EXAMINING THE RELIABILITY AND VALIDITY OF THE SECOND VERSION OF THE VULNERABILITY INDEX-SERVICE PRIORITIZATION DECISION TOOL (VI-SPDAT) FOR SINGLE ADULTS

by

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ABSTRACT

KHALIL B. SALIM. Examining the Reliability and Validity of the Second Version of the Vulnerability Index-Service Prioritization Decision Tool (VISPDAT) for Single Adults. (Under the direction of DR. RYAN P. KILMER and DR. JAMES R. COOK)

Many communities use the Vulnerability Index-Service Prioritization Decision Tool (VI-SPDAT) to determine which individuals and/or households experiencing homelessness are most vulnerable and therefore prioritized for the limited housing resources available. Because of the tool's widespread use and implications for housing, the present study examined the reliability and validity of the second version of the VI-SPDAT for Single Adults with a sample of individuals experiencing chronic homelessness in Charlotte, NC. Results suggest that the VI-SPDAT is strongest in measuring areas associated with psychological symptomatology and/or mental health, but that the scale had significant limitations in its internal consistency, ability to adequately measure the construct of vulnerability, and convergent, concurrent, and predictive validity. Furthermore, findings raise concerns related to the VI-SPDAT's ability to adequately reflect the complex and dynamic behavioral, social, and medical needs of those experiencing chronic homelessness. Taken together, the findings from this study point to issues with the VI-SPDAT's reliability and validity and provide actionable information to help inform areas that should be strengthened and/or modified to better capture the needs and vulnerability of individuals experiencing homelessness. It is hoped the findings from this study can inform local efforts for assessing the needs and functioning of individuals experiencing homelessness and, more importantly, provide information that can be used to ensure equitable allocation of services in the homeless service system.

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CHAPTER 1: INTRODUCTION

Coordinated Entry (CE) is a process mandated by the U.S. Department of Housing and Urban Development (HUD) to "ensure that all people experiencing a housing crisis have fair and equal access and are quickly identified, assessed for, referred, and connected to housing and assistance based on their strengths and needs" (U.S. Department of Housing and Urban Development, n.d.). One of the primary goals of CE is to determine which individuals and/or households are most vulnerable to the effects of homelessness and, therefore, should be given priority for the limited housing and homeless assistance available in a community (U.S. Department of Housing and Urban Development, 2015a).

To help determine which individuals are most vulnerable, HUD recommends the use of an assessment tool (Office of Community Planning and Development, 2012; U.S. Department of Housing and Urban Development's Office of Policy Development and Research & National Alliance to End Homelessness, 2015). One of the most widely used assessment tools for determining individuals' priority for housing is the Vulnerability-Service Prioritization Decision Assistance Tool (VI-SPDAT). Although the VI-SPDAT is useful in obtaining information related to individual's history of homelessness, levels of risk, functioning, and well-being, recent research suggests that the tool has limited validity and reliability (Brown et al., 2018; King, 2018). This is especially problematic given that an instrument that does not adequately assess an individual's service needs may unintentionally prioritize a person with lower service needs for costly and already limited housing resources, or worse, reduce a highly vulnerable individual's opportunity for housing (Brown et al., 2018).

Relatedly, recent work suggests that in some communities which draw on VI-SPDAT scores for allocating housing assistance, Whites are disproportionately prioritized for housing

interventions despite Blacks making up the majority of the population experiencing homelessness (Wilkey, Donegan, Yampolskaya, & Cannon, 2019). Research suggests that these disparities are occurring due to the VI-SPDAT's limitations in assessing vulnerability, as well as its inability to adequately measure vulnerability across diverse populations (see Wilkey et al., 2019). Given that unreliable and/or invalid assessments can lead to disparities in accessing housing services, it is critical to develop screening methods or assessments that reliably, adequately, and equitably assess individuals' vulnerability and priority for homeless assistance.

With that as backdrop, the present study examined the psychometric properties of the second version of the VI-SPDAT to determine its ability to collect reliable and valid information in Charlotte, North Carolina (NC). Study findings can help improve local housing providers' ability to make efficient and data-driven service decisions. Moreover, results from the study can help illuminate the degree to which differences exist across various demographic groups on the VI-SPDAT and, in turn, can help inform how current processes can be modified to reduce rates of racial and ethnic bias in local community systems and services. The next sections of this paper provide an overview of 1) The state of homelessness in the U.S., 2) Homeless service delivery in the U.S., and 3) CE and its development.

State of Homelessness in the United States

According to the *State of Homelessness in America* report (The Council of Economic Advisers, 2019), over half a million people in America experience homelessness on a given night. In 2019, nearly two-thirds of people experiencing homelessness were staying in shelters or transitional housing programs, and over one-third were living in places not intended for human habitation such as sidewalks, cars, and abandoned buildings (National Alliance to End Homelessness, 2020). Between 2018 and 2019, the number of people experiencing homelessness

on a single night increased by nearly 3% (or 14,885), marking the third straight year of a

national-level increase in homelessness (U.S. Department of Housing and Urban Development,

2019).

When examining the demographic characteristics of those experiencing homelessness,

some groups are overrepresented. For example, adults over the age of 25 make up three-quarters

of people experiencing homelessness, and nearly two-thirds are men or boys (U.S. Department of

Housing and Urban Development, 2019). Veterans constitute another population that is

overrepresented; in 2019, Veterans alone accounted for over 9% of those experiencing

homelessness (United States Interagency Council on Homelessness, 2018). Lesbian, gay,

bisexual, transgender or queer (LGBTQ) youth are also overrepresented in homelessness. A

recent study using a nationally-representative phone-based survey of youth found that those that

identified as LGBTQ had twice the risk of experiencing homelessness compared to their non-

LGBTQ peers; even more, youth who identified as both LGBTQ and black or multiracial had the

highest rates of homelessness (Morton et al., 2018). Recently, formerly incarcerated individuals

have also garnered the attention of policymakers in relation to homelessness. For example, one

study drew on 8 years of administrative records and found that those who had been previously

incarcerated were more than twice as likely to experience housing insecurity than those with no

history of incarceration (Geller & Curtis, 2011). Research attributes higher rates of homelessness

among formerly incarcerated individuals to barriers to employment, low wages, lack of

affordable housing, and the screening criteria used by property owners and/or local housing

authorities (Couloute, 2018; Pager, 2003; Western, 2002).

Some minority groups in the U.S. are overrepresented in the homeless service system.

For instance, although they are a small segment of the U.S. population (1.3%), Native Americans

represent a substantial portion of the population experiencing homelessness. In fact, in states such as Alaska, South Dakota, Montana, Minnesota, New Mexico, North Dakota, and Oklahoma, Native Americans represent at least 10% of those experiencing homelessness (Moses, 2019), and are 4 times more likely to experience homelessness in comparison to Whites (Olivet et al., 2018). The most staggering disproportionality is found among Blacks – they make up more than 40% of those experiencing homelessness nationally, despite only representing 13% of the general population (Moses, 2019; U.S. Department of Housing and Urban Development, 2019). A recent study found that Blacks are 5 times more likely to experience homelessness in comparison to their White counterparts (Olivet et al., 2018). Research attributes these higher rates of homelessness among Black Americans to structural and systemic factors related to discrimination, poverty, incarceration, and lack of affordable housing (see Jones, 2016 for a review).

Homeless Service Delivery in the United States

A variety of programs have been developed in the U.S. to meet the needs of individuals and/or families experiencing homelessness. These services are generally organized by Continuums of Care (CoCs) – local planning groups that coordinate homeless service delivery in order to develop comprehensive homeless assistance systems that meet the diverse needs of individuals and/or households experiencing homelessness (Burt et al., 2002). Central to the CoC model are three programmatic responses for addressing the needs of individuals and/or households experiencing homelessness: (1) Emergency Shelters (ES), (2) Transitional Housing (TH), and (3) Permanent Housing (PH; National Academies of Sciences, Engineering, and Medicine [National Academies], 2018; Wong, Park, & Nemon, 2006). ES are short-term shelters to prevent individuals and/or households experiencing homelessness from sleeping on the streets

and/or places not meant for human habitation (Wong et al., 2006). TH is more intensive and refers to interim housing coupled with wrap-around supportive services (e.g., trainings, employment services, case management) to help individuals and/or families become more self-sufficient (National Academies, 2018). Finally, PH programs are long-term subsidies designed to help individuals and/or households experiencing homelessness live independently (National Academies, 2018).

