Vulnerabilities by Typology and Housing Outcome:

Assessment of Coordinated Entry Items Among Young Adults Experiencing Homelessness In Houston,

Texas

by

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ABSTRACT

Purpose

Despite decades of interventions and targeted resources for those experiencing homelessness, every night in the U.S. thousands of young adults 18-24 continue to live without a home (U.S. HUD, 2020 PIT Populations and Subpopulations). To end this crisis for the estimated three million plus young adults experiencing homelessness (YAEH) each year (Morton, Dworsky, & Samuels, 2017), U.S. Department of Housing and Urban Development (HUD) has adopted the U.S. Interagency Council on Homelessness Framework to End Youth Homelessness (FEYH). The Framework lists permanent housing as critical for ending the experience of homelessness for these young people (USICH, 2013). FEYH also notes the vital need for improved data on the vulnerabilities which may characterize specific service needs among YAEH (USICH, 2013, FEYH, ppt., pg. 2, 4). HUD also requires local communities to prioritize limited Supportive Housing Program (SHP) resources for those most vulnerable through a central intake process known as Coordinated Entry (U.S. HUD, 2015).

Methods

This study attempted to contribute to improved data by exploring vulnerabilities reported by YAEH at entry to HUD SHP on a Coordinated Entry tool in Houston, Texas between June 2016 and November 2018. The tool was a unique instrument created and adopted by Houston Continuum of Care (CoC) for young adults, ages 18–24, and was informed by research indicating life events associated with young people's vulnerabilities for experiencing homelessness, experiencing prolonged homelessness, and compounded risks while experiencing homelessness (USICH, 2019) (U.S. HHS, 2017). Latent class analysis and syndemics was used as the conceptual framework to improve understanding of combinations of vulnerabilities among subgroups of YAEH. Vulnerabilities captured by the tool included time spent experiencing homelessness, juvenile detention, child welfare, adult detention, abuse as a

child, family violence, LGBTQ kicked out by family, substance use, mental health challenges, educational achievement, unstable employment, having children, trafficking risk, and lacking adult support.

Findings

Lacking adult support (both emotional and financial) and levels of vulnerabilities were differentiating factors among three subgroups of YAEH identified through this analysis. The highest vulnerability lowest support subgroup was the largest of the three identified groups of YAEH and the most likely to have been housed through HUD SHP; however, only temporarily housed by exit (i.e., exited to homelessness or unstable temporary housing). Black participants had higher than expected lack of adult emotional support and both black (4.3 times more likely than white participants) and YAEH identifying as gender minorities (3.5 times more likely than male participants) to have been only temporarily housed versus permanently housed at exit from HUD SHP. Lack of adult financial and emotional support were the primary differentiating factors between vulnerability subgroups.

Implications

Findings can inform future Coordinated Entry processes and potentially different service needs for YAEH at entry to HUD SHP. Patterns of responses indicate YAEH subgroups who may benefit from strategic use of limited resources for those with low vulnerability and high support and higher engagement for those with high vulnerabilities and low support. YAEH would benefit from federal policies differentiating by vulnerabilities rather than as a homogeneous group or broad labels of runaway, delinquent, or homeless. As lacking adult support is often reported and significantly different by subgroups, implementing adult mentors and/or strengthening family kinship in service delivery warrants additional focus and exploration. Future research should continue to build on emerging knowledge of subgroup differentiation among YAEH, further explore the role of adult support in exiting homelessness and perform longitudinal studies to understand experiences and outcomes of YAEH who are not housed through limited HUD SHP (i.e., 'never housed').

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Introduction

This study is an examination of vulnerabilities reported by young adults experiencing homelessness (YAEH) at entry to Housing and Urban Development (HUD) Supportive Housing Programs (SHP). *Young Adults* are defined as those ages 18–24 and *vulnerabilities* as experiences, risks, or conditions which YAEH:

- have been or are being more exposed to than their comparable peers prior to or during the experience of homelessness (Arora, Shah, Chaturvedi, & Gupta, 2015; Holzmann & Jørgensen, 2001, p.3)
- and which increase the potential for poor outcomes related to environmental, social, economic, and individual conditions (UNDRR, 2020).

The terms risk and vulnerabilities appear to be similar in concept in research literature (Dorsen, 2010). These include risks and risk factors associated with poor lifelong behavioral and health outcomes, including experiencing homelessness (Anda, et. al., 2006; Jonkman, 2013). There are also particular life experiences which are associated with higher likelihood for traumatic experiences while living on the street (U.S. HHS, 2017). For this study, the term vulnerabilities encompass all these concepts, specifically related to environmental, social, economic, and individual conditions associated with YAEH.

Housing and Urban Development Supportive Housing Programs (HUD SHP) are the current primary interventions to end the experience of homelessness. Unfortunately, most research in homelessness and what has been used to develop HUD SHP models, mandates, and best practices has focused on adults experiencing homelessness (AEH) age 25 and older (Rice, et. al, 2018; King, 2018). This includes prioritization of limited HUD SHP through a HUD mandated Coordinated Entry assessment process which in many communities reflect vulnerabilities predictive of adult prolonged homelessness and poor outcomes (King, 2018), including death (National Academies of Sciences, Engineering, and Medicine (NASEM, 2018; Schick, et. al., 2019). This may be because there is little research on what

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vulnerabilities YAEH bring to Coordinated Entry, which vulnerabilities may be predictors of different

HUD SHP outcomes, and/or which vulnerabilities may characterize YAEH with different service needs to

achieve the goals stated in the framework (Rice, et. al., 2018).

To set the stage for this analysis, this chapter briefly discusses the scope and federal response to

YAEH including current federal understanding of vulnerabilities which informs HUD SHP. Using

Syndemics as a framework, chapter two outlines current discussion of vulnerabilities related to

environmental, social, economic, and individual conditions and how these may be related to housing

outcomes. Chapter three provides an overview of the design and methodology for each study aim.

Chapter four provides results of the various analyses. Finally, chapter five discusses findings in context

with prior research and professional experience of this researcher, including limitations and implications

for services and housing models designed on behalf of YAEH.

Youth Homelessness in the United States

Each year, HUD requires communities to conduct a one-night count of all those experiencing

homelessness. In 2019, these Point-In-Time counts nationally found 35,038 unaccompanied homeless

young people ages of 18–24 (NAEH, 2019). This figure represents a discrete point in time (i.e., a single

night) and likely does not reflect the entirety of young adult homelessness in the United States (Morton,

et. al., 2018). The National Alliance to End Homelessness (NAEH) estimates 550,000 youth up to age 24

experience a homeless episode of longer than one week during any given year (NAEH, 2019, 2012) and a

household survey found over 3 million young adults experienced homelessness over a 12 month period

(Morton, et. al, 2018). Although information on the size and typology of young adult homelessness

varies by study, much research to date has examined common risk factors associated with young adult

homelessness. YAEH most often report family conflict as the primary cause of their homelessness,

including conflict over their sexual identity, gender identity, sexual activity, substance misuse, and other

issues associated with family discord (Congressional Research Service, 2019). Within these findings,

females are more likely than males to report family conflict and Black youth have the highest rates and lowest ages of experiencing homelessness. LGBTQ+ youth, especially Black LGBTQ youth (Morton, et. al., 2017) are the most vulnerable to experiencing homelessness at 120% times the risk of their cisgender peers (Morton, et. al., 2018).

When youth are kicked out or forced to leave home, they may become involved with child welfare and other systems of care (Bender, Yang, Ferguson, & Thompson, 2015; Serge, et. al., 2005). Policies within these systems of care as well as policies which drive HUD SHP are provided as context to understand current public responses to YAEH and how these may be differently informed through increased understanding of the vulnerabilities present at entry to HUD SHP.

Policy Context: Prior System Involvement

United States federal policy responses to young adult homelessness continue to evolve including attempts to consolidate various definitions of what constitutes 'homelessness' with some current policies treating youth as 'delinquents', others as 'runaways', and still others as 'missing' (Glassman, Karno, & Erdem, 2010). Beginning in the early 20th century and in response to growing numbers of runaway children, U.S. policies were created to provide protection and basic needs services to replace what was typically provided by parents. These early policies described these children as "victims of society" and legislated funding of community organizations to provide food, shelter, and education unless an adult could be found to take custody (Lin, 2001). This framework continues to focus on children as 'victims' and informs community-based agency practices which care for children whose parents are absent or deemed unsafe (Glassman, Karno, & Erdem, 2010). The concept of delinquency was later introduced in the 1977 Title III add on to the Juvenile Delinquency Act which also contained the first explicit mention of 'homeless youth' (Juvenile Delinquency, Senate Judiciary Committee, 1955-1956). This act eventually provided funding for one model of HUD SHP, Transitional Living, in 1988 (Glassman, Karno, & Erdem, 2010). Risk for delinquency was a concept further linked to the experience

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of youth homelessness by the 1994 Violent Crime Control and Law Enforcement Act, where outreach was included to "reduce the abuse of runaway and homeless street youth" (Glassman, Karno, & Erdem, 2010, p. 801). Federal policies targeting continue to respond to either having run away, or delinquency, or as 'victims of society' rather than based in specific vulnerabilities present prior to or among young adults experiencing homelessness. These disparate concepts in federal policies inform funding and regulations which often make it difficult to respond across separate community-based efforts each with unique allowed services and outcomes.

One such example of a system informed by these concepts is Child Welfare. YAEH with prior involvement in child welfare report experiences of unstable housing, episodic homelessness, and running away which typically result in and then are compounded by multiple foster care placements and/or placements in a group home (Ross & Rebekah Selekman, 2017; Andres-Lemay, Jamieson, & MacMillan, 2005). Policies which guide federal response to young adults involved in these systems (U.S. HHS, 2012) allow states to provide continued regular assistance up to age 23 and education and training for those who have aged out until age 26 (Congressional Research Service, 2019). Participation requirements are placed on those served by these funds, including staying in school, working, or having a medical condition which prevents their engagement (Fostering Connections to Success and Increasing Adoptions Act (FCSIAA) of 2008). Over time, an evolution of the upper age from 18 to now 26 and targeted funds focused on transition to self-sufficient adulthood seem to reflect understanding that foster youth and other children involved in child welfare lack typical financial and emotional supports that their housed peers depend upon for this successful transition (Gogtay, et. al., 2004). However, these concepts do not extend into HUD's CoC policies for example, which dictate funds can be used in only rare and extremely limited circumstances for youth exiting foster care (U.S. HUD, 2014).

In a more recent attempt to update federal response systems for youth and young adults experiencing homelessness, the 2008 reauthorization of The Runaway and Homeless Youth Act (RHYA)

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mandated further research. This mandate eventually resulted in *Missed Opportunities: Youth Homelessness in America*, published in 2017. This report found approximately 3.5 million young adults (18-25) experienced homelessness within the prior 12 months of the study (Morton, et. al., 2017, Missed Opportunities, pg. 1) and concluded with recommendations focused on the mitigation of vulnerabilities related to disconnection from families, unstable and low employment, and interrupted educational achievement (Family Youth and Services Bureau (FYSB), 2018). Data from Missed Opportunities aligns with vulnerabilities under examination in this study.

Unfortunately, it remains unclear whether efforts to support contemporary research and understanding specific to YAEH within HUD SHP policies has resulted in similar evolution. Key modern policies informing current services available to YAEH at entry to HUD SHP are outlined below.

Policy Context: HEARTH 2009

In 2009, the Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act which dictates funding and regulations for HUD SHP was a reauthorization of the McKinney-Vento Homeless Assistance Act of 1987. The HEARTH Act was included as part of the Helping Families Save Their Homes Act, the emergency federal funding responding to the mortgage crisis among families of the late 1980's. HEARTH has since been updated with additional requirements (U.S. HUD, 2009).

The McKinney-Vento Homeless Assistance Act of 1987 was the first general federal legislative response to provide a comprehensive definition of "homelessness" as applied to youth, seemingly responding to specific vulnerabilities related to youth dropping out of school. Title VII of the Act includes provisions to ensure continued school enrollment, attendance, and success of youth experiencing homelessness. Under the act, schools must work to eliminate any barriers to attendance among youth experiencing homelessness. Schools also must appoint a liaison to work with homeless students and their families (Kubala, 2014).

The HEARTH reauthorization of McKinney Vento reflected a significant update to the funding,

use, and eligibility of HUD homelessness eligible services, models, and guidelines. Reflecting the intent

to mitigate the mortgage housing crisis in 2009, focus shifted to housing as the primary intervention to

prevent and address homelessness and therefore it is not surprising that current HUD policies related to

addressing homelessness as primarily a 'housing problem' evolved from research on adults experiencing

homelessness (King, 2018; NAEH, 2014; Waegemakers, Schiff & Rook, 2012). This understanding of

homelessness due to housing loss and housing as the primary intervention was eventually codified as

"Housing First" and remains central to policies guiding HUD SHP (NAEH, 2016). Housing First is described

by USICH as "an approach that offers permanent, affordable housing as quickly as possible for

individuals and families experiencing homelessness, and then provides the supportive services and

connections to the community-based supports people need to keep their housing and avoid returning to

homelessness" (USICH, 2019). Housing First places housing as a priority and as a "basic need" prior to

addressing employment, mental, physical, or behavioral health issues related to stability of permanent

housing (NAEH, 2016). Housing First moves people from homelessness directly into housing (U.S. HUD,

2012). This replaced earlier emphasis on "services first" models including Transitional Housing (a time

limited HUD Supportive Housing model), which requires participants to complete various levels of

services prior to gaining housing. Housing First models allowed under HUD SHP include time limited

Rapid Re-Housing (RRH) designed to quickly resolve families and singles experiencing homelessness for

the first time, and non-time limited Permanent Supportive Housing (PSH) typically for single adults with

a disabling condition who have experienced and continue to experience homelessness for long durations

(i.e., chronically homeless) (U.S. HUD, 2012).

These HEARTH Act shifts resulted in significant changes for most federally funded Young Adult

homeless service providers which previously followed a service-first Transitional Housing model

(Semborski, Redline, Rhoades, & Henwood, 2020). Transitional Housing (TH), first adopted during the

1988 reauthorization of the Reconnecting Homeless Youth Act (RHYA), was designed to support youth

who are unable to return to their families of origin. Funding for Transitional Housing includes service

requirements for YAEH participation. Allowed supportive services include those expected to address the

vulnerabilities specific to YAEH including mental, physical, and behavioral health, as well as any lack of

achievement in education or opportunities for gainful employment. At the end of this temporary

housing and required service participation model, YAEH are expected to achieve independent living

(RHYA, 2008). However, since 2016, HUD competitions for funding SHP (TH, RRH, PSH) award additional

points to agencies and communities adopting a Housing First framework and has not allowed any new

TH programs (U.S. HUD, 2016).

Among other regulations, HEARTH required all services to be coordinated under Continuums of

Care (CoC), including entry into services. The "Coordinated Entry" requirement dictated that a single

assessment tool "provide an initial, comprehensive assessment of the needs of individuals and families

for housing and services" and that the tool be "standardized" (U.S. HUD, 2012) to prioritize those at risk

for chronic or continued homelessness of long duration, especially those with a disabling condition

(Spence-Almaguer, Cronley, & Petrovich, 2013).

Although the HEARTH Act consolidated the policy environment in many ways for adults and

families experiencing homelessness, it remains unclear how these changes reflect the needs of YAEH.

One area of concern for young adult service providers is prioritization on the Coordinated Entry tool by

chronic homelessness since YAEH are more likely to experience episodic homelessness than chronic

homelessness as defined by HUD (Rice, et. al., 2013). Hearing this and other concerns, HUD began to

focus on potential population specific needs of YAEH beginning in 2013 (USICH, 2013). This shift included

efforts to address differences in definitions of youth and young adult homelessness among different

federal agencies and re-examination of prioritization guidelines for HUD funded SHP (Kozloff, et. al.,

2016). Under this more recent youth focus, research is needed to explore what are the significant

underlying vulnerabilities among YAEH populations using Coordinated Entry to HUD SHP and whether

YAEH vulnerabilities are associated with temporary, permanent, or never having received supportive

housing (i.e., housing outcomes) in HUD SHP.

Policy Context: U.S. Department of Housing and Urban Development (HUD)

HUD defines "homelessness" for their programs in four categories. The categories are:

1. individuals and families who lack a fixed, regular, and adequate nighttime residence

    (includes a subset for an individual who resided in an emergency shelter or a place

    not meant for human habitation and who is exiting an institution where he or she

    temporarily resided;

2. individuals and families who will imminently lose their primary nighttime residence;

3. unaccompanied youth and families with children and youth who are defined as

    homeless under other federal statutes who do not otherwise qualify as homeless

    under this definition; and

4. individuals and families who are fleeing, or are attempting to flee domestic violence,

    dating violence, sexual assault, stalking, or other dangerous or life-threatening

    conditions that relate to violence against the individual or a family member (U.S.

    HUD, 2009).

HUD also prioritized limited SHP for those experiencing prolonged homelessness, defined as 'chronically

homeless.' Chronic homelessness is defined under HUD Category 1 as continuously experiencing

homelessness for at least 12 months, or on at least four separate occasions in the last 3 years, for a

combination of 12 months or greater (U.S. HUD, 2015).

While the HUD definition seems to encompass a wide spectrum of homeless experiences,

including "homeless under other federal statutes", there are several considerations related to both

undercounting YAEH (Pew Charitable Trusts, 2017) which results in lack of their prioritization and design

of specific interventions and the difficulty for YAEH to document their homeless experience (Rice, et. al., 2013). Many cite difficulty capturing YAEH within these definitions for purposes of the Point-In-Time counts (Morton, et. al., 2018) which establish congressional and local priorities for funding as well as an assessment of the community's achievement in making homelessness rare, brief, and non-recurring for all populations (Morton, et. al., 2018; NAEH, 2012).

Current HUD SHP documentation requirements of eligibility standards purportedly place YAEH at a disadvantage in being prioritized for limited resources. HUD SHP eligibility requirements are based on HUD's definition of "literal homelessness" (Category 1 above) and length of time spent experiencing homelessness is typically documented by presence at an emergency shelter or other homeless service providers. Length of time experiencing homelessness is specifically linked to housing model eligibility and prioritization. Both documenting eligibility standards through prior service engagement and prioritization by prolonged homelessness are of particular concern for YAEH because they are less likely than their adult peers to seek homeless services, define themselves as homeless, or experience "literal homelessness" as defined by HUD (Narendorf, Santa Maria, & Cooper, 2015; National Health Care for the Homeless Council (NHCHC), 2016).

Perhaps HUD policies informed by vulnerabilities prior to and while experiencing homelessness, rather than definitions of homelessness, could respond best to YAEH. Therefore, improved understanding of vulnerabilities reported by YAEH at entry to HUD SHP and how they may relate to service needs and housing outcomes may be helpful in further informing policy, program, and housing models for young adult services.

Significance

This study expands knowledge of vulnerabilities that YAEH bring at entry to HUD SHP and the linkages between these vulnerabilities and housing outcomes. To date, most research has focused on housing outcome and service alignment with vulnerabilities based on adult homelessness (National

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Academies of Sciences, Engineering, and Medicine (NASEM), 2018; Schick, et. al., 2019; Aubry,

Klodawsky, & Coulombe). Although this prior research is substantially focused on adults experiencing

homelessness for extended and multiple episodes (i.e., "chronic adults"), it is noteworthy that HUD

Supportive Housing appears to improve "… an individual's ability to remain housed and plausibly

alleviates a number of conditions that negatively impact health" (NASEM, 2018); therefore, better

understanding vulnerabilities among YAEH at entry to HUD SHP is critical in assessing whether achieving

potentially the same benefit may be possible. What is not yet well understood is whether these same or

different vulnerabilities among YAEH are associated with HUD supportive housing outcomes and

whether vulnerabilities associated with different housing outcomes may inform different service needs

for YAEH in a HUD SHP environment. Additionally, it is unclear how subgroups among YAEH might differ

in what supports are most helpful.

This study posits that examining vulnerabilities and experiences reported on the CE tool at entry

to HUD supportive housing may help to address this gap in knowledge and inform needed services to

achieve permanent housing through SHP. Although prior research on young adults' experiences and

vulnerabilities have described risk factors and trauma histories of youth experiencing homelessness and

how these may inform different service needs (Narendorf, Bowen, Santa Maria, & Thibaudeau, 2018),

there is limited information describing vulnerabilities brought by young adults who are currently

engaged in HUD SHP programs, as youth are often not the focus of research for these supportive

programs (Ensign & Panke, 2002).

Innovation Potential

Broadening the research base to focus on YAEH in HUD SHP through improved understanding of

those vulnerabilities at entry to HUD SHP has the potential to inform service needs and policy guiding

prioritization, funding, and eligible services. Additional understanding of what specific vulnerabilities

exist at the time of Coordinated Entry (CE) entry and how these might inform Supportive Housing

service needs can inform future CE tools and processes specific to YAEH.

As the funding environment remains limited, it is important to consider the costs to

communities for remaining "as is." Again, prior research has mostly spoken to poor adult behavioral and

health outcomes among those experiencing prolonged homelessness where chronic health conditions

are more prevalent (Lebrun-Harris, et. al., 2013). Individuals experiencing prolonged homelessness (i.e.,

chronic) typically die 30 years sooner on average than their housed peers (National Health Care for the

Homeless Council (NHCHC), 2013). Researchers purport factors which are the mediators between

housing and adverse health outcomes include stress (Wong & Piliavin, 2001), untreated mental health

issues (Mejia, et. al., 2021), poor nutrition (Sprake, Russell, & Barker, 2014), environmental exposures,

and other social and economic determinants (NHCHC, 2013). Shorter periods of homelessness also

decrease the risk for communicable disease and violence (Quigley, Raphael, & Smolensky, 2001).

