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Designing for a Demographic: How to Reduce Poverty and the Homeless Population Through Design

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DESIGNING FOR A DEMOGRAPHIC:
HOW TO REDUCE POVERTY AND THE
HOMELESS POPULATION THROUGH DESIGN

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The University of Akron Honors Project

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Abstract

This research paper is a response to my personal encounters and experience with the homeless and low-income population in Akron, Ohio over the course of my 5 years at the University of Akron. It explores the causes and statistics of poverty and homelessness within the United States and the greater Akron area as well as what is currently being done to aid and reduce this population. Haven of Rest Ministries, one of the largest and most successful shelters in Akron, is showcased for the multitude of services they provide on a daily basis. Referencing the shelter helps to point out just how many people in the community turn to shelters on a typical day. Careful attention paid to the design of a shelter or service center location has the potential to greatly reduce poverty and homelessness. By understanding the causes and the psychological impacts on day-to-day life for low-income households and the homeless population, the architecture and design industry, in conjunction with the government and other organizations, has the potential to greatly reduce this demographic population and enable people to take control of their lives and reach independence and success.

In July of 2016, I was in the process of moving into a new apartment, located in Cuyahoga Falls, Ohio. Upon getting my keys, the apartment consultant took me to my door. As we walked up the stairs he said, “You won’t have any neighbors for a while. We are doing some construction.” I did not blink an eye at this statement until I began moving in my belongings. As it turned out, a resident of one of the soon-to-be vacant apartments was moving out that same day. He told me that there had been a fire in one of the neighboring apartments – a child, unsupervised, playing with a lighter. The resident explained that everyone affected by the damage was forced to forego the remainder of their leases and move out, despite the many vacant apartments still available in the complex. I was puzzled, as I could not understand why the apartment complex would kick people out when they had nothing to do with the incident itself. From a business standpoint, as long as the apartments are occupied and there is rent to be collected, why would it matter if they lived in Apartment A or Apartment C?

The resident explained that he and the others were “Section 8” – a government housing program for low-income individuals and households – and, though he was able to move in with his father, most of the other residents he had talked to in regards to the fire explained to him that they did not know where they were going to go. They did not have time to prepare or come up with a plan of action. When I had initially signed my lease, I was unaware that this apartment complex, which was under new management, was in the process of transforming a Section 8 government housing development into a “luxury apartment complex.” From my perception of the events, I suppose the fire was an excuse for the apartment complex to decrease their current number of remaining Section 8 residents and families.

After hearing this story and telling it to a few friends, I realized that there was something not quite right or “fair” about how these people, forced to move, were being treated. Of course, I

do not know the actual events and exchanges that took place, or if the apartment staff directed them to resources, helping in any way. Regardless, it sparked an interest in my thinking about the lifestyle and demographic encompassing low-income families and individuals living in government housing as well as the homeless. In my Families, Individuals, & Environments class later that year, in the Fall semester of 2016, I brought this story up in a discussion about the issues we currently see or have experienced in society. Conclusions were drawn that perhaps these people, made to move, were not aware of the resources available to them or simply were not comfortable asking for further assistance, such as turning to a shelter in their time of need.

In this situation and those similar, many questions arise, such as where can they go? What are their immediate options? How will they get “back on their feet?” Driving down the streets of Akron, there are often licensed beggars on the corners with cardboard signs asking for anything to help. In the privacy of a car, people often make comments about how these beggars could just get a job at McDonald’s if they really wanted to and then proceed to assume that the beggars just want money for alcohol or drugs. Is this the truth? Why do they not have jobs? Are they able to even get one? Do they beg because that is what they feel is the best or only option? These are all questions, among many, that middle and upper class Americans should be asking in order to better assess the situation surrounding these individuals and families in need. If we can learn more about the lower-class demographic, maybe there are efficient solutions to help people to help themselves, in turn, decreasing the poverty rate and homelessness not only within the Akron area, but within the entire nation.