PH are generally reserved for individuals and/or households who are experiencing chronic homelessness and typically involve two types of housing: Permanent Supportive Housing (PSH), and Rapid Re-Housing (RRH). PSH consists of long-term rental subsidies (3+ years) designed for individuals and/or households with disabilities so severe that living independently is not suitable (Wong et al., 2006). RRH is short-term rental assistance (up to 24 months) designed to help individuals and/or households experiencing homelessness quickly exit homelessness and maintain stable housing (National Academies, 2018). RRH generally involves rental assistance and case management services (e.g., identifying housing options, move-in assistance, etc.).

Both PSH and RRH are embedded in a Housing First (HF) philosophy, which prioritizes housing as an early step in service delivery, without any prerequisites or conditions for housing (Padgett et al., 2011; Tsemberis et al., 2004). Traditionally, homeless services and programs used a "treatment first" approach; meaning, individuals and/or households, if applicable, had to treat their substance abuse and/or mental illness in order to be eligible for Permanent Housing assistance (National Academies, 2018; Padgett, Stanhope, Henwood, & Stefancic, 2011). However, in recent years, providers delivering homeless services began to follow a Housing First philosophy, which supports the notion that individuals and/or households experiencing

homelessness must have their basic needs met before they can attend to financial, and/or substance abuse issues (National Academies, 2018; Tsemberis et al., 2004). The next section provides an overview of CE, the process developed for allocating housing assistance for individuals and/or households experiencing homelessness.

Development of Coordinated Entry System for Homeless Service Delivery

In 2014, HUD put forth the CoC Program interim rule. Of particular salience, this interim rule required CoCs to establish and operate "a centralized or coordinated process designed to coordinate program participant intake, assessment, and provision of referrals" (U.S. Department of Housing and Urban Development, 2014, p. 10). This centralized or coordinated process would later become known as "Coordinated Assessment" or "Coordinated Entry" (Office of Community Planning and Development, 2012, p. 10).

HUD shifted towards a CE system for several reasons. First, a CE system would help ensure that communities had multiple points of entry for individuals and/or families to access homelessness assistance (United States Interagency Council on Homelessness, n.d.). That way, individuals and/or households experiencing homelessness could quickly access services for which they are eligible, thereby reducing the likelihood of individuals or households needing to visit multiple agencies in order to obtain services. Secondly, a CE system would use a common assessment process so that regardless of where people experiencing homelessness presented for assistance, staff would ask the same set of questions and use the same criteria for determining eligibility for housing interventions and/or services. In doing so, all referral decisions in the community would be based on the same criteria, as well as community-wide openings and services. Thirdly, a system using a common assessment process would help identify which interventions (e.g., prevention, Rapid Re-Housing, Permanent Supportive Housing, etc.) best

meet individual's and/or household's needs, and prioritize housing assistance to those who are most vulnerable to the effects of homelessness and/or with the greatest housing barriers (U.S. Department of Housing and Urban Development, 2015a; United States Interagency Council on Homelessness, n.d.).

One of the most widely used tools across CoCs for determining vulnerability and allocating homeless assistance is the Vulnerability-Service Prioritization Decision Assistance Tools (VI-SPDAT). While the VI-SPDAT is useful in obtaining information related to individual or household's vulnerability, some research suggests that the measure has limited validity and reliability (see Brown et al., 2018; King, 2018). This is particularly problematic given that the tool is used for allocating housing resources. In other words, if the tool is not valid or reliable, it may inappropriately prioritize a person with lower service needs, or worse, reduce a highly vulnerable individual's opportunity for housing (Brown et al., 2018). Indeed, the implications of poor measurement when determining individual's vulnerability for the allocation of housing are immensely consequential. With this context, the next section describes the VI-SPDAT and recent research examining the measure's psychometric properties.

Use of the Vulnerability Index – Service Prioritization and Decision Assistant Tool (VI-SPDAT) for Allocating Housing

The VI-SPDAT is a condensed version of two existing tools – the Vulnerability Index (VI), a pre-screening tool, and the Service Prioritization Decision Assistance Tool (SPDAT), a more in-depth assessment (OrgCode & Community Solutions, 2015b). The integrated and condensed version was developed to help overburdened and under-resourced service providers quickly identify individuals or households who should be prioritized for a more in-depth assessment (OrgCode & Community Solutions, 2015b). Items on the second version of the VI-

SPDAT are designed to reflect four components: (1) History of Homelessness, (2) Risks, (3) Socialization and Daily Functioning, and (4) Wellness (see Appendix A for the full VI-SPDAT assessment for Single Adults). Questions on the assessment are primarily focused on physical health, substance use, service utilization, victimization, risk behaviors, income, social support, mental health, and trauma. Depending on their responses, individuals or households can obtain a vulnerability score ranging from 0 to 17, with higher scores indicating greater vulnerability.

The developers of the VI-SPDAT provide recommendations based on levels of vulnerability as determined by the tool. According to the VI-SPDAT manual, a score of 0-3 should not involve a housing intervention given that is considered low acuity (OrgCode & Community Solutions, 2015a). A score of 4 to 7 should result in an assessment for Rapid Re-Housing. A score of 8 or higher should result in an assessment for Permanent Supportive Housing or Housing First. The next few paragraphs describe the VI-SPDAT's strengths and limitations.

Strengths and Limitations of the VI-SPDAT

The developers of the VI-SPDAT assert that the tool has several strengths. For example, the VI-SPDAT's manual states that the measure was developed "through extensive research and development, and testing," in addition to input from hundreds of people with lived experience of homelessness (OrgCode & Community Solutions, 2015b, p. 9). Moreover, the manual proclaims that the VI-SPDAT "follows the structure of the SPDAT assessment tool, and is informed by the same research backbone that supports the SPDAT - almost 300 peer-reviewed published journal articles, government reports, clinical and quasi-clinical assessment tools, and large data sets" (p.13). While the SPDAT may be informed and supported by a number of studies, it is unclear whether or not communities that use the VI-SPDAT are in fact using the SPDAT for more in-

depth assessment to determine which individuals are most vulnerable and should be prioritized for housing assistance (Wilkey et al., 2019).

Furthermore, in 2014, HUD's Office of Policy Development and Research, in partnership with the National Alliance to End Homelessness solicited the input of a set of experts on the strengths and limitations of tools being used for allocating housing assistance. Notably, experts concluded that the tools being used, with one of them being the VI-SPDAT "are evidence informed, but because they are still relatively new, the evidence base is limited" (U.S. Department of Housing and Urban Development's Office of Policy Development and Research & National Alliance to End Homelessness, 2015, p. 1). Even today, there has been scant independent research examining the VI-SPDAT's reliability and validity (Brown & Cummings, 2018). As such, additional research is needed to elucidate the VI-SPDAT's strengths and limitations, especially given its weight in determining an individual's or household's priority for housing assistance, and in light of recent research suggesting that the VI-SPDAT may be leading to disparities in the allocation of homeless assistance among those who are Black, Indigenous, and People of Color (BIPOC; see Wilkey et al., 2019). The next section describes some of the most prominent limitations and/or issues that have been described in the literature related to the VI-SPDAT.

Issues with VI-SPDAT

Recent studies have pointed to complications with the VI-SPDAT. The first peer-reviewed study examining the first version of the VI-SPDAT, by Brown and colleagues (2018), found several issues with the VI-SPDAT in real-world implementation. One major issue was identified via the authors' examination of the VI-SPDAT's test and re-test reliability of the VI-SPDAT observer-rated items using three samples: those who were re-administered the VI-

SPDAT within 2 weeks, 1 month, and 3 months. Eighty-nine percent of those who were administered the VI-SPDAT twice had either lower or higher scores on observer-rated items assessing the individual and/or household's extent of impairment related to daily living skills, substance use, and mental and physical health. While something could have legitimately changed in the individual or household's circumstance or presentation, the differences on these items led the authors of the study to hypothesize that poor test and re-test reliability on observer-rated items may have been a consequence of some service providers misrepresenting scores to advocate for their clients to obtain housing, lack of training for administrators, clients not feeling comfortable answering questions honestly due to the sensitive nature of some of the items (e.g., illegal activity, addiction, etc.), and/or the community's implementation of the VI-SPDAT. Fortunately, the observer-rated items were removed in the second version of the VI-SPDAT (OrgCode & Community Solutions, 2015a).