There is also emerging research focused on reduction of ongoing and long-term community

costs through innovative practices addressing housing and service-related needs for those experiencing

homelessness (Krupski, et. al., 2016). These are typically public costs associated with incarceration, law

enforcement contacts, and emergency healthcare among adults experiencing prolonged homelessness

(NASEM, 2018). The majority of public costs appear to be specifically associated with behavioral health

conditions and these same behavioral health conditions appear to increase the risk of adult prolonged

homelessness (Quigley, Raphael, & Smolensky, 2001).

While this research has been primarily focused on the adult experience of homelessness, it may

be helpful to consider youth related research in regard to public costs. The World Bank's Orphans and

Other Vulnerable Children (OVC) Toolkit explicitly speaks to reduction of high community costs by

addressing poor health and behavioral outcomes among youth. OVC recommends youth ". . . be assisted

before they have reached the most critical stages of vulnerability, because interventions aimed to

rescue and rehabilitate the most critically vulnerable children tend to be too expensive to be sustainable and moreover have low rates of success" (World Bank, 2015, p. 8). When considering YAEH, those who experience prolonged homelessness have more difficulty achieving housing stability (Hyman, 2010).

Therefore, further understanding of specific vulnerabilities present at entry to HUD Supportive Housing, how these may inform service needs, or whether the vulnerabilities that are captured are significant predictors of different housing outcomes, is a critical missing piece to achieve best outcomes for YAEH. By using vulnerability data from the Houston CoC Coordinated Entry assessment tool (i.e., Young Adult Triage Tool Appendix A) which captures key environmental, social, economic, and individual vulnerabilities, this research will be able to begin to address these gaps.

Specific Aims

As outlined by USICH and the American Academy of Social Work & Social Welfare (AASWSW) through its Grand Challenges for Social Work program, there is a goal of ending youth and young adult homelessness by 2020 (USICH, 2013; AASWSW, 2015). Recognizing it is now 2021 and such goals have not been met, HUD funded the Youth Homelessness Demonstration Program to disseminate emerging best practices and "to drastically reduce the number of youth experiencing homelessness" (YDHP Fact Sheet, U.S. HUD, 2019, p. 1). This includes an explicit goal for communities to "… assess the needs of special populations at higher risk of experiencing homelessness, including racial and ethnic minorities, LGBTQ+ youth, parenting youth, youth involved in the foster care and juvenile justice systems, and youth victims of human trafficking" (YDHP Fact Sheet, U.S. HUD, 2019, p.1). To advance that goal, this study builds knowledge on vulnerabilities reported by YAEH at entry to HUD Supportive Housing, explores how these vulnerabilities might be related to housing outcomes, and informs knowledge of subgroups of young adults who experience different combinations of these vulnerabilities who may benefit from tailored service models. The specific aims of this investigation are to:

- Aim 1: Describe and quantify vulnerabilities at the time of entry into the system for HUD

  Supportive Housing and examine whether these vary by race, gender, or age;

- Aim 2: Identify whether there are subgroups of homeless youth with different combinations of

  vulnerabilities and whether these subgroups are different by demographics; and

- Aim 3: Examine whether identified vulnerability subgroups (aim 2) or demographics are related

  to different housing outcomes.

Conclusion

This chapter has briefly discussed the scope, federal response to YAEH, and HUD SHP policy

context as informed by current federal understanding of vulnerabilities prior to and among YAEH in the

United States. In the next chapter, syndemics is discussed as a framework to guide this research, what is

known in the current state of literature about rates of vulnerabilities among YAEH, the relationship

between vulnerabilities and housing outcomes, and previous research on subgroup typologies which

may inform different service needs for YAEH.

Literature Review and Conceptual Framework

While there is ample research examining risks by exposure to a range of physical and mental health problems, violence, early pregnancy, and substance use among YAEH, (Bender, Brown, Thompson, Ferguson, & Langenderfer, 2015; Narendorf, Santa Maria, & Cooper, 2015; Stroud, Mainero, & Olson, 2014), little is yet known about how these present or may combine at entry to HUD SHP and whether these combinations may be associated with housing outcomes or indicative of potential differences in service needs. Building on prior use of syndemics (Singer, Bulled, Ostrach, & Mendenhall, 2017) as a conceptual framework to inform homelessness research (Johnson, 2016; Braitstein, et. al., 2003), this study also uses syndemics in an exploration of vulnerabilities and their combinations that exist at entry to HUD SHP among YAEH.

Literature Findings & Gaps

Research suggests that exposure to multiple risks increases the likelihood of future homelessness (Radcliff, et. al, 2019) and the longer this exposure occurs for YAEH, the less likely they are to achieve permanent housing as an outcome (Hyman, 2010). While there is research to support individual factors related to achieving permanent housing among YAEH (i.e., having a high school diploma and seeking mental health assistance)(Roy, 2016) and research has explored this idea of subgroup typology for service planning (Narendorf, Bowen, Santa Maria, & Thibaudeau, 2018), little research has yet explored subgroup typology at entry to HUD SHP for YAEH. It is not yet well understood which vulnerabilities or combinations of vulnerabilities among YAEH may be associated with different HUD SHP housing outcomes. Better understanding of YAEH specific vulnerabilities and/or combinations of vulnerabilities may aid in developing service models and have the potential to inform strategies to shorten the length of homelessness and prevent recidivism.

Syndemics Framework

Syndemics has been primarily used as a framework to understand the synergistic effects of various domains of experience (e.g., environmental, social, economic, and individual conditions) on health outcomes. First introduced in the 1990's by anthropologist Merrill Singer, researchers studying drug users with HIV in Hartford, Connecticut noted the cumulative effect of poor housing, poverty, social stigma, and lack of support systems on HIV disease progression. Singer later observed that these factors did not parallel but combined in a cumulative effect (Lancet, 2017). This came to be known as syndemics and now informs collaborations between clinical and public health interventions (Lancet, 2017). The domains of this framework (environmental, social, economic, and individual conditions) are thought to interact with each other to amplify various outcomes (Singer, Bulled, Ostrach, & Mendenhall, 2017). Syndemics speaks directly to a socially excluded or marginalized population. Marginalization is defined as "a state in which individuals are unable to participate fully in economic, social, political and cultural life, as well as the process leading to and sustaining such a state" (UN, 2016, pg. 2) (e.g., housing, employment, education, and healthcare). YAEH are a marginalized population (Gaetz, 2004) who suffer stressors of poverty, impermanent housing, association with potentially risky peers, little to no familial support, and other multiple vulnerabilities while living on the street (Wenzel, et. al., 2012), and therefore syndemics offers a particularly constructive framework for better understanding how these societal vulnerabilities related to individual experiences, risks, or conditions may play a role in different housing outcomes.

Finally, the syndemics framework incorporates developmental theory as a unique point in time with specific psychosocial stressors helpful in understanding why particular vulnerabilities for young adults 18-24 are critical in achieving adult self-sufficiency (Berzin, 2010; Stroud, Mainero, & Olson. 2014).

Syndemics Applied to Homelessness

Prior research using the syndemics framework has focused on better understanding differences among those experiencing homelessness related to recidivism and prolonged homelessness. Researchers have identified synergistic intersections between depression, posttraumatic stress disorder, childhood trauma, and/or intimate partner violence for returns to homelessness among women (North & Smith, 1993; Rodriguez, et. al., 2008). There is also previous research using a syndemics framework which has focused on links to prolonged homelessness among YAEH who report previous foster care involvement in combination with becoming a parent as a young adult, substance use (i.e., methamphetamines and marijuana), mental health symptoms (i.e., depression or PTSD), and not having a high school diploma or GED (Focus Strategies, 2017). Although outside of a syndemics framework, researchers found combinations of similar vulnerabilities differentiated YAEH who had experienced 5 or more years of homelessness from their less frequently homeless peers (Rice, et al., 2018).

Syndemics component of marginalization is an obvious area of connection for YAEH who have been forced to leave or have been taken away from their families of origin. Their marginalization results in atypical environmental circumstances (i.e., prior child welfare, involvement in juvenile and/or adult justice systems, and prolonged homelessness) which further exacerbate social conditions, including having been kicked out as a result of coming out as LGBTQ+, witnessing or being the victim of family violence or abuse, and/or lacking any adult for emotional or financial support (Heinzelman, 2021; Ballon, Courbasson, & Smith, 2001). Resulting economic vulnerabilities include low educational achievement (Aratani & Cooper, 2015), low employment achievement, and vulnerability to being trafficked, with some early research indicating a trafficked rate of almost 9% among YAEH (Chisholm-Straker, et. al., 2018). Individual conditions of early pregnancy, self-harm and/or other mental health concerns including alcohol and/or substance misuse are also often present (Narendorf, Santa Maria, & Cooper, 2015). These include suicidal ideation and attempts which are well-researched and documented among

YAEH (Desai, Liu-Mares, Dausey, & Rosenheck, 2003; Molnar, et al., 1998; Unger, et al., 1997; Votta &

Manion, 2004; Yoder, Hoyt, & Whitbeck, 1998; Tyler, Whitbeck, Hoyt, & Johnson, 2003).

Vulnerabilities captured on the Houston CE tool are described by syndemics domain below.

Please note that while these domains are helpful in organizing information, they are not meant to imply

vulnerabilities exist in isolation from each other.

Figure 2.1 Syndemics Framework Conceptual Model
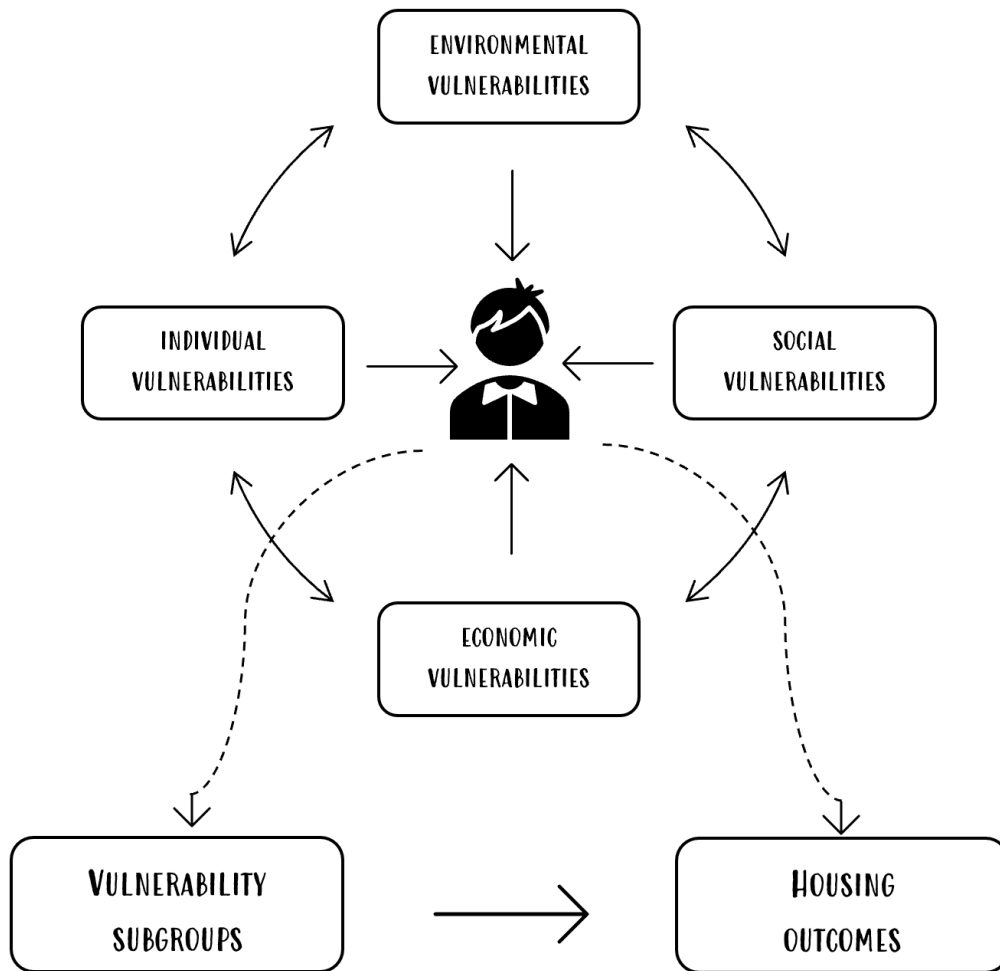
Environmental Vulnerabilities

Environmental vulnerabilities refer to socio-ecological and physical conditions to which YAEH

are exposed. These include justice systems (juvenile and adult), child welfare systems, and exposure to

prolonged homelessness. Researchers funded by the Administration on Children, Youth, and Families (ACYF) Family and Youth Services Bureau (FYSB), interviewed YAEH, 44% of whom reported justice system exposure (jail, prison, and/or juvenile detention). Of these, 78% had at least one law enforcement encounter, and 62% reported being arrested at some point while living on the streets (ACYF, 2016). Other research reports half of YAEH have been involved in juvenile detention, jail, or prison (Morton, Dworsky, & Samuels, 2017). There appears to be significant overlap between child welfare and juvenile justice data. YEH and YAEH report high rates of dual system involvement for Child Welfare and Juvenile Justice prior to experiencing homeless (Narendorf, et. al., 2020). Prior research among all YAEH found 33% report having once been part of the foster care system and 50% reporting having been in the juvenile justice system, in jail or detention (Morton, Dworsky, & Samuels, 2017). Other researchers found 57% of YAEH reported involvement in public child systems of care (Narendorf, et. al., 2020). YAEH also appear to have particular risk for repeated incarceration (Solorio, et. al., 2006). A recent report indicates nearly half of all youth experiencing homelessness have been in juvenile detention, jail or prison and this variable appears highly relevant to the experience of young adults living without a home (Morton, Dworsky, & Samuels, 2017). Unfortunately, research also demonstrates the overrepresentation of BIPOC youth in child welfare services (Morton, Ocasio, & Simmel, 2011). Other more recent research reports transgender, gender non-conforming, and LGBTQ youth experiencing homelessness are more likely to report involvement in child welfare systems as compared to their cisgender and straight peers (Nichols, et. al., 2017) and suffer conditions which put them at particular risk for criminal offending and victimization (Woods, 2017).

The need to develop specialized services for system involved YAEH is specifically mentioned in the Youth Homelessness Demonstration Program (YHDP, 2019). Youth who age out of the foster care system are at especially high risk of experiencing homelessness. The ongoing longitudinal study "Midwest Evaluation of Adult Functioning of Former Foster Youth" followed 732 youth who had aged

out of foster care and found that by age 23 or 24, about 30 percent of them experienced some form of

homelessness at least one night after leaving foster care (Courtney & Dworsky, 2006). Youth Count

Texas in Houston found that 22 percent of youth experiencing homelessness who were surveyed had

aged out of foster care (Narendorf, et. al., 2016). Additionally, Youth Count Texas! found 35.1 percent of

youth experiencing homelessness who were interviewed reported previous foster care system

involvement, and more than half of those young people had aged out of the foster care system

(Narendorf, Santa Maria, & Cooper, 2015). It is not necessarily surprising that prior involvement in child

welfare systems, including foster care, is therefore a vulnerability among young adults for experiencing

homelessness, experiencing prolonged homelessness, and necessity for specific service (Santa Maria,

Narendorf, Bezette-Flores, & Ha, 2015; Bender, Yang, Ferguson, & Thompson, 2015).

Thus, the need to understand how these environmental vulnerabilities and especially any

differences in numbers and combinations of vulnerabilities among subgroups of YAEH is vital to

protecting these young adults from further harm.

Social Vulnerabilities

Witnessing or experiencing family violence and/or abuse in any form, including being kicked out

after revealing LGBTQ identity is often connected to the experience of homelessness for many young

adults. YAEH report victimization by guardian adults, as key to their being kicked out, running away, and

subsequent risky experiences which may lead to lifetime homelessness (Canada Mortgage and Housing,

2001). These experiences which are similar to those captured in the Adverse Childhood Experiences

(ACE) research may be significant both as risk factors for homelessness and while experiencing

homelessness (Montgomery, et. al 2013). In fact, this vulnerability appears to play a more significant

role for experiencing homelessness among young adults then their older adult peers (Edidin, Ganim,

Hunter, & Karnik, 2012) and may be linked to YAEH family building behaviors while on the streets

(Barman-Adhikari, et. al., 2016). Additional support for the connection between family violence and

abuse and poor adult behavioral and health outcomes can be found among the ample Adverse

Childhood Experiences (ACE) research (Felitti, et. al., 1998), specifically for YAEH (Bender, et. al., 2015b).

Family violence is not only understood to play a role in youth homelessness (Montgomery, et. al., 2013)

but also relates to specific service supports found to be helpful in mitigating poor behavioral and health

outcomes (Bender, et. al., 2015a).

These traumatic experiences are also understood to be compounded while living on the street

by magnitude, frequency, duration, and scope (Montgomery, et. al., 2013). Prolonged homelessness

among YAEH puts them at higher risk for violent injury, disease, early death, and repeated incarceration

(NAEH, 2009; Solorio, et. al., 2006). Unfortunately, these traumatic experiences may not fully capture

how Black YAEH experience and describe trauma and therefore their experience of trauma may be

underrepresented among these findings (Henderson, 2019). Additional traumatic experiences among

Black youth include police harassment, racism, and discrimination; poverty; community isolation; and

being bullied (Henderson, 2019).

As previously mentioned, LGBTQ+ youth are 120% more likely to experience homelessness than

their cisgender peers (Morton, et. al., 2018), with Black LGBTQ+ youth experiencing the highest rates

(Morton, et. al., 2017). Homeless youth service providers report as many as 30-45% of their participants

identify as LGBTQ+ (Durso & Gates, 2012). The primary reason LGBTQ+ youth report as to why they are

homeless is because of family rejection related to coming out about their sexual orientation or gender

identity (Durso & Gates, 2012). LGBTQ+ youth also report running away from foster care placement as a

result of harassment and violence against them for being LGBTA+ (Durso & Gates, 2012; Mallon, 1997a,

Mallon, 1997b; Ray, 2007). Critical recent research into the experiences of LGBTQ+ youth in New York

City foster care system, reports particular risks include having been absent from placements much more

often than their cisgender peers, higher likelihood to experience homelessness, higher likelihood of

negative law enforcement contacts, and more often criticized, including for 'dressing too much like the

other sex', (Sandfort, 2019, p. 5) all of which reportedly resulted in higher symptoms of depression, including lack of optimism for their future (Sandfort, 2019). Being LGBTQ+ is disproportionally high among YAEH as compared to their housed peers (Morton, et. al., 2018) and a subpopulation in need of specialized services (HUD Exchange, 2014) including emotional acceptance, healthcare, and for transgender possibly transition related support (True Colors United, 2020). LGBTQ+ YAEH are also at particular risk for being trafficked and/or experiencing acts of sexual violence (Polaris, 2021).

The role of family conflict may be a particularly important social condition among YAEH. Prior research found that among YAEH, having a supportive adult differentiated distinct groups in need of specialized services (Narendorf, Santa Maria, Bowen, & Thibaudeau, 2018). Adult emotional support was reported as critical to their future stability. This emotional support included the need to address concerns over losing their apartments, becoming ineligible for other public assistance (e.g., food stamps, Medicaid/Medicare) if they entered the formal or informal job market, and not having personal or professional support in place for crisis moments (Karabanow, Kidd, Frederick, & Hughs, 2016). Other research among YAEH exiting HUD SHP spoke to the importance YAEH gave community, family, tangible supports, and social connections as important to their successful transition to adulthood (Holtschneider, 2016). Research also speaks to the role an adult may play for YAEH in providing instrumental and/or emotional support, which seem to be important protective factors against continued risk-taking behavior (Barman-Adhikari & Rice, 2014; Barman-Adhikari, et. al., 2016; Reyna & Farley, 2006).

These typical needs for adult emotional and financial support are not surprising as recent reports suggest as many as 55% of all youth ages 18 to 24 in the United States live with their parents for economic practicality (U.S. Census Bureau, 2017).

Economic Vulnerabilities

There is an obvious interplay between low educational achievement, unstable employment, and survival related risks for trafficking among YAEH. YAEH have many challenges in completing their

education and pursuing employment (Ferguson, Bender, & Thompson, 2015). Youth who leave school

before high school graduation are more likely to experience homelessness and less likely to enroll in

college (Kull, et. al., 2019) while achievement of stable employment is associated with lower

involvement in survival sex, stealing, or selling drugs (Ferguson, et. al., 2015). This survival behavior

includes the experience of human trafficking for many YAEH (Chisolm-Straker, et. al., 2018). According

to the National Academy of Medicine, U.S. citizen and resident YAEH are at particular risk of being

trafficked (Dank, et. al., 2015) with some studies reporting an incidence of 14 to 15% of YAEH being

trafficked or experiencing trafficking at some point in their life (Chisolm-Straker, et. al., 2018).

