

TRAUMA-INFORMED DESIGN

DEFINITIONS AND STRATEGIES FOR ARCHITECTURAL IMPLEMENTATION

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TRAUMA: A DEFINITION AND WHY IT'S A PROBLEM

Oftentimes, people experiencing homelessness have been subjected to trauma in their lives. Trauma is “an event, series of events, or set of circumstances experienced by an individual as physically or emotionally harmful or life-threatening with lasting adverse effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being” (SAMHSA, 2014). Crime, mental disorders, racial discrimination, and violence are contributors to trauma. This condition is often the reason that people engage in coping responses such as withdrawal, denial, emotional outbursts, or substance abuse. It is a situation that can last many years and is difficult to overcome.

One empirical study examining the prevalence of trauma within populations of unhoused persons reported that 100% of its women participants with co-occurring disorders had experienced a life-altering traumatic event. Among male participants, 68.6% also reported trauma histories (Christensen, 2005). Trauma is widespread, globally speaking. For example, poverty is a strong causation of stress leading to trauma, and approximately 2.1 billion people live in extreme poverty worldwide.

Trauma-informed design as an idea amongst built environment fields has emerged alongside the trauma-informed care movement from the social work and psychology fields. Principles of trauma-informed design provide actionable guidance intended to help preserve people’s dignity and personal control in the physical environment. This report identifies the principles of trauma-informed design as currently conceived and identifies strategies that interior and architectural designers can use to reduce people’s perceptions of stress so those that have experienced trauma can take positive steps to improve their situation.

WHAT IS TRAUMA INFORMED DESIGN?

Trauma informed design is an emerging concept that does not have a consensus definition nor goals at this time. However, a definition may be gathered around the meaning of trauma-informed care:

“Design actions and implementations that support the strengths-based trauma-informed care framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment” (Hopper, Bassuk, & Olivet, 2010).

Designers that enact trauma-informed design strategies must do their work with an eye toward recognizing the altered mental, emotional and physical states that trauma can inflict on people and intentionally take steps to mitigate these negative influences.

It is necessary to recognize that built environment design by itself is not a panacea. The broad goal of trauma-informed design is to support a ‘wraparound’ recovery environment that includes the built environment itself along with training, therapies and other support activities for people in need (American Association of Children’s Residential Centers, 2010).

WHY DOES ADDRESSING TRAUMA THROUGH BUILT ENVIRONMENT DESIGN MATTER?

Trauma informed design is important because it may help lower the high levels of a person's emotional stress or tension that they are feeling. Lowering these levels provides a heightened opportunity for those that have experienced trauma to successfully move forward with their lives.

People experiencing trauma are often understandably distracted by the nature of their situation, sometimes needing to spend their mental 'band width' on securing their next meal or a dry place to sleep that night. An accommodating, thoughtful environment can allow a person to stop attending to their immediate survival-related problems and have time and ease to consider and plan for relieving their situation. In this way, an interior environment can provide people 'breathing room', psychologically speaking, so that they can strategize for their future more effectively.







Trauma-informed environments can increase levels of safety for clients and staff in that it may reduce the incidence and frequency of coping behaviors such as emotional outbursts. Such environments may also reduce the likelihood of re-traumatization.

Through trauma-informed design's adherence to the principles of trauma-informed care its application to architectural projects may also help improve outcomes regarding mental health and substance abuse behaviors (SAMHSA, 2014).

WHAT PRIMARY HUMAN NEEDS PRINCIPLES ARE THE FOCUS OF TRAUMA-INFORMED DESIGN PRACTICE?

There are principles that might be called fundamental human needs that people experiencing trauma and homelessness value and seek out for themselves and their families. Literature talks of this quality of a sense of confidence and trust in the world as **ontological security***. If applied in appropriate ways through architecture and therapy methods, spaces that embrace these principles can provide users a place to create their plan to exit homelessness in an environment that exudes optimism, calmness and respect that can support their sense of dignity and self. In the following pages, each of these human needs are defined and provide potential applied strategies within architectural space to address each one.

* See L. Rivlin, "The Significance of Home and Homelessness," *Marriage & Family Review* 15, No. 1-2 (1990): 39-56; L. Rivlin and J. Moore, "Home-Making: supports and barriers to the process of home," *Journal of Social Distress and the Homeless* 10, no. 4 (2001): 323-336; and D. Padgett and B. Henwood, "Qualitative research for and in practice: findings from studies with homeless adults who have serious mental illness and co-occurring substance abuse," *Clinical Social Work Journal* 40, no. 2 (2012): 187-193. While these works addressed built environment design only tangentially, their focus on user lived experience had clear implications for the design of built space, and the articles' points were often specifically related to the experience of persons experiencing homelessness.