A second problem uncovered by Brown and colleagues (2018) was that some items and/or questions on the VI-SPDAT did not adequately assess the concept of vulnerability. As one particularly unexpected finding, the authors found that in their sample, several items on the Socialization and Daily Functioning and Wellness – Health domains demonstrated negative associations with the latent variables. Additionally, higher scores on VI-SPDAT did not significantly predict homeless service re-entry but did trend toward significance with higher scores associated with greater risk. The researchers found that the type of housing support (e.g., Permanent Supportive Housing, Rapid Re-Housing, etc.) provided to an individual was a stronger predictor of increased risk of homeless service re-entry than actual VI-SPDAT scores. Based on the study's findings, the authors concluded that "score-based recommendations on the VI-SPDAT are likely arbitrary" (Brown et al., 2018; p. 115).

Examination of the first version of the VI-SPDAT's reliability and validity was extended in a dissertation by Benjamin King (2018). In this study, King (2018) used 2014-2017 VI-SPDAT data from Travis County, Texas to examine the psychometric characteristics of the measure, its criterion validity, and its associations with homelessness and health. First, King examined the validity of the VI-SPDAT based on the 4 construct domains outlined by the VI-SPDAT (1) History of Housing and Homelessness, (2) Risks, (3) Socialization and Daily Functions, and (4) Wellness. Confirmatory Factor Analysis (CFA) revealed that these 4 domains did not reflect latent factors. Relatedly, the study found that the VI-SPAT did not measure the construct of "vulnerability" adequately or equivalently across subgroups based on gender, ethnicity, race, homeless duration, and chronic homelessness categories, suggesting that it may not be appropriate to compare VI-SPDAT scores across subgroups. Finally, when examining the criterion validity of the VI-SPDAT with information collected via medical records, King (2018) found that medical conditions were often under-reported, and that instances of over-reporting were rare.

More recently, work from C4 Innovations (2019), in partnership with four Continuums of Care: Portland-Gresham-Multnomah County CoC in Oregon; Roanoke City and County/Salem CoC in Virginia; Seattle/King County CoC in Washington; and Tacoma/Lakewood/Pierce County CoC in Washington, examined the potential for the VI-SPDAT to perpetuate racial inequities. Notably, the study found that BIPOC seeking services through CE received lower VI-SPDAT scores than Whites, Whites were prioritized for Permanent Supportive Housing (PSH) at higher rates than BIPOC, and race was a significant predictor of receiving a higher VI-SPDAT score. Ultimately, the analysis by C4 Innovations found that most VI-SPDAT subscales do not

equitably capture vulnerabilities for BIPOC, and that items on the assessment were more likely to capture vulnerabilities for Whites in comparison to BIPOC.

Following the release of C4 Innovation's report, the president and Chief Executive Officer (CEO) of OrgCode, Iain De Jong (2019), published a blog post on the organization's website and Facebook page addressing the report's findings. In his post, De Jong emphasized what is noted in the VI-SPDAT manual, which is that the VI-SPDAT is "not an assessment" but rather a "triage tool" to determine whether an individual or family *should be assessed* for particular housing intervention using the full SPDAT (De Jong, 2019). De Jong reiterated C4's postulation that contextual factors such as client and provider rapport, location of assessment, assessor training, and the cultural competence of assessors may be contributing to the disparate outcomes for BIPOC (De Jong, 2019; Wilkey et al., 2019). De Jong (2019) concluded that OrgCode would continue exploring the issues brought to light for the third version of the VI-SPDAT but encouraged communities to examine how their own systems may be contributing to inequities, and to "learn from those communities where these inequities are not present" (para. 7).

Despite OrgCode explicitly recommending that communities not use the VI-SPDAT as an assessment tool, it continues to be widely used across communities for allocating housing and supportive services. In fact, as of 2019, the VI-SPDAT is reportedly used across 40 states, with no evidence to suggest that communities plan to discontinue their use of the VI-SPDAT (Wilkey et al., 2019). As a result, it is vital to examine the tool's reliability and validity to enhance understanding of its use in allocating housing resources, and what supplementary information is necessary to obtain in order to guide decisions on allocating housing resources to those who are most vulnerable. The present study seeks to build on the recent work of Brown and colleagues

(2018), King (2018), and C4 Innovations (Wilkey et al., 2019), with respect to the second version of the VI-SPDAT (OrgCode & Community Solutions, 2015b), and examine the measure's properties with a sample of adults experiencing chronic homelessness in Charlotte, North Carolina (NC). The next section describes the context for the present study.

Context of the Present Work

In 2014, Charlotte-Mecklenburg implemented CE with financial support from the United Way of Central Carolinas and Wells Fargo (United Way of Central Carolinas, 2017). Charlotte-Mecklenburg was considered an early adopter of CE, given that the HUD did not require communities to implement CE until January, 2018 (Office of Community Planning and Development, 2012). Although HUD has required elements for CE that communities must adopt and/or implement, communities also have the flexibility to adapt their system to fit local context and/or needs. With that in mind, the next section describes the CE process in Charlotte-Mecklenburg (Coordinated Entry Oversight Committee, 2018, 2020).

Coordinated Entry in Charlotte, North Carolina

If an individual or family is experiencing a housing crisis, they are directed by local agencies to call the United Way North Carolina 2-1-1 Health and Human Services Information and Referral Hotline. A 2-1-1 operator asks a series of triage questions to determine whether an individual or family is "literally homeless" (i.e., not at imminent risk of becoming homeless, or precariously housed). Charlotte's CE system, guided by HUD's definitions of homelessness, considers an individual "literally homeless" if they meet the following criteria (U.S. Department of Housing and Urban Development, 2012): "Individual or family lacks a fixed, regular, and adequate nighttime residence, meaning

- (i) Has a primary nighttime residence that is a public or private place not meant for human habitation;

- (ii) Is living in a publicly- or privately-operated shelter designated to provide temporary living arrangements (including congregate shelters, transitional housing, and hotels and motels paid for by charitable; organizations or by federal, state and local government programs); or
- (iii) Is exiting an institution where (s)he has resided for 90 days or less and who resided in an emergency shelter or place not meant for human habitation immediately before entering that institution" (para. 1).

If the individual or household is "literally homeless," a 2-1-1 operator refers them to an in-person "coordinated assessment" at one of the designated coordinated assessment sites in Charlotte-Mecklenburg. During the in-person assessment, a trained CE assessor asks the individual a set of questions to determine which services and/or interventions are appropriate to meet their housing needs, and to use that information to prioritize the needs of the individual and/or household relative to others who have presented for assistance (Coordinated Entry Oversight Committee, 2020).

During assessments, the CE assessor explores whether diversion is appropriate as a strategy for assisting the individual or household experiencing homelessness. If so, the individual or household is referred to a diversion specialist who then works to identify immediate alternative housing arrangements that would allow the individual or family to return to permanent housing. Diversion strategies generally involve financial assistance to the individual or family experiencing homelessness such as purchasing bus passes to stay with a friend or relative, or paying rental deposits. If diversion is not appropriate, the CE assessor gathers information related to the household and their housing needs. The standardized questions allow assessors to collect information related to such areas as history of homelessness, domestic violence/safety, veteran status, foster care involvement, employment and education, health and wellness, and housing challenges (i.e., rental history, credit score, etc.).