Some studies report unemployment among YAEH as high as 75%, as compared to 16% among

their housed peers (U.S. Department of Labor, Bureau of Labor Statistics, 2016) with more recent

research finding rates of unemployment at 62% (Slesnick, et.al., 2018). Although effects of COVID on

unemployment rates among YAEH is yet unclear, young workers were cited as a particularly hard hit

population (Pew, 2020). Unemployed YAEH spend longer time on the streets, use survival behaviors to

earn money, and have high rates of addiction (Ferguson, et. al., 2012). Stable employment is mentioned

as necessary to achieve housing stability and is an allowed area of supportive service focus both under

RHYA and HUD Supportive Housing (RHYA 2020, HUD 2020). Employment is also specifically mentioned

as important in ending youth homelessness by the Framework to End Youth Homelessness (USICH,

FEYH, 2013). Achieving stable employment also seems to result in YAEH reporting higher self-efficacy,

positive self-identity, and high social competency (Ferguson, et. al., 2011).

Individual Condition Vulnerabilities

Individual conditions contributing to the vulnerability of YAEH likely include substance abuse

problems (Aubry, Klodawsky, & Coulombe, 2012; Berzin, Rhodes, & Curtis, 2011; Rhule-Louie, Bowen,

Baer, & Peterson, 2008; Rosenthal, et. al., 2007; Roy, et. al., 2004; Adlaf & Zdanowicz, 1999) behavioral

health, and mental health problems (Rhule-Louie, et. al., 2008). Not surprisingly, there is a higher

prevalence of mental health and behavioral disorders among YAEH compared to their matched housed peers (Whitbeck, 2009). And YAEH report both high incidence of mental health issues as well as having difficulty in accessing mental health related services (Narendorf, 2017).

Mental health symptoms may play a role in engagement in high-risk behaviors including substance use, self-harm, and suicide attempts (Yoder, Longley, Whitbeck, & Hoyt, 2008). This individual condition exacerbating vulnerability may be particularly critical in prioritizing YAEH for housing, as self-harm (Tyler, Whitbeck, Hoyt, & Johnson, 2003; Unger, et. al., 1997) as well as suicide attempts and suicidality among YAEH is well-documented (Desai, Liu-Mares, Dausey, & Rosenheck, 2003; Molnar, et. al., 1998; Unger, et. al., 1997; Votta & Manion,2003, 2004; Yoder, Hoyt, & Whitbeck, 1998). Risk for lethality amplifies the need to better understand the role of this individual vulnerability. Use of alcohol and drugs are also well described in the literature related to youth and young adults experiencing homelessness both as potential physical and mental health problems (Narendorf, 2017). Substance misuse also appears to be related to housing evictions among some engaged in supportive housing (Montgomery, et. al., 2017). Unfortunately, individual denial of problems, fears of confidentiality, survival focus (food, shelter, clothing) seem to contribute to lack of service engagement among YAEH (Stewart, et. al., 2010). This may be especially problematic for YAEH who are pregnant as pregnancy during homelessness is linked to significant health risks for mother and infant (Clark, 2019) and as many as 48% of youth living on the street report at least one pregnancy (Greene, 1998).

Demographic Vulnerabilities

Although much of what has been described thus far are common experiences among all living on the street, there are different levels of risk by age, race/ethnicity, and gender. Because of their developmental needs and lack of experience, it seems YAEH are less prepared than their adult counterparts to overcome these vulnerabilities (Ammerman, et. al., 2004). The developmental stage of Emerging Adulthood defined as age 18-24 (Arnett, 2007) is critical in establishing social supports which

may serve to magnify or mitigate the possibility of poor outcomes (Whitbeck, 2009). Emerging young

adulthood development theory recognizes "age-appropriate functioning concurrent with vulnerability

related to the adversity that might otherwise place the young person at risk for less positive adaptation"

(Liljedahl, 2010). This may in part be due to not developmentally achieving secure attachment which is

correlated between childhood adversities and YAEH (Heineman, 2010). Research reports that early and

ongoing trauma results in dysfunctional coping behaviors and alters a child's brain chemistry (Bremner,

2003; Carrion, 2006) many times as a result of interpersonal trauma at any time in the lifespan (van der

Kolk & Courtois, 2005).

For young adults 18-24 who are experiencing homelessness, difficulties in achieving expected

developmental milestones are compounded due to the lack of resources typically provided by caring

adults understood to mitigate risks associated with this age (Hagan & McCarthy, 2005; Wenzel, et. al.,

2006). Homelessness may prevent achievement of developmental milestones expected during emerging

adulthood (Hagan & McCarthy, 2005). Specifically, research led by Les B. Whitbeck reported YAEH

missing important developmental milestones including accepting responsibility for oneself, financial

independence, independent decision making, general independence, and establishing a household

(Whitbeck, 2009, p. 11). This may be connected to early research among YAEH who report lack of

emergency shelter usage related to perceptions of emergency shelters having strict rules (Gharabaghi &

Stuart, 2010). As services are often embedded in these programs, YAEH who remain on the streets

become at increased risk for multiple poor health outcomes, elevated rates of continued substance use,

STI's, and mental health conditions (Edidin, Ganim, Hunter, & Karnik, 2012).

Gender and race/ethnicity may also play a role in service use by YAEH. In a study from 2018,

research found female and non-white young adults are more likely to use emergency shelter (Ha,

Thomas, Narendorf, & Maria, 2018). A relationship between race/ethnicity and perceived need for

services was also found in research among YAEH utilizing a drop-in center (Pedersen, Tucker, Klein, &

Parast, 2018). Finally, being black and experiencing homelessness is associated with higher rates of depressive symptoms and suicidality related to racial discrimination and stigma of homelessness. This remained high even when controlling for age and sexual identity (Gattis, & Larson, 2016).

Housing & Vulnerabilities

HUD has recognized housing as its primary mission and goal (HUD.GOV/about/mission). HUD SHP includes "supportive services" as "voluntary, flexible services designed primarily to help tenants maintain housing. Voluntary services are those that are available to but not demanded of tenants, such as service coordination/case management, physical and mental health, substance use management and recovery support, job training, literacy and education, youth and children's programs, and money management" (CSH, 2015). Although housing itself has been shown to ameliorate many problems for chronically homeless adults (CRS, 2019) and lower justice involvement among adults with mental disorders experiencing homelessness (Somers, et. al., 2013), it is unknown whether this same effect exists for YAEH as most HUD SHP were designed for adults with chronic disabilities, vulnerability to HIV, substance abuse, and untreated mental illness (Shubert & Bernstine, 2007) and most research to date in HUD SHP has been done among adults experiencing chronic homelessness (Kertesz, 2017; Greenwood, Stefancic, Tsemberis, &Busch-Geertsema, 2013; Johnson, Parkinson, & Parsell, 2012; Aubry, Klodawsky, & Coulombe, 2012; Busch-Geertsema, 2014).

While the intervention of housing is understood to play an important role in improving adult health and behavioral outcomes, there is limited research on housing effect among YAEH. Housing instability has been linked to poor outcomes among multiple domains of academia, mental health, and future homelessness (Cunningham, Harwood, & Hall, 2010). Understandably, HUD SHP intent is to stabilize housing and provides measures to evaluate programs in this regard (Appendix B). Housing outcomes related to permanency (i.e., stability) are therefore critical for YAEH. In a recent study, researchers examined housing outcomes by number of vulnerabilities on an adapted coordinated entry

tool (Rice, et. al., 2018). In this study, YAEH who reported 4 or fewer vulnerabilities as well as those who

reported 5-9 vulnerabilities combined with at least 6 months of HUD SHP, tended not to return to

homeless services at 180 days post exit (Rice, et. al., 2018). Although this effect is related to the number

of vulnerabilities reported, particular vulnerabilities may also play a role. The Veterans Administration

conducted research among veterans formerly experiencing homelessness and found an associated

pattern between having been housed only temporarily and evictions related to untreated substance

misuse while permanent housing was related to engagement in primary care and supportive services

(Montgomery, et. al., 2017). There is also recent research on the intensity of services needed to achieve

permanent housing and improve health related quality of life among adults experiencing homelessness

for long durations (i.e., chronic homelessness) (Schick, 2019). These findings are related to a study

conducted in Houston in Houston, Texas among 323 adults who formerly experienced chronic

homelessness and living in HUD SHP. Participants were assigned to one of two groups, both receiving a

coordinated care plan but the intervention group having a single plan of care with a partnering clinic.

Those in the intervention group reported a significant increase in health-related quality of life over the

comparison group and a reduction in emergency room use by 70% (no comparison group) (Schick,

2019).

Prior research has found subgroups of YAEH differentiating low and high need groups as well as

emphasis for focused service delivery related to specific vulnerabilities such as substance use, behavior

management, and more comprehensive approaches (Bucher, 2008). Other studies have focused on

service use association with incarceration to distinguish subgroups of youth experiencing homelessness.

In a study utilizing data from Social Network and Homeless Youth Project, 249 youth were interviewed

based in three midwestern cities from January 2008 to March 2009. Researchers found older youth ran

away from home at a younger age, having higher utilization of mental health, incarceration, and basic

services use while younger youth ran away at an older age and used these services much less frequently

(Kort-Butler & Tyler, 2012). A third study among newly homeless adolescents found three subgroups distinguished by risk and protective factors. One group with high protective factors, one mixed, and one high risk factors and low protective factors with implications for family reconnection as a stabilizing intervention (Milburn, et. al., 2009). Other researcher examined resilience factors and negative outcomes to describe three subgroups of homeless and then used these subgroups to predict long-term patterns of homelessness. The connected but transient group of youth were most likely to continue experiencing periods of homelessness while high risk youth had an increase in homelessness as they entered young adulthood (Toro, Lesperance, & Braciszewski, 2011).

Based on prior adult homeless research and research indicating potentially helpful typologies of youth experiencing homelessness, it is logical to assume the critical need to better understand specific vulnerabilities among YAEH at entry to HUD SHP and then extrapolate whether these experiences and vulnerabilities might predict different housing outcomes. In fact, there is research that points to this finding among YAEH. In 2018, Chapin Hall collected coordinated entry scores for YAEH and found those who scored highest on a Coordinated Entry (indicating highest number of vulnerabilities) were least likely to achieve permanent housing at exit from HUD SHP (Chapin Hall, Toward A System Response to Ending Youth Homelessness, 2018). A related study using the same Coordinated Entry data for YAEH looked at the number of vulnerabilities while considering housing models (HUD SHP or Return to Family or Self Resolved) and their association with returns to homelessness post exit at 180 days. In brief, this study found those with a low score (4 or below) and who either resolved through family or self and those with mid-range scores (5-9) and at least 6 months of HUD SHP (RRH) both had low rates of returns to homelessness (Rice, et. al., 2018). This study does not consider housing models but only looks at outcomes related to stability or permanency of housing. By removing particular housing intervention (i.e., Rapid Re-Housing or Permanent Supportive Housing) as a consideration for housing, this study examined differences among YEAH without regard to who may have been referred for housing as well as

different supportive services provided by various agencies, or their fidelity to Housing First are other important considerations in reaching stable housing. This has the potential to focus recommendations by vulnerabilities rather than the availability of limited HUD SHP resources and/or individual case manager bias in referring YAEH to HUD SHP based on their assumptions related to likelihood for a successful outcome, both of which were noted as limitations in the prior study (Rice, et. al., 2018).

Conclusion

Young adults experiencing homelessness is a complex, multi-system involved phenomenon combated at this time with limited resources and limited data on what works best to achieve permanent housing. The National Alliance to End Homelessness reported that at the end of 2019 in the U.S., there were 35,038 unaccompanied youth or 6% of the total population experiencing homelessness. While there was a downward count of homelessness prior to 2017, there has been an increase of 11% among individuals, including unaccompanied youth, experiencing homelessness for the past three years (2017-2020) (NAEH, 2020). While it is yet unclear the impact COVID-19 may have on homelessness, the pandemic will likely result in higher numbers of homelessness due to low rental housing stock as well as economic instability (NAEH, 2020). Pre-COVID 19, the number of youth experiencing homelessness was already expected to continue to rise (Morton, et. al., 2018). However, the current investment in COVID-19 recovery funds for housing systems provides an opportunity for innovation to support YAEH (HUD ESG-CV Awards, 2020).

Understanding which vulnerabilities are present at entry to HUD SHP and any combinations present which may serve to classify subgroups of YAEH has great potential to enhance recent findings matching interventions to specific vulnerabilities. These findings using Coordinated Entry total vulnerability scores to determine potential housing outcome may be further strengthened by understanding what the specific vulnerabilities are, whether combinations of vulnerabilities are associated with a housing outcome, and if combinations of vulnerabilities have the potential to inform

service models. A summary of findings collected and distributed by the HHS Office of the Assistant

Secretary for Planning and Evaluation (ASPE, 2017) provides what may be useful information linking

specific vulnerabilities such as unstable housing, dropping out of high school, unemployment, substance

use and other mental health issues, and involvement in child welfare to specific interventions and/or

development of protective factors specifically addressing the above (U.S. HHS ASPE, 2017). Whether or

not HUD SHP policies focused on reconnection to families, quickly re-housing families at risk for longer

term homelessness, and prioritization of chronically homeless adults with disabling conditions

adequately respond to YAEH is unknown and beyond the scope of this study; however, understanding

what are the current vulnerabilities YAEH present at entry to HUD SHP may help to lay groundwork for

better understanding connections between specific vulnerabilities, potential service needs, and different

housing outcomes which in turn can help in informing policies and practices to achieve the end of youth

homelessness.

Methods

Introduction

This chapter provides an overview of the design and methodology for each study aim. This study examines frequencies and patterns of vulnerabilities captured on a Coordinated Entry triage tool (CE TT) at entry to Housing and Urban Development Supportive Housing Programs (HUD SHP) managed by the homeless Continuum of Care in Houston, Texas. Vulnerability data was collected for those that were assessed from June 2016 through November 2018, and Housing Outcome data (i.e., HUD designated exit destinations) was reported any time between participant's assessment date and May 11, 2020. The objectives of the study are three-fold. First, this study examines and describes vulnerabilities as reported on the coordinated entry tool and explores whether there were significant differences in these vulnerabilities by demographics. Second, vulnerability patterns were examined for classification of participants according to vulnerability subgroups and whether the vulnerability subgroup a participant belonged to varied by demographic variables (i.e., race/ethnicity, gender, and age). Third, the study explored if there was a significant relationship between (1) the subgroup a participant belongs to and housing outcomes, and (2) between demographics and housing outcomes. Chi-square tests for association of demographics with housing outcomes and multinomial logistic regression were used to determine each subgroup's association with housing outcome.

Positionality Statement

The researcher comes to this project with over 15 years of homeless service provider experience. Prior service included directly assisting participants and directing multiple teams to assist those seeking housing as a result of experiencing homelessness, including those displaced by disaster. Programs which I designed, funded, staffed, trained, and directed included low barrier emergency shelters, homelessness prevention, diversion, rapid re-housing, permanent supportive housing, human trafficking crisis response, and a young adult resource center (day center). As part of this work, the

researcher served on the Continuum of Care during implementation of Coordinated Entry (CE) and

partook in discussions designing the CE triage tool (TT) from which the data for this dissertation study

was captured. This role provided me with trust and authority but also informs my belief that young

adults are in need of specialized services due to their particular vulnerabilities, lack of typical familial

supports, and developmental expectations of this age. The researcher has also undergone continued

education in Trauma Informed Care with particular training in Trust-Based Relational Intervention

(TBRI)(Purvis, Cross, Dansereau, & Parris, 2013), an approach to trauma informed care based in

attachment and developmental theory. Each of these experiences has likely informed my approach,

analysis, and understanding of results.

Data Source

Aims were examined using existing data (i.e., secondary administrative data) acquired from the

Coalition for the Homeless Houston (CFTH) extracted from the Homeless Information System (HMIS)

database. CFTH is a non-profit organization serving as the Housing and Urban Development (HUD)

Continuum of Care (CoC) coordinating agency in Houston and as such is tasked with managing federal

competitions for public funding of homeless services including HUD Supportive Housing Programs (SHP),

managing data and the database (HMIS) for homeless services, and managing Coordinated Entry into

HUD SHP. To implement Coordinated Entry, the CFTH trains and coordinates assessors in use of a

community assessment tool to prioritize those with highest vulnerabilities for limited HUD SHP.

Assessors are employees of homeless service provider agencies. During June 2016-November 2018,

CFTH trained assessors in a unique YA Triage Coordinated Entry tool, only administered to YAEH.

Assessors conducted in-person interviews with YAEH at various homeless agencies in downtown

Houston, Texas. Locations where the tool was administered include The Salvation Army Young Adult

Resource Center (day shelter for youth and YAEH), Covenant House Texas (overnight emergency and

transitional shelter for YAEH), and The Beacon (day shelter for all populations experiencing

homelessness). All three sites are located within homeless service provider agencies in downtown

Houston, Texas. Assessment tool and demographic data was then entered by these assessors into the

Homeless Management Information System (HMIS) database. Based on a respondent's assessment

score, CFTH then assigned YAEH a position on the housing wait list by prioritization score for HUD SHP.

The data for this study reflects two points in time for each individual participant. The first point in time is

participant's interview date for Coordinated Entry (CE). The second point in time is participant's housing

outcome as of May 11, 2020.

Sample

Only YAEH 18-24 who underwent a Coordinated Entry interview using the YA Triage tool

between June 2016 and November 2018 in Greater Houston, Texas were included in this study. The

dataset consists of 1,857 rows of data. There are a total of 1,498 unique record numbers (participants).

This indicates that some participants have multiple lines of data representing multiple assessment

encounters. Since this study is concerned with vulnerabilities at entry to HUD SHP and time spent

experiencing homelessness (i.e., "time homeless" is an eligibility criterion to enter HUD SHP), those

records with a missing value for questions about time experiencing homelessness were excluded from

analyses. This resulted in 1,457 records. Next, all the complete but duplicate record numbers were

removed (only keeping the first assessment per participant). This resulted in a final n=1,218 used for

both descriptive and inferential analyses.

Measures

The specific data for this study is derived from the Coordinated Entry (CE) Young Adult Housing

Triage Tool (TT) used as assessment for prioritization for entry into limited HUD SHP. Data from the tool

was used to determine eligibility, prioritization, and appropriate housing model/intervention (i.e., HUD

SHP RRH or PSH). Please see Coordinated Entry Young Adult Housing Triage Tool (i.e., CE TT) for each of

the questions (Appendix A). Demographic data was collected and reported in HMIS per HUD standards

separately at the time of administering the CE TT (Appendix C). Houston's CE TT for YAEH is a unique

tool and therefore no comparison source is known at this time. The Houston CE TT has not established

reliability or validity and this study is not intended as a formal test of the tool used to obtain this data.

The higher the score reported by use of the CE TT, the more vulnerable the participant was deemed and

received a higher priority for entering HUD SHP. It is important to note that the 'score' is not under

evaluation for this proposed research but rather only whether the participant reported a positive (yes)

or negative (no) response to having each vulnerability. Not all positive responses were deemed to merit

an increase in score to determine prioritization on the housing wait list. For example, whether the

participant used illicit substances or alcohol was not scored relative to prioritization on the housing wait

list but is included as a vulnerability for purposes of this study.

Although typically administrative data is incomplete and is subject to other data quality issues,

CFTH trains all assessors, requires a strict data plan for all homeless service provider agencies and

reviews data quality on a regular basis for all agencies entering CE and Housing Outcome data.

Additionally, since CE is required for entry to HUD SHP and demographic information is required to be

reported to HUD, most elements captured in HMIS are a 'forced response' (i.e., required for completion

of data entry) which results in more complete data. As this tool was developed in real time, 7 questions

were added 10/27/2016 after initial implementation on June 1,2016. These questions were dependent

upon prior positive responses and are not included in statistical analysis and their addition did not affect

sample size for this study as only participants who answered all of the original questions are included.

(See Appendix A for the Young Adult Triage Tool).

Demographic Variables

Three demographic variables are included for this study. The demographic variables are

participants' self-report of age, gender identity, and race/ethnicity. The demographic variables are

obtained by coordinated entry assessors and/or by homeless service agency staff at initial intake for any

service request and are separate from the Coordinated Entry tool (See Appendix C). An overview of

demographic data of the sample is provided in Table 3.1. The demographic variables race/ethnicity, age,

and gender identity are self-reported by the participant when asked by assessor during Coordinated

Entry interview as required by HUD HMIS standards (HUD Exchange, 2020).

Age. Age is coded as a categorical variable. The minimum age is 18 and maximum age is 24. Age

is made binary for statistical analysis by categories of younger (18-20) and older (21-24). These

categories were chosen to differentiate two groups by legal rights and responsibilities (e.g., drinking)

and systems and other expected age-based milestones in contemporary United States (e.g., upper limit

to receive benefits as a ward of the state) (DFPS, 2020).

Gender. Gender is a categorical variable with five distinct and mutually exclusive categories. The

categories are male, female, non-conforming, trans-female, trans-male. The majority of participants

identified as female (*n*=710) or male (*n*=476). Only two (2) participants classified themselves as non-

conforming, 24 as trans-female, and 6 as trans-male. The limited number of participants classified within

these last three categories are combined to create a third category of gender, "gender minority" (*n=32*)

as balanced categories and a minimum of 30 participants per categories is usually recommended for

statistical analyses.