The Issue of Poverty

The United States. In the United States, there are an estimated 326,091,983 residents, based on the United Nation’s World Population Prospects for 2017.¹ As of 2015, 14.7 percent

were considered to be in poverty, on average.² To be recognized as a person “in poverty,” one must lack adequate income and resources to provide sufficiently for oneself or for a family. For purposes of eligibility for government programs, such as welfare programs, there is a “poverty guideline” that refers to the maximum amount of income a person or family can make in order to be accepted.³ For example, in the 48 contiguous states, one person in a household must make \$12,060 in a year to be considered for program eligibility and is thus considered to be in poverty. For a family of four, this number is \$24,600 per year.⁴

Often used interchangeably with the phrase “in poverty,” the term “low-income” refers to a person or a family that does not make much money. However, this term is more specifically intended for use to describe a person or family who does not have sufficient funds to provide adequate housing.⁵ Interchanging both terms can be misleading. Low-income is the level at which people can apply for government housing, such as “Section 8,” rather than be eligible welfare and other government aid programs. These levels are determined by the Uniform Act Income Limits and vary by state and city. In Akron, Ohio, for example, a person making a maximum of \$37,450 per year can apply for government housing solutions.⁶ A family of 4 can make up to \$53,500 per year to qualify.⁷ These numbers are usually above the federal poverty guideline per the number of people within a household.

Under the umbrella of poverty in the United States, the homeless population grows as poverty thresholds rise. However, there are people assumed to not use the provided resources and either hide or live in uncharted areas, such as the woods. Therefore, there is a mysterious population of people who are not documented as being “homeless.”⁸ The fact that people can be homeless for a short period of time, as opposed to perpetually, can skew the statistics as well. Therefore, the counts of the homeless population are often rough estimates for a given point in

time within a specified location. In an article written for the Guardian, entitled “How America Counts its Homeless – and Why So Many are Overlooked,” it is reported that there can be an approximate 549,928 people homeless in America on a given night.⁹ Unfortunately, due to the variables that cannot be accurately measured, there are probably a lot more.

Akron, Ohio. In the city of Akron, Ohio alone, there are approximately 199,100 people, based on the UN prospects for 2017.¹⁰ According to the U.S. Census Bureau, the poverty rate in Summit County, as of 2015, is between 14.7 and 19.5 percent of the population, putting the county at an above average rate. This rate had presumably increased from between 3.1 and 5.4 percent from 2014 estimates,¹¹ showing a growing need for efficient intervention programs and resources.

Causes of Poverty and Homelessness:

According to the National Coalition for the Homeless, which is a network comprised of people who are “currently experiencing or who have experienced homelessness, activists and advocates, community-based and faith-based service providers,” the main causes of homeless in America include a lack of affordable housing and poverty.¹² Poverty and homelessness and “inextricably linked,” meaning that the typically presumed causes of homelessness (i.e. mental illness, addiction, unemployment, etc.) are actually indirectly causes, as they are the direct causes of poverty; however, poverty in itself leads to homelessness.¹³ Poverty can be caused by a lack of employment, decline in the availability of public assistance, lack of affordable healthcare, domestic violence, mental illness, and addiction.¹⁴ Of these causes, about 1 in 4 people claim to have mental illness and 1 in 3 have admitted to substance abuse. These conditions and cycles can make it impossible for people to sufficiently provide for themselves and their families without intervention from family, friends, or the community.¹⁵

