RESEARCH
SHOP

Recommendations for designing supportive housing for women and gender-diverse individuals

Prepared for

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Executive Summary

The design of a building or space can have an impact on our quality of life. The purpose of this report is to provide recommendations to building developers on the built form of supportive housing designed for women and gender-diverse individuals. A literature review was conducted to inform the policy-to-practice recommendations found in this report. The literature review gathered the available theoretical considerations and practices of various supportive housing models and other developers.

The findings encourage developers to use trauma-informed design and be adaptive to intersectional needs. Housing developers should design spaces that avoid re-traumatizing women and gender-diverse individuals who have trauma associated with institutions, such as hospitals and prisons. Design that incorporates nature and natural materials are a great way to make a space feel safer for residents.

The eight recommendations provided in this report reflect these main three safety and security considerations (i.e., trauma-informed design, intersectional design, and biophilic design).

Contents

1. Introduction

In 2017 the McMaster School of Social Work received a generous donation from the estate of Dr. Richard Splane for 'advancing the study of social policy.' With this donation, the School intends to deepen its capacity to develop social policies that increase the quality of life for citizens. The approach involves working intentionally and creatively to bring together those of us who experience social policy: service users, social workers, students, advocates, academics, and policymakers.

One of Splane's projects is investigating the complex issue of women and gender-diverse homelessness. By bringing together a range of actors in a Community-University Policy Alliance (CUPA), the goal is to advocate for more supportive housing for women and gender-diverse individuals in the community. Splane has requested the Research Shop's help in developing a policy brief regarding the built form that supportive housing for women and gender-diverse individuals might take.

The main research question for this project is: *What are some of the key safety and security considerations for the built form of supportive housing for women and gender-diverse individuals who experience complex homelessness?*

The purpose of this report is to provide Splane with a plain-language literature review to inform a set of policy-to-practice recommendations. The team was also tasked with the creation of a policy brief to summarize the research in an easy-to-read format. These policy-to-practice recommendations will be shared with local community agencies, municipal governments, and funders. These recommendations will also be shared nationally through channels such as Homeless Hub and the National Women's Housing and Homelessness Network. This report is a summary of the team's research methods, findings, and recommendations.

2. Methods

2.1. Literature Review

The team conducted a review of theoretical and empirical literature relating to the built form of supportive housing for women and gender-diverse individuals. The reviewed literature included both peer-reviewed journal articles and grey literature.

The literature review is broken up into three parts:

1. A brief overview and definitions of the main terms used in this report, including homelessness and the "built form" of supportive housing.
2. A summary of the main theoretical considerations and recommendations regarding the relationship between built form and safety and security.
3. A summary of the evidence for particular practices to foster safety and security.

For a broad overview of the main terms, we consulted resources from prominent Canadian organizations such as the Homeless Hub. For the theoretical and empirical investigations on the built form of supportive housing, the team searched scholarly databases including Google Scholar and the McMaster library databases. Grey literature was also collected, including reports and evaluations created by housing and support centres for women and gender-diverse individuals with histories of homelessness. Sources within the last 15 years or from 2006 and later were included. Search terms included "Homelessness", "Built form", "Trauma-Informed", "Housing", "Gender-Based Violence/Trauma", "Women", "Gender-Diverse", "Transgender", and "Gender Non-Conforming", among others.

2.2. Limitations

The limitation of the literature review centres around a lack of research on the topic. The available literature largely focuses on services and programming in supportive housing situations rather than the built form. Few evaluations exist to determine the impact of the built form of supportive housing, and to a lesser extent, the impact and needs of women and gender-diverse individuals with intersecting identities (e.g., ethnicity, culture, disability). The conclusions of this report are therefore limited in terms of the populations (e.g., veterans) and contexts (e.g., prisons) they draw on in the literature.

3. Context

3.1. Definitions of homelessness

Mainstream definitions of homelessness refer to "the situation of an individual, family, or community without stable, safe, permanent, appropriate housing, or the immediate prospect means and ability of acquiring it" (The Canadian Observatory on Homelessness, 2012). Notably, this definition of measuring homelessness by a lack of housing does not explain all experiences of homelessness. An Indigenous definition of homelessness, for instance, considers the traumas and barriers of reconnecting to

Indigeneity (Aboriginal Standing Committee on Housing and Homelessness, 2012; Thistle, 2017).

The following section provides a brief review of homelessness as it relates to women and gender-diverse individuals. The impact stresses the importance of considering the built form when designing supportive housing initiatives.