-  Dignity and Self Esteem
-  Empowerment and Personal Control
-  Security, Privacy and Personal Space
-  Stress Management
-  Sense of Community
-  Beauty and Meaning

1) DIGNITY AND SELF-ESTEEM

Premise

- People like to be treated as and recognized as individual people, not anonymously (Miller & Keys, 2001).
- People can be sensitive to feeling dominated or overpowered (American Association of Children's, 2010)
- Physical cues that support positive self identity such as appearance are helpful.

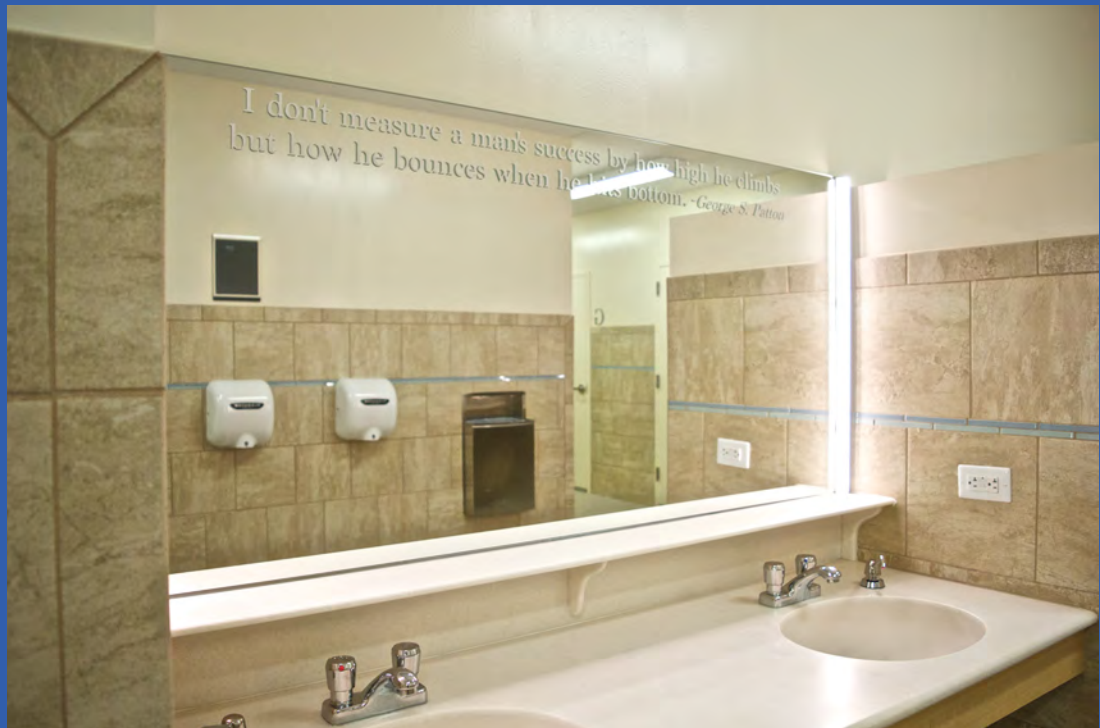
Applied Built Environment Idea

- Adjust lighting color and placement to better complement skin tone and minimize shadows under eyes and nose in places with mirrors.



Lighting placed overhead (left photo) versus at eye level flanking the face can significantly affect how a person perceives their appearance in a mirror. For a traumatized person who has an important job interview, the view on the right would reinforce positive perceptions better.

LED strips flank this shelter bathroom in 3500 Kelvin temperature, better ensuring clients' positive opinion of their appearance. Kearney Comprehensive Services Center, Tallahassee FL Clemons Rutherford, architects.



2) EMPOWERMENT & PERSONAL CONTROL

Premise

- People like feeling they have control over their surroundings (Burn, 1992).
- People like having the ability to participate with others when they want, or withdraw to be alone, or be nearby to listen but not engage.

Applied Built Environment Idea

- A water bottle filling station can provide empowerment as one can obtain a basic human need on their own schedule.



Water bottle filling station in the main lobby waiting area. Austin Research Center for Homelessness. Architecture by LZT Architects and Herman Thun.