Race/Ethnicity. Race and ethnicity were self-reported by participants based on HUD

demographic categories asked during assessment (Appendix C). Race and ethnicity were identified as

important analytical factors related to continued disproportionality in young adult homelessness as a

result of systemic racism and oppression. For example, Black/African Americans account for 13 percent

of the U.S. population but 40 percent of people experiencing homelessness (NAEH, 2018). Researchers

cite discrimination in housing, justice, child welfare, and education systems as the cause (Morton, et. al.,

2017, *Missed Opportunities*, p. 12). Labels of race and ethnicity are problematic in social science

research, both stemming from long-standing racist classifications (Blakemore, 2019). Although both race

and ethnicity are social constructs, the term 'race/ethnicity' used for this study lends itself to concepts

of shared cultural expression and identification rather than 'race' which has the tendency to be

associated with biology and preconceptions of genetics (Blakemore, 2019). Race/ethnicity is also

understood to exit within a dominant white/European cultural context. Race/ethnicity is a nominal

scaled variable with eight distinct and mutually exclusive categories: Black_African American/Hispanic;

Black_African American/Non-Hispanic; Multi-Racial/Hispanic; Multi-Racial/Non-Hispanic;

Other/Hispanic; Other/Non-Hispanic; White/Hispanic; and White/Non-Hispanic. Data Not Collected are

three cases with missing values for race/ethnicity (*n*=3).

For purposes of bivariate and multivariate statistical analysis (e.g., Chi-square), categories with

fewer than 30 participants were combined and grouped as 'other'. These included HUD designated

categories of Black_African American/Hispanic, Multi-Racial/Hispanic, American Indian, Native Hawaiian,

Other Pacific Islander, and Asian. This resulted in four race/ethnicity categories: Black/Non-Hispanic

(Black), White/Hispanic (Hispanic), White/Non-Hispanic (White), and Other. These distinctions follow

current recommendations for use of race/ethnicity in current social science research (Ross, Hart-

Johnson, Santen, & Zaidi, 2020).

Table 3.1 Demographics Frequency Distribution

Gender		Race/Ethnicity		Age Category	
Female	710(58.3%)	Black/Non-Hispanic	855(70.2%)	Older	734(60.3%)
Male	476(39.1%)	White/Non-Hispanic	147(12.1%)	Younger	484(39.7%)
Gender Minority	32(2.6%)	White/Hispanic	118(9.7%)		
Gender Non-Conforming	*2(0.2%)*	Other	98(8.2%)		
Trans Female	*24(2.0%)*	*Multi-racial/Hispanic*	*13(1.1%)*		
Trans Male	*6(0.4%)*	*Multi-racial/Non-Hispanic*	*39(3.2%)*		
		Black/Hispanic	*31(2.6%)*		
		Other/Non-Hispanic	*10(0.8%)*		
		Other/Hispanic	*2(0.2%)*		
		Not collected	*3(0.3%)*		

Table 3.2 Demographics by Gender Age Categories and Race/Ethnicity

	Black African American, Non-Hispanic 855(70.2%)	White Hispanic 118(9.7%)	White Non-Hispanic 147(12.1%)	Other 98(8.2%)
Younger Female	180(21.1)	33(28.1)	28(19.0)	24(24.5)
Older Female	334(39.1)	43(36.4)	41(27.9)	27(27.6)
Younger Male	123(14.4)	17(14.4)	37(25.1)	26(26.5)
Older Male	197(23.0)	21(17.8)	38(25.9)	17(17.3)
Younger Trans Female	9(1.1)	2(1.7)	1(0.7)	0(0.0)
Older Trans Female	10(1.2)	1(0.8)	1(0.7)	0(0.0)
Younger Trans Male	1(0.1)	1(0.8)	0(0.0)	1(1.0)
Older Trans Male	1(0.1)	0(0.0)	1(0.7)	1(1.0)
Younger Gender Nonconforming	0	0	0	1(1.0)
Older Gender Nonconforming	0	0	0	1(1.0)

Housing Outcome Variables

HUD defines Housing Outcomes by either 'permanent' or 'temporary' exit destination data. Homeless service provider agencies are required to report individual participant housing outcomes by exit destinations per these HUD approved measures. These measures are expected to guide communities in adapting practices to achieve permanent housing for all participants in HUD SHP (HUD Exchange, 2016). Permanent includes exit destinations in which participants are expected to remain for the known future while temporary exit destinations are those which participants exited to a temporary destination or returned to experiencing homelessness. These classification of permanent or temporary exit destinations are the same regardless of housing model (permanent or time limited). These data are eventually aggregated and reported as community level system outcome or performance measures for future HUD funding competitions (Appendix B System Performance Measures).

To answer Aim 3, there is a second point in time which represents the Housing Outcome by exit destination data as of May 11, 2020 for YAEH who participated in Coordinated Entry assessment (first point in time). To have a Housing Outcome exit destination, participants had to have been assessed by vulnerabilities including length of time spent homeless, which is used to determine appropriate HUD

SHP model (i.e., RRH or PSH). As Aim 3 is related to patterns of responses associated with different housing outcomes, it was necessary to exclude those participants that had no information related to time spent homeless (Young Adult Housing Triage Tool Questions 1a, 1b, and 1c).

Housing exit destination data in this study were reported by agency staff to whom the participant was assigned for HUD SHP or if not assigned (i.e., never housed) by homeless service agency staff where the participant was assessed for Coordinated Entry. Housing exit destination data was reported by agency staff any time between date of assessment and May 11, 2020.

Housing exit destination data (i.e., permanent or temporary exit destination) or whether the participant was never housed were grouped to fit three nominal and mutually exclusive Housing Outcome categories established for this study, namely "Permanently Housed", "Temporarily Housed", or "Never Housed". The specific HUD defined housing outcome measure within the categories "Permanently Housed" and "Temporarily Housed" can take multiple forms as is displayed in Table 3.3.

Housing exit destinations reported as either permanent or temporary are also related to HUD's two primary Supportive Housing models (i.e., Permanent Supportive Housing and Rapid-Re-Housing). Permanent Supportive Housing (PSH) is designed for those experiencing long-term homelessness (i.e., chronic or prolonged homelessness) with a disabling condition. Rapid Re-Housing (RRH) is a temporary housing subsidy. Regardless of model, participants are expected to remain permanently housed at exit.

Permanent Housing Outcome Category. All exit destinations listed in Table 3.3 under Permanent are designated as "permanent housing outcome" for this study. It is important to note that Permanent Supportive Housing (PSH) is a HUD SHP model which is non-time limited and therefore no exit destination reported assumes participants remain in PSH permanently. Study participants assigned PSH with no exit destination were therefore coded "Permanently Housed" (*PSH assigned n=211 of which 74 had no exit destination reported*).

Temporary Housing Outcome Category. All exit destinations listed in Table 3.3 under

Temporary are designated as "temporary housing outcome" for this study. Rapid Re-Housing (RRH) is a

time limited housing model (i.e., temporary); therefore, study participants assigned Rapid Re-Housing

(RRH) with no exit destination reported were coded "Temporarily Housed" (*RRH assigned n=244 of*

which 31 had no exit destination reported).

Never Housed Outcome Category. Participants labeled as "never housed" means those not

housed through the Coordinated Entry system into HUD SHP although participants may have found

housing outside this system. These are participants were never assigned PSH or RRH and would

therefore also not have a housing placement date or HUD designated exit destination.

Table 3.3 Frequency Distribution Specific Exit Destination per Housing Outcome

Exit Destinations Permanent Housing Outcome Variable	Frequency (%)
Long-term care facility or nursing home	2(0.8)
Owned by client, no ongoing housing subsidy	1(0.4)
Owned by client, with ongoing housing subsidy	3(1.1)
Permanent housing (other than RRH) for formerly homeless persons	11(4.2)
Rental by client in a public housing unit	1(0.4)
Rental by client with RRH or equivalent subsidy	22(8.4)
Rental by client, no ongoing housing subsidy	60(23.0)
Rental by client, other ongoing housing subsidy	5(2.0)
Rental by client, with HCV voucher (tenant or project based)	4(1.5)
Residential project or halfway house with no homeless criteria	1(0.4)
Staying or living with family, permanent tenure	55(21.1)
Staying or living with friends, permanent tenure	22(8.4)
Remained in PSH at time of data pull	74(28.4)
Exit Destinations Temporary Housing Outcome Variable	**Frequency (%)**
Data not collected	2(1.9)
Emergency shelter, hotel/motel paid for, RHY-funded Host Home	15(13.9)
Jail, Prison, Juvenile Detention Facility	13(12.0)
No exit interview completed	1(1.0)
Other	7(6.5)
Place not meant for habitation	8(7.4)
Psychiatric hospital or other psychiatric facility	2(1.9)
Staying or living with family, temporary tenure	14(13.0)
Staying or living with friends, temporary tenure	12(11.1)
Substance abuse treatment or detox center	1(0.9)
Transitional housing for homeless persons (including youth)	2(1.9)
Remained in RRH at time of data pull	31(28.7)

Table 3.4 Frequency Distribution of Three Housing Outcome Variables

Housing Outcome Variables	Frequency (%)
Permanently Housed	261(21.4)
Temporarily Housed	108(8.9)
Never Housed	849(70.0)

Vulnerability Variables

A total of 26 vulnerability variables were included in the descriptive analysis for Aim 1.

Vulnerability variables shaded in grey were not included for Aims 2 and 3 (see Vulnerability Variables not

included in LCA for details).

Table 3.5 Vulnerability Variables

Syndemics Domains	Vulnerabilities by Concepts in Research	CE TT Captured Vulnerability Variables
Environmental	Time spent experiencing homelessness	Prolonged (12 or > months or >4 episodes)
		Short term (<12 months or <4 episodes)
	CPS Involvement	Participant
		Participant's Child
		Participant's Child past two years
	Justice System Involvement	Juvenile Detention
		Adult Justice System
Social	Adult Support	Emotional
		Financial
	Family Related Loss of Housing	Kicked out after coming out as LGBTQ
		Left due to Family Violence
	Abused as a child	Physically, emotionally, or sexually
Economic	Educational Achievement	High School Diploma or GED
	Employment Stability	>3 or no jobs in past year
		1-3 jobs in past year
	Risk of Being Trafficked	Control of money
		Trading sex for survival needs
		Being forced to do things

		Self-report
	Mental Health Issues	Professionally recommended for treatment
		Current treatment
Individual Conditions	Behavioral Health Issues	Self-Harm
		Suicide Attempt
		Drug/Alcohol use
		Substance use type & consequence
	Having a child	Responsible for a child
		Currently pregnant

Each of the 26 questions on the CE TT was treated as a vulnerability variable. An overview of these variables, including an operational definition is provided below. All variables on the CE TT were considered for Aim 1 frequencies. All questions included in the instrument are potential variables related to prolonged homelessness and risk for poor health and behavioral outcomes while experiencing homelessness. The tool is provided in Appendix A.

Environmental Vulnerability Variables

Time Spent Experiencing Homelessness. (CE TT Questions: 1a, 1b, & 1c) This variable is measured by the assessor conducting Coordinated Entry interview determining the participant had 12 or more months of time spent experiencing homelessness accounted for in HMIS, whether the client reported they had been homeless before, and/or whether the participant reported 4 or more episodes of homelessness over the past 3 years. The binary variable for time spent experiencing homelessness is a dichotomous variable with two designations for this study:

- *Short/Medium Homelessness Variable.* (CE TT Question: 1a;1b;1c) is a combination of responses indicating participant had less than 12 months and fewer than 4 episodes of experiencing homelessness in the past three years.

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- ***Prolonged Homelessness Variable.*** (CE TT Question 1a;1c) is a combination of responses

  whereas it was determined the participant had 12 or more months or four or more

  episodes experiencing homelessness in the past three years.

Episodic or repeated experiences of homelessness have been noted as more typical among YAEH as

compared to their adult counterparts (Rice, 2013). Additional research to date has focused primarily on

risk for prolonged homelessness among YAEH as a result of being intermittently housed (e.g.,

episodically housed) outside of the homeless shelter system (Witken, et. al., 2005) as well as episodes of

homelessness related to number of foster care placements (Bender, Yang, Ferguson, & Thompson,

2015). In addition, prolonged homelessness (>12 months "chronic" or >4 episodes experiencing

homelessness) for young adults is associated with higher rates of depression, PTSD, reports of physical

abuse, sexual molestation, and sexual assault as compared to their YAEH at shorter lengths of time

(Rice, 2013). In light of this research, the dichotomous categories for time experiencing homelessness

were created. Finally, while there is no consensus on the appropriate way to define chronic

homelessness for YAEH, 'Chronic' on the Young Adult Housing Triage Tool is 12 or more months

experiencing, homelessness following HUD guidelines (U.S. Office of Federal Register, 2015).

     Child Protective Service Involvement. (CE TT Question: 7) Participants were asked if they had

ever been in Child Protective Services custody. Possible answers were yes or no.

     Justice Involvement. (CE TT Question: 15a & 15b) Participants were asked if they had ever been

in juvenile detention. (***Juvenile Justice Involvement***). Possible answers were yes or no and related to

detention only. Participants were also asked the number of days they had been in jail or prison in the

last 2 years. (***Jail Days***). This ratio level data was made dichotomous and coded as: 0=never and 1 = up

to 7, 8-30, 31-90, 91-180, over 180. It is important to note that a great deal of specificity was lost by

dichotomizing this variable and the distinction between never and any amount of time in jail loses

variation between those that have minimal vs. extensive criminal justice histories. Additionally, neither

the Juvenile Justice nor Adult Justice variables capture involvement with justice systems other than detention. However, the distinction between no involvement and involvement in criminal justice systems is meaningful.

Social Vulnerability Variables

Adult Support. (CE TT Questions: 16 & 17) Participants were asked how many adults they can count on for emotional support. (*Adult Emotional Support Variable*) This ratio variable was dichotomized as having no adult they can count on for emotional support or having 1 or more. Participants were also asked how many adults they can count on for financial support. (*Adult Financial Support Variable*) This ratio variable was made into a dichotomous variable reported as having no adult for financial support or having 1 or more.

Kicked out by Family Because of Being LGBTQ. (CE TT Question: 8) Participants were asked whether they had been kicked out or felt unsafe at home because of coming out as LGBTQ. The possible answers were either yes they had or no they had not.

Left home because of Family Violence. (CE TT Question: 9) Participants were asked if they left home because of violence between family members or to them. This binary, dichotomous variable was reported as yes (left home because of family violence) or no (did not leave home because of family violence).

Abused as a Child. (CE TT Question: 6) Participants were asked if they had ever been a victim of physical, emotional, or sexual abuse as a child. Possible answer was either yes or no.

Economic Vulnerability Variables

High School Diploma or GED. (CE TT Question: 3) Participants were asked if they had a high school diploma or GED. Responses were coded for yes if they lacked a diploma or GED or no, if they have a diploma.

Employment Stability. (CE TT Question: 2a) Participants were asked the number of jobs they had lost over the last 12 months. If the participant's answer was none or more than 3 jobs, then they were considered unstably employed (vulnerable). If participant reported less than 3 jobs lost but at least 1 job, they were considered currently capable of stable employment. It is unknown why none or 3 was chosen as the threshold on this unique tool and is noted as a limitation to any findings related to this vulnerability.

Risk for Trafficking: (CE TT Questions: 2b/10b/10a) Participants were asked questions related to risk for being trafficked and were measured by whether the participant reported if they are trading sex or anything else in exchange for something (***Trafficking for Survival Needs***) and/or if someone is forcing them to do something (***Trafficking by Force)*** and/or if someone else controlled the money they earned from their job (***Trafficking by Control of Money)***.

Individual Condition Vulnerability Variables

Mental Health Issue(s): (CE TT Questions: 11/12a) Participants were asked questions regarding their mental health and answers were either self-report of having mental health related issues making it hard to live on their own (***Mental Health Self Report)*** and/or having been recommended by a professional for mental health services (***Mental Health Professional Recommendation)***.

Self-Harm Ideation. (CE TT Question: 13a) Participants were asked if they ever thought about hurting themselves. Possible answers were yes or no.

Substance Use. (CE TT Question: 14a) Participants were asked if they use drugs or alcohol. Possible answers were yes or no.

Having a Child. (CE TT Questions: 4a and 5) Participants were asked if they had a child for whom they were responsible (***Responsible for a Child)*** or if they were currently pregnant (only cis-gender females asked pregnancy question) (***Pregnant)***. The variable ***Having a Child*** is a combination of question 4a and 5 for analysis of Aims 2 and 3. Being pregnant was coded as having a child.

Vulnerability Variables Not Included in Latent Class Analysis

The following vulnerability variables are related to questions only asked if there were prior positive responses on the Coordinated Entry Triage Tool and are included for descriptive analysis only (Aim 1). Inconsistent collection of responses for these questions and responses only collected if a prior question was answered positively resulted in imbalances in sample sizes requiring their removal from bivariate and multivariate analyses for Aims 2 and 3. Conceptually, the vulnerabilities captured by the dependent questions (listed below) are already represented among the non-dependent questions which remain for analysis. These are child welfare involvement, risk for trafficking, mental health issues, and behavioral health issues. Therefore, excluding the dependent questions is both statistically recommended and conceptually does not result in excluding vulnerabilities related to child welfare involvement, risk for trafficking, mental, and behavioral health known to be associated with YAEH (YDHP Fact Sheet, U.S. HUD, 2019, p.1).

Child Protective Service Involvement of Participant's Child Current or Recent. (CE TT 4b/4c) Participants were asked if they currently had a child in CPS or had a child in CPS in the past two years. This question was asked only if participant responded 'yes' to having children for whom they are responsible (question 4a).

Risk for Trafficking by Control of Money. (CE TT 2b) Participants were asked "Do you work a job where someone else controls your money" only if they had reported having lost a job (question 2a).

Current Mental Health Treatment. (CE TT 12b) Participants were asked if they were currently receiving mental health treatment only if they had answered yes to question regarding whether a professional had recommended mental health treatment (question 12a).

Suicide Attempt. (CE TT 13b) Participants were asked if they have ever tried to kill themselves. Being asked "Have you ever tried to kill yourself" (question 13b) was dependent upon a positive response for question 13a: "Have you ever thought about hurting yourself".

Substance Use Type and Consequences. (CE TT questions 14b/14c) If participants reported they use alcohol or drugs, then they were asked specific type of substances used (question 14b) and consequences of substance use (question 14c).

Analysis

Aim 1. Describe and quantify vulnerabilities at the time of entry into the system for HUD Supportive Housing including whether these vary by Race/Ethnicity, Gender, and Age

Aim 1 Descriptive and Bivariate Statistical Analysis. The first analysis strategy for this aim is descriptive and limited to frequency distribution of each vulnerability variable as they are categorical items. For instance, the variable 'self-harm' is a dichotomous variable with two categories, no self-harm versus self-harm, with percentages of each category reported. The second strategy is bivariate analysis by race/ethnicity, gender, and age using Chi2, a p value of .05, and Cramer's V. SPSS (version 27) [Computer Software] Armonk, NY: IBM Corp will be used to descriptively analyze the data and test for significant differences. Those questions which were dependent upon a prior answer were excluded for bivariate analysis of race/ethnicity, gender, and age as sample size was inconsistent and some categories were too small for chi square. This resulted in 18 variables considered for bivariate analysis.

Aim 2. Understand whether there are subgroups of homeless youth with different combinations of vulnerabilities and whether these subgroups are different by demographics.

In this part of the study, participants' answer patterns across vulnerability variables were closely investigated to identify unobserved vulnerability subgroups. Latent class analysis (LCA) was used for this statistical method to identify unobserved subgroups based on a set of chosen indicator variables (see Vulnerability Variables in Measures) (McLachlan & Peel, 2000). All vulnerability variables were considered for the LCA. Because of the nature of the questionnaire, seven variables were excluded because they were contingent upon the answer on another question and therefore did not result in comparable sample size for statistical analysis. As an example, participants were only asked if they are

working a job where someone else controls their money (q2b) if they had already reported they have a job (q2a) (and only 5.83% answered yes on this item). Prior research on model selection in Latent Class Analysis has shown that having too small a sample often leads to too few subgroups (i.e., classes) to adequately create a model capturing characteristics of the sample (Dziak, Lanza, & Tan. 2014).

Based on the above considerations, inclusion of the remaining vulnerability variables resulted in 18 indicator variables for the LCA to answer Aim 2 & 3. These are time spent homeless, employment stability, high school diploma or GED, having a child, having been abused, having been in CPS, having been kicked out due to LGBTQ, leaving home because of family violence, trafficking risk by trading sex for survival needs, trafficking risk by being forced to do something, self-reported mental health issue, professionally recommended mental health service, self-harm ideation, using drugs or alcohol, having been in juvenile justice, having been in adult jail, and adult emotional or financial support.

Aim 2 Statistical Analysis (Latent Class Analysis). To identify unobserved vulnerability subgroups (i.e., called latent classes), patterns of participant responses to the vulnerability variables were examined using latent class analysis (LCA). First, a one-class LCA was run. This one-class model serves as a comparative baseline for models with more than one class. After examining the one-class LCA, the number of classes was gradually increased by one. Each LCA solution was examined to evaluate whether the addition of an extra class resulted in a statistically superior solution.

Determining Number of Classes. The statistical superiority of a LCA solution was evaluated to decide whether the addition of a class resulted in a better model. Fit indices were used to help in determining the number of classes for the LCA model (Masyn, 2013; Morgan, 2015; Morovati, 2014; Nylund, et. al., 2007; Yang, 2006). Two groups of fit indices, namely (1) the information criteria and (2) the relative fit indices were evaluated.