The Cycle of Poverty. Whether one is evaluating the United States as a whole or focusing on a specific state, county, or local population, it is clear that the percentage of people in poverty is in constant fluctuation. Even if the statistics show a decrease in the rate over a span of time, it is not much, and does not remain steady. The Business Dictionary defines this cycle of poverty as “a seemingly endless continuation of poverty.”¹⁶ This suggests that when a person or group falls below a determined level of resourcefulness and self-sustainability, the many causes of poverty (unemployment, mental illness, addiction, etc.) can lead into one another, creating a perpetuating cycle that is difficult to break. The National Center for Children in Poverty reports that about 21% of the 15 million children in the United States are born into impoverished families. 43% live in low-income households. With poverty being the “single greatest threat to a child’s well-being,” it is likely they will continue this cycle of poverty into adulthood¹⁷ due to a multitude of possible factors, such as lack of funds to sustain a higher-level education, for example. To some, providing food or a couple of dollars for a bus fee may seem like it helps – and it does for the immediate situation – however, these are short-term solutions. Real change in the lives of those in poverty and those homeless must be brought on by interference and the providing of worthwhile means, thus, helping people to help themselves and to promote positive future results, such as juvenile success into adulthood.¹⁸

Local Solutions to Reducing the Impoverished Population:

Shelters. In addition to the many programs being implemented through the U.S. government, 3rd party activists, and organizations, areas of refuge have a prime potential to promote successful lifestyle changes. They are the first resource people turn to when they are at a loss and do not know where to go. Some shelters, such as the Haven of Rest Ministries in Akron, OH, provide more than the typical three meals a day and a place to sleep.

In Akron, Haven of Rest Ministries is one of the largest shelters in the area, with a long-term men's residency with an addiction rehabilitation program, and a separate women and children's dormitory, known as the Harvest Home. The facility serves about 600 meals a day and on an average night shelters approximately 182 men, women, and children. At the Haven of Rest, especially when the weather is extreme, numbers can reach up to 250 people per night. The shelter is often overpopulated and people must sleep on mats throughout the vicinity of the dormitories. In America on a given night, it is projected that approximately 62% of the estimated homeless population are sheltered.¹⁹ With shelters being easily overpopulated, there is a growing need, especially within the Akron area, for larger buildings to draw people in and efficiently house them, provide food, access to resources, and necessary services to sustain life (i.e. laundry, showers, etc.).

Among the many valuable resources at the Haven of Rest are the "day rooms." There is a separate day room for both men and women and have sex-specific secured entries. Whether or not the users take advantage of the dining, boarding, career, academic, and recreational services provided by the shelter, the day rooms serve as a home base for people to come indoors from the streets and relax, take a nap, do laundry, and safely store their belongings.

In addition, the Haven of Rest has a gardening program for men and sewing classes for women, where self-esteem is developed and confidence is built. These programs are an opportunity for both the ministry, which is not sponsored by government funding, and the enrolled people to generate earnings from within. Produce and items are sold at local markets, such as the Hartville Flea Market, located between Akron and Kent, Ohio. The shelter also provides free clothing to each man, woman, and child once a month, a store for people to purchase nicer clothing and approved donations, and religious services twice a day. The Haven

of Rest Ministries pledges to help people to help themselves and, as long as they are willing to put in the effort to get onto their feet, will support their journey.

Street Cards. One of the more valuable resources for those on the street is the Akron Street Card. These documents provide a list of the plethora of resources available, categorized by the products and services they provide, such as housing, meals, and healthcare. There is a map, which visually locates each resource geographically, and provides information regarding transportation. In addition, there is a list of emergency phone numbers that can be called for support and advice, including hotlines for suicide prevention, domestic violence, and human trafficking, to name a few. This document can be obtained by visiting one of the local shelters in the Greater Akron/Cleveland area and are often available at campus buildings, such as the residence halls, at the University of Akron. The Street Card is produced by Akron Public Schools and Project RISE, which is a federally funded program made up of the Akron Public School district, local shelters, and the surrounding community and aims “to provide supplemental educational services to children and youth experiencing homelessness.”²⁰ Geared towards ending the cycle of poverty for future generations, these cards, however, can aid anyone looking for general information and service locations within the city of Akron.

