fears.

JS: And that kind of is one of those things as well is just asking people what their routine is. Do they use public space?

27:20

Is it something that they feel like they want? Which, according to my professor, it is something that they do want because they utilize places that aren't even supposed to be green spaces as greenspaces. Not as just a greenspace too but like, activity or gathering spaces for public causes as well so it's definitely kind of an interesting dynamic there.

NS: So there's a, um he's from Egypt, a professor at Texas, A&M in architecture, but I'm sure he'd be happy to talk to you, and his wife. He lives there with his wife and kids. But you know someone else in design.

JS: Yeah, someone who is aware of the sensitivities.

NS: Yeah, so what else?

JS: Yeah, so what I'm trying to figure out what the most important things are just because of time. Okay, so I'm also, one thing I think also that I guess didn't get addressed this morning as well was circulation, and I was going to ask a question about that, because, like with the gosh, I can't remember, the first presenter. What was his name?

NS: Jeff.

JS: Yes, Jeff, Jeff, okay, yeah. Yes, like he didn't really talk about... I know he was working with really small places and so it would

28:51

not be as much of a concern, but like also Adam didn't really, I mean he did show that diagram that was of circulation, but I just, I wish they could've touched on it a little bit more just because it's circulation. It can be just such a hard thing to think sometimes about so I guess in your personal experience, what have you found to be the most successful and maybe the least successful?

NS: I think having especially in a public space having at least one main circulation path. Yeah, whether it's circular or whatever. But it's very clear, like this, this is the main route. Yeah, real good. Then there might be little arteries, like you know, there might be a sort of a gradation, so there's you know. Maybe the main route is ten feet wide and then the next one is five or six feet. Then there's one that's like stepping stones. You know yeah so there's kind of a different levels of scale and intimacy. That makes people feel more comfortable like they know where they're supposed to be.

30:16

JS: Yeah, okay, so in an Islamic, and this is kind of a weird connotation because I wasn't really thinking about this, but in an Islamic garden one of the main design ordering comes from just the classic four paths with a central water feature and so I'm wondering, if that could be considered the main paths,

NS: Absolutely

JS: Just because it may not be like a circular, but it's like one is this way and clear that way.

NS: Okay. And if you look at like the Alhambra there's the main cross and then there's the outside. Yeah right, so there the rectangle that goes around the buildings in between the building and the water feature. And so that's your outside and then the inside palace. Actually when I was developing the the audit tool for my dissertation, it was tough sometimes because there was a question about the main pathway, but sometimes the garden was just you know, a garden or like mostly paved yeah so there was no quote, unquote, pathway, yeah and so then we ended up changing it to like the main paved area, terminology, yeah, yeah. Because people like well, "there is no path."

31:44

JS: Yeah, yeah. Okay, so another thing that I'm thinking about is noise mitigation because it's next to that road that I mentioned, and so I'm trying to think about like classic, ways of, like vegetation might ease some, but I was wondering, I'm thinking about using a living, so there's an existing wall and it's like a concrete wall and it's provided security for the hospital but my professor and I have been thinking about alternatives and I feel like a living wall would be a good opportunity, just because of the possibility for noise, mitigation but also trees and shrubbery and as well, and I'm just wondering what has been effective for you.

NS: Well, um so solid walls and earth do a better job and are most effective and Thomas, no what's his name? Not Thomas Balsley, the other guy. Michael Van Valkenburgh. He was talking about. He just gave a talk Cornell and he was talking about the Brooklyn Bridge Park and he had this great diagram of the sound of the traffic and how it sort of flowed over the traffic and down

and so they did all these studies about how the noise would like flow over and down into the Hudson, rather than just.

33:09

JS: I love how deep, like they're just so detailed. Like everything. I did precedent study on him a few years ago and their work and I'm just like how you do have time to think about everything, like every little thing, but that's really.

NS: Yeah. Manpower.

JS: Yeah, they do have a lot of manpower.

NS: So, there they handled it with grace and they did have a berm but the berm was almost like, not just blocking sound, but directing the sound waves.

JS: Yeah, okay, that's really interesting.

NS: So look into that and you know, maybe if it's guidelines, you know maybe not saying like it has to be ratio, but yeah just here. Strategy, yeah strategies that can work and you're right vegetation definitely helps. My concern with the green wall would be in Egypt, it's really fricken hot, and so is there going to be something that could actually grow there?

JS: Right. I think that's kind of the next step that I'm thinking about too is the probability that all these ideas would work. Right now, I'm just in idea generation, but I'm definitely I'm thinking about that, and I mean it is right next to the Nile river so there's definitely like, it's a lot more fertile and there is a lot more water availability than you would think in a lot of different areas of Egypt. but you still need to be aware.

NS: Definitely and water is only going to get more and more scarce.

JS: So, and even right now, that's another big thing with Al Azhar park. The one that was proposed like it's literally like a lawn so you're, like okay, like how much irrigation does that need? But I mean it's beautiful park, like I would go there, but it's just maybe not as regional

NS: Yeah. More of a Western model. I have a question. So like with the slums, would it be possible to create a park there? Yeah, in that space.

JS: Yeah, um well I would like to, I mean I would love. I don't know. I've thought about that, a little bit and I think that is why was I kind of thinking more streetscapes I guess is because there's not so much, there's not the open space available for like a park I guess and that's why I'm kind of trying to develop these guidelines that would work for streetscapes as well because I may not be that addressing like that exact space but I could think about strategies that could be implemented on maybe the different types of streetscapes that are available because I mean the informal settlements...