First, the following four information criteria (IC) indices are suggested and were adopted as important in considering the statistical superiority of classes within models for LCA: the Bayesian

Information Criterion (BIC, Schwarz, 1978), Sample-size adjusted Bayesian Information Criterion (SABIC, Sclove, 1987), Consistent Akaike Information Criterion (CAIC, Bozdogan, 1987), and Approximate Weight of Evidence Criterion (AWE, Banfield & Raftery, 1993). These are approximate fit indices where lower values indicate superior fit. For example, the BIC for the one-class model was compared with the BIC of the models including additional classes, and the model with the lowest BIC was considered. The values of the BIC, ABIC, CAIC, and AWE were visually displayed across the models for easy inspection. Plots were used to inspect for large decrease in the IC for each additional latent class. In other words, if the addition of an extra class resulted in a large decrease, then we were at the 'elbow point' which was used as a cutoff point for the number of latent classes. The BIC is the most used and trusted fit index for model comparison (Masyn, 2013; Nylund, et. al., 2007).

Second, relative fit was determined by conducting two likelihood-based tests. Likelihood-based tests were determined by obtaining p-values indicating whether adding a class led to a statistically significant improvement in model fit. The likelihood-based tests compare the fit between two neighboring class models (e.g., 2- class versus a 3-class model). The null hypothesis of the likelihood-based tests state that the addition of one class does not result in a better model. Therefore, a p-value smaller than .05 provides support that the model with the extra class is superior. In combination with significance, content analysis by face validity was also considered in determining easily describable classes. Likelihood-based tests included the Vuong-Lo-Mendell-Rubin adjusted likelihood ratio test (VLMR-LRT) and the bootstrapped likelihood ratio test (BLRT) as suggested by Nylund, Asparouhov, and colleagues in 2007.

Class Differentiation. In deciding on the final number of classes, the conceptual superiority was also examined. That is, whether latent subgroups in a solution show logical patterns, are distinct from other subgroups, and can be easily labeled. After the number of classes was selected and interpreted, it was evaluated by how well the classes were differentiated (Masyn, 2013). For this purpose, entropy (i.e.,

the 'surprise or uncertainty') of the model was calculated. Entropy is an omnibus index evaluating the quality of the classification of participants into classes (Clark & Muthén, 2009). An entropy value larger than .80 indicates a "good" classification. Second, the average posterior probabilities (AvePP) were computed as this provides information about how well a given model classifies individuals into their most likely class. For each participant, the AvePP values are reported for their most likely assigned class. Nagin (2005) suggests that values > .70 indicate well-separated classes. Third, class homogeneity reflects how similar people are to each other with respect to their responses in each class, where item probabilities > .70 and < .30 indicate high homogeneity. Fourth, class separation is how dissimilar people are across classes in their item responses, where odds ratios of item probabilities between two classes > 5 and < .20 indicate high separation.

   Class Description. Once an informed decision about the number of classes was made, the subgroups were described in detail. For instance, for the three-class model solution the variable "Adult Emotional Support" differentiated class 2 from the other two classes. This variable is binary and as such, the probability of having a "1" (i.e., lacking adult emotional support) versus a "0" (i.e., having adult emotional support) on that variable for the three classes is provided. The probability of having a "1" for lacking "Adult Emotional Support" for class 2 was 0% while it was 75% for class 1 and 71% for class 3. The patterns of responses across all indicators helped provide an overall picture of the meaning of each class. In addition, for a given person, the probability that the person belongs to the first, second, or third class is provided (using Bayes' theorem). For example, for person 1 these probabilities can be 25% that the person belongs to the first class, 5% probability of belonging to the second class, and 70% of belonging to the third class. This person would, therefore, be characterized as belonging to the third class. Based on these results, participants were categorized and assigned to one of the latent classes. MPLUS Version 8.3 (Muthén and Muthén, 1998-2017) was used for the latent class analysis.

Secondly, bivariate analyses were run to investigate whether there is a statistically significant relation between demographic variables and vulnerability subgroup (i.e., latent class). Because the demographic variables are nominal (or categorical for age) variables, Chi-square analyses were run to investigate the relation between each of the demographic variables and the subgroup. This provided insights into whether there were significant differences in subgroups related to certain demographic variables. A significance level of .05 was used and the following statistics reported: (1) Chi square, (2) p value, and (3) the Cramer's V. The Chi square statistic is the test statistic but does not reflect the size of the relation between the nominal variables on an interpretable, scale (i.e., non-parametric). Therefore, the chi square statistic is complemented by Cramer's V to reflect the strength of the relation between two nominal variables which will always be less than 1. The larger the contingency coefficient the stronger the association. Chi square analyses were run to test the significance of each relationship between gender, age, and race/ethnicity and subgroup membership.

Aim 3. Examine whether identified vulnerability subgroups (aim 2) or demographics are related to different Housing Outcomes.

Aim 3 Statistical Analysis Strategy. Bivariate analyses were run to investigate whether there is a statistically significant relation between demographic variables and the housing outcome variable. Because the Housing Outcome variable is nominal, Chi-square analyses were run to investigate the relation between each of the demographic variables and the Housing Outcome variable. A significance level of .05 was used and the following test statistics reported: (1) Chi square, (2) p value, and (3) the Cramer's V. Chi square analyses were run to test the significance of the relationship between gender and housing outcome, between age and housing outcome, and between race/ethnicity and housing outcome.

Second, the relationship between Vulnerability Subgroup and Housing Outcome was investigated. Housing Outcome is treated as a nominal variable and therefore Chi square analyses were

run. A significance level of .05 was used and the following test statistics reported: (1) Chi square, (2) p

value, and (3) the Cramer's V. After running the chi-square test, the relationship between the

vulnerability subgroup and housing outcome was investigated by running a multinomial logistic

regression, controlling for demographic characteristics.

This chapter presents findings for each aim, including examination of variation by race/ethnicity, gender, and age. Frequencies of vulnerabilities at entry to HUD SHP, patterns which resulted in identifiable subgroups of YAEH, and subgroups housing outcomes associations are presented.

Results Aim 1. Describe and quantify vulnerabilities at the time of entry into the system for HUD Supportive Housing including whether these vary by Race/Ethnicity, Gender, and Age

Tables 4.1-4.3 present the number of participants presenting with each vulnerability, the relationship between each vulnerability variable and demographic factors, and results of bivariate Chi-squared analyses indicating which vulnerability variables differ significantly across categories of the demographic variable. For each χ^2 test, the correlation coefficient (Cramer's V), reflecting the strength of the relationships (i.e., effect size) are presented together with the specific value of the test statistic (i.e., the χ^2 value) with *p*-values smaller than .05 representing significant relationships. The vulnerability variables are grouped by syndemics domain and those that are significantly different across demographic categories are indicated by an *.

Table 4.1 Vulnerability Variable Frequencies by Race/Ethnicity

Having Vulnerability	Total Sample(%)	Black 855(70.2%)	Hispanic 118(9.7%)	White 147(12.1%)	Other 98(8.1%)	Chi-Square Value	p value	Cramers V
Environmental Vulnerability Variables								
Prolonged Homelessness	441(36.2)	307(35.9)	41(34.7)	58(39.5)	35(35.7)	0.82	0.84	0.03
Participant been in CPS	451(37.0)	307(35.9)	42(35.6)	56(38.1)	46(46.9)	4.77	0.19	0.06
Been in juvenile detention	334(27.4)	235(27.5)	30(25.4)	44(29.9)	25(25.5)	0.88	0.83	0.03
Been in jail/prison	479(39.3)	327(38.2)	50(42.4)	62(42.2)	40(40.8)	1.47	0.69	0.04
Social Vulnerability Variables								
Lack Adult Emotional Support	760(62.4)	554(64.8)	74(62.7)	76(51.7)	56(57.1)	10.42*	0.02	0.09

Lack Adult Financial Support	1012(83.)	705(82.5)	102(86.4)	127(86.4)	78(79.6)	3.18	0.36	0.05
Family kicked out LGBTQ	163(13.4)	106(12.4)	13(11.0)	28(19.0)	16(16.3)	6.09	0.11	0.07
Left Family Violence	764(62.7)	520(60.8)	80(67.8)	100(68.0)	64(65.3)	4.67	0.20	0.06
Abused as child	678(55.7)	446(52.2)	65(55.1)	101(68.7)	66(67.3)	19.81*	.0002	0.13
Economic Vulnerability Variables								
Lacking HS diploma/GED	478(39.2)	313(36.6)	67(56.8)	60(40.8)	38(38.8)	17.87*	.0005	0.12
Unstable employment	718(59.0)	504(58.9)	69(58.5)	85(57.8)	60(61.2)	0.30	0.96	0.02
Trafficking Risk $ Control	71(5.8)	49(5.7)	6(5.1)	9(6.1)	7(7.1)	0.47	0.93	0.02
Trafficking Risk Survival Needs	295(24.2)	201(23.5)	25(21.2)	45(30.6)	24(24.5)	4.10	0.25	0.06
Trafficking Risk by Force	162(13.3)	102(11.9)	21(17.8)	19(12.9)	20(20.4)	7.77	0.05	0.08
Individual Condition Vulnerability Variables								
Independent living capacity by mental health self-report	146(12.0)	86(10.1)	16(13.6)	27(18.4)	17(17.3)	11.63*	0.009	0.10
Professional recommendation for mental health services	694(57.0)	459(53.7)	59(50.0)	111(75.5)	65(66.3)	30.22*	<.0001	0.16
Self-Harm Ideation	504(41.4)	335(39.2)	44(37.3)	79(53.7)	46(46.9)	13.03*	0.005	0.10
Having a child	530(43.5)	379(44.3)	58(49.2)	52(35.4)	41(41.8)	5.83	0.12	0.07
Substance Use	307(25.2)	225(26.3)	18(15.3)	36(24.5)	28(28.6)	7.39	0.06	0.08

Statistically Significant

Vulnerability Variable Frequencies by Race/Ethnicity. Six vulnerability variables have a

statistically significant relationship with race/ethnicity. Namely lacking adult emotional support, having

been abused, lacking a high school diploma or GED, self-report of mental health issue limiting ability to

live independently, and having been recommended for mental health treatment by a professional. Black

participants report lacking adult emotional support more often than expected and reported lower than

expected frequencies for lacking a high school diploma, mental health issues limiting their ability to live

independently, having been recommended mental health services by a professional, self-harm, and

having been abused as a child. Hispanic participants reported higher than expected levels of lacking a

high school diploma while reporting lower than expected levels of self-harm and having been

recommended mental health services by a professional. White and Other participants reported higher

than expected frequencies of self-harm, having been abused as a child, mental health issues limiting

their ability to live independently, and having been recommended mental health by a professional.

Although not significant at less than .05, Risk for Trafficking by force appears to be greater than

expected for Hispanic and Other youth (p=.05).

Table 4.2 Vulnerability Variable Frequencies by Gender

Having Vulnerability	Frequency (%)	Female 710 (58.3%)	Male 476 (39.1%)	Gender Minority 32 (2.6%)	Chi-Square Value	p value	Cramers V
Environmental Vulnerability Variables							
Prolonged homelessness	441(36.2)	225(31.7)	202(42.4)	14(43.8)	15.06*	.0005	.1112
Participant been in CPS	451 (37.0)	256(36.1)	186(39.1)	9(28.1)	2.23	.3277	.0428
Been in juvenile detention	334(27.4)	159(22.4)	170(35.7)	5(15.6)	27.70*	<.0001	.1508
Been in jail/prison	479(39.3)	213(30.0)	257(54.0)	9(28.1)	70.47*	<.0001	.2405
Social Vulnerability Variables							
Lack Adult Emotional Support	760(62.4)	425(59.9)	315(66.2)	20(62.5)	4.85	.0886	.0361
Lack Adult Financial Support	1012(83.)	577(81.3)	405(85.1)	30(93.8)	5.61	.0604	.0679
Kicked out because of LGBTQ	163(13.4)	80(11.3)	59(12.4)	24(75.0)	107.95*	<.0001	.2977
Family Violence	764(62.7)	459(64.6)	278(58.4)	27(84.4)	11.34*	.0034	.0965
Abused as a child	678(55.7)	410(57.7)	244(51.3)	24(75.0)	9.84*	.0073	.0899
Economic Vulnerability Variables							
Lacking HS diploma/GED	478(39.2)	292(41.1)	170(35.7)	16(50.0)	5.10	.0783	.0647

Unstable employment	718(59.0)	417(58.7)	279(58.6)	22(68.8)	1.31	.5204	.0327
Trafficking Risk $ Control	71(5.8)	45(6.3)	25(5.3)	1(3.1)	1.04	.5916	.0294
Trafficking Risk Survival Needs	295(24.2)	202(28.5)	72(15.1)	21(65.6)	58.26*	<.0001	.2187
Trafficking Risk by force	162(13.3)	103(14.5)	50(10.5)	9(28.1)	10.23*	.0060	.0916
Individual Condition Vulnerability Variables							
Independent living capacity by mental health self-report	146(12.0)	69(9.7)	74(15.5)	3(9.4)	9.39*	.0092	.0878
Professional recommendation for mental health services	694(57.3)	373(52.5)	299(62.8)	22(68.8)	14.14*	.0008	.1078
Self-Harm Ideation	504(41.4)	290(40.8)	202(42.4)	12(37.5)	.50	.778	.0203
Substance Use	307(25.2)	125(17.6)	171(14.9)	11(34.4)	52.19*	<.0001	.2070
Having a child	530(43.5)	455(64.1)	75(15.8)	0(0.0)	296.10*	<.0001	.4930

Statistically Significant

Vulnerability Variable Frequencies by Gender. There were 12 statistically significant

vulnerabilities by gender. These included experiencing prolonged homelessness, having been in juvenile

detention, having spent time in jail, having been kicked out because they are LGBTQ, experiencing family

violence, having been abused as a child, trading sex for survival needs, risk of trafficking by force, self-

report of mental health issues limiting capacity for independent living, having been recommended

mental health treatment, substance use, and having a child. This means for these vulnerabilities that

gender matters. Males reported higher than expected levels of prolonged homelessness, having been in

juvenile detention, having been in jail, self-report of a mental health issue which limits their capacity to

live independently, having been recommended mental health treatment by a professional, and using

alcohol and/or drugs. As compared to females, males less frequently reported family violence, having

been abused, trading sex for survival, risk of trafficking by force, and having a child. Females reported

higher than expected levels of family violence, having been abused, trading sex for survival needs, risk of

trafficking by force, and having a child. As compared to males, females reported lower frequencies of

prolonged homelessness, juvenile justice involvement, having been in jail, mental health issues limiting

their ability to live independently, having been recommended mental health treatment, and using

substances. Not surprisingly, gender minorities reported higher than expected levels of having been

kicked out because they are LGBTQ. YAEH that identified as gender minorities also report higher than

expected levels of family violence, having been abused as a child, trading sex for survival needs, risk of

trafficking by force, having been recommended mental health treatment by a professional, and

substance use. Finally, YAEH that identified as gender minorities report less than expected levels of

having been in juvenile justice, having been in jail, and having a child.

Table 4.3 Vulnerability Variable Frequencies by Age Category (18-20 younger & 21-24 older)

Having Vulnerability	Frequency (%)	Young 484 (18-20) (39.7%)	Older 734 (21-24) (60.3%)	Chi-Square Value	p value	Cramers V
Environmental Vulnerability Variables						
Prolonged Homelessness	441(36.2)	163(33.7)	278(37.9)	2.22	.1359	.0427
Participant been in CPS	451 (37.0)	215(44.4)	236(32.2)	18.83*	<.0001	.1243
Been in Juvenile Detention	334 (27.4)	154(31.8)	180(24.5)	7.79*	.0052	.0800
Been in Jail/Prison	479 (39.3)	172(35.5)	307(41.8)	4.83*	.0279	-.063
Social Vulnerability Variables						
Lack Adult Emotional Support	760 (62.4)	284(58.7)	476(64.9)	4.74*	.0295	-.062
Lack Adult Financial Support	1012(83.1)	388(80.2)	624(85.0)	4.88*	.0272	-.063
Kicked out because of LGBTQ	163 (13.4)	67(13.8)	96(13.1)	.15	.7016	.0110
Family Violence	764 (62.7)	305(63.0)	459(62.5)	.030	.8647	.0049
Abused as Child	678 (55.7)	280(57.9)	398(54.2)	1.56	.2123	.0357
Economic Vulnerability Variables						
Lacking HS diploma/GED	478 (39.2)	255(52.7)	223(30.4)	60.86*	<.0001	.2235
Unstable employment	718 (59.0)	287(59.3)	431(58.7)	.04	.8409	.0058

Trafficking Risk $ Control	71(5.8)	27(5.6)	44(6.0)	.09	.7617	-.008
Trafficking Risk for Survival Needs	295(24.2)	106(21.9)	189(25.7)	2.35	.1250	-.004
Trafficking Risk by Force	162(13.3)	45(9.3)	117(15.9)	11.16*	.0008	-.096
Individual Condition Vulnerability Variables						
Independent living capacity by mental health self-report	146(12.0)	51(10.5)	95(12.9)	1.60	.2059	-.036
Professional recommendation for mental health	694(57.0)	283(58.5)	411(56.0)	.73	.3930	.0245
Self-Harm Ideation	504(41.4)	198(40.9)	306(41.7)	.07	.7867	-.008
Substance Use	307(25.2)	108(22.3)	199(27.1)	3.56	.0591	-.054
Having a child	530(43.5)	155(32.0)	375(51.1)	43.13*	<.0001	-.188

Statistically Significant

Vulnerability Variable Frequencies by Age. There are eight vulnerabilities which are significant by age. These are having been in CPS, having been in Juvenile Justice, having been in jail, lacking adult emotional support, lacking adult financial support, lacking a high school diploma or GED, risk of trafficking by force, and having a child. Younger participants (18-20) reported higher than expected frequencies of involvement in CPS, juvenile detention, and less frequently than expected lack of a high school diploma, having been in jail, lacking adult emotional support, lacking adult financial support, risk of trafficking by force, or having a child. Older participants aged 21-24 report having been in jail, lacking adult emotional support, lacking adult financial support, risk of trafficking by force, and having a child in higher-than-expected levels while they report having been in CPS, juvenile justice, and lacking a high school diploma in lower than expected numbers.

The remainder of vulnerability frequencies as captured on the Coordinated Entry Triage Tool but not included in Latent Class Analysis are presented in Table 4.4.

Table 4.4 Frequencies of Vulnerability Variables Removed for Latent Class Analysis

Have a child in CPS custody (Missing 761)	Frequency	(% total n)(%asked)
No		399(32.8)(87.3)
Yes		58(4.8)(12.7)
Have a child in CPS custody past 2 years (Missing 1081)	Frequency	(% total n)(%asked)
No		94(7.7)(68.6)
Yes		43(3.5)(31.4)
Trafficking Risk by control of $ (Missing 1147)		Frequency(%total n)
Yes		71(5.8)
Currently Receiving Mental Health Treatment (Missing 524)		Frequency (%total)(%asked)
No		226(18.6)(32.6)
Yes		468(38.4)(67.4)
Suicide Attempt (Missing 714)	Frequency	(%total)(%asked)
No		153(12.6)(30.4)
Yes		351(28.8)(69.6)
Substance Use Type Missing 911, only answered if yes use drugs/alcohol		
Marijuana		307(100)
Alcohol		307(100)
Synthetics		34(11.1)
Meth, Crack, Cocaine, Heroin		30(9.5)
Consequences of Alcohol/Drug Use Missing 911, only answered if yes use drugs/alcohol		
Arrest		115(37.5)
Shelter/Street		136(44.3)
Prostitution		49(16.0)
Theft		1(0.3)
Domestic Violence		70(22.8)
Lose employment		64(20.8)

Results Aim 2. Vulnerability Subgroups Described

Subgroups of homeless youth with different combinations of vulnerabilities were identified and these subgroups were different by demographics. As explained in chapter 3, a latent class analysis (LCA) was used to identify unobserved subgroups based on a set of vulnerability variables (McLachlan & Peel, 2000).

Latent Class Analysis Results. First, a one-class LCA was run to serve as a comparative baseline for models resulting in more than one class. After examining the one-class LCA, the number of classes was gradually increased by one. Each LCA solution was examined to evaluate whether the addition of an extra class resulted in a statistically, and qualitatively superior solution. In Table 4.5, you can find the model comparison using Goodness of fit statistics (BIC, SABIC, CAIC, AWE), the LogLikelihood value, and

the Likelihood Ratio tests results (VLMR). The entropy is presented as well, indicating whether the

model succeeded in class differentiation.

Table 4.5 Latent Class Analysis Goodness of Fit Indices, LogLikelihood & Entropy per Model

Fit Index	Baseline Model 1 Class Solution	2 Class Solution	3 Class Solution	4 Class Solution	5 Class Solution
Bayesian Information Criteria (BIC)	26189.854	25171.913	25086.958	25090.915	25031.321
Sample Size Adjusted BIC (SABIC)	26132.678	25054.386	24909.079	24852.684	24732.738
Consistent Akaike Information Criterion (CAIC)	26097.964	24983.029	24801.080	24708.042	24551.454
Approximate Weight of Evidence Criterion (AWE)	26144.507	25024.699	24863.376	24901.966	24655.005
Loglikelihood (LL)	-13030.982	-12454.51	-12344.540	-12279.021	-12181.727
Vuong-Lo-Mendell-Rubin adjusted likelihood ratio test (VLMR-LRT p-value)	NA	$p < .0001$	$p = .0045$	$p = .0165$	$P = .3594$
Entropy	NA	0.719	0.760	0.754	0.701

   Based on the Goodness of fit statistics (BIC, SABIC, CAIC, AWE), model 3 or model 4 were the

models with the best model fit. The Vuong-Lo-Mendell-Rubin adjusted likelihood ratio test indicated

that the four-class solution resulted in a statistically significant improvement compared to the three-

class solution if a significance level of .05 is used (p = .0165). This indicates that the four class did

improve the model fit significantly. The five-class solution did not significantly improve the model fit

(p=.3594) compared to the four-class solution. However, by evaluating all the fit indices and the entropy

(the closer to .08 the better), there is very little improvement of the four-class solution compared to the

three-class solution. Because of parsimony (i.e., simplest model), and interpretation of the classes by

face validity (substantive evaluation of the classes), the three-class solution was chosen. The three-class

solution has more face validity in terms of presenting easily interpretable classes.