Designing for the Homeless Population

With thorough research and understanding, the architecture and design industry can play a significant role in reducing the cycle of poverty and the number of homeless people in cities all over the globe. With application of research and evidence-based design strategies, architects, engineers, and interior designers can come together to design safe, comforting, and inspiring environments for people and families to improve their health, confidence, and overall standard of living, in turn, enabling people to work towards building the foundation for a successful life

ahead. In addition to the typically integrated ADA Standards, egress and occupancy requirements, and universal design concepts to commercial building structures, there are a few important areas in which designing for the homeless must be specifically concerned. Above all, these spaces must literally be a safe haven, a home, and promote both physical and mental health.

Safety and the Theory of Defensible Space:

Safety. While making resources easily accessible is key to one's success in rising above the poverty line, the physical space must first, and foremost, be safe. Safety is a comfort to many people on the streets and it is often difficult to trust and hard to come by. With poverty, and especially homelessness, being a traumatic and psychologically altering experience, it is essential that people feel safe before they can have a positive outlook on improving in their situation.

There are design features, such as mysterious tunnel-like entrances in opposition to the typical front entry door seen on most building structures, that have been fostered as more inviting, in a psychological sense, for the homeless population because it makes them *feel* a sense of safety and security. However, a tunnel may not tangibly be the safest alternative for those moving through it, in regards to its functionality. Without an actual door, there is no control over who or what could enter the facility. In designing a sanctuary for the homeless, the solution must incorporate both safety and comfort, with safety always being the leading measure.

Theory of Defensible Space. In 1976, architect Oscar Newman published *Design Guidelines for Creating Defensible Space*. In this paper, he introduces his theory on defensible space, which he defines as the idea of designing “a residential environment whose physical characteristics – building layout and site plan – function to allow inhabitants themselves to

become key agents in ensuring their security.”²¹ To design a defensible space, four factors must be met: territoriality, natural surveillance, image, and milieu.

Territoriality. As in the Animal Kingdom, humankind has fought over territory for thousands of years. Just as knights defended their castles in medieval history, people today defend their homes and their families within in times of crisis. Territoriality can be expressed as the perception of ownership.²² In a homeless shelter, the people staying within its walls will not own the building, or even a bed, however, it is important to create a sense of home and community within. The space needs to be a haven – a place that people would rather be than on the streets. Rather, it should be a home by its ability to be perceived as one. By employing a design that is inviting and warm, similar to a house or a familiar place, a feeling of territory can begin to be developed by its inhabitants. Some design features that can be implemented to reflect this vibration and promote a sense of ownership could include:

- a private suite for families, so that families do not need to be split between male and female, essentially placing significance on *family* within the space
- using a warm color scheme and natural day lighting to create a less “clinical” atmosphere (i.e. white walls), as well as using color to accent wayfinding, as opposed to an abundance of signage, giving the center more of a “homey feel”
- specify round table tops to encourage gathering

Natural Surveillance. Almost every location within a city seems to have camera and audio surveillance. As a society, people can identify the reality of situations by reviewing visual footage of happenings and determine if there is an issue or a danger or monitor a person or a group of people. The comfort and practicality found in the idea of surveillance contributes to the factor of defensibility called “natural surveillance.”²³ Another way to promote feelings of

security is to allow inhabitants to see their surroundings and see outside. For example, a shelter guest can look out of a window to determine if it is safe to go outside, or simply determine what clothing to wear on a given day, due to the observed weather. Ways to design for natural surveillance include:

- a moderate amount of windows to provide views to the exterior
- windows that can be seen out of, but not into – especially on the first floor – to promote feelings of security

Image. With safety being at the root of the defensible space theory, security must be integrated into the aesthetic appearance of the exterior and interior of the shelter design, but nevertheless, it always comes first. Image is the factor of designing defensible space that meets the physical requirement of defensibility, to keep inhabitants physically safe.²⁴ In order to be universally designed, the service center must have all egress precautions and comply with ADA Standards, so that no matter the person's situation at-hand, they are safe and secure within the building in case of a multitude of potential events that could occur, such as a fire or criminal activity. Some of the ways to incorporate security features into the design are:

- comply with ADA Standards
- comply with egress standards and fire codes
- create entry points that are safe, yet inviting
- have an on-site security department