In addition to exploring whether diversion is appropriate as a strategy, the CE assessor works to identify if an individual and/or family meets HUD's definition of "chronically homeless." According to HUD (2015b),

> A "chronically homeless" individual is defined to mean a homeless individual with a disability who lives either in a place not meant for human habitation, a safe haven, or in an emergency shelter, or in an institutional care facility if the individual has been living in the facility for fewer than 90 days and had been living in a place not meant for human habitation, a safe haven, or in an emergency shelter immediately before entering the institutional care facility. In order to meet the ''chronically homeless'' definition, the individual also must have been living as described above continuously for at least 12 months, or on at least four separate occasions in the last 3 years, where the combined occasions total a length of time of at least 12 months. Each period separating the occasions must include at least 7 nights of living in a situation other than a place not meant for human habitation, in an emergency shelter, or in a safe haven occasions total a length of time of at least 12 months. Each period separating the occasions must include at least 7 nights of living in a situation other than a place not meant for human habitation, in an emergency shelter, or in a safe haven. Chronically homeless families are families with adult heads of household who meet the definition of a chronically homeless individual (p. 75792).

If an individual or family meets the criteria for chronic homelessness, they are administered a VI-SPDAT to determine their vulnerability and prioritization for homeless assistance. Charlotte's CE system does not administer the VI-SPDAT to individuals or households that do not meet HUD's definition of chronic homelessness and, similar to many other CE system across the U.S, it does not use the VI-SPDAT to determine which individuals or families should be administered a more in-depth assessment such as a SPDAT. In other words, the VI-SPDAT is the primary tool used to determine an individual or family's vulnerability and, therefore, priority for housing.

Charlotte's Response to Issues with the VI-SPDAT. In May of 2017, the Charlotte-Mecklenburg Continuum of Care (CoC) implemented a Vulnerability Review Committee (VRC) to address instances in which caseworkers believe that VI-SPDAT scores do not adequately capture individual's or families' vulnerability (Coordinated Entry Oversight Committee, 2020).

At present, the VRC consists of 3 individuals elected by the CE Oversight Committee (Coordinated Entry Oversight Committee, 2018, 2020). To be eligible to serve on the committee, individuals must be knowledgeable about Housing First and chronically homeless populations. To reduce the likelihood of conflicts of interest, outreach workers or case managers (i.e., those making referrals to the VRC) cannot serve on the committee.

Caseworkers can refer an individual or family to the VRC if they believe that their VI-SPDAT score does not reflect their true vulnerability, or if they are unable to complete a VI-SPDAT (Coordinated Entry Oversight Committee, 2018, 2020). As part of the referral, caseworkers submit a detailed explanation for their referral with examples and evidence to support their referral. Reasons for referral generally fall into the following categories: (1) severe mental health and/or substance use condition or developmental disability; (2) frequent MEDIC (i.e., Emergency Medical Services) / emergency room user; (3) severe medical conditions; (4) VI-SPDAT score does not represent the true vulnerability of a family with dependent children living in shelter or on the street; or (5) VI-SPDAT score does not represent the true vulnerability of a transition-aged youth living in the shelter or on the street (Coordinated Entry Oversight Committee, 2018, 2020). Based on the review of the referral as well as the group's discussion, the VRC determines individuals' and/or families' vulnerability and appropriate referral(s).

Current Study

Given the weight assigned to the VI-SPDAT in allocating housing resources, it is imperative to examine its reliability and validity. This is especially salient in view of recent evidence suggesting that the VI-SPDAT may be leading to inequities in how housing is allocated among BIPOC (see Wilkey et al., 2019). The present study examines the second version of the VI-SPDAT's reliability and investigate its concurrent, predictive, convergent, and divergent

validity with existing standardized measurement tools. With that in mind, research questions (RQ) guiding this study are:

1. RQ1: What is the reliability of the second version of the VI-SPDAT among single adults experiencing chronic homelessness?

    a. What is the internal consistency of the entire VI-SPDAT, in addition to its domains?

2. RQ2: What is the construct validity of the VI-SPDAT?

    a. What are the internal factor groupings of the entire VI-SPDAT, in addition to each of its domains?

    b. To what degree does the VI-SPDAT demonstrate convergent and divergent validity with other standardized measures that are theoretically related to or distinct from the construct of vulnerability?

3. RQ3: What is the criterion validity of VI-SPDAT?

    a. What is the concurrent validity of the VI-SPDAT with other standardized measures?

    b. What is the predictive validity of VI-SPDAT with other standardized measures?

CHAPTER 2: METHODS

Overview

In 2017, Mecklenburg County Government, the Urban Ministry Center (UMC)**,** and the Charlotte Housing Authority (CHA) collaborated to implement a multi-sector effort to end chronic homelessness in Charlotte, NC (National Association of Counties, n.d.). The effort was guided by the Housing First philosophy (Mecklenburg County Government, n.d.), which prioritizes housing as an early step in service delivery, without any prerequisite or conditions for housing (Tsemberis et al., 2004). To examine the outcomes of Housing First, Mecklenburg County Government as well as the University of North Carolina at Charlotte's College of Health and Human Services and School of Social work co-funded an evaluation of Housing First Charlotte-Mecklenburg (HFCM). The evaluation consisted of three components: (1) a process evaluation; (2) an outcome evaluation; and (3) a service utilization study (see Thomas et al., 2020). Approval for the HFCM study was obtained from the University of North Carolina at Charlotte's Institutional Review Board (IRB).

As part of the HFCM study, baseline and follow-up interviews (at 6, 12, and 24 months) were conducted with consenting participants. Specifically, participants completed demographic questionnaires, standardized measures, and answered qualitative questions. This study uses archival data collected as part of the HFCM Evaluation and Research Study to examine the reliability and validity of the VI-SPDAT. IRB approval from the University of North Carolina at Charlotte was obtained for this study on 04/15/2020. The paragraphs that follow describe the participants, measures, and procedures that were used to answer the study's guiding questions.

Participants

Potential study participants were identified and referred to the HFCM research team by outreach and CE staff. In order to be eligible to participate in the HFCM study, participants had to meet three criteria. First, participants had to be listed on Charlotte's By-Name List– a "real-time, up-to-date list of all people experiencing homelessness" (U.S. Department of Housing and Urban Development, 2015c, p. 3). Second, participants had to be at least 18 years old. Third, participants had to meet the federal definition of chronic homelessness (see pg. 15 for full definition). Participants who did not meet the aforementioned criteria or could not have their chronic homelessness status verified were not eligible to participate in the study.

To examine the effects and outcomes of Housing-First in Charlotte Mecklenburg, the study used a quasi-experimental, non-equivalent comparison group design. The treatment group consisted of individuals who exited from homelessness to Housing First Permanent Supportive Housing. The comparison group consisted of individuals who received usual homeless services (e.g., shelter, outreach, food). A total of 330 participants consented to take part in the study. During the HFCM Research and Evaluation Study, the CoC shifted to using the second version of the VI-SPDAT for Single Adults (instead of the first version). Of the 330 participants, only 204 had complete data and VI-SPDAT scores that were from the second version. These participants comprised the sample used to answer the study's guiding questions.

Measures

Demographic Information

A demographic questionnaire collected information about participants' age, gender, race, ethnicity, length of homelessness, and level of education. The measure is included in Appendix B.

Vulnerability and Housing Stability

Vulnerability and housing stability were assessed via the Vulnerability Index-Service Priority Decision Assistance Tool, Version 2 for Single Adults (VI-SPDAT; OrgCode, Community Solutions, 2015b), the central focus of this study. The measure assesses four domains: (1) History of Homelessness; (2) Risks; (3) Socialization and Daily Functioning; and (4) Wellness (see Appendix A for the full VI-SPDAT assessment for Single Adults). Most questions on the questionnaire only allow for responses such as "Yes," "No," or "Refused." Individuals can score between 0 and 17; higher scores indicating greater vulnerability. The creators of the VI-SPDAT (OrgCode, Community Solutions, 2015b) provide the following recommendations based on Individuals' VI-SPDAT scores: 0-3: no housing intervention; 4-7: an assessment for Rapid Re-Housing; 8 or higher: an assessment for Permanent Supportive Housing/Housing First. To the author's knowledge, no existing peer-reviewed publications report reliability or validity statistics for the second version of the VI-SPDAT for Single Adults.

Life Satisfaction

Trained researchers administered the 20-item Quality of Life Interview (QOLI-20), which measures life satisfaction across six subscales: family, finances, living situation, leisure, safety, and social (Uttaro & Lehman, 1999). Each item is scored from 1 ("Terrible") to 7 ("Delighted"), and subscales include 2 to 4 items. The QOLI-20 is a shortened version of the original 35-item Quality of Life Interview and retains the consistency of the original scale (α = .90; Lehman, 1988). Summed total scores can range from 20 to 140; higher scores indicate greater satisfaction with life.