Next, the average posterior probabilities (AvePP) were computed. This provides information about how well a given model classifies individuals into their most likely class. For each participant, the AvePP values are reported for their most likely assigned class. Values > .70 indicate well-separated classes. For the 390 participants assigned to class 1, the mean and the median AvePP equals 0.848 and 0.901 respectively (mode is 0.99). Only 10% of the participants assigned to class 1 have an AvePP smaller than 0.700 (with smallest value being 0.475). For the 155 participants assigned to class 2, the mean and median AvePP equals 0.894 and 0.966 respectively (mode is 0.966). 10% of the participants assigned to class 2 have an AvePP smaller than 0.700 (with smallest value being 0.384). For the 673 participants assigned to class 3, the mean and median AvePP equals 0.917 and 0.986 respectively (mode is 1.00). Less than 10% of the participants assigned to class 3 have an AvePP smaller than 0.700 (with smallest value being 0.422). This provides evidence that the three class solution resulted in well-separated classes. The avePP per class is displayed in boxplots providing additional evidence for class separation.

Figure 4.1 Average Posterior Probabilities to be Class 1
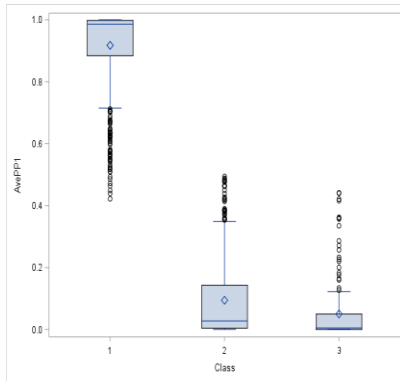
Figure 4.2 Average Posterior Probabilities to be Class 2
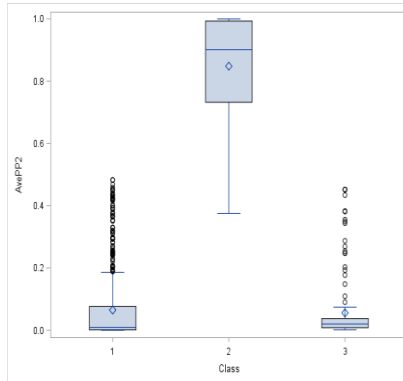
Figure 4.3 Average Posterior Probabilities to be Class 3
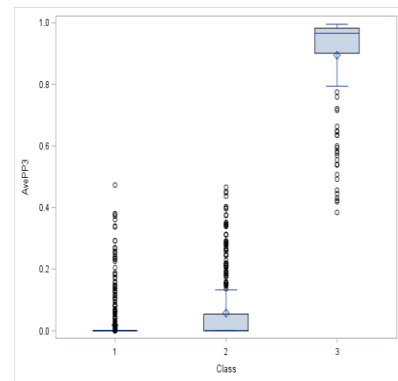
Next, class homogeneity reflects how similar people are to each other with respect to their responses in each class, where item probabilities > .70 and < .30 indicating high homogeneity. The degree to which the probabilities for a particular latent class are close to 0 and 1 indicate the degree of homogeneity. Table 4.6 provides the probabilities of participants belonging to a certain class having a 1 for each of the vulnerabilities. This table is also used to conduct content analysis of the three identified

latent classes. In the table below, values representing homogeneity (lower than .30 and higher than .70)

are indicated. If there are high and low probabilities within vulnerabilities, then this indicates class

separation which was formally tested using odds ratio (next table). Based on the results of table 4.6,

only a few vulnerabilities have homogeneity. This means that the participants within a class, on average,

did not consistently have a low or high probability for that vulnerability. For example, participants within

class 3 do not answer in the same way for prolonged homelessness and this is not necessarily a

distinguishing vulnerability for this class. However, four vulnerabilities are homogenous within classes

based on the results of table 4.6. These are lacking adult emotional support, lacking adult financial

support, having been abused as a child, and having been recommended mental health services by a

professional, all of which have values smaller than .30 and higher than .70. However, it is also the case

that some vulnerability variables have values slightly exceeding .30 and are slightly smaller than .70.

These vulnerability variables might also be able to discriminate between classes. These include having

experienced abuse as a child, experiencing family violence, and self-harm ideation. This is formally

tested by the odds ratio test (table 4.6).

Table 4.6 Latent Class Analysis Homogeneity Results for Three-Class Solution

Probability of Having Vulnerability	Latent Class 1	Latent Class 2	Latent Class 3
Prolonged homelessness	0.230	0.185	0.485
Been in Juvenile Justice	0.148	0.242	0.356
Been in Jail	0.307	0.231	0.486
Been in CPS	0.218	0.357	0.462
Lacking Adult Emotional Support*	0.753	0.000	0.712
Lacking adult Financial Support*	0.967	0.216	0.913
Kicked out because LGBTQ	0.048	0.037	0.209
Experiencing Family Violence	0.338	0.432	0.846
Experiencing Abuse	0.216	0.383	0.799
Self-harm ideation	0.179	0.178	0.611
Using Drugs or Alcohol	0.149	0.036	0.368

Lacking a diploma/GED	0.283	0.436	0.444
Unstable Employment	0.518	0.621	0.623
Trading Sex for Survival Needs	0.046	0.051	0.406
Trafficked by Force	0.036	0.043	0.212
Self-Report Mental Health Issue	0.033	0.050	0.188
Professional Mental Health Recommendation*	0.290	0.215	0.824
Having a Child	0.495	0.486	0.387

vulnerabilities which were homogenous

Lastly, class separation indicates how dissimilar people are across classes in their item responses. Odds ratios of item probabilities were calculated in order to evaluate which vulnerability variables indicate distinct class separation. This helps for the interpretation of the classes (content analysis). NA in the table 4.7 is a result of there being a 0 for Lacking Adult Emotional Support in class 2 (Table 4.6); therefore, comparison on this vulnerability variable cannot be made.

Table 4.7 Latent Class Analysis Results for Odds Ratio

	Class 1 vs Class 2		Class 1 vs Class 3		Class 2 vs Class 3	
Vulnerability Variable	Odds ratio [SE]	p-value	Odds Ratio SE]	p - value	Odds Ratio [SE]	p - value
Prolonged homelessness	1.313[0.514]	.542	0.317[0.074]	<.0001	.241[0.070]	<.0001
Juvenile Detention	0.544[0.220]	.038	0.314[0.078]	<.0001	0.577[0.169]	.012
Been in Jail	1.468[0.556]	.400	0.468[0.106]	<.0001	0.319[0.089]	<.0001
Been in CPS	0.502 [0.170]	.003	0.324[0.067]	<.0001	0.645[0.169]	.036
Lacking Adult Emo. Support	NA	NA	1.233[0.573]	.685	NA	NA
Lacking adult Fin. Support	105.697[108.065]	.333	2.764[1.325]	.183	0.026[0.029]	<.0001
Kicked out because LGBTQ	1.306[0.932]	.743	0.192[0.071]	<.0001	0.147[0.084]	<.0001
Experienced Fam. Violence	0.670[0.220]	.135	0.093[0.024]	<.0001	0.139[0.047]	<.0001
Experienced Abuse as Child	0.443[0.157]	<.001	0.069[0.020]	<.0001	0.156[0.055]	<.0001
Self-harm ideation	1.002[0.478]	.996	0.138[0.030]	<.0001	0.138[0.057]	<.0001
Using Drugs or Alcohol	4.646[3.487]	.296	0.300[0.094]	<.0001	0.065[0.040]	<.0001
Lacking a diploma/GED	0.510[0.137]	<.001	0.493[0.093]	<.0001	0.967[0.216]	.878

Unstable Employment	0.657 [0.161]	.033	0.652[106]	.001	0.992[0.218]	.972
Trading Sex or Something else for Survival Needs	0.901[0.700]	.888	0.070[0.031]	<.0001	0.078[0.041]	<.0001
Trafficking Risk by Force	0.830[0.624]	.785	0.140[0.057]	<.0001	0.168[0.100]	<.0001
Self-Report Mental Health	0.654[0.489]	.479	0.147[0.071]	<.0001	0.225[0.113]	<.0001
Prof. Mental Health Rec.	1.488[0.712]	.493	0.087[0.026]	<.0001	0.059[0.021]	<.0001
Having a Child	1.034[0.399]	.932	1.547[0.361]	.130	1.496[0.399]	.214

Figure 4.4 Vulnerability Variable Subgroup by Latent Class Analysis Graphed
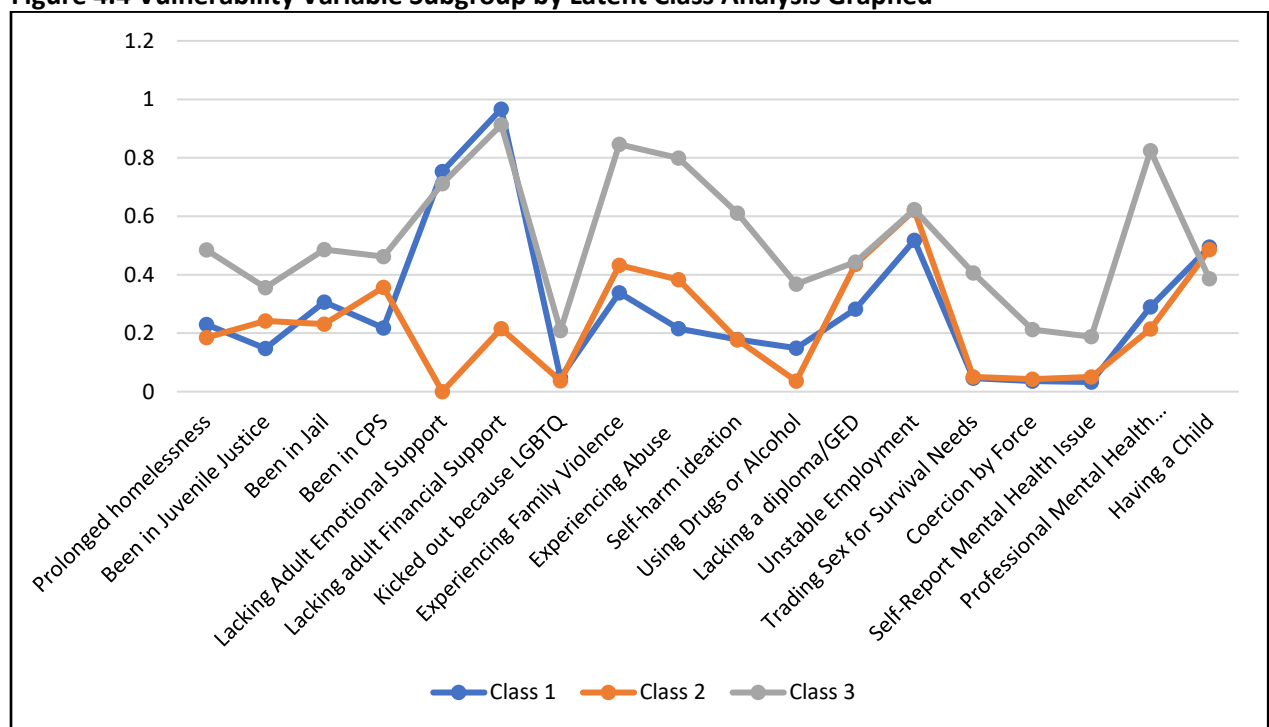
The classes were named to reflect these differences as Class 3 (HVLS) = "High Vulnerability/Low Support", Class 2 (LVHS) = "Low Vulnerability/High Support", and Class 1 (LVLS) = "Low Vulnerability/Low Support".

Classes 1 and 2 differ primarily in juvenile justice and CPS system involvement, experiencing abuse, lacking a high school diploma/GED, unstable employment, and adult emotional and financial support. Class 2 is significantly higher than Class 1 for these vulnerability variables except that they have

adult emotional and financial support. For all other vulnerability variables, the two classes are similar.

Classes 1 and 3 differ significantly in all variables except that they both lack adult emotional and

financial support. Classes 2 and 3 differ significantly in all variables except for lacking a high school

diploma/GED and unstable employment.

Class 3 represents the highest vulnerability subgroup and has low support. Those assigned to

Class 3 were especially high for lacking adult emotional and financial support, having experienced family

violence, having experienced abuse, and having been recommended mental health treatment by a

professional.

The second focus of aim 2 was to identify whether there were significant differences between

the identified latent classes in terms of demographic variables.

Latent Class Analysis Subgroup Demographic Differences. To address this portion of aim 2,

bivariate relationships between each of the three demographic variables (age, gender, and

race/ethnicity) and the latent class variable were explored and tested for statistical significance. The

results are presented in table 4.8.

Table 4.8 Relationship Between Vulnerability Variable Subgroups & Demographic Variables

	Low Vulnerability, Low Support Subgroup 1 390(32.0%)	Low Vulnerability, High Support Subgroup 2 155(12.7%)	High Vulnerability, Low Support Subgroup 3 673(55.3%)	χ^2	*p*-value	Cramer's V
Age Category				21.692*	<.0001	0.1335
Younger (18-20)	126 (32.3)	83 (53.6)	275 (40.9)			
Older (21-24)	264(67.7)	72 (46.5)	398 (59.1)			
Gender				13.457*	.0092	0.074
Female	236 (60.5)	98 (63.2)	376 (55.9)			
Male	151 (38.7)	55 (35.5)	270 (40.1)			
Minority	3 (0.8)	2 (1.3)	27 (4.0)			

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Race/Ethnicity				18.089	.2027	0.0862
Black	293(74.6)	114(73.6)	450(66.9)			
Hispanic	40(10.3)	13(8.4)	65(9.7)			
White	35(23.8)	15(9.6)	97(14.4)			
Other	24 (24.5)	13(8.4)	61(9.1)			

Statistically Significant

Age Category Frequencies by Subgroup. There was a statistically significant relation found between subgroup and age [χ^2(12) = 29.34, p < .01]. The correlation coefficients (Phi coefficient = .155, Contingency coefficient = .153, and Cramer's V = .110) reflect the size of the associations and were all moderately large. Low Vulnerability, Low Support Subgroup (1) has more older participants. The highest percentage of young participants was in the Low Vulnerability, High Support (LV/HS) subgroup (2). The high vulnerability, low support subgroup (HV/LS) (3) was found to be a mix of participants by age having more younger participants compared to subgroup 1 and more older ones compared to subgroup 2.

Gender Frequencies by Subgroup. There was a statistically significant relation between subgroup and gender [χ^2(4) = 13.457, p = .0092]. The low vulnerability, low support subgroup (1) was more male than the low vulnerability, high support subgroup (2). The low vulnerability, high support subgroup (2) was more female than either of other two subgroups. The highly vulnerable, low support subgroup (3) was less female, more male and more gender minority as compared to the other two subgroups. There was a stark overrepresentation of gender minorities (84.4%) found in this highest vulnerability, least supported subgroup.

Race/Ethnicity Frequencies by Subgroup. The relationship between race/ethnicity and subgroup was not statistically significant [χ^2(14) = 15.64, *p* = .208]. The distribution of race/ethnicity was similar across subgroups. There are slightly more "other" and white participants in the low vulnerability, low support subgroup (1) as compared to the other subgroups and slightly fewer black participants in the high vulnerability, low support subgroup (3) as compared to the other subgroups.

Figure 4.5 Age Category Distribution	Figure 4.6 Gender Distribution	Figure 4.7 Race/Ethnicity

Figure 4.5 Age Category Distribution
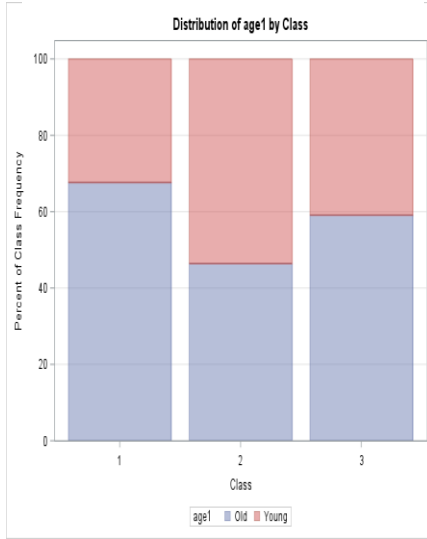
Figure 4.6 Gender Distribution
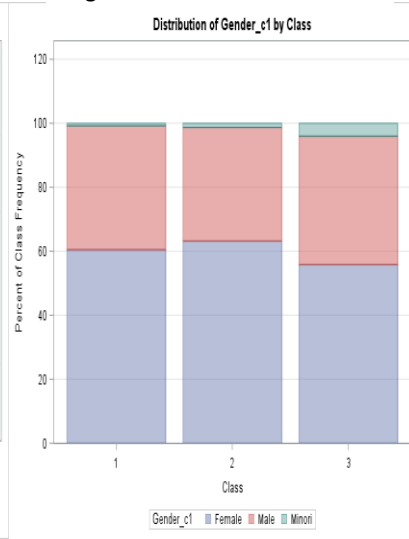
Figure 4.7 Race/Ethnicity
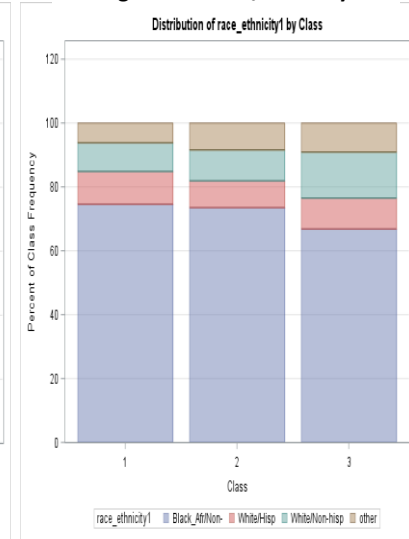
Results Aim 3

The relationships between Housing Outcomes, Vulnerability Variable Subgroups (aim 2), and demographics are discussed in relation to Housing Outcomes in this section.

Controlling for demographic factors, the vulnerability subgroup has a significant relationship to different housing outcomes. The dependent variable was the variable "Housing Outcome" that had three categories. The independent variable of interest was the vulnerability variable subgroup (i.e., latent class variable) which had three categories and as such two dummy coded variables were needed. The control variables were three categories of demographic variables and were also nominal. For this reason, a multinomial logistic regression was run. All the variables in the model are categorical and as such, a reference category was chosen. For subgroup variable, low vulnerability low support group (i.e., latent class 1) was the reference category. For race/ethnicity the reference category is white/non-Hispanic, for gender the reference category is male, and the reference category for age is young (18-20 years of age). The results are interpreted by these chosen reference categories. The multinomial logistic regression approach models the probabilities of the three housing outcome categories directly as a set of two logits. These compare each of the two other housing outcome categories to the reference

categories. This implies that the logits are obtained for the comparison of housing outcome two (i.e., temporarily housed at exit) with housing outcome one (i.e., permanently housed at exit), for the comparison of housing outcome three (i.e., never housed) with housing outcome one (i.e., permanently housed), and for the comparison of housing outcome two (i.e., temporarily housed) with outcome three (i.e., never housed). All these comparisons are discussed in detail, and the results for the set of comparisons are summarized in tables.

The results indicated that the multinomial logistic regression model (including vulnerability subgroup, gender, age, and race/ethnicity) was statistically significant. This was indicated by the large values for the Likelihood ratio test [$\chi^2(16)$ = 156.5047, p<.0001], Score [$\chi^2(4)$ = 164.7478, p<.0001)], and Wald test [$\chi^2 94$) = 134.1223, p<.0001]. Next, it was clear that the vulnerability subgroup has a statistically significant association with housing outcomes [$\chi^2(4)$ = 82.3525, p < .0001] while controlling for the demographic variables gender, age, and race/ethnicity. The control variable gender [$\chi^2(4)$ = 40.8415, p < .0001] was also statistically significant, and the same applied for race/ethnicity [$\chi^2(6)$ = 16.0761, p = .0134]. The only control variable that was not statistically significant was age [$\chi^2(2)$ = 2.7193, p < .001].

Next, more detailed results are presented to fully understand for which housing outcomes the vulnerability subgroup was associated and to understand the relations of the demographic variables. The results of the multinomial logistic regression are provided on a logit scale and as such these are hard to interpret. Therefore, the results are provided in terms of odds ratio or relative risks. In that way it can be evaluated whether participants who are young, male, and white and belong to the LVHS subgroup (2) are more likely to have been temporarily housed at exit (i.e., housing outcome 2) vs. never housed (i.e., housing outcome 3) or permanently housed at exit (i.e., housing outcome 1). The full set of results are presented in Tables 4.9 to Table 4.11 per set of outcome comparisons. Both the odds ratio estimates and the 95% confidence intervals are presented. An odds ratio of one indicates that the odds of a certain

outcome are the same between the comparisons made. Therefore, confidence intervals that do not

contain the value one (1) indicate that the odds ratio estimate is statistically significant for a significance

level of .05. The first table compares odds of being temporarily housed versus having been permanently

housed at exit. Second, the results are presented for the comparison of never being housed versus

permanently housed at exit. Last is the comparison for temporarily housed versus never housed at exit.