3) SECURITY, PRIVACY, AND PERSONAL SPACE

Premise

- People identify with and are assisted by their possessions, and so they are deeply aware of how safe these items are from theft and destruction. Jewelry, photos, clothes, technology are just a few things people often protect.

Applied Built Environment Idea

- Protected back seating prevents fear of unknown, and bed areas with shelves and curtains allow for personal space and retreat.

Lighting for reading in bed, a clock radio, ventilation fan and magnetic marker board provide clients a retreat in this transitional shelter family bedroom. Design by Jill Pable and Kenan Fishburne. HOPE Community, Tallahassee Florida.



4) STRESS MANAGEMENT & COPING

Premise

- While desired moods vary, people generally prefer an environment that can be calm when the moment calls for it (American Association of Children's, 2010).

Applied Built Environment Idea

- A protected courtyard can provide visual privacy promoting a sense of calm and refuge.



Courtyard of the Third Avenue Apartments, New York, New York. This protected area provides a space in addition to one's small apartment to be alone, but still in protected space. Architecture by James McCullar Architecture, PC.

5) SENSE OF COMMUNITY

Premise

- Working toward a shared goal can build relationships and is nourishing to most people. (American Association of Children's, 2010)
- People that have a support net can feel less stressed and less paralyzed in taking action.

Applied Built Environment Idea

- Waiting and hang-out spaces within day centers, supportive apartments and shelters can be designed to offer intentional activities that give wary clients a justified reason to be there.

Vision for a waiting space next to a day center. Activities including ping pong, checkers and a band stand for concerts provide logical reasons for people to congregate and develop positive relationships. Design by Jill Pable and Lindsey Slater with Design Resources for Homelessness for the Atlanta Mission.



6) BEAUTY AND MEANING

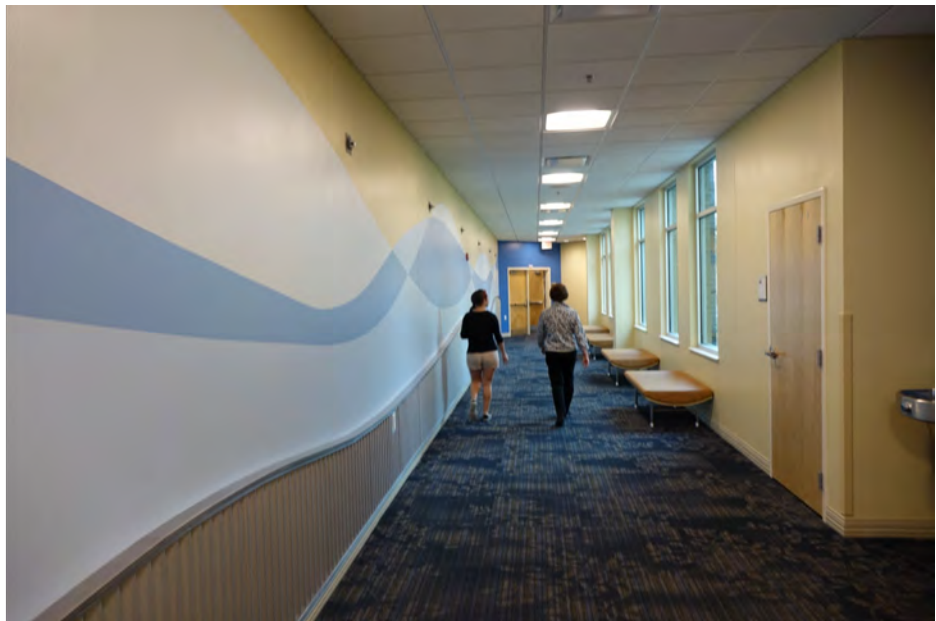
Premise

- A feeling of being oneself, comfortable and surrounded by familiarity provide a sense of grounding and purpose for people. (McCracken, 1989)
- People seek sense in what they do and where they are. They want understanding of procedure and generally order in their lives. A chaotic place supports chaotic behavior and thinking. Beauty also sends a message of care that supports self-esteem.

Applied Built Environment Idea

- Wayfinding devices, sightline features, and successful management of visual clutter and signs can free up an environment to attend to deeper meaning and make connections to visitors.