3.2. Women and gender-diverse individuals' experiences with homelessness

Existing research consistently shows homelessness is threatening for women and gender-diverse individuals (Schwan et al., 2020). Women's experiences of homelessness and housing in Canada are largely impacted by violence and sexual abuse (McInnes, 2016; McLeod & Walsh, 2014), mental health, and addiction (Vaccaro & Craig, 2020). Cases of violence are particularly heightened among Indigenous women (Boyce, 2016; Martin & Walia, 2019).

Schwan and colleagues (2020) argue that women and gender-diverse peoples' concerns of safety and housing go hand-in-hand. Women and gender-diverse people experiencing complex homelessness in Hamilton, Ontario identified the safety and security of housing as the top priorities for permanent housing (Vaccaro & Craig, 2020).

3.2.1. Transgender and gender non-conforming individuals

Transgender and gender non-conforming people are often denied access to gender-specific supportive housing due to a lack of gender diversity (Fraser et al., 2019). As such, many transgender and gender non-conforming people resort to concealing their identity to 'pass' as cisgender to access supportive housing and other services (McCann & Brown, 2021). Even if permitted to access supportive housing, many services do not facilitate a safe environment for transgender and gender-diverse individuals. As a result, many transgender and gender non-conforming people avoid accessing supportive housing services and seek other places to stay (Mottet & Ohle, 2006).

Unfortunately, discriminatory practices among housing providers and landlords also play a role in many transgender and gender non-conforming people being left without housing (Mottet & Ohle, 2006). Ultimately, the lack of safe and secure housing for transgender and gender non-conforming makes them vulnerable to violence and repeated cycles of homelessness (Fraser et al., 2019).

3.3. The "built form" of supportive housing

The examined literature uses a variety of terms to refer to the considerations for improving the quality of supportive housing. In this report, we differentiate the "built form" from the "services" of supportive housing.

- **Services** (or practices) concern the activities, modules or human labour involved in maintaining the unit. Some examples of services include providing counselling on-site, art classes for the attendees, or training staff in mental health response.
- **The built form (or built environment)** concerns the physical features of spaces; the design of space, its function and the architectural design of structures.

The built form has effects on our quality of life. Huffman (2018) argues efforts to study and improve trauma-informed practices have been widely made, but efforts to discuss the built form and physical context around the practices are lacking. Considering this gap, this paper focuses on gathering the available literature to strengthen efforts made on considering the built form of supportive housing.

4. Theoretical Considerations

4.1 Built form theories emphasizing safety and security

Promising design theories discussing the relationship between the built form and safety and security include "trauma-informed design," "intersectional design," and "biophilic design." This section provides an overview of these theories.

4.1.1. Trauma-informed design (TID)

TID creates spaces that are aware of the emotional and physical consequences of trauma on individuals. For example, institutional designs that use dark stairwells and have stark white spaces can be triggering for people who have trauma (Singer, 2020). TID aims to reduce or remove these adverse triggers (Pable & Ellis, 2017). For individuals experiencing trauma, built environments that are safe and secure decrease survival-related stress and create spaces for recovery and healing (Farrell, 2018; Hetling et al., 2018; Pable & Ellis, 2017). The literature has shown that TID is associated with decreased feelings of emotional stress and tension (Pable & Ellis, 2017), alterations in the stress/trauma neurological pathways (Tuck, 2019) and improved mental health outcomes (Evans, 2010).

4.1.2. Intersectional design

Intersectional design recognizes that individuals have many "intersecting identities (i.e., gender, race, cultural, spiritual beliefs) that result in multiple sites of marginalization and oppression" (Greene et al., 2012 p.131). Intersectional buildings are flexible and adapt to their tenants' shifting needs (Sagert, 2017). For example, women with mobile disabilities have difficulty accessing supportive housing buildings that do not have ramps, elevators, and door push buttons (Walsh et al., 2009; Walsh et al., 2010). If these intersecting identities are not recognized, individuals will have difficulties accessing supportive housing (Sagert, 2017).

4.1.3. Biophilic design

Biophilic design arises from the concept of biophilia, the idea that humans have an innate connection to nature (Kellert, 2018). Biophilic design focuses on increasing residents' exposure to nature by adding natural elements into the design of housing. Some examples include allowing access to the outdoors, natural light, and good ventilation (Blair, 2012). Natural design elements are theorized to improve the wellbeing and wellness of residents (Mazuch, 2017; Sagert, 2017; Söderlund & Newman, 2017). By adding natural elements into the design of housing, residents can venture on a path towards healing and start anew.