Physical and Mental Health

The Modified Colorado Symptom Index (MCSI). The MCSI is a brief self-report

measuring the presence and frequency of psychiatric symptoms in the last month (Boothroyd &

Chen, 2008; Conrad et al., 2001). On the 14-item measure, participants indicate the frequency of

a diverse range of psychiatric symptoms using a 5-point Likert scale ranging from 0 ("not at all")

to 4 ("at least every day"). Symptoms assessed include depression, hallucinations,

indecisiveness, loneliness, paranoia, social anxiety, racing thoughts, abnormal behavior, suicidal

and violent thoughts, and tension. A total score is generated by summing items; higher scores

indicate a higher level of psychiatric symptoms. The MCSI has been found to be a reliable and

valid measure of psychological symptomatology. In a sample of individuals who had been

experiencing homelessness and were now housed, Cronbach alphas ranged from .87 to .92, and

test-rest intra class correlation coefficients ranged from .64 to .93 (Conrad et al., 2001). The

MCSI has previously demonstrated construct validity, with high validity coefficients with

measures assessing psychological symptomatology or distress (Conrad et al., 2001).

The Short-Form 12 Survey v2 (SF-12v2). The SF-12v2 is a shortened version of the

Short-Form 36 which measures self-rated physical and mental health (Ware et al., 1996; also see

Ware, 1992). The 12-item measure collects information across eight domains and/or subscales:

Bodily Pain, General Health, Vitality, Social Functioning, Physical Functioning, Mental Health,

Role Physical, and Role Emotional. Based on responses, two scores are calculated: Physical

Component Summary (PCS) and Mental Component Summary (MCS). This widely-used

screening measure has previously demonstrated good reliability and validity among a variety of

populations (Gandek et al., 1998; Maurischat et al., 2008; Okonkwo et al., 2010). In a study with

individuals experiencing homelessness with mental illness, Cronbach alphas for the SF-12

ranged from .79 to .85, and overall was found to be an appropriate measure of physical and health status (Chum et al., 2016).

Trauma

The Life Events Checklist for DSM-5. (LEC-5). The LEC-5 is a self-report that gathers information about individual's potential exposure to traumatic experiences (Weathers, Blake, et al., 2013). The measure lists 16 events that have been linked to Posttraumatic Stress Disorder (PTSD) diagnosis and includes an "other" option in which respondents can include events that may not have been captured in the prior items. Life events listed include natural disasters, physical assault, sexual assault, serious accidents, or life-threatening injuries or illnesses. Using a 6-point nominal scale ("happened to me," "witnessed it," "learned about it," "part of my job," "not sure," and "doesn't apply") respondents indicate their level of exposure to a traumatic event. The measure has not been used for a "total" score; rather, it helps identify whether a person has experienced a traumatic event that has been linked to PTSD or distress.

Psychometric characteristics are not currently available for the LEC-5, however, the measure is based off of the LEC and includes minor changes (e.g., "sudden, unexpected death of someone close to you" was changed to "sudden accidental death" and the responses option "part of my job" was added as a response option). The original LEC has demonstrated good test-retest reliability ($r = .82$), and convergent validity with existing measures of psychopathology, trauma history, and other variables known to be related to traumatic exposure (Gray et al., 2004). Because of the minor revisions from the LEC to the LEC-5, little to no psychometric differences are expected (U.S. Department of Veterans Affairs, n.d.).

The Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C). The PCL-C is a self-report measure measuring key symptoms of PTSD (National Center for Posttraumatic

Stress Disorder, n.d.; Weathers, Litz, et al., 2013). The measure is widely used for screening individuals for PTSD, in addition to quantifying and monitoring their symptoms. On this 20-item measure, respondents use a 5-point Likert scale (1 - "Not at all" to 5 – "Extremely") to rate how much they have been bothered by a key symptom of PTSD (e.g., "Feel distant or cut off from other people?" "Feeling jumpy or easily startled?" "Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?") in the last month. Items with scores of 3-5 are considered symptomatic, while scores below 2 are considered non-symptomatic. Total scores can range from 17 to 85; higher scores suggest that individuals should be assessed for PTSD. While the author has not located any such studies that report specific psychometrics in use with those experiencing homelessness, the measure has regularly been described as valid and reliable or, more generally, psychometrically sound (Blevins et al., 2015; Bliese et al., 2008). For example, in 2 separate samples of trauma-exposed college students, the PCL-C exhibited strong internal consistency (α = .94), test-retest reliability (r = .82), as well as convergent (rs = .74 to .85) and discriminant (rs = .31 to .60) validity. Another study with earthquake survivors found that the PCL-C had strong internal consistency (α =.89), in addition to convergent validity (rs = .85 to .90; Agudelo et al., 2005).

Addiction Problem Severity

The Addiction Severity Index (ASI) is a 200-item semi-structured interview that assesses individual's perceptions of problem severity across 7 domains: medical, employment, alcohol, drugs, legal, family/social, and psychiatric (McLellan et al., 1980; Zanis et al., 1994). The ASI takes approximately 1-hour to complete and collects information regarding an individual's problem severity within each domain (i.e., how much substance use impacts the individual's functioning in that domain) across 30 days as well as lifetime. The ASI provides two summary

scores across each domain: (1) severity ratings (SRs), which are subjective ratings to help determine the seriousness of an individual's problem, and (2) composite scores (CSs), designed to help measure treatment outcomes based on the prior thirty-day period. Higher SRs and CRs indicate greater problem severity. The HCFM study used the ASI to collect information on the drug and alcohol domain across each participant's lifetime. Scores are weighted and range from 0 to 1; higher scores indicate greater problem severity.

Previous studies suggest that the ASI demonstrates acceptable reliability and validity (Hendriks et al., 1989; Kosten et al., 1983). While studies examining the ASI have largely involved populations struggling with addiction and/or receiving treatment, one study found that within a sample of individuals experiencing homelessness, composite scores on the ASI demonstrated high test-retest reliability across the seven domains assessed. Moreover, intraclass correlation coefficients (ICC) ranged from .55 to .91, with an average of .76; and the average Spearman Brown coefficients ranged from .71 to .95, with an average of .86 (Zanis et al., 1994).

Food Security

The 10-item U.S. Adult Food Security Survey assesses individuals' level of food security (Bickel et al., 2000). The tool was developed by the U.S Department of Agriculture to help measure food insecurity and hunger in the U.S. Respondents indicate the degree to which statements about food insecurity apply to their experiences over the last 30 days. Items include such statements as "I worried whether my food would run out before I got money to buy more," "the food I bought just didn't last, and I didn't have money to get more," and "I couldn't afford to eat balanced meals." Responses for each item include "often true," "sometimes true," "never true," "don't know or refused." Individuals and/or households with a score of 0 to 2 are considered "food secure," those with scores of 3 to 5 are considered "food insecure without

hunger," those with scores of 6 to 8 are considered "food insecure with moderate hunger", and those with scores of 9 to 10 are considered "food insecure with severe hunger" (Bickel et al., 2000). Although the measure is widely used, the author was not able to locate any studies that report specific psychometrics for the 10-item U.S. Adult Food Security Survey.

Housing First Charlotte Mecklenburg Research and Evaluation Study Procedures

In the Housing First Charlotte Mecklenburg Research and Evaluation Study, individual interviews were completed with consenting study participants between March 2016 and December 2019. Participants completed demographic questionnaires and standardized measures, and answered open-ended questions. Because the study was examining outcomes over time, baseline and follow-up interviews were conducted. For the intervention group, interviews took place at the baseline meeting with researchers and were repeated at 6, 12, and 24 months after their housing date. For the comparison group, interviews took place at the baseline meeting, then again at 6, 12, and 24 months after their initial interview with researchers. Interviews lasted approximated 1 to 1.5 hours.

Before conducting interviews, researchers provided consent information and asked for potential participants' signatures to indicate their consent. Participants received a $20 gift card for each interview, in addition to 2 bus passes for every follow-up interview. Participants were reminded several times throughout the study that they were not required to participate in the research, and that their participation (or lack of) would not impact their eligibility for housing services. Participants were informed that they did not have to answer any question they did not feel comfortable answering and that they could withdraw from the study at any time.