Milieu. When one buys their dream home, one of the priorities that is at the top of the list is usually deemed, “location, location, location.” This is due to the fact that the physical location of a building takes a lot of time and money in order to move and, in addition, other buildings and places cannot be moved necessarily as well. For example, the perfect house may not be found in

the perfect neighborhood, however the perfect neighborhood is often chosen because of the other locations that cannot be moved, such as the ocean or a specific school. Being close in proximity to locations, such as police stations and hospitals, can be an important aspect of designing a homeless shelter, which has hundreds to over a thousand people possibly passing through the doors per day and staying each night. People may come to the shelter, as it is their home base, harmed or sick beyond the staff's in-house ability to treat. The ability to get ailing individuals to the nearest hospital is crucial. Conversely, a violent guest may require police intervention, so having a location close to a police station can be beneficial to the success of the shelter and its reputation for safety. The milieu of the shelter design describes the importance of its surroundings on its defensibility.²⁵

Originally designed with crime prevention in mind,²⁶ the theory of defensible space is essential in the designing of a refuge for the homeless. Designing a defensible space that will allow the homeless population to feel control over their own safety could also lead to them develop self-confidence and a will to undergo transformation within their lives. Once they have a present feeling of empowerment in response to increased safety and self-esteem, people of the homeless and low-income demographic can work towards rising above the poverty line and potentially begin a new, successful chapter to their life.

Designing a Physically Healthy Environment:

In addition to safety, a space designed for homeless and impoverished citizens needs to endorse a healthy lifestyle and physical wellbeing before mental rehabilitation and progress can be made. Maximizing natural light, clean ventilation, and attention to sanitation are the fundamental elements of creating a physically healthy environment and upholding healthy bodies.

Natural Light. In areas where people spend a lot of their daily hours, for example, an office workplace, natural light is key to optimizing performance and sustaining health over the course of time. Natural light promotes the regulation of the body's inherent Circadian Rhythm, which essentially is the internal "clock" within the human brain that controls the sleep-wake cycle, hormone release, body temperature, and much more.²⁷ With greater exposure to natural light, people within a building are exposed to more white light, which supports energy absorption and usage, as well as increased sleep time and quality of sleep. Proper lighting can improve conditions such as obesity, sleep disorders, and various mental illnesses. In a homeless shelter, increased window placement within each space that will be occupied throughout daytime hours can have positive effects on the guests, as well as the employees.

Ventilation. Especially on the interior of a location that is to house large numbers of people and have hundreds of individuals coming through its doors each a day, indoor air quality is vital in ensuring the general health of the people within. There is a controversial medical anomaly, known as "sick building syndrome," that is said to occur from prolonged exposure to a space with inadequate ventilation and airflow.²⁸ It can produce symptoms such as sinus infections, watering eyes, muscle cramping, nausea, shortness of breath, and fatigue, among many others.²⁹ When occupants leave the building for a prolonged period of time, their symptoms will improve or disappear. This syndrome can be caused by the accumulation of volatile organic compounds, a product of the off-gassing of materials, which include fumes from installing new carpet or paint, and airborne allergens and pathogens within the ventilation systems of the building.³⁰ For these reasons alone, it is important for a shelter, as well as any other building design with high or frequent occupancy, to have proper ventilation and airflow. In the design for a homeless shelter, however, proper ventilation as a means to prevent common

ailments can save money on treatments, which may not work due to continual exposure, as well as promote the health and wellbeing of its inhabitants. Inspecting for mold and mildew on a regular basis and moderate window access can help to reduce the potential for sick building syndrome and increase healthy airflow.