4.2. Human considerations for the built form

This section describes relevant human considerations for the built form of supportive housing reflected in the literature. These include stress, sense of safety, human dignity, and sense of home.

4.2.1. Stress

When we experience stress, our bodies go into "survival mode". Survival mode is when fight or flight hormones (i.e. epinephrine, cortisol) are released in reaction to stress. This stress response helps us deal with short-term dangers but can be harmful if experienced for prolonged periods of time. Brain scans can be used to show evidence of long-term stress response.

Clutter-free. Supportive housing services should allow visitors and residents to feel relieved from the chronic stress of experiencing homelessness (Hetling, et al., 2018). People who struggle with homelessness go into survival mode for weeks or years at a time (Tuck, 2019). However, many supportive housing services are set up in messy and chaotic ways that contribute to the stress levels in those experiencing homelessness (Tuck, 2019). To promote healing from long-term stress responses, supportive housing

should involve clutter-free spaces (Tuck, 2019) that support self-care (Hetling et al., 2018).

4.2.2. Safety

Safety and feelings of safety are the primary considerations for designing a space for people experiencing homelessness and the trauma of prolonged stress (Tuck, 2019).

Building safety. Many supportive housing services use physical facilities that were not originally designed to provide shelter (Canavan et al., 2017). Instead, they were designed using outdated regulations that do not prioritize visitors' accessibility and safety (Canavan et al., 2017).

Lighting. Poorly lit spaces can feel crowded, insecure, and unsafe (Farrell, 2018).

Floor plans. Cluttered and close quartered spaces can feel dangerous and can be perceived as having a lack of control (Farrell, 2018). Open floor plans that create common areas are theorized to promote safety. This design strategy not only promotes socialization, but it allows for easy supervision by staff (Petrovich et al., 2017).

Gender-inclusivity. It is important to consider the safety of transgender and gender non-conforming people. In many Canadian shelters, floors are segregated as "male" and "female" or by the sex someone was assigned to at birth (Abramovich, 2016). Also, shared washroom facilities are often segregated with gender markers (Canavan et al., 2017). Gender-related rules are not safe or accessible for transgender and gender non-conforming people and put them at risk of violence (Canavan et al., 2017; Abramovich, 2016; Mottet & Ohle, 2006).

4.2.3. Human dignity

The literature discusses considerations of human dignity in the built form of supportive housing.

Privacy. A sense of privacy is very important for people experiencing homelessness. Privacy allows for "a place of refuge from the outside world, a sanctuary that functions as a foundation allowing for fulfilling potential" (Walsh et al., 2009, p.308). Many shelters are warehouses with long rows of cots on the floor, giving no dignity or privacy to the residents (Tuck, 2019). Tuck (2019) argues for providing residents with a combination of community spaces and private rooms to promote human dignity.

Personal space & property. Personal space and safe storage are important considerations for the built form. Residents in supportive housing often cope with difficult life circumstances with their belongings, and these possessions are found to restore and maintain their sense of self (McCarthy, 2020). Research shows people are strongly aware of how safe their belongings are from theft and destruction (Pable & Ellis, 2017). It is valuable to have personal spaces for self, belongings, and the ability to retreat if desired (Pable & Ellis, 2017).

Autonomy. A sense of autonomy is an important human consideration for designing healthy housing. The means-end theory suggests people have preferences for certain qualities (e.g., space, decor, or money) because these attributes represent a way to achieve their values and goals (e.g. privacy, status, or peace of mind) (O'Connell, 2006, p. 2). Autonomy can be facilitated in the structure of shelters by giving residents the power and ability to personally control their environment (Pable & Ellis, 2017).

4.2.4. Sense of home

When designing housing for people experiencing homelessness, the literature shows that creating a feeling of home is the ideal (McCarthy, 2020).

De-institutionalize spaces. One way to achieve a feeling of home is to deinstitutionalize spaces. Some supportive housing projects use older facilities that once were or mimic the design of institutionalized services, such as barred windows, clanging doors, and stark white colours (Jewkes et al., 2019). Many people who experience homelessness have been traumatized by institutional settings such as hospitals or prisons (Jewkes et al., 2019). A key trauma-informed design feature is thus avoiding designs that look and feel institutional (Jewkes et al., 2019). Examples include using natural materials, like wood for flooring (Farrell, 2018; Tuck, 2019).