Table 4.9 Odds Ratio for Housing Outcome at Exit: Temporarily Housed vs. Permanently Housed

Effect	Odds Ratio	95% Confidence Interval	
		Lower	Upper
Vulnerability Variable Subgroup			
LVHS (2) compared to LVLS (1)	0.739	0.235	2.324
HVLS (3) compared to LVLS (1)	1.172	0.640	2.149
Age Category			
Older vs Younger	0.678	0.424	1.084
Race/Ethnicity			
Black compared to White	4.321*	1.466	12.732
Hispanic compared to White	2.169	0.537	8.761
Other compared to White	4.354*	1.174	16.150
Gender			
Female compared to Male	0.776	0.471	1.279
Gender Minority compared to Male	3.488*	1.353	8.995

* Statistically significant

Subgroups and Demographics by Housing Outcome Temporary vs. Permanently Housed at

Exit. Race/ethnicity and gender were significantly associated with having been temporarily housed at

exit as compared to having been permanently housed at exit from the program. Black and Other

participants were 4.3 times more likely than white participants to have only been temporarily housed

versus permanently housed at exit. Gender minorities were 3.5 times more likely than males to have

been temporarily housed versus having been permanently housed at exit. For those who received HUD

SHP, there were differences by race/ethnicity and gender for housing outcomes.

Subgroups and Demographics by Housing Outcome Never Housed vs. Permanently Housed at

Exit. Next, we compared latent class, age, race/ethnicity, and gender between never having been

housed (housing outcome three) and permanently housed (housing outcome one) at exit.

Table 4.10 Odds Ratio for Housing Outcome at Exit: Never Housed vs. Permanently Housed

Effect	Odds Ratio	95% Confidence Interval	
		Lower	Upper
Vulnerability Variable Subgroup			
LVHS (2) compared to LVLS (1)	1.229	0.680	2.220
HVLS (3) compared to LVLS (1)	0.310*	0.219	0.440
Age Category			
Older vs Younger	0.858	0.635	1.160
Race/Ethnicity			
Black compared to White	0.824	0.530	1.281
White/Hispanic compared to White	1.190	0.635	2.233
Other compared to White	1.139	0.583	2.227
Gender			
Female versus Male	0.579*	0.426	0.789
Minority versus Male	0.261*	0.099	0.692

The high vulnerability low support subgroup, females, and YAEH identifying at gender minorities

are more likely to have been permanently housed at exit vs. never housed through HUD Supportive

Housing.

Table 4.11 Odds Ratio for Housing Outcome at Exit: Temporarily Housed vs. Never Housed

Effect	Odds Ratio	95% Confidence Interval	
		Lower	Upper
Vulnerability Variable Subgroup			
LVHS (2) compared to LVLS (1)	0.601	0.215	1.682
HVLS (3) compared to LVLS (1)	3.779*	2.196	6.504
Age Category			
Older vs Younger	0.790	0.515	1.213
Race/Ethnicity			
Black compared to White	5.243*	1.844	14.907
Hispanic compared to White	1.822	0.480	6.91
Other compared to White	3.823*	1.113	13.134
Gender			
Female compared to Male	1.339	0.852	2.103
Minority compared to Male	13.349*	5.183	34.377

* Statistically Significant

Subgroups & Demographics by Housing Outcome Temporary at Exit vs. Never Housed. The

HVLS subgroup (class 3) is 3.8 times more likely to have been temporarily housed vs. never having been

housed as compared to the LVLS subgroup (class 1). By race/ethnicity, Black (5.2 X more likely) and

Other (3.8 X more likely) participants were more often temporarily housed at exit vs. never housed as

compared to their white peers. Finally, gender minorities were 13.3 times more likely than their male

peers of having been temporarily housed vs. never being housed.

Discussion, Limitations, & Implications

This chapter is presented in four sections. First, each aim's findings are briefly summarized in the context of prior research. Second, the findings are discussed considering this researcher's prior professional experience. Third, limitations of the study are explained. And fourth, the implications for social work practice are explored. Table 5.1 summarizes the results discussed in the previous chapter.

Table 5.1 Summary of Significantly Higher Vulnerabilities by Race/Ethnicity, Gender, & Age

	RACE / ETHNICITY				GENDER			AGE	
	White	Black	Hispanic	Other	Male	Female	Gender Minority	Younger	Older
Prolonged homelessness					✓				✓
Lack adult emotional support		✓							✓
Lack adult financial support									✓
Having been abused	✓			✓		✓	✓		
Self-report MH issues	✓			✓	✓				
Self-harm ideation	✓			✓					
Recommended MH treatment	✓			✓	✓		✓		
Using drugs or alcohol					✓		✓		
Trade sex for survival needs						✓	✓		
Risk of trafficking by force				✓*		✓	✓		✓
Kicked out b/c LGBTQ							✓		
Family violence						✓	✓		
Having a child						✓			✓
Lacking HS Diploma/GED			✓					✓	
Time in Jail					✓				✓
Juvenile detention					✓			✓	
Having been in CPS								✓	

✓*Statistically Significant (✓*almost statistically significant p=.05)*

Discussion Aim 1

Vulnerabilities at the time of entry into the system for HUD Supportive Housing are quantified below including significant variances by race/ethnicity, gender, and age.

Frequencies of Vulnerabilities. Six vulnerabilities were reported by the majority of YAEH in this sample. These were lacking adult financial support (83%), leaving home because of family violence

(62.7%), lacking adult emotional support (62.4%), being unstably employed (59.0%), having been

recommended mental health by a professional (57.0%), and having been abused as a child (55.7%).

Lacking adult financial and emotional support are among the top three most often reported

vulnerabilities. When considering prior research which indicates the importance of personal

relationships with others for YAEH achieving stable outcomes across multiple domains, this may be a

critical area for continued research (Barman-Adhikari, et. al., 2016). It is not surprising that YAEH at

entry to HUD SHP also reported family violence and abuse often as previous research has described

family conflict as the most common reason for experiencing homelessness (Congressional Research

Service, 2019). This also aligns with traumas findings about trauma described in ACE homeless literature

(Montgomery, 2013) and adds to previous research indicating this vulnerability as a significant predictor

for experiencing homelessness (Edidin, Ganim, Hunter, & Karnik, 2012; Moore, 2006; Toro, Dworsky, &

Fowler, 2007). Having been recommended mental health services may also not be surprising since prior

research has found high rates of mental health issues among YAEH as both predictors and an outcome

of living on the street (Homelessness Policy Research Institute, 2019; Somers, et. al., 2013). A link

between mental health issues and unstable employment in recent research among former foster youth

may also shed some light on findings in this study demonstrating similar rates of reporting for these two

vulnerabilities captured on this tool (Lenz-Rashid, 2006).

     Vulnerabilities and Race/Ethnicity. Disproportionality of BIPOC YAEH at entry to HUD SHP was

further demonstrated by this study's findings with over 88% of the sample being BIPOC vs. 77% BIPOC

young adults in the general Harris County population (Kinder, 2019). This is in line with research

reporting similar disproportionality among all Black youth as compared to their White peers (Olivet, et.

al., 2021; Rice, 2013). There were several vulnerabilities which were different by Race/Ethnicity. For

example, among Black participants in this sample, there were fewer than expected self-report of having

been abused as a child even as data from a longitudinal study among adolescents until age 26

demonstrated history of emotional abuse as a child having approximately 39% higher odds of

experiencing housing insecurity in adulthood (Curry, 2017). This may be one piece of information

indicating black young people are at higher risk of homelessness in general, regardless of known

vulnerabilities (Olivet, et. al., 2018). In consideration of recent research finding Coordinated Entry triage

tools tend to skew white, how these tools capture having experienced abuse as a child may be one

vulnerability pointing to this inequity (Cronley, 2020; Wilkey, Donegan, Yampolskaya, & Cannon, 2019).

It also may be true that this phenomenon is genuinely lower in Black youth or may be a result of CE TT

tools failing to capture abuse in terms Black young adults themselves use (Henderson, 2019). Either way,

since Coordinated Entry is typically administered at emergency shelters and research indicates non-

white youth are more likely to enter emergency shelters, this finding needs further exploration (Ha,

Thomas, Narendorf, & Santa Maria, 2018). Black participants also reported lacking adult emotional

support in higher-than-expected numbers than as compared to their white peers. This may not be

surprising considering child welfare related research indicating higher likelihood for Black children to be

removed from their families of origin as compared to other races (Harris, 2014). Whether because of

resilience (Rew, et. al., 2004) or factors indicative of implicit bias, Black participants also reported higher

rates of having a high school diploma and lower than expected rates of having been recommended for

mental health treatment as compared to their white peers.

  Vulnerabilities and Gender. In terms of gender, males in this study were more likely to report

prolonged homelessness (12 or more months or >4 episodes), having been recommended mental health

treatment, and having been in juvenile justice and/or jail. This sample among YAEH mirrors point in time

counts which overwhelmingly count males (70%), found men are much more likely to be represented

among the unsheltered or street homeless population (Moses & Jonosko; 2018), and men tend to have

higher incidence of mental health issues and law enforcement encounters than their sheltered peers

(Schick, 2019). The risk of prolonged homelessness does not appear to be equal among genders and raises concerns that current services need may better respond to females (NAEH, 2019).

Among LGBTQ+ YAEH in this sample, gender minority youth (i.e., trans and gender non-conforming) were most likely to report being kicked out by their families after coming out and were most likely to trade sex for their survival needs. It was also found that YAEH who identified as gender minority overwhelmingly reported lacking adult emotional or financial support. This further emphasizes the need for specialized services for YAEH who identified as a gender minority including representation among mentors for these youth at highest risk for poor outcomes, including death, while on the street (Morton, et. al., 2018). Although not gender, LGB identity (inferred by 'kicked out' variable) was also found to be statistically significant and warrants inclusion in future HUD mandated demographic collection standards, currently not required (Harris, 2017).

Vulnerabilities and Age. Finally, younger participants (ages 18-20) at entry to HUD SHP were more likely to report having been in CPS, lacking a high school diploma or GED, and being at risk for trafficking by force than their older (21-24) counterparts. The link between aging out of child welfare systems and homelessness is well-established with rates as high as one-fifth of all youth exiting foster care reporting unstable housing or experiences of homelessness and as many as twenty percent experiencing homelessness the day they age out (Fowler, et. al., 2017). Further investigation is warranted to understand why older youth (21-24) in this sample report history of CPS involvement in less than expected numbers. It may be that policies extending child welfare to ages 21 and in some cases 23 have resulted in fewer older youth exiting from CPS to homelessness. Regardless, linking homelessness prevention or diversion supports as early as possible to young adults exiting child welfare may serve to further mitigate this vulnerability. Although older participants were less likely to report having been in CPS and this is in line with prior research (Kelly, 2018), they were more likely to report having a child and having an open CPS case related to that child. Although it is somewhat unclear the

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role child welfare involvement plays in intergenerational homelessness, research indicates a parent who experiences homelessness also suffered abuse and/or neglect as a child (Cutuli, Montgomery, Evans-Chase, & Culhane, 2017; Hayes, Zonneville, & Bassuk, 2012) including lack of care (i.e., neglect) and physical abuse (Herman, Susser, Struening, & Link, 1997), and these traumatic experiences as well as separation from your family are associated with higher risk for future homelessness (Radcliff, Crouch, Strompolis, & Srivastav, 2019; Eastwood & Birnbaum, 2007).

Discussion Aim 2

Subgroups of YAEH with different combinations of vulnerabilities and differences by demographics are discussed in this section.

Vulnerability Subgroups. Patterns of responses were found which were used to describe three subgroups of YAEH. The three vulnerability subgroups were categorized as 1) low vulnerability, low support (LVLS), 2) low vulnerability, high support (LVHS), and 3) high vulnerability, low support (HVLS). These subgroups were differentiated significantly by level of vulnerabilities and by adult support. The low vulnerability high support subgroup (2) reported 100% access to adult emotional support and very high adult financial support. This is in stark contrast with participants in the high vulnerability low support subgroup (3) who reported very low levels of adult support (emotional or financial). Subgroup 3 was the largest of the three subgroups (55.3%) and also had the highest vulnerabilities, most distinctly higher for having been recommended mental health treatment, having experienced family violence, and having experienced abuse as a child as compared to the other two subgroups. This is of particular concern as compounded vulnerabilities are associated with prolonged homelessness (Patterson, Moniruzzaman, & Somers, 2014).

In previous studies finding subgroup typologies among YAEH, adult support was also a differentiating vulnerability (Narendorf, et. al., 2018). As was mentioned in Aim 1, lacking adult

emotional support was reported 62.4% of the time; however, vulnerability subgroup 2 was distinguished by having no participants who lacked adult emotional support.

Vulnerability Subgroup Differences by Demographics. There were differences by demographics among subgroups found in this study. It is important to keep in mind that the highest vulnerability, lowest support subgroup (3), had the most participants and was disproportionately larger than subgroups 1 and 2; however, there remain significant findings. For example, given its size, fewer young adults did not appear to receive any housing intervention (i.e., never housed = 395/46.5%).

Vulnerability Subgroups and Race/Ethnicity. The three subgroups were evenly distributed by race/ethnicity. Race/ethnicity were defined by HUD standards for demographics. It appears that participants had the same level of exposure to vulnerabilities regardless of race/ethnicity and future tools may best be guided by individual exposure to vulnerabilities.

Vulnerability Subgroups and Gender. There were significant gender differences across the three identified vulnerability subgroups. In the high vulnerability low support subgroup (3), there were higher numbers of males and YAEH identifying as gender minorities compared to females. The HVLS subgroup (3) had 84.4% of the gender minorities. There were also higher than expected number of females in subgroup (2), the lower vulnerabilities and high support subgroup. It is therefore important to consider collection of gender minority demographics in standardized tools (Glick, Theall, Andrinopoulos, & Kendall, 2018) prioritizing for limited services. This finding speaks to the importance of fully implementing HUD's Equal Access rule which prohibits the discrimination of services, including housing based on gender identity (HUD, 2021).

Vulnerability Subgroups and Age. The lower vulnerability high support subgroup (2) had more younger participants, particularly as compared to the lower vulnerability low support subgroup (1). The low vulnerability low support subgroup (1) is older than the other two groups, the low vulnerability high support subgroup (2) is younger than the other two, and the high vulnerability low support subgroup (3)

has a mix of younger and older participants. Since subgroup 2 was also most likely to achieve permanent

housing at exit, perhaps being younger indicates less time spent experiencing homelessness and fewer

vulnerabilities as a result (HHS, 2016).

Discussion Aim 3

Vulnerability subgroups were found to be associated with different housing outcomes and

housing outcomes were different by demographics.

Differences by Housing Outcomes. Differences in housing outcomes by vulnerability variable

subgroups were demonstrated, with the high vulnerability low support subgroup (3) most likely to have

been only temporarily housed at exit while the low vulnerability high support subgroup (2) was most

likely to have been permanently housed. It is especially concerning that YAEH in the high vulnerability

low support subgroup (3) were least likely to achieve permanent housing at exit. In other words,

involvement in HUD SHP did not likely result in permanent housing at exit for this largest and most

vulnerable group of YAEH entering HUD SHP. This may give further support to tools that prioritize

limited HUD SHP both by vulnerabilities and by assignment to programs and services best able to

mitigate them (Narendorf, et. al., 2018). It may be more helpful to align an assessment tool by YAEH

vulnerabilities indicating service needs and the ability of service agencies to provide specific supports to

meet those needs, rather than the availability of HUD SHP alone. It may also be true that lacking adult

support results in poorer outcomes and why adult mentorship programs have proven so important for

YAEH (Barman-Adhikari et al, 2016; Dang & Miller, 2013).

Although Housing Outcomes were examined by exit destination and not by Housing Model and

any influence the model may have had on findings is outside the scope of this study, the distribution of

PSH versus RRH in each vulnerability subgroup is almost identical. For example, in the low vulnerability

low support subgroup (1), there are 36 participants with PSH and 33 with RRH; in the low vulnerability

high support subgroup (2), there are 11 participants with PSH and exactly the same amount (11) with

RRH; and in the high vulnerability low support subgroup (3), the most participants received HUD SHP

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and there is also almost an equal number of participants with PSH (131) and with RRH (147). For the

'never housed' Housing Outcome, subgroup 1 had 193(28.7%), subgroup 2 had 85(12.6%), and subgroup

3 had 395(58.7%). More discussion on housing models potential influence on this study can be found in

Limitations.

The questions asked on the Houston Young Adult Coordinated Entry Triage Tool (CE TT) did not

result in differences among vulnerability subgroups by race/ethnicity; however, gender minorities (i.e.,

Queer Transgender (QT) and Black, Hispanic, and Other (BIPOC) YAEH were least likely to achieve

permanent housing at exit.

Limitations

Although this study provides important information on vulnerabilities among YAEH at entry to

HUD SHP, limitations should be noted. Data were gathered by self-report and are therefore subject to

recall and social desirability biases. Vulnerabilities of particular concern for social desirability (i.e.

substance use, sexual activity, mental health) and recall bias (i.e. ability to report early or limited prior

child welfare or juvenile detention) may be under or over-represented by this tool as there is no

mitigating social desirability scale and CFTH training involved only understanding of delivering the tool,

what the questions were trying to capture, and how to report data, rather than strategies to

compensate for these potential biases. Since the housing outcome variable is based on whether

participants were assigned or not assigned HUD SHP, it is possible that participants reported items

which they felt would increase their potential to score higher on the coordinated entry triage tool (CE

TT) and thus receive housing (i.e., response bias). Because of the nature of the questions, the majority of

answers participants reported as either a 0 (vulnerability absent) or 1 (vulnerability present). This is a

dichotomous (categorical) measurement scale that limits the variability and ability to detect nuanced

differences. In addition, 5 of the questions are ratio variables that were dichotomized by the

administrators of the CE TT. By dichotomizing a ratio scaled variable, information is lost and the

threshold of "0" vs. any number of occurrences is somewhat arbitrary, although there are important

differences between not being or being vulnerable by a particular experience. For example, not having

been in jail at all and having spent any time in jail is an important difference. Collapsing having a child for

whom I am responsible and currently being pregnant into one variable has the potential to lose

meaningful differentiations. For example, there are likely important differences in outcomes as well as

differences in available resources which may be important for youth who are currently pregnant, or

have a child for whom they are responsible, or for whom both are true.

The tool itself is not validated so the reliability and validity of the instrument is questionable.

While data-driven screening and triage tools can be useful, all YAEH do not access services, especially in

adult driven locations. There is also ample reason to believe HUD definitions do not fully capture the

experience of housing instability and literal homelessness among all young adults. This means that YAEH

who present at entry to HUD SHP could be significantly different from those who do not so findings

apply only to those seeking housing services rather than to all YAEH.

For the LCA, we do not know the "true" correct number of classes, so fit indices help to

approximate a correct number of classes. Given the relatively large sample size (*n-1218*), the researcher

had adequate power to identify meaningful subgroups using vulnerability variables; however, little is

known about the exact effect of sample size on the ability to identify a set of underlying latent classes

and is an important area of future research (Lanza, Flaherty, & Collins, 2003).

The items measured in the Houston Young Adult Coordinated Entry Triage Tool does not

represent the universe of vulnerabilities experienced by young people entering HUD Supportive Housing

programs and likely does not capture vulnerabilities unique to many BIPOC YAEH such as police

brutality, growing up in stressed neighborhoods, and other experiences resulting from racism

(Henderson, 2019). Future research has also been recommended to better understand how BIPOC youth

experience and report all vulnerabilities (Cronley, 2020). Although race/ethnicity was associated with

some vulnerabilities, it is less clear why there are differences and further investigation is warranted.

It is also possible that participants who were 'never housed' could have experienced a number

of situations not reflected by the Coordinated Entry variables. For example, participants may have been

unable to provide documentation for HUD eligibility (i.e., proof of homelessness), or agencies to whom

participants were assigned were unable to contact or find the participant, or the participant may have

relocated to another city. All that is known about these participants is that they were not housed

through the CoC Coordinated Entry system and therefore the outcome 'never housed' could be an

artifact of this limitation rather than a true indicator of belonging to this Housing Outcome and there is

high likelihood of variation based on all the different reasons participants could belong to this category.

The data comes from only one geographic area and may not generalize to young adult homeless

populations in other communities. Houston's population of YAEH may be similar in terms of

disproportionality by race/ethnicity, YA identifying as gender minorities, and prior system involvement

to other large cities in the country (Olivet, et. al., 2021; USICH, 2018); however, Houston encompasses a

large geographic area which makes it difficult for many service seeking YAEH to participate in

Coordinated Entry for HUD SHP. Houston's population of YAEH are also typically from Houston

(Narendorf, Santa Maria, & Cooper, 2015) and are less transient than YAEH in other locations (Ferguson,

et. al., 2010). It is also true that findings of the study may not be generalizable beyond the political

contexts and available services and resources for young adults experiencing homelessness in this area.

Namely, there is very limited transitional programming for young adults which may have increased YAEH

to attempt entry to HUD SHP. However, it is also true that Houston has led innovation to reduce

homelessness as compared to other cities and adoption of policies for chronic and veteran

homelessness developed and tested in Houston may benefit other large metropolitan areas (Jensen,

Ryan, Jones, & Ackley, 2020).

Services captured in HMIS were not included as part of this data set so any effect related to service engagement, length of use, or availability to mitigate or compensate vulnerabilities may be important for further evaluation.