A hallway is elevated above a mere transition space here through paint and galvalum siding. Kearney Comprehensive Emergency Services Center, Tallahassee Florida. Architecture by Clemons Rutherford Architects. Interior hallway details by Design Resources for Homelessness and Kenan Fishburne.



WHAT ARE THE GOALS OF TRAUMA INFORMED DESIGN?

Design Resources for Homelessness has gathered the informed opinions of researchers, as well as the perspectives of social agency directors and advocacy organizations to examine the human-drive goals of trauma-informed design. The following pages explain some of these goals with an example of how its principles might be activated through built environment design. There are many strategies that might be used to build these goals into a building project.

REINFORCE THE INDIVIDUAL'S SENSE OF PERSONAL IDENTITY AND OWNERSHIP



Storage spaces with locks are essential. Sleeping areas preferably should have lockable storage compartments for belongings as well as a closet tall enough to hang a shirt, trousers, a dress or skirt (Berens, 2016).

Third Avenue Apartments apartment (New York) closets provide not just storage but a flexible way to categorize and organize belongings. Shelves can be moved by the resident. Architecture by James McCullar Architecture, PC.

PROVIDE AN ENVIRONMENT THAT IS SAFE WHILE ALSO INVITING



Places perceived as safe do not have to sacrifice their sense of humanity. Functional elements like doors, sightlines, and finishes that retain a familiar, warm quality can offer a sense of safety without losing their welcome.

A divided dutch door on this small four-person transitional shelter family bedroom lets the family engage with hallway neighbors when they choose or choose privacy with both parts of the door closed. HOPE Community, Tallahassee. Design by Jill Pable and Kenan Fishburne.

PROMOTE OPPORTUNITY FOR CHOICE WHILE BALANCING PROGRAM NEEDS AND SAFETY & COMFORT



Choice is an intangible quality that architecture can provide to clients and is supportive of empowerment. Where possible, offering choice to clients that is manageable for staff can counter a sense of helplessness.

This daybed in a single-room apartment provides residents the ability to have guests over with less stigma: the bolsters allow the resident to invite guests to sit on a sofa and not their private bed. Third Avenue Apartments, New York, New York. Design by Services for the Underserved.

ENGAGE THE INDIVIDUAL ACTIVELY IN A DYNAMIC, MULTI-SENSORY ENVIRONMENT

Planned and intentional visual distractions can provide people with something else to think about in their midst of their crisis. Color, pattern and form offer ways to engage the senses and perceptions.

Festival flags inject color to this day center courtyard, providing the support organization and place to provide supportive messaging with placement that discourages theft or defacement. Design by Design Resources for Homelessness and Lindsey Slater for the Atlanta Mission.



REDUCE/REMOVE KNOWN ADVERSE STIMULI AND TRIGGERS



Color, form and materials within spaces can have a profound effect on residents' mood. Avoid sterile, institutional-looking colors and finishes that may remind someone of past events or subconscious states of anxiety. For example, a black-colored metal bunk bed may remind a client of being in prison (Berens, 2016). When purchased in bulk, metal beds can be painted in other colors that may avoid such associations at little or no extra cost.

REDUCE/REMOVE ENVIRONMENTAL STRESSORS SUCH AS NOISE AND CROWDING

Noise abatement strategies such as using porous floor, wall or ceiling materials can be employed to reduce stress and provide a quiet, relaxed atmosphere where residents rest or sleep (Berens, 2016).

Early sketch of a day room for the Restoration House project for the Atlanta Mission shows the use of acoustic ceiling panels to dampen sound reverberation. Architecture by Nelson Worldwide. Sketch by Design Resources for Homelessness.



PROVIDE WAYS FOR THE INDIVIDUAL TO EXHIBIT THEIR SELF-RELIANCE



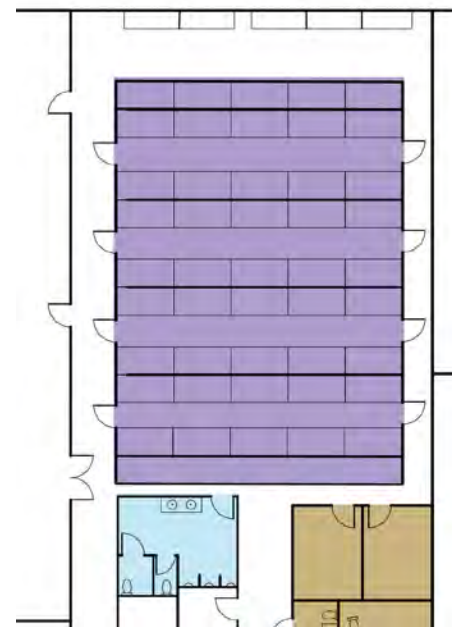
Allowing residents to take care of their own needs such as moving furniture to suit the moment, relieving thirst or having the opportunity for self-expression can support autonomy (Berens, 2016).