Personalizing space: Another way to increase the feeling of belonging is to take a flexible approach to decoration. This allows residents to personalize and feel ownership over their own space (McCarthy, 2020). For example, personalizing blank walls and picture frames may be a means of managing, or removing completely, the otherness of previous and future tenants (Hurdley, 2006; McCarthy, 2020).

4.3. Existing recommendations

The research team synthesized existing theoretical built form recommendations in the literature into four design categories:

- **Intersectional design:** Housing environments should be considerate of the complex and intersecting needs of its residents.
- **Accommodations:** The accommodations of the facility should support residents' feelings of safety and security.
- **Structural features:** Supportive housing should have structural features that are welcoming and alleviate stress.
- **Interior design:** Using interior design aspects, these environments should be aware of individuals' exposure to trauma and support their human needs.

The following tables highlight the key recommendations within each theme from the literature.

Table 1. Intersectional design

Key features	Explanation	Recommendations
Being inclusive of all genders	Areas where residents can freely express their gender identity.	• Have all-gender washrooms (Abramovich, 2016) or gender-neutral bathroom (Canavan et al., 2017) where privacy can be maintained with locked doors for toilets and shower stalls • Include welcoming sign and posters about LGBTQ+ concerns and policies in the entry spaces (Mottet & Ohle, 2006)
People with mobility related needs	Recognizing that the built environment can help or hinder an individual's ability to access and exit their living space.	• Access to ramps, low countertops, wide interior doorways, and elevators (Petrovich et al., 2017; Walsh et al., 2009; Walsh et al., 2010)

Table 2. Accommodations

Key features	Explanation	Recommendations

Privacy in restrooms and bathing areas	Prioritizing the privacy and safety of all residents.	• Have private bathing and dressing areas by using curtains and have at least one shower stall with a door that locks available (Fraser et al., 2019; Mottet & Ohle, 2006) • Have at least one single-stall restroom with a door that locks available (Fraser et al., 2019; Mottet & Ohle, 2006) • Or if possible, private and semi-private rooms with personal washrooms (Abramovich, 2016; Walsh et al., 2009)
Storage and personal spaces	Offering spaces where possessions are free from theft and destruction.	• Provide additional spaces to store smaller valuables and larger items such as bicycles, shopping carts, and luggage (Petrovich et al., 2017) • Sleeping areas with shelves and curtains to create personal space for self, belongings, and the ability to retreat if desired (Pable & Ellis, 2017)
Animal friendly	Recognizing that service animals and companion pets offer support to residents.	• Kennels available for individuals with companion animals allows owners to comfortably access services inside the facility, even if animals are not allowed inside (Petrovich et al., 2017)
Autonomy over basic needs	Allowing residents to have access and control of basic human needs.	• Water bottle filling station allows residents to obtain a basic human need on their own schedule (Pable & Ellis, 2017)

Table 3. Structural Features

Key features	Explanation	Recommendations
Open design	Having shared spaces where residents can interact with others.	• Use of open floor plans for face-to-face interactions and spacious areas to help residents feel less constricted (Farrell, 2018; Tuck 2019)

Windows	The windows are easily accessible.	• Use of fabric window treatments, heights that allow children to view out, and ensure windows are lockable (Grieder & Chanmugam, 2013)
Minimize clutter	Having tidy spaces to avoid placing additional stress on residents.	• Simple, linear and easy to navigate spaces are calming and uncluttered to minimize sense of chaos (Farrell, 2018)

Table 4. Interior Design

Key features	Explanation	Recommendations
Colour	The use of colours can provide additional layers of tranquility and safety.	• Cool colours (blue, purple, green) rooms are perceived as more open and less crowded (Farrell, 2018; Walsh et al., 2010)
Aesthetics/ art	Making residents feel included by using simple and familiar designs.	• Have decor that reflects culture and diversity such as displaying art, poetry, or photography created by residents (Hetling et al., 2018; Petrovich et al, 2017)
Lighting	Lighting that reinforces positive self identity and appearance.	• Placement of lighting at eye level instead of overhead to better complement skin and minimize shadows in places with mirrors (Pable & Ellis, 2017)
Nature	Making residents feel comfortable by connecting them to the natural environment.	• Plants, woods, natural materials, natural light create a sense of abundance and connection to nature (Pable & Ellis, 2017; Tuck, 2019)
Flexible seating options	Residents having sense of control and options in shared spaces.	• Non-fixed furniture in common spaces and waiting areas that are easy to move around and allow for choice in seating (Hetling et al., 2018; Farrell, 2018) • Have protected back seating (i.e., sofas situated against the walls)

| | | prevents fear of the unknown (Pable & Ellis, 2017) |
| | | • Use of round tables for socialization (Pable & Ellis, 2017) |