Analytic Approach

A number of analyses were used to examine the second version of the VI-SPDAT's psychometric characteristics using archival data from the HFCM study. All analyses were conducted using Statistical Package for Social Sciences (SPSS version 26) and R (version 3.6.2; R Core Team, 2020). The sections that follow describe the study's approach for examining the VI-SPDAT's reliability and validity.

Reliability

Cronbach alphas were calculated to examine the internal consistency of the entire measure, in addition to each of its four domains: History of Homelessness, Risks, Socialization and Daily Functioning, and Wellness[1].

Validity

Construct Validity. To examine the construct validity of the VI-SPDAT, confirmatory factor analyses (CFA) were conducted[2]. CFA is method of examining how well a predetermined hypothetical structure of a measure and/or tool fits empirical data by evaluating a variety of goodness-of-fit indices. In order to examine the structure and stability of the second version of the VI-SPDAT for Single Adults, this study replicated the CFA analyses conducted on the VI-SPDAT's first version by Brown and colleagues (2018).

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[1] One of the study's original aims was to examine the second version of the VI-SPDAT's inter-rater reliability, however, there were not enough participants with more than one VI-SPDAT Version 2 for analysis.

[2] An additional aim of this study was to examine the VI-SPDAT's ability to capture the construct of vulnerability adequately and equitably across gender, race, and ethnicity. However, sample subgroups were too small to allow for measurement invariance analysis. Because of the small sample sizes, it was only possible to conduct confirmatory factor analyses to assess the structure and stability of the second version of the VI-SPDAT.

Consistent with Brown et al., (2018), items that collected information about frequency or were categorical were dichotomized according to the scoring system of the VI-SPDAT. Furthermore, items that collected information on service utilization were dichotomized based on endorsement for utilization. The Tri-Morbidity item was not included in any of the analyses, given that it is an item that is dependent on other items in the Wellness domain. Because items were binary, diagonally weighted least squares (DWLS) were used to estimate the models.

The first CFA examined the stability of the VI-SPDAT as a single factor model, given that the VI-SPDAT is used as a unidimensional scale assessing overall vulnerability (Brown et al., 2018). The next CFA examined the VI-SPDAT's construct validity through a hierarchical model in which Global vulnerability served as the second order factor and was measured by the three items on the History of Housing and Homelessness domain. The first-order factors consisted of Risks (items 4-9), Socialization and Daily Functioning (items 10-14), and the Wellness domain divided into two latent variables (1) Wellness – Health and Wellness (items 15-20), and (2) Substance Use and Mental Health (items 21-27). All analyses replicated Brown and colleagues' approach in order to determine whether improvements have been made from version 1 to version 2 of the VI-SPDAT. Model fit was assessed using cut-offs based on previous literature and best practices (Bryant, 2000; Kline, 2004): comparative fit index ([CFI]; CFI ≥ 0.90), root mean square error of approximation ([RMSEA]; RMSEA ≤ 0.08), and Tucker-Lewis index ([TLI]; TLI ≥ 0.90).

Construct validity of the VI-SPDAT was further examined via Pearson product-moment correlation coefficients *(r)* to assess its convergence and divergence with existing measures that are theoretically related to or distinct from the construct of vulnerability. The following predictions were tested:

1. The VI-SPDAT's History of Housing and Homelessness, Risks, Socialization and Daily Functioning, Wellness, and total score will be positively correlated with scores on the MCSI (i.e., psychological symptomatology), Life Events Checklist (i.e., trauma), and PCL-C (i.e., trauma), and the U.S. Adult Food Security Survey.

2. The VI-SPDAT's History of Housing and Homelessness, Risks, Socialization and Daily Functioning, Wellness, and total score will be negatively correlated with scores on the QOLI-20 (i.e., life satisfaction), and SF-12's Mental and Physical Health subscales.

Criterion-Validity. Hierarchical multiple linear regression analyses were conducted to examine whether subscale and total scores on the VI-SPDAT independently predicted scores on standardized measures (e.g., MCSI, QOL-20, etc.). Prior to analyses, number of weeks were calculated between the date of administration of the second version of the VI-SPDAT for Single Adults, and the date baseline measures were administered. Because Charlotte's Continuum of Care (CoC) transitioned to using the second version of the VI-SPDAT during the Housing First Charlotte-Mecklenburg study, some participants were re-administered the VI-SPDAT, but using the second version. As a result, 40 individuals in the sample were administered the second version of the VI-SPDAT after completing the standardized measures for the HFCM study and therefore were removed from concurrent and predictive validity analyses. Thereafter, the distribution of number of weeks between VI-SPDAT and administration of standardized measures was examined with the remaining participants. Results indicated that the average number of weeks ranged from 0 to 64 weeks, with an average of approximately 11 weeks (SD = 14.53). Individuals whose VI-SPDAT and baseline measures were within 4 weeks of one another were used for concurrent validity analyses; individuals whose baseline assessments were

between 8 and 52 weeks were used for predictive validity analyses. Although not customary for concurrent and predictive validity analyses, these cut-offs were selected to help maximize sample sizes and model stability, while also considering the VI-SPDAT's real world application for decision-making in determining priority for housing allocation.

Covariates for analyses included gender (Male, Female), race (BIPOC or White), and age. BIPOC and White groupings were created to compare with results from Wilkey and colleagues (2019). Consistent with Wilkey and colleagues' approach (2019), participants were considered BIPOC if they indicated that their race was African American, American Indian, Asian, Native Hawaiian or Other Pacific Islander, or Multi-Racial. For each regression conducted, the level 1 model included the control variables gender (Male or Female), race (BIPOC or White), and age; the level 2 model included VI-SPDAT domain scores or total scores. All continuous predictor variables were mean centered to help aid interpretation.

Assumption Checks

As part of analyses, all assumptions of multiple regressions were checked. Q-Q plots were examined to assess the normality of the residuals, and homoscedasticity was examined by plotting the residual and predicted values. Multicollinearity was assessed via correlations among variables, and variance inflation factor (VIF) statistics. Finally, Cook's Distance values were calculated to determine whether any participants had outliers that could influence the model. Models examining whether VI-SPDAT scores could predict scores on the ASI (Alcohol and Drug subscales), Number of Stressful Life Events Witnessed via the LEC-5, and the study's measure of Food Security violated statistical assumptions and therefore were not included in any of the concurrent and predictive validity analyses. The latter two scales were included when reporting descriptives for the samples; however, descriptive information from the ASI was not

included for multiple reasons. Specifically, the index lacks normative data, which limits comparisons with other populations, and the developers of the measure do not recommend the use of composite scores for indicating current status in a problem area given that mathematical formulas for scoring were developed for and are only intended for assessing change (Carise, n.d.).

CHAPTER 3: RESULTS

Given the study's small sample size, every effort was made to maximize the size of the sample for analyses. Thus, if participants were missing data that were not relevant to the analysis in question, those participants were still included. The section that follows describe the sample as well as results of analyses, organized by research question.

Research Question 1: What is the Reliability of the Second Version of the VI-SPDAT Among Single Adults Experiencing Chronic Homelessness?

A total of 227 participants in the study had completed the second version of the VI-SPDAT for Single Adults. Only 204 participants had complete data for the measure; they were used to examine the internal consistency and construct validity of the tool. The sample was predominantly BIPOC (65.2%) and Male (73.5%). Nearly half (45.3%) had experienced homelessness for 5 years or more, with an average of 7.7 years of homelessness. The average total VI-SPDAT score was 9.76 (SD = 3.39). See Table 1 for additional demographic information, and Table 2 for descriptive statistics on the VI-SPDAT.

Cronbach alphas were calculated to assess the VI-SPDAT's internal consistency. Results indicated that the full VI-SPDAT demonstrated acceptable internal consistency (α= 0.795). Notably, the History of Housing and Homelessness had a negative Cronbach alpha (α= -.232). Because of the negative Cronbach alpha, item intercorrelations were examined, which showed weak or negative associations among the 3-items (see Table 3 for more information). The Socialization and Daily Functioning and Wellness domains demonstrated poor and moderate internal consistency (α=.284 and .650, respectively). The Risks domain was the only VI-SPDAT domain that demonstrated acceptable internal consistency (α= 0.732). See Table 4 for additional statistics on the VI-SPDAT's reliability.