NS: Yeah like you could think about making them greener like look at the space from building to building.

JS: But definitely, I think that that's kind of something that I'm... It's just there's such a disparity between what's in Maadi and what is right next door. So it's kind of, I wish. I should pull up a site plan for you or like an aerial image so you can see the space and how interesting it is. I'm, okay kind of touched on a lot of this stuff just through conversation, Okay. So, when I'm going to Egypt, as my site visit yeah, I don't want to.

NS: Do you know the time?

JS: Oh that's okay, I'm almost I'm pretty much done so if we need to go soon, that's definitely okay.

Okay, I'll just ask one more question. Okay, so when I'm at the site and I'm kind of just doing like basic site inventory, because I'm not really speaking with anyone there just because of the language barrier and because of the connotations of IRB and all that kind of stuff, so I mean I'm available like if someone comes up and talks to me, I sure will talk to them, but I'm not actually interacting with anyone. So I'm just trying to think about like what should I be aware of like in a normal a site inventory, like when you've gone to a site or something like that much that I should be aware of, thinking specifically for

therapeutic design and like what would be the stimulants, like what would be, so just things to think about well.

NS: I think comfort is the number one thing, the most important.

JS: Yeah absolutely, and you know, both emotional and physical. So, when you go and you look at people in public spaces... Are they... like where are people gravitating? Like are they gravitating to shade? Gravitating to the edges? How are they interacting? How are people interacting with each other? Do people, I don't know, you could, is there like a public space indoors? You could also so I don't know whether you know whether it's acceptable for a western woman to be sitting there, but like I'm sitting there with a book right, and just sort of semi-surreptitiously observing people and maybe there's like a mall and you can see how different people interact with each other inside and outside public spaces you know. If you go hang out in that garden, do people interact with? If you know, if there are planters and like pretty plants, do people go and smell them? Do they touch them? Do they talk about them? Do they take pictures of them, like here? In a lot of the public landscapes, now, people express themselves with their phones or they'll take selfies or take pictures of each other. You know, like outside the market that couple was getting their picture taken and so that's one way like you know, not necessarily that you'll make a selfish station but some places you want to create these opportunities for people to remember it.

JS: Yeah, sure.

40:21

NS: You want to sort of make it yeah, so I would just you know, if you can sketch and make notes and really try take to in where people go and what they do. And also, over the course of the day. You know. I mean I would imagine, with the government building, people spill out yeah for lunch.

JS: I would assume...

NS: But maybe it's too hot and they're really just passing through the space or maybe it's busier in the evening. I mean you really don't know.

JS: That's why I was like, I just want to start doing it because there's all these questions that I just want to know so. You know in New Mexico, I mean not anymore but in Santa Fe, it was basically like this promenade around the plaza and people just at the end of the nineteenth century, they would parade you know, and what you've seen in other parks too and you know, it's just like these people, promenading, engaging.

41:35

JS: Like observing what they do, that's a really good point,

NS: Its people participating and yeah, so I think just try to take it all in and take notes, lots of notes. You know and maybe, it may be that sometimes it's better to be sitting there and have notebook and sometimes it's better not to so, you might ask your professor and the student organization ahead of time like what you think should be more acceptable or what you should be aware of, like should you wear a scarf?

JS: I think that that's what I will do, yeah cause it's like, just because I don't want to attract attention.

NS: Yeah, just that culturally sensitive, so yeah, like can you wear sleeves, can you wear a dress? I don't know.

JS: Yeah, I have I to go through this whole debriefing thing with like a research compliance officer and like what I need to do and stuff yeah, but yeah.

NS: Mhmm, so just soak it in and take notes the times when you're out in public you can't take as detailed notes but when you get back to your hotel room or the hostel, yeah, wherever you're staying reflect on the same night.

JS: Right.

42:56

NS: So you might just be recording and doing, you know, what you're actually seeing that day, but then once you get back or at the end of the day you can figure out how to filter it and synthesize it, and so even if it's just some crazy ideas right them down because you think you'll remember, but you won't

JS: Absolutely.

NS: Especially with jet lag.

JS: Oh yeah, that's gonna be an interesting week. Well. Thank you very much. Its all very helpful.

NS: Of course. That's all really exciting. I don't get to work on many growing international projects, so.

JS: Well, I had good reason to include you so. I've really appreciated. Like I mean I'm not just saying the say this, but really when I went to your guys's presentation that was really when I was just like, this is really something meaningful, that landscape architects can do so.

NS: I'll tell Todd. He was he going to come, but he's in Florida.

JS: Yeah, okay, so I didn't, but I making was this connection, so my trauma professor... I think she knows him because it wasn't, I might even be a different person but we were just talking about this the other day, and she mentioned this gentleman, who had a similar story. I couldn't remember exactly Todd's story because its

44:20

been two years ago, and like it was, um is it to where he is, is he just like a really big advocate for mental health? Like does he do a lot of stuff with that because it might be different person? Okay, I think it's a different person that is also named Todd honestly, because he was talking about a person named Todd and she knew him really well, so it might be a different person.

NS: Yeah Todd is an arborist.

JS: Oh, yes, I thought he might be in architecture but I promise you his name was Todd. Okay, maybe I don't know it's been two years, but yeah, okay. Well thank you very much. I'm gonna, end the, but I really very much appreciate you taking the time to kind of chat with me and yeah, please do tell them that was special, because I don't think it was just me too. I think a lot of people liked the talk.

END