5. Empirical Practices

5.1. Examples of build form considerations used

The available literature consists of reports and evaluations of built form safety and security considerations used by various centres internationally. The research team divided the empirical examples into three themes: structural features, accommodations, and interior design.

5.1.1. Structural Features

Clear sightlines: Clear sightlines were widely used to enhance tenants' feelings of safety in the building. Three methods were used to create clear sightlines in the literature.

- Wide corridors: Wide corridors have been used to alleviate triggers of trauma residents may experience (Singer, 2020). One study found that having wide corridors that connect to a central space was beneficial (Shopworks Architecture et al., 2020).
- Curved corners: Inverclyde, the first trauma-informed prison in the United Kingdom, built its halls with curves and undulation to improve the sightlines and avoid individuals being surprised by someone appearing from a corner (Jewkes et al., 2019).
- Windows and cut-outs: Windows that provide clear sightlines into common areas allow residents to assess the safety in common areas before entering (Bollo & Dononfrio, 2014; McLane & Pable, 2020). Using windows and wall cutouts to protect tenants can also be extended to shared bedrooms and other living spaces (Singer, 2020).

5.1.2. Accommodations

The built form accommodations that were reflected in the literature include creating a variety of sleeping spaces, access to basic needs, and building security.

Creating Sleeping Spaces: When it comes to designing sleeping spaces, the literature emphasizes the use of trauma-informed design and the need for privacy. In shared sleeping quarters, the Arroyo Village project in the United States uses privacy walls placed between beds (Singer, 2020). However, private or semi-private rooms are commonly preferred by residents, as they provide relief from publicly living on the streets (Walsh et al., 2010). In a qualitative study of 20 women who experienced homelessness in Canada, bedrooms were identified as a desirable space where they can be alone as well as make choices about who they want to invite into their private space (Walsh et al., 2009). The permanent supportive-housing units in Arroyo Village also include large couches to give residents who are not ready to sleep in a bed another option (Singer, 2020).

Providing Access to Basic Needs: The literature highlights the importance of providing residents with access to utilities, such as water, heating, and garbage disposal (Quinn et al., 2015). Access to a phone and working kitchen appliances were also identified as beneficial to residents (Walsh et al., 2009).

Building Security: For the building to feel secure to residents, controlled entry features, lockers to secure personal belongings, and security features in private rooms were added.

- Controlled entry features: Examples of controlled entry features include: the use of buzzers (McLeod & Walsh, 2014); no intake desk to deinstitutionalize the space (Singer, 2020); and a single controlled entry, such as a vestibule, to promote feelings of security among residents (Bollo & Donofrio, 2014; Parsell et al., 2015).
- Lockers: The use of lockers and locked personal storage spaces to secure personal belongings (McLeod & Walsh, 2014; Petrovich et al., 2017; Singer, 2020) are valued, because many of the residents of supportive housing have experienced a loss of personal belongings in the past (Matthews et al., 2018).
- Bedroom security: Security features in private rooms include the use of solid doors with peepholes (McLeod & Walsh, 2014) and not creating gender segregated sleeping wings (Abramovich, 2013).

5.1.3. Interior Design

The interior design of spaces in the literature focuses on the use of colour, materials, nature, space, and furniture. All these elements help to soothe and reduce a trauma response in women and gender-diverse individuals.

Use of Colour: Soothing colours are used to mitigate anxiety (Jewkes et al., 2019; Singer, 2020). Examples of suitable colours used include lavender and sage (Singer, 2020).

Nature and Plants: Plants and natural light are used in housing to improve the mood of residents. Studies in healthcare and prisons link views of nature and landscapes that incorporate trees to lower levels of general improvements in emotional wellbeing (Jewkes, 2018; Jewkes & Gooch, 2019).

Use of Space: The use of space in the design focuses on open spaces, spaces for socialization, and flexible seating.