Research Question 2: What is the Construct Validity of the Second Version of the VI-SPDAT Among Single Adults Experiencing Chronic Homelessness?

To examine the underlying factor structure of the second version of the VI-SPDAT for Single Adults, confirmatory factor analyses (CFA) replicating the approach of Brown and colleagues (2018) were conducted using R software (R Core Team, 2020). Results suggested that neither the single-factor nor the hierarchical factor CFA demonstrated adequate model fit (see Table 5); however, the hierarchical model resulted in slight improvements in model-fit indices as well as factor loadings ($\chi2$ = 1023.802, $\chi2$/df = 1.95, CFI = .835, TLI = .823, RMSEA = .069). Notably, items on the Risks domain demonstrated the best fit to the latent variable, with standardized factor loadings ranging from .42 to .89. However, several items on the VI-SPDAT yielded extremely low standardized factor loadings. For example, items assessing frequency of homelessness (item 3), income (item 11), and interest in programs that assist people with HIV or AIDS (item 17) had factor loadings below .08 (see Table 5 for more information).

Exploratory analyses were conducted to determine whether model fit could be improved by (a) the removal of some items on the VI-SPDAT and/or (b) the grouping of some items under new latent variables. The grouping of items on the VI-SPDAT was informed by the VI-SPDAT's scoring for various sets of items. For example, on the VI-SPDAT, items 4 through 9 fall under the "Risks" domain; however, within that overarching domain, items 4a through 4f are labeled as being indicators of "Emergency Service Use," while items 5 and 6 are considered indicators of "Risks of Harm." Through an iterative process, items were removed and/or grouped to find the best fitting model.

Analyses suggested that removing items 1-3, 4f, 7, 10-11, 14, 17, 20, and 22, and using a five factor model – consisting of the latent variables Service Utilization, Risk of Harm,

Socialization and Daily Functioning, Wellness and Health, and Substance Use and Mental Health – led to the greatest model fit and factor loadings ($\chi2 = 365.861$, $\chi2/df = 1.6$, CFI = .941, TLI = .933, RMSEA = .056; see Table 6 for more information). Measurement invariance analyses were attempted to determine whether the new model measured the construct adequately across gender or race; however, it was not possible due to the small sample sizes across these groups.

Convergent and Divergent Validity

Pearson product-moment correlations were used to examine the relationship between subscale and total scores on the VI-SPDAT and scores on the MCSI (i.e., psychological symptomatology), LEC-5 (i.e., trauma), PCL-C (i.e., trauma), QOLI-20 (i.e., life satisfaction), SF-12 (i.e., Physical and Mental Health), and Food Security that were collected within 4 weeks of VI-SPDAT administration. As shown in Table 7, participants in this sample had low food security ($M = 7.29$, $SD = 2.99$), low levels of life satisfaction ($M = 73.16$, $SD = 18.46$), moderate levels of psychiatric symptomatology ($M = 21.81$, SD = 18.46), and lower levels of perceived physical ($M = 43.01$, $SD = 11.56$) and mental health ($M = 40.95$, $SD = 11.56$) compared to the general population (Norm = 50). Of particular note, individuals in the sample reported high levels of PTSD symptoms ($M = 45.21$, $SD = 15.31$). While the PCL-C does not provide specific cut-points, over half of participants scored 45 or above, suggesting that the majority of participants in the concurrent and divergent validity sample likely meet the criteria for a PTSD diagnosis (U.S. Department of Veteran Affairs).

Table 7 shows that total VI-SPDAT scores had a significant but low negative correlations with scores on the Short-Form 12's Perceived Mental Health subscale ($r(64) = -.27$, $p < .05$), and moderate positive correlations with the MCSI ($r(62) = .34$, $p < .01$) and the PCL-C ($r(63) = .42$, $p < .01$). Thus, those with higher total VI-SPDAT scores reported greater psychological and

emotional distress, as well as higher levels of PTSD symptomatology. Notably, total VI-SPDAT scores did not have any associations with Physical Health scores on the Short-Form 12 ($r(63) =$ .05)*;* and low but non-significant associations with scores on the QOL-20 ($r(62) = -.20$)*.*

When examining correlations between VI-SPDAT domain scores and the standardized measures, History of Housing and Homelessness domain scores had no significant associations with any of the standardized measures. Risks domain scores had significant but low to moderate correlations with scores on the MCSI ($r(62) = .26, p < .05$) and PCL-C ($r(63) = .33, p < .01$), indicating that those who reported higher levels of risks, as assessed by the VI-SPDAT, also tend to report higher levels of psychiatric and PTSD symptomatology. The Socialization and Daily Functioning domain score had a moderate negative correlation with scores on Perceived Mental Health ($r(63) = -.31, p < .01$), indicating that those who report challenges with socialization and daily functioning also report lower levels of perceived mental health. Finally, scores on the Wellness domain had moderate positive associations with scores on the MCSI, LEC-5, and PCL-C ($r = .30$ to $.43, p < .01$), indicating that individuals with higher scores on the wellness domain also report greater exposure to traumatic events, in addition to higher levels of psychiatric and PTSD symptomatology. Notably, scores on the Perceived Physical Health subscale had little to no associations with any of the VI-SPDAT scores, nor any of the scores on the other standardized measures.

RQ3: What is the criterion validity of VI-SPDAT?

Concurrent Validity of the VI-SPDAT

Sixty-four participants had baseline assessments that were completed within 4 weeks of their VI-SPDAT, the cutoff employed here for investigating concurrent validity. These participants were used for hierarchical multiple linear regressions to examine whether domain

and total scores on the VI-SPDAT independently predicted scores on the standardized measures (e.g., MCSI, QOL-20, etc.). As shown in Table 8, the sample was predominantly Male (73.4%), and BIPOC (60.9%). See Table 8 for additional demographic information. Independent samples *t*-tests indicated that BIPOC (*M* = 9.67; *SD* = 3.56) had lower mean VI-SPDAT scores (i.e., suggesting lower levels of vulnerability and a lower priority for housing services) relative to their White counterparts (*M*= 11.48; *SD* = 3.53), and these differences trended toward significance (*t*(62) = -1.99, *p* = .051). There were no significant differences between BIPOC and Whites across VI-SPDAT domain scores, apart from the Socialization & Daily Functioning domain. Results indicated that BIPOC (*M* = 2.21; *SD* = 1.06) had significantly lower Socialization & Daily Functioning scores than their White (*M* = 2.84; *SD* = 1.11) counterparts (*t*(62) = -2.30, *p* = .025). There were no significant differences between Males and Females on any of the VI-SPDAT scores. See Table 9 for additional descriptive statistics for VI-SPDAT, by gender and race.

BIPOC reported significantly fewer stressful life event experiences on the LEC-5 (*t*(62) = -2.42, *p* = .018) and lower levels of Food Security (*t*(62) = -2.18, *p* = .033) than Whites; however, there were no significant differences between BIPOC and Whites on any of the other standardized measures. Relatedly, Males had significantly lower scores on Food Security (*t*(62) = -3.56, *p* = .001), and LEC-5 (number of stressful life events experienced) than Females (*t*(62) = -2.42, *p* = .018); however, no significant differences were detected across the other standardized measures based on Gender. See Table 10 for additional descriptive statistics across the standardized measures by gender and race.