Young Adults assessed in this window of time did not necessarily complete Rapid Re-housing programs (i.e., time limited housing up to 24 months) and therefore no Housing Outcome data would have been collected as of the time of data pull for this study. Based on previous studies indicating 6 months of housing resulting in less homeless recidivism, perhaps participants achieved permanent housing outside the date range of Housing Outcome data pull (Rice, et. al., 2018).

Housing Outcomes were examined by exit destination not by Housing Model (i.e., PSH or RRH). Since there is no service requirement in PSH and it is non-time limited while RRH requires participation in case management and is time limited, any differences or influence there may be by housing model on Housing Outcomes is not captured by this research. However, for each of the three classes, the distribution of PSH versus RRH is almost identical. For instance, for the low vulnerability low support subgroup (1), there are 36 participants with PSH and 33 with RRH. For low vulnerability high support subgroup (2), there are 11 participants with PSH and the same amount (11) with RRH. The high vulnerability low support subgroup (3) has the most participants receiving HUD SHP and almost an equal number of participants with PSH (131) and with RRH (147). Housing model (RRH or PSH) is not significantly different by subgroup and therefore may play less of a role on findings than the vulnerabilities themselves.

This study only provides data to inform further exploration and development of system-level coordinated entry tools, housing models, and vulnerabilities related to potential service needs and interventions, rather than suggesting that these variables in and of themselves can effectively triage all young people experiencing homelessness and are inclusive of all vulnerabilities at entry to HUD supportive housing. It is recommended that Housing Outcomes data continue to drive assessment of

success of any given system. Housing Outcome data also needs to continue to be refined to best capture

potentialities to end this crisis of homelessness for so many young adults, rather than focusing on

potential helpfulness of a refined Coordinated Entry tool.

Policy Implications

Black, Hispanic, and young adult participants identifying as gender minorities presented at entry

to HUD SHP in much higher numbers their cis-gender white peers. Because of continuing

disproportionality, policies which inform regulations, funding, and eligible services would benefit from

anti-racism and gender equity guiding principles (USICH, 2019). Study findings are in line with national

estimates indicating black people account for 78% of all 18-24 YAEH (Olivet, et. al., 2018). Discrimination

in housing policies, including lending practices, is one area of systemic racism resulting in higher

likelihood for black people to experience homelessness (Morton, et. al., 2017). Federal policies to

sustain fair housing protections, including full implementation and enforcement of HUD Equal Access for

HUD SHP have the potential to support positive exits from homelessness for black and YA identifying as

gender minorities. Policy is also suggested for mandating affordable housing for any new developments

(Olivet, et. al., 2018) including high consideration for residents' neighborhood choice (Lucio, Hand, &

Marsiglia, 2014). Fully funding implementation of HUD's plan for families and individuals utilizing

Housing Choice Vouchers (HCV) to achieve home ownership (HUD, HCV, 2020) has potential to undo

decades of housing discrimination targeted to black people and create generational wealth.

Findings that adult support is a differentiating vulnerability among subgroups of YAEH, may

indicate the need for the advancement of policies which focusing on family reunification and family

kinship. As these were concepts first introduced by federal responses to vulnerable youth targeted by

RHYA (Glassman, et. al., 2010), it would appear an important consideration for HUD SHP related

regulations. However, policies strengthening these practices may need to be tailored to different groups

of YAEH, especially those lacking adult emotional and/or financial support. These include current HUD

efforts in an emerging intervention called 'Diversion' which relies on connections to stably housed social

networks (HUD, 2019). For those YAEH lacking adult financial support, Direct Cash Transfer or other

creative emerging practices may be more effective (Morton, et. al., 2020).

Study findings indicate policy consideration to further coordinate and collaborate across

systems. Both child welfare and juvenile detention were found to be significant vulnerabilities among

YAEH; however, funding typically separates these two systems. Therefore, policies to reform child

welfare related to disproportionately negative outcomes for youth of color including reunification may

be of particular help (Olivet, et. al., 2018). Policies using separate concepts of 'delinquency, runaway,

victims of society, or homeless' also have the tendency to silo efforts which ultimately negatively impact

YAEH. For example, HUD mostly disallows the use of Emergency Solutions Grant funding for Young

Adults still in custody of the state (i.e., Child Welfare) even if they are experiencing homelessness (U.S.

HUD, 2014). Therefore, YAEH may benefit from policies more reflective of the vulnerabilities they have

experienced rather than eligibility categories in existing legislation.

Findings also support the reconsideration of policies which silo funds by outcome (e.g.,

education, employment, risk for trafficking, risk for truancy). For example, YAEH who reported low

employment stability also reported lacking a high school diploma or GED. While this may be an obvious

connection, current policies have the tendency to separate funding for employment and education

supportive services. In contrast, findings from this and other studies support policy alignment of service

needs by YAEH vulnerability subgroups to target limited community resources more efficiently to those

who might benefit from shallow service delivery and those in need of longer term supports (Narendorf,

Bowen, Santa Maria, & Thibaudeau, 2018). For example, the LVLS subgroup identified in this study may

benefit most from congregant housing (e.g., transitional or host homes), the LVHS subgroup from

diversion and prevention strategies to reconnect them to supportive adults known to them, while the

HVLS subgroup would benefit from prioritization for permanent supportive housing. Since PSH

availability is typically limited, those young adults in the HVLS subgroup with adult support might be prioritized for RRH (time limited) supportive housing.

Although unclear why there were many participants who were never housed, HUD policies purportedly do not reflect the fluid nature of YAEH resulting in difficulty establishing eligibility for YAEH at entry to HUD SHP (NN4Y, 2020). As HUD is the primary funder for homeless interventions, data collection mandates to reflect all forms of HUD defined homelessness (i.e., Categories 1 – 4) would likely benefit YAEH in the 'never housed' category who may have had difficulty documenting homeless experience to become eligible for HUD SHP (Homeless Children and Youth Act, 2019). Results from previous typology research also indicate alignment of federal resources by need, including a large group of youth experiencing homelessness with comprehensive needs to establish stable housing (Bucher, 2008).

Finally, multiple community plans are required within public policy, including HUD's requirement of a consolidated plan for affordable housing and community needs using data to drive decisions (U.S. HUD, 2020). These plans may benefit from specific expertise around racial equity, especially for black YAEH. Plans are required to be updated regularly and inform funding priorities. This presents an opportunity to connect existing efforts to systems of care in any effort to realign by racial equity.

Research Implications

Knowing the vulnerabilities YAEH bring with them at entry to HUD SHP has the potential to inform an evidence base for developing strategies specific to young adults by circumstances rather than being treated as a homogenous group. Findings from this study are in line with prior research examining latent classes among YAEH. For example, prior research found subgroups differentiated by adult support and traumatic experiences (Narendorf, Bowen, Santa Maria, & Thibaudeau, 2018). Prior research has also demonstrated more difficulties exiting homelessness for YAEH lacking social supports and those

reporting substance use (Slesnick, Kang, Bonomi, & Prestopnik, 2008). YAEH may benefit from future

research exploring additional young adult vulnerabilities related to prolonged homelessness. For

example, in one research study, history of child abuse was a less important factor in exiting

homelessness than supportive relationships in predicting eventual permanent housing outcomes

(Slesnick, et. al, 2008). Findings from this study which found that males were significantly more likely to

report prolonged homelessness and therefore were likely more vulnerable to the effects of longer-term

homelessness may also be an important area of future research. Finally, housing outcomes related

conclusions of this study are fundamentally related to the vulnerabilities captured on the Coordinated

Entry Triage Tool. A longitudinal study following young adults from entry at HUD SHP has the potential

to differentiate YAEH who are able to self-resolve their housing from those who are not. Additionally, a

longitudinal study may be helpful in capturing compounding vulnerabilities related to difficulties exiting

the experience of homelessness.

Further research is warranted to capture trauma related vulnerabilities which were found to be

significant in this study and are similar to those in ACE literature and their association with specific

supports important for YAEH to regain stable housing and well-being related outcomes (Lanier, et al.,

2014). However, due to the limited resources in HUD SHP, it may be helpful to know specific

vulnerabilities and/or combinations of all vulnerabilities to target training and services to reach a

permanent housing outcome

Although it is recommended that housing outcomes data continue to drive homeless system

improvements, a Coordinated Entry Tool tested for reliability and validity could result in more precise

measurement of vulnerability indicators and/or prioritization for these limited HUD SHP.

Finally, systemic issues of racism continue to drive disproportionately high rates of experiencing

homelessness for young adults of color and better research is needed to understand needs and services

best for these young people. For example, research is indicated to better understand trajectories into

and out of homelessness for young people of color, including specifically the role of asset building to prevent homelessness from ever occurring (Olivet, et. al., 2018).

Implications for Service Providers

From the vantage of field practice, these findings point to the importance of specialization in services for YAEH in general, and that patterns of responses among subgroups may help identify level of service engagement protocols for efficient use of limited resources. For example, Black participants and YAEH identifying as a gender minority are highly over-represented in this sample and national trends indicate this is only increasing, especially when considering effects of COVID (Edwards, 2020). Testing and understanding strategies to involve and engage black and YAEH identifying as gender minorities is critical in disrupting anti-black and anti-gender minority effects of existing racist and heteronormative structures. There is a great deal of COVID related funding released at this time to combat homelessness, especially related to a relatively new strategy named Diversion (HUD,2020). It is important to recognize the role of adult support for this strategy and to consider that black participants among this sample were less likely to report having adult emotional support which may mean they could benefit less from diversion strategies. Diversion relies on (re)connecting those at the beginning of their homeless experience to immediate housing options in their social network (USICH, 2019). This finding may also indicate difficulty in using Family Kinship or Family Strengthening interventions once the young adult is experiencing homelessness.

It is also important to deliver services in combination with known vulnerabilities and not isolate efforts by outcomes. For example, YAEH in this study reported high incidence of mental health issues and lack of employment stability both of which research reports are important in exiting the experience of homelessness. Thus, the potential importance of linking employment and mental health services deserves further investigation.

There are also important considerations from a homeless systems point of view. Coordinated Entry questions, vulnerabilities, and what results in prioritization matter. The questions asked on the Houston Young Adult Coordinated Entry Triage Tool (CE TT) did not result in differences among vulnerability subgroups for race/ethnicity but YAEH identifying as gender minorities were more likely to receive HUD SHP. However, Queer Transgender (QT) and Black, Hispanic, and Other (BIPOC) YAEH were least likely to achieve permanent housing at exit. Research exploring this difference in housing outcome is critical to furthering best use for future CE TT. Perhaps a CE TT which not only captures vulnerabilities but also assigns participants to agencies with the expertise to mitigate those specific vulnerabilities. In other words, a CE TT which both prioritizes the most vulnerable and matches those YAEH by vulnerability to services may lead to better outcomes. Thus, significantly more time and examination of existing coordinated entry tools is required if we are to achieve the end of Young Adult homelessness.

While all YAEH report a significant number of vulnerabilities which put them at additional risk while on the streets, males report higher than expected numbers of prolonged homelessness. Since there are higher numbers of males experiencing chronic homelessness as demonstrated through national Point-In-Time counts, early intervention to further support males to exit homelessness deserves special attention. The importance of social supports for YAEH within HUD SHP is critical. Social vulnerabilities were found to be both significant and important in differentiating subgroups of YAEH. Having adult support, family violence, experiencing child abuse, and being kicked out because of coming out as LGBTQ were all found to be significant vulnerabilities. In other words, YAEH are harmed by some adult relationship dynamics but also benefit from supportive adult relationships. Therefore, it may be helpful to understand how a relationship-based trauma remediation (e.g., TBRI, Purvis, Cross, Dansereau, & Parris, 2013) which can come in many forms through engagement, community building, a sense of belonging, and developing self-worth and identity may benefit YAEH.

The high vulnerability among YAEH identifying as gender minority is both sad and not surprising. This speaks to the importance of examining heteronormativity in service environments, including recognizing the need for prioritizing gender minorities to receive limited HUD SHP and having representation of gender minorities on decision making bodies. The necessity to examine service environments and outcome expectations by hetero and white normativity seems critical if these most vulnerable young adults are to achieve positive outcomes and not continue to die while experiencing homelessness at significantly higher rates than their cis-gender peers.

As lacking adult support is often reported and significantly different by vulnerability subgroups, implementing the use of adult mentors in service delivery may be especially effective as has previously been demonstrated for YAEH (Dang, 2013). It is also worth considering strengthening informal housing arrangements with trusted adults (i.e., couch surfing or host homes) as these are more typical arrangements for YAEH and have demonstrated positive outcomes related to positive adult relationships in early research (Curry, et. al., 2021), especially for young adults in the low vulnerability, low support subgroup (class 1). Family and kinship strengthening may also be particularly helpful for these youth, having demonstrated high effectiveness in resolving the experience of homelessness in the UK, Canada, Australia, and in some U.S. cities (Point Source Youth, Host Homes Handbook, pg. 2 & 4; Pergamit, et. al., 2016).

Some vulnerabilities experienced prior to and during homelessness captured in this study are reflective of those found in the Adverse Childhood Experiences (ACE) literature. Therefore, exploration of trauma-based interventions may prove important in-service delivery, especially those based in relationship (i.e., TBRI, Purvis, Cross, Dansereau, & Parris, 2013) given the importance of adult support. Research exploring adult support includes a small Canadian study involving a mix of 35 adolescents and YAEH which found that service models focused on flexible, participatory, long-term, and choice-driven emotional and affirmational support were important in achieving self-sufficiency (Stewart, 2010).

Finally, addressing racial/ethnic and gender identity inequities among organizational decision making persons and bodies may benefit YAEH disproportionality black and gender minorities (Olivet, et. al., 2018). This could include training on racism and homelessness, professional supports for staff of color to enter leadership positions, and representative community-driven resource allocation and practices for prevention. Focus on asset building to increase social network emotional and financial support also may benefit black participants in particular (Olivet, et. al., 2018).

Discussion Conclusion

The experience of young adult homelessness is solvable, and it will take sustained and profound anti-racist structural changes. All young people are vulnerable by nature; however, black and YA identifying as a gender minority have been made more vulnerable by systemic and historical failures to support them (Olivet, et. al., 2018 & 2020). Consideration of vulnerabilities and subgroups by vulnerabilities of YAEH has the potential to drive strategic use of existing resources, research to further explore innovations, and practices to make the experience of young adult homelessness rare, brief, and non-recurring. For limited HUD SHP, prioritization and specific housing strategies by subgroup can lead to efficiencies and better matching of services to needs. Based on findings from this study and others, adult support may be a critical component for service providers and policy makers. Further research is needed to develop strategies and more reliable measurements of vulnerabilities to inform allocation and matching of best resources to individual young people. Supportive services strategies would benefit from consideration of multiple vulnerabilities which cluster together. For example, findings from this study and others suggest practices which mitigate both disrupted educational achievement and employment instability. Finally, labels of runaway, delinquent, or homeless currently found in federal responses to YAEH continue to silo efforts. Instead, policies informing eligibility based on individual circumstances and vulnerabilities has the potential to de-silo limited public funding and encourage cross-collaborative system efforts.

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	APPENDIX A. Young Adult Triage Tool	**Answer**	**Score**
1a	Chronic?	Yes/No /Logic	N/A
1b	Have you been homeless before? (only show if chronic = no)	Yes	1
1c	How many times have you been homeless in the past 3 years? (only show if chronic = no)	>4	1
2a	How many jobs have you lost in the past 12 months	>3, none	1
2b	Are you working a job where someone else controls your money?	Yes	1
3	Do you have a Diploma or GED?	No	1
4a	Do you have any children that you're responsible for?	Yes	1
4b	Do you have an open CPS case?	Yes	1
4c	Have you had an open CPS case in the past 2 years?	Yes	1
5	Are you currently pregnant?	Yes	1
6	Were you abused as a child (physically, emotionally, or sexually)?	Yes	1
7	Have you ever been in CPS custody?	Yes	1
8	Have you ever been kicked out of or felt unsafe at home because you came out as LGBT?	Yes	1
9	Have you ever left home because of violence between family members or to you?	Yes	1
10a	Are you being forced to do things that make you feel uncomfortable?	Yes	1
10b	Have you ever traded sex for anything (like food, shelter, money)?	Yes	1
11	Do you have any mental health or brain issues that might make it hard for you to live on your own?	Yes	2
12a	Has a doctor or professional ever recommended mental health services?	Yes	1
12b	Are you currently receiving any of those services	No	1
13a	Have you ever thought about hurting yourself?	Yes	0
13b	Have you ever tried to kill yourself?	Yes	1
14a	Do you use alcohol or drugs?	Yes/ No	0
14b	Marijuana	Yes	0
	Alcohol	Yes	0
	KUSH, spice, K2, or any other synthetic marijuana	Yes	1
	Meth, crack, cocaine, heroin	Yes	1
14c	Has your drug or alcohol use ever resulted in the any of the following:		
	Arrest		1
	Living in a shelter or on the street		1
	Prostitution		1
	Theft		1
	Domestic Violence		1
	Loss of employment		1
15a	Have your ever been in juvenile detention?	Yes	1
15b	Have many days have you been in jail or prison in the past 2 years?	Insert #	0
16	How many adults can you count on for emotional support? (On the days when you are so down and you don't know what to do is there an adult that you visit with or call?)	<1 person	1
17	How many adults can you count on for financial support? (If you had a small bill that needed to paid and you were out of money for the month is there an adult that will usually help you out?)	<1 person	1

HUD System Performance Measures: Destination Classification

#	HUD HMIS Project Types:	SO	ES	TH	PH (all)	SH	SSO
#	**Type: TEMPORARY**						
1	Emergency shelter, including hotel or motel paid for with emergency shelter voucher	+	T	T	T	T	T
15	Foster care home or foster care group home	+	Remove from the denominator				
6	Hospital or other residential non-psychiatric medical facility	Remove from the denominator					
14	Hotel or motel paid for without emergency shelter voucher	+	T	T	T	T	T
7	Jail, prison or juvenile detention facility	-	T	T	T	T	T
27	Moved from one HOPWA funded project to HOPWA TH	+	T	T	T	T	T
16	Place not meant for human habitation	-	T	T	T	T	T
4	Psychiatric hospital or other psychiatric facility	+	T	T	T	T	T
29	Residential project or halfway house with no homeless criteria	Remove	T	T	T	T	T
18	Safe Haven	+	T	T	T	T	T
12	Staying or living with family, temporary tenure (e.g., room, apartment or house)	+	T	T	T	T	T
13	Staying or living with friends, temporary tenure (e.g., room apartment or house)	+	T	T	T	T	T
5	Substance abuse treatment facility or detox center	+	T	T	T	T	T
2	Transitional housing for homeless persons (including homeless youth)	+	T	T	T	T	T
#	**Type: PERMANENT**						
25	Long-term care facility or nursing home	+	Remove from the denominator				
26	Moved from one HOPWA funded project to HOPWA PH	+	P	P	P	P	P
11	Owned by client, no ongoing housing subsidy	+	P	P	P	P	P
21	Owned by client, with ongoing housing subsidy	+	P	P	P	P	P
3	Permanent housing for formerly homeless persons	+	P	P	P	P	P
10	Rental by client, no ongoing housing subsidy	+	P	P	P	P	P
28	Rental by client, with GPD TIP housing subsidy	+	P	P	P	P	P
20	Rental by client, with other ongoing housing subsidy	+	P	P	P	P	P
19	Rental by client, with VASH housing subsidy	+	P	P	P	P	P
22	Staying or living with family, permanent tenure	+	P	P	P	P	P
23	Staying or living with friends, permanent tenure	+	P	P	P	P	P
#	**Type: OTHER**						
24	Deceased	Remove from the denominator					
8	Client doesn't know	-	T	T	T	T	T
9	Client refused	-	T	T	T	T	T
99	Data not collected	-	T	T	T	T	T
30	No exit interview completed	-	T	T	T	T	T
17	Other	-	T	T	T	T	T

Legend	
-	Negative Outcome
+	Postive Outcome
T	Temporary Outcome
P	Permanent Outcome

Appendix C

HUD Demographic Data Collection Standards

3.4 Race

Header	Instruction
Header	**Instruction**
Element Name	Race
Field 1 & Responses	Race (as many as are applicable)
1	American Indian or Alaska Native
2	Asian
3	Black or African American
4	Native Hawaiian or Other Pacific Islander
5	White
8	Client doesn't know
9	Client refused
99	Data not collected
Element Type	Universal
Funder: Program-Component	All Programs – All Components
Project Type Applicability	All HMIS Project Types
Data Collected About	All Clients
Collection Point	Record Creation
System Logic	There is a one-to-one relationship between this data element and 5.8 Personal ID. System stores collected information. Users associated with projects that serve any given client must be able to edit data to correct errors or reflect changes in client responses.
	The HMIS must accommodate the recording of up to five race response categories per client.
Other System Issues	'Client doesn't know,' 'Client refused,' and 'Data not collected' are not races; they are explanations for missing race data. None of these three responses are valid in conjunction with any other response.
XML	<Client><Race>
CSV	Client
2017 V1 Changes Made	*Clarifications to System Logic regarding relationships between data elements; no change is intended, but updates will be required in systems not consistent with this logic.*

3.5 Ethnicity

Header	Instruction
Header	**Instruction**
Element Name	Ethnicity
Field 1 & Responses	Ethnicity
0	Non-Hispanic/Non-Latino
1	Hispanic/Latino
8	Client doesn't know
9	Client refused
99	Data not collected
Element Type	Universal
Funder: Program-Component	All Programs – All Components