A changeable frame outside a transitional family bedroom apartment lets the residents reach out to neighbors. Elements that beg for completion such as empty frames can compel participation. Design by Design Resources for Homelessness.

PROVIDE THE MEANS FOR PRIVACY AND CONFIDENTIALITY

Spatial layouts should be simple, linear and easy to navigate. Breaking up space in shelter dormitories to form smaller units, instead of one large open plan or parallel corridors, enhances the overall sense of privacy along with safety.

Floor plan of men's bunk beds separated into four groups of 20. This spatial arrangement permits older men to be separated from those who are disruptive than can interrupt their sleep. Austin Research Center for Homelessness. Architecture by LZT Architects and Herman Thun.



REINFORCE THE SENSE OF STABLE AND CONSISTENT POLICY SUPPORT



Intake and reception areas should be open and welcoming, with visual cues and signage that indicate where lines form and where facilities and service areas are located (Berens, 2016).

Lobby, Austin Research Center for Homelessness.
Architecture by LZT Architects and Herman Thun.

PROVIDE/PROMOTE CONNECTEDNESS TO THE NATURAL WORLD

Settings that include vegetation can reduce stress and promote a sense of peace. They can also enhance self-esteem and promote a sense of mastery of the environment (Berens, 2016).

This hypothetical shelter design shows a sheltered and protected view of nature for persons who have long slept outside and may have a fearful view of the natural world. Design by Jill Pable.



PROMOTE A SENSE OF COMMUNITY AND COLLABORATION WORTHY OF TRUST



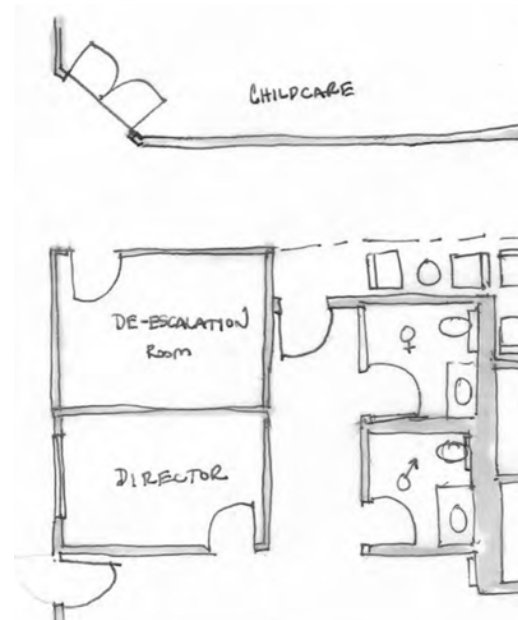
Architectural choices such as ceiling height, room finishes, and windows can be harnessed to create spaces that people want to linger in. Tapping ideas from cognitive psychology, round tables rather than square ones may support more fluid conversation.

The Day Station by COTS, Burlington, Vermont.
Architecture by Duncan Wizniewski Architecture.

SEPARATE AN INDIVIDUAL FROM OTHERS WHO MAY BE IN DISTRESS

Providing a de-escalation room near public spaces can help diffuse tense situations, enhancing the sense of safety (Berens, 2016).

A de-escalation room off the main lobby of a women's shelter can provide staff a place to accompany a client out of visual and auditory view. Space planning concept by Design Resources for Homelessness.



WHAT FUTURE RESEARCH NEEDS TO BE ADDRESSED IN TRAUMA-INFORMED DESIGN?

Little research has been completed to date on trauma informed design specifically. Evidence from other fields and areas of specialties within design have provided some basic guidance on how to address issues of the physical environment affecting behavior, mood, health and well-being, gender and cultural differences, and the special needs of individuals who are traumatized. While this report provides helpful fundamental introduction and guidance to trauma informed design, more research is needed to expand understanding of this important consideration and how built environment can help mitigate stress. Some of these areas of opportunity are provided below.