Sanitation. While thousands of people in the United States seek shelter each night at established refuges around the country, there are those homeless people that avoid shelters. The article *Why Some Homeless Choose the Streets Over Shelters*, published by the National Public Radio, brings up many points of interest as to why someone would choose to avoid a shelter, even on the coldest of nights. There are horror stories about people getting necessities, such as their shoes, stolen, the possibility of missing an interview or being late to work due to the rigid check-out schedules of some locations.³¹ However, the issues with sanitation are completely real and understandable in one's avoidance of such a public facility. The possibility of bed bugs, lice, and overcrowding can be extremely threatening to a person's health when clothing cannot be replaced and treatment cannot be afforded. In the design strategy for a shelter, there should be areas for laundry to be done with measures to avoid the spread of bed bugs and lice. There needs to be enough space to house the current population in need without becoming frequently overpopulated on a typical night. A measure of separating the sick from the well could also reduce the spread of disease and hinder the fear of becoming infected.

Designing an Environment for Positive Mental Health:

Once safety and the physical health aspect of the design is addressed, mental health can be tended to. Simple design approaches can boost the general mental and emotional health of the occupants, as well as decrease the severity of some illnesses. Maximizing natural light,

application of color theory, and supporting the family unit can all stimulate a positive affect on a person's mental health.

Natural Light. With about 20-25% of homelessness directly caused by suffering from mental illness alone,³² natural light is a feature that is essential within a shelter design. Exposure to natural light can also improve psychological disorders and illnesses such as depression, bipolar disorder, and Alzheimer's,³³ in addition to its physiological benefits. Little funding is given by the government for the costly treating of mental illness for the homeless population,³⁴ but designing open and bright spaces with an abundance of windows allows for greater exposure, which can have positive effects on the current states of mental illnesses of building occupants for a fraction of the cost.

Color Theory. A large part of making a shelter seem like a home is avoiding color and finish choices that may make the spaces seem "clinical." The word is used to describe a space reminiscent of an institution or a hospital, which has the common perception of being stark white and strictly utilitarian. Incorporating warm and calming colors into the design aesthetic, such as beige, blue, green, and purple hues, can be inviting and comforting to the people who stay there. Applying residential color schemes and using furniture with soft and round edges can reduce the institutional reputation of a commercial space.

In the late 1970's, research was done exploring the tranquilizing effects of color on violent behavior. In a shelter's security department, there could be a space, similar to holding cells in a jail, that could give potentially violent guests a chance to calm down. The research suggests that painting these cells pink will encourage a calming affect.³⁵ With later research suggesting that painting a cell pink is only a short-term affect on behavior, it would be a simple

design feature for giving guests in a shelter a chance to re-evaluate their reactions before being turned away or taken into police custody.

The Family Unit. With 16% of homelessness being derived from domestic violence circumstances,³⁶ most homeless shelters employ a division between men and women to avoid the risk of recurring situations. Although 16% may seem like a small percentage, about 50% of all homeless women and children have a past of domestic violence.³⁷ Thus, the precaution is extremely necessary for ensuring the safety of the occupants. For example, Haven of Rest Ministries has an entirely separate building for women, called the Harvest Home, which houses 20 women and children. Many shelters, for obvious safety and security, do not allow families to have rooms to themselves; the father must go to the men's dormitory for bed. In a time of crisis, although temporary, it may be comforting and encouraging in keeping the family unit together. Providing a dormitory or residential area for families to stay together, separate from individuals and those who have experienced domestic violence or abuse, can be a temporary, but beneficial accommodation.

Furthermore, children who are homeless often are out of a routine, not knowing where their next meal will come from or if they will be able to shower, or go to school. According to Akron Public Schools regarding Project RISE, homelessness can be extremely stressful on children and can cause delays in learning, learning disabilities, and mental illness, such as depression and anxiety.³⁸ By containing the family unit and having a separate space that allows for the creating of a routine, effects on learning and mental health can be reduced or diminished. By reducing these effects and sponsoring education, there is hope for putting an end to a child's generational cycle of poverty.³⁹

Universal Design Considerations:

The homeless population is very diverse, comprised of people from all walks of life. There are people with disabilities, mental illness, minorities, and veterans, among many other categories. A homeless shelter must be able to meet the basic needs of any person who walks through the doors, no matter what their situation entails. Whether they are in a wheel chair, experiencing abuse, fighting alcoholism or drug addiction, or even violent, there is a need and a cry for help that must be accommodated. By using the basic Americans with Disabilities Act (ADA) Standards, responding to proxemics, and creating a safe space through efficient means of egress, a shelter can be used by any person who is in need and willing to create rejuvenation to their life.