- Open spaces: Spacious areas help to alleviate any sense of institutionalization and make the space more homely (Jewkes et al., 2019).
- Spaces for socialization: Areas are created specifically for socialization (Jewkes et al., 2019). Community spaces are created for eating and physical activity (Singer, 2020). Communal spaces are created for tenants to prepare meals together (Rutledge, 2017). Vanity mirrors are installed to help foster a sense of community in washrooms (Singer, 2020).
- Use of flexible seating: Flexible seating is used so that it can be rearranged to meet a variety of needs (Rutledge, 2017).

Furniture: One supportive housing building provides bedside outlets and reading lamps, as well as big sofas at the entrance, and rocking chairs for residents to use for self-soothing (Singer, 2020).

5.2. Existing recommendations

The research team divided the existing recommendations found across the empirical literature into the same design categories as the theoretical recommendations: intersectional design, accommodations, structural features, and interior design. The following tables highlight the key recommendations within each theme from the literature.

Table 5. Intersectional Design

Key features	Explanation	Recommendations
Older adult specific needs	Design features that can adapt to the physical and cognitive changes associated with aging.	• Spaces welcoming of older homeless adults that are open, quiet, and affordable (McLeod & Walsh, 2014; Peterson, 2015) • Accessible housing for aging women and gender-diverse people (Vaccaro & Craig, 2020)

Table 6. Accommodations

Key features	Explanation	Recommendations
Animal friendly	Recognizing that service animals and companion pets offer support to residents.	• Design spaces that allow for residents to bring their companion animals (McLeod & Walsh, 2014)
Building security	Considering residents safety when accessing and staying in the space.	• Extra bolts on doors and windows residents can use (Vaccaro & Craig, 2020) • Well-lit perimeter and safe paths to the building (Rutledge, 2017)

Table 7. Structural Features

Key features	Explanation	Recommendations
Sightlines	Clear sightlines allow residents to see around corners and assess safety of rooms before entering.	• Create clear sightlines using wide and curved halls, as well as window and wall cut-outs (Bollo & Dononfrio, 2014; Jewkes et al., 2019; McLane & Pable, 2020)
Communal areas	Shared areas where residents can socialize with each other	• Access to a combination of personal and shared spaces to foster a sense of community (Parsell et al., 2015; Vaccaro & Craig, 2020)

| Minimize noise | Having quiet spaces to avoid placing additional stress on residents. | • Have carpets, fabrics, and acoustic panels to soak up loud noises (Hetling et al., 2018; Singer, 2020) |

Table 8. Interior Design

Key features	Explanation	Recommendations
Nature	Making residents feel comfortable by connecting them to the natural environment.	• Use of greenery (Vaccaro & Craig, 2020)
Design	Creating a design that considers the residents' desires.	• Consult with residents on the design and decor selected for the spaces (McLeod & Walsh, 2014; Paradis et al., 2011)

6. Report Recommendations

Using the literature gathered in this report, the research team offers the following eight built form recommendations for developers of supportive housing for women and gender-diverse individuals.

1. **The foundational design consideration for building designers is to centre their work in trauma-informed design.** Those who experience homelessness often suffer from trauma and prolonged stress (Pable & Ellis, 2017; Tuck, 2019). To provide a space for healing, residents must feel safe and secure (Hetling et al., 2018; Pable & Ellis, 2017). Trauma-informed design reduces likely triggers of emotional and physical trauma. Using trauma-informed design is the foundational principle because it is reflected in all the recommendations shared in this report. A practice supported by the literature include:

   • creating clear sightlines (e.g., wide and curved halls, wall cut-outs and windows) (Bollo & Donofrio, 2014; Jewkes et al., 2019; McLane & Pable, 2020; Shopworks Architecture et al., 2020; Singer, 2020)

2. **Building designers of supportive housing should incorporate elements of nature.** Our findings suggest that exposure to natural elements can improve the

health and well-being of residents (Mazuch, 2017; Sagert, 2017; Söderlund & Newman, 2017). Some practices supported by the literature include:

- use of natural light and natural materials (Farrell, 2018; Tuck 2019)
- use of plants and greenery (Farrell, 2018; Jewkes et al., 2019; Tuck 2019; Vaccaro & Craig, 2020)
- creating natural spaces such as a courtyard with trees (Singer, 2020)

3. **Building designers of supportive housing should create deinstitutionalized spaces.** Housing developers should design spaces that avoid re-traumatizing women and gender-diverse individuals who have trauma associated with institutions, such as hospitals and prisons (Jewkes et al., 2019). Some practices supported by the literature include:

- flooring from natural materials, like wood (Farrell, 2018)
- use of buzzers (McLeod & Walsh, 2014) instead of an intake desk (Singer, 2020)
- not using barred windows and ensuring doors do not clang (Jewkes et al., 2019)
- use of open spaces (Farrell, 2018; Jewkes et al., 2019)

4. **Building designers of supportive housing should consider the safety and security of the building.** Many supportive housing projects use buildings that were not originally designed to provide shelter (Canavan et al., 2017). Our theoretical findings indicate that builders should prioritize current safety regulations and accessibility (Canavan et al., 2017). Some practices supported by the literature include:

- single controlled entry (Bollo & Donofrio, 2014; Parsell et al., 2015)
- extra bolts and locks on windows and doors (Vaccaro & Craig, 2020)
- a well-lit perimeter (Rutledge, 2017)
- access to ramps, low countertops, wide interior doorways, and elevators (Petrovich et al., 2017; Walsh et al., 2009; Walsh et al., 2010)
- spaces welcoming of older adults that are open, quiet, and uncluttered (McLeod & Walsh, 2014; Peterson, 2015)

5. **Building designers of supportive housing should consider the security of residents' needs and possessions.** Building should be designed to meet the needs of its residents. Housing that accommodates residents' needs minimizes the stress and worries associated with fulfilling these needs. Developers should

also consider adding spaces for personal belongings, as individuals are acutely aware of how safe their belongings are from theft and destruction (Pable & Ellis, 2017). Some practices supported by the literature include:

- lockers and locked personal storage spaces to protect peoples' valuables (McLeod and Walsh, 2014; Singer, 2020; Petrovich et al., 2017)
- spaces to store larger items such as bicycles, shopping carts, and luggage (Petrovich et al., 2017)
- access to utilities, such as water, heating, garbage disposal (Quinn et al., 2015), phone, working appliances (Walsh et al., 2009), bedside outlets and reading lamps (Singer, 2020)

6. **Building designers of supportive housing should consider the safety of transgender and gender-non-conforming residents.** Supportive housing can be extremely dangerous to access for transgender and gender non-conforming people. Transgender and gender non-conforming people are vulnerable to violence and repeated cycles of complex homelessness due to the lack of safe and secure housing. Some practices building designers should consider for making safer spaces for transgender and gender non-conforming people include:

- eliminating gender segregation in building designs (Canavan et al., 2017, Abramovich, 2013/2016)
- all-gender washrooms or gender-neutral washrooms with locked doors for toilets and shower stalls (Abramovich, 2016; Canavan et al., 2017)
- welcoming signs/designs and posters about LGBTQ+ concerns and policies in the entry spaces (Mottet & Ohle, 2006).

7. **Building designers of supportive housing should include interior design elements that help soothe and reduce trauma responses.** The literature widely supports that choice of colour, flooring materials, natural textures, space layout, and furniture can have an impact on women and gender-diverse individuals' feeling of safety. Notably, a flexible approach to decoration allows residents to personalize the space and feel a sense of pride and ownership (McCarthy, 2020). Some practices supported by the literature include:

- use of cool and soothing colours (blue, purple, green) (Farrell, 2018; Jewkes, 2019; Singer, 2020; Walsh et al., 2010)
- use of non-fixed seating (Hetling et al., 2018; Farrell, 2018; Rutledge, 2017) and protected back seating options such as sofas situated against the walls (Pable & Ellis, 2017)

- designing clutter-free spaces (Farrell, 2018; Tuck, 2019)

8. **Building designers of supportive housing should mindfully create a mix of private and shared spaces for residents.** Housing developers should design spaces for privacy as well as community building spaces (Pable & Ellis, 2017; Parsell et al., 2015; Vaccaro & Craig, 2020). The private spaces offer residents refuge from the outside world (Walsh et al., 2009) while the communal spaces allow residents to socialize with each other. Some practices supported by the literature include:

- have private bedrooms available (Walsh et al., 2009) or create privacy walls between beds in communal sleeping spaces (Singer, 2020)
- have private bathing and restrooms with a door that locks (Abramovich, 2016; Fraser et al., 2019; Mottet & Ohle, 2006)
- communal spaces to exercise, and eat and prepare meals together (Rutledge, 2017) with round tables (Pable & Ellis, 2017)
- install large vanity mirrors in washrooms (Singer, 2020)

7. References

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