Materials

Research on materials is needed to further determine the effects on people including

1. Durability
2. Comfort
3. Ease of maintenance
4. Noise abatement
5. Sustainability

Biophilia and Nature Views

1. Experiences leading to changes in perception of nature
2. Levels of comfort vs. distraction
3. Air quality
4. Wellness factors

Use of space

1. Effectiveness and efficiency
2. Importance of impacts of flexibility/ adaptability

Visual Order and Complexity

Persons experiencing homelessness often have many possessions they manage that can result in a chaotic appearance of the spaces they inhabit.

1. Effects on visual presentations on stress
2. Arousal stimulation
3. Positive vs. negative impressions

Behavioral control and boundaries

1. Proper balance of physical environment in reinforcing respectful behavior with need for residents to feel independent
2. Effective and unobtrusive visual/physical boundaries

Shelterization and dependence

Administrators tend to worry that making facilities too attractive and comfortable for residents is counterproductive in that it may cause residents to resist departure. This idea has never been tested objectively. Research needs to be done in areas regarding:

1. The impact of the physical environment on helplessness
2. Other possible reasons for residents to stay, such as social networks and self-reliance

SOURCES FOR FURTHER RESEARCH-SUPPORTED INFORMATION

1) Design Resources for Homelessness

<http://designresourcesforhomelessness.org/people-1/education/>

This review of research was undertaken to identify, aggregate and summarize known insights about how to design the interiors of facilities for persons that have experienced mild or major trauma, including but not limited to homelessness. It focuses on the local, intimate level of human-built environment interaction that often is neglected in available guidelines and literature.

Over 300 pages of other case studies, spotlight reports and project databases are also available at this website for free download.

2) ***Homelessness and the Built Environment: Designing for Unhoused Persons***, a forthcoming book from Routledge Publishers.

by Jill Pable, Yelena McLane and Lauren Trujillo

This book examines the supportive role that the design of buildings can play for unhoused persons and other users and argues that built environment is an equal partner alongside other therapies and programs for ending a person's state of homelessness. This work supports the wider, emerging argument that built environments can positively impact human perception, a gateway to positively evolving choices and actions. It intends to serve as a reference source for interior designers, architects and sponsoring organizations who are renovating or constructing new built environments, design researchers and students forging new discoveries, and policy makers who seek to assist their communities

affected by homelessness. Its publication is expected in 2021.

3) Substance Abuse and Mental Health Services Administration

<https://www.samhsa.gov/>

The purpose of this paper is to develop a working concept of trauma and a trauma-informed approach and to develop a shared understanding of these concepts that would be acceptable and appropriate across an array of service systems and stakeholder groups.

4) Behavioral Influence Stairway Model

<https://viaconflict.wordpress.com/2014/10/26/the-behavioral-change-stairway-model/>

The Behavioral Influence Stairway Model is used by the Federal Bureau of Investigation in managing crisis negotiations along with many kinds of conflict settings. Its framework of active listening > empathy > rapport > influence > behavioral change may be an area of exploration for architecture as well.

5) **The WELL Building Standard**

<https://standard.wellcertified.com/well>

The WELL Building Standard takes a holistic approach to health in the built environment addressing behavior, operations and design. A series of 'Welloographies' explain the empirical findings that support its many standards for human wellness, including mental health.

6) **Attachment, Regulation and Competency (ARC) Framework**

<https://arcframework.org/>

The Attachment, Regulation and Competency Framework is a flexible, components-based intervention developed for children and adolescents who have experienced complex trauma, along with their caregiving systems.

7) **A Long Journey Home**

<https://www.homelesshub.ca/resource/long-journey-home-guide-creating-trauma-informed-services-mothers-and-children-experiencing>

The Long Journey Home is projected to serve as a guide to agencies looking for practical ideas about how to create successful trauma-informed physical environments.

8) **Using Trauma Theory to Design Service Systems**

<https://psycnet.apa.org/record/2001-00826-000>

Abstract: This book identifies the essential elements necessary for a system to begin to integrate an understanding about trauma into its core service programs. The basic philosophy of trauma-informed practice is examined across several specific service components: assessment and screening, inpatient treatment, residential services, addictions programming, and case management. The modifications necessary to transform a current system into a trauma-informed system and the approaches that may become contraindicated are identified.

9) **The Adverse Childhood Experiences (ACE) Study**

<https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/resources.html>

The Adverse Child Experiences study concluded that childhood exposures to adverse experiences among the general population are correlated with (but not necessary causative to) adult health risk behaviors.

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Design Resources for Homelessness

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