ADA Standards. The Americans with Disabilities Act is at the heart of designing spaces that virtually anybody can use, despite the mobility complications they may endure. Strategic space planning techniques, such as including a 60 inch turning radius at tight corners for those in wheelchairs and providing 36 inches of width in corridors at the minimum can make a space easier to navigate.⁴⁰ Implementing simple-to-use hardware, such as door pulls rather than latches, and providing ramps at the entry and exit of the space can improve the experience of navigating the building. Selecting finishes with enough contrast to differentiate spatial changes, such as light toned countertop and a dark floor or placing dark nosing on stairs, can help those visually impaired perceive the depth of the space.

Proxemics. A high population density can affect human behavior, culture, and the encompassing environment. This affect is known as “proxemics,” which responds to the distances between people and is a reason behind many people’s common fear of crowds. When designing a space that is projected to have a high occupancy, it is important to maintain comfortable spatial integrity based upon those established inherently by humankind. As studied

in the field of communications, there are 4 levels of distance people keep between one another. These include intimate (0 to 18 inches), personal (18 inches to 4 feet), social (4 to 10 feet), and public (over 10 feet).⁴¹ In a shelter situation where a large group must be effectively housed, whether it is for homeless or disaster relief populations, for example, beginning with an intrinsic need for personal space is fundamental. For example, according the ADA Emergency Shelter Checklist, there should be 36” between cots, with accessible cots having one side against a wall.⁴² In addition to making a space accessible, these proxemics standards help to separate space into more personal areas.

Means of Egress. Especially within a large commercial building space, the means of egress is essential to the safety of the occupants. Occupancy classifications helps to establish the number of exits and, in the case of multiple floors, stairways for the maximum number of people that can be within a specific type of space. The occupancy type and the number of occupants correlates with the number of exits required.⁴³

Conclusion and Further Application

By researching a demographic, such as the homeless in the United States, architects and designers can create evidence-based design solutions for the problems that arise. It is vital to the success of a design to understand the physical and psychological needs of the people to inhabit the space, in addition to its basic functionality.

Furthermore, the research presented on poverty and homelessness can be drawn upon. The concept for an all-inclusive “service-center” that could effectively house, rehabilitate, and make resources easily accessible for people, all under one roof, could promote great success for people of the low-income and homeless demographic in rising above the poverty threshold. This model would aim to cover all necessary bases in order to be able to give each person that comes

through the doors an opportunity to turn their life around and rise from their station in the homeless category. In addition to traditional shelter services, including beds, showers, laundry, and meals, providing security, basic medical care, career guidance, childcare, and mental health services within the same building can be an essential solution to one's success. In order to incorporate facets in facilitating a simpler way for a person to rise above the poverty line, careful attention must be paid to the design of the building itself by careful research and the use of evidence-based design strategies.

Even though the aforementioned model is an application of evidence-based design for the low-income and homeless demographic, similar research methods and design strategies can be used for housing and facilitating other groups, such as the Syrian refugees, which is a current issue in the United States. While there are many political opinions and schools of thought on the "refugee crisis," there is a population developing with needs that cannot be ignored. In the same Families, Individuals, & Environments course mentioned previously, it was discussed that there has been a large population of Syrian refugee children integrated into the Cuyahoga Falls School district, close to Akron, Ohio. Many of these children are attending school, however, they do not speak English, which inhibits their ability to actively participate and learn. This information, for example, could be researched and built upon in order to design a safe environment that could house refugees and other immigrant groups as well as educate them in the English language until they are legal residents of the country and able to afford housing on their own.

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