Next, hierarchical linear regression were conducted to examine the degree to which VI-SPDAT domain and total scores predicted scores on the standardized measures. For each

regression conducted, the level 1 model included the control variables gender (Male or Female), race (BIPOC or White), and age; the level 2 model included VI-SPDAT domain scores or the total score. Thus, there are five regression analyses for each dependent variable, one for each domain of the VI-SPDAT and one for the measure's total score. The bullets below list the tables summarizing the hierarchical regression results for each dependent variable:

- QOL-20 (Table 11 through 15)

- MCSI (Table 16 through 20)

- SF-12: Mental Health (Table 21 through 25)

- SF-12: Physical Health (Table 26 through 30)

- LEC-5: Stressful Life Events Experienced (Table 31 through 35)

- PCL-C (Table 36 through 40)

Notably, for almost all the hierarchical regressions conducted, none of the control variables included reached statistical significance, and these characteristics accounted for a small proportion of the variance in the dependent variables. The change in R-squared for the control variables was equal to .03 for the QOL-20, .07 for the MCSI, .02 for SF-12 (Mental Health), .05 for SF-12 (Physical Health Health), and .10 for PCL-C. The only models in which control variables reached statistical significance involved the use of VI-SPDAT scores to predict LEC-5 scores, specifically, number of stressful life events experienced. Moreover, the control variables accounted for 12% of the variance, but gender was the only variable that reached statistical significance, suggesting that BIPOC Females had significantly higher reported levels of exposure to traumatic experiences than their BIPOC Male counterparts (i.e., reference group). Relatedly, when controlling for gender, race, and age, White Males fared worse (in an absolute sense) than

BIPOC Males on QOL-20, MCSI, SF-12 (Mental Health), SF-12 (Physical Health), and LEC-5; however, these differences did not reach statistical significance.

Results indicated that total VI-SPDAT scores only had a significant association with MCSI and PCL-C scores, accounting for 13% and 16% of their variance, respectively (see Table 41 for summary of ΔR^2 accounted for by VI-SPDAT scores across the standardized measures). Furthermore, few significant relationships were detected between VI-SPDAT domain scores and the scores on the standardized measures. For instance, scores on the VI-SPDAT's Risks, Socialization and Daily Functioning, and Wellness domains had significant associations with scores on the PCL-C and accounted for 6 to 15 percent of the variance in scores. Moreover, scores on the Wellness domain had a significant association with scores on the MCSI and accounted for 13% of the variance in scores.

Predictive Validity of the VI-SPDAT

Fifty-six participants had baseline assessments that were completed within 8 to 52 weeks of their VI-SPDAT and were used for predictive validity analyses. As shown in Table 42, the sample was similar to the sample used for concurrent validity analyses; specifically, 67.9% were BIPOC, and 76.8% identified as Males. Independent samples *t*-tests indicated that there were no significant differences on any of the VI-SPDAT domain or total scores between BIPOC and their White counterparts, or between Males and Females. Notably, individuals in the predictive validity sample reported lower levels of life satisfaction on the QOL-20, higher levels of mental health symptomatology on the MCSI and SF-12's Mental Health Subscale, worse physical health on the SF-12's Physical Health subscale, and more posttraumatic stress symptoms on the PCL-C (see descriptive statistics for scores on the standardized measures in Tables 43 - 45).

Similar to the structure of the concurrent validity analyses, the level 1 model included the control variables, and the level 2 model included VI-SPDAT domain scores or total scores. The dependent variables (DV) for predictive validity analyses were scores on the standardized measures that had been collected within 8 to 52 weeks of the VI-SPDAT's administration. The bullets below list the tables summarizing the hierarchical regression results for each dependent variable:

- QOL-20 (Table 46 through 50)

- MCSI (Table 51 through 55)

- SF-12: Mental Health (Table 56 through 60)

- SF-12: Physical Health (Table 61 through 65)

- LEC-5: Stressful Life Events Experienced (Table 66 through 70)

- PCL-C (Table 71 through 75)

Similar to the results from the concurrent validity analyses, for the majority of the hierarchical regressions conducted, none of the control variables included reached statistical significance, and these characteristics accounted for a small proportion of the variance in the dependent variables. The change in R-squared was equal to .05 for the QOL-20, .02 for the MCSI, .07 for SF-12 (Mental Health), .02 for SF-12 (Physical Health Health), and .05 for LEC-5. The only models in which control variables reached statistical significance involved the use of VI-SPDAT scores to predict PCL-C scores. Although the control variables accounted for 10% of the variance in the PCL-C scores, age was the only variable that reached statistical significance ($P = .049$, $CI = -.955$ to $-.003$).

Furthermore, total VI-SPDAT scores only had a significant association with MCSI and SF-12's Mental Health subscale scores, accounting for 8% and 9% of their variance, respectively

(see Table 76 for summary of $\Delta R2$ accounted for by VI-SPDAT scores across the standardized measures). Notably, Risk domain scores were the only scores across the VI-SPDAT domains to have significant associations with any of the scores on the standardized measures. Specifically, Risk domains scores accounted for 8% to 14% of the variance on scores on the PCL-C, the SF-12's Mental Health subscale, and the MCSI.

CHAPTER 4: DISCUSSION

The present study examined the reliability and validity of the second version of the VI-SPDAT for Single Adults with a sample of single adults experiencing chronic homelessness; it grew out of a larger study evaluating Housing First Charlotte-Mecklenburg (HFCM), a multi-sector effort to end chronic homelessness in Charlotte, NC (National Association of Counties, n.d.). Using archival data from the HFCM evaluation, this study set out to answer 3 research questions: (1) What is the reliability of the VI-SPDAT? (2) What is the construct validity of the VI-SPDAT? and (3) What is the criterion validity of the VI-SPDAT? The goal of this study was to provide actionable recommendations to help inform areas that should be modified in future iterations of the VI-SPDAT and/or supplemented by additional information or assessments.

The first set of analyses examined the internal consistency of the VI-SPDAT and each of its domains. Results suggest that the VI-SPDAT had reasonable internal consistency as a full measure; however, when examining the internal consistency across the domains, the Risks domain was the only section that demonstrated acceptable consistency. These results are similar to findings from King (2018), an effort which found that the first version of the full VI-SPDAT had strong internal consistency (α= 0.818) but demonstrated a range of alphas across domains. Specifically, King (2018) found the following Cronbach's alphas for that version's domains: .055 for History of Housing and Homelessness, .655 for Risks, .407 for Socialization and Daily Function, and .725 for Wellness.

In the present study, the Cronbach alpha for the History of Housing domain was negative, which is generally indicative of coding issues (e.g., failure to account for reverse-scoring), or that the scale's items are measuring different dimensions (DeVellis, 2013). In this instance, the negative Cronbach alpha was due to weak or negative associations across the 3-items that

encompass the domain, particularly the negative association between responses to question 2 which asks "How long has it been since you lived in permanent stable housing?" and question 3 "In the last three years, how many times have you been homeless?" Respondents are awarded 1-point if they indicate that they have been homeless for one or more consecutive years *and/or* that they have experienced 4 or more episodes of homelessness in the last 3 years. The negative inter-item correlation can be explained, at least in part, by the fact that few participants in this sample met the criteria for both. Although it is not necessary for respondents to meet the criteria for both items to be awarded a point towards their Housing and Homelessness domain score, internal consistency analysis from the present study and King (2018) suggest that items on this domain are poorly related to one another.

This study also conducted reliability analyses based on Brown and colleagues' (2018) hierarchical model, which organized first-order factors into: Risks, Socialization and Daily Functioning, Health and Wellness, and Substance Use and Mental Health. The Brown et al. (2018) study found that the Risks, Health and Wellness, and Substance Use and Mental Health domains demonstrated adequate internal reliability, but that the Socialization and Daily Functioning domain had poor reliability. Contrary to Brown and colleagues' results, the present study found that the Wellness domain demonstrated poor internal consistency, even when divided into the two latent variables: Health and Wellness, and Substance Use and Mental Health. The findings from the present study, Brown et al. (2018), and King (2018) may suggest that the changes from version 1 to version 2 did not contribute to meaningful improvements as related to the VI-SPDAT's internal consistency, or that the measure demonstrates poor internal consistency with samples consisting of single adults who are experiencing chronic homelessness. Because of these mixed findings, additional research is needed to examine more thoroughly the

internal consistency of the second version of the VI-SPDAT for Single Adults and identify strategies for improving the measure.

To assess the construct validity of the VI-SPDAT, confirmatory factor analyses (CFA) were conducted to examine the underlying factor structure of the tool. Analyses worked to replicate the work of Brown and colleagues (2018) to determine whether changes in the second version of the VI-SPDAT led to improvements in overall model fit. Consistent with Brown and colleagues' approach (2018), a hierarchical model with the first-order factors of Risks, Socialization and Daily Functioning, Health and Wellness, Substance Use and Mental Health, and the second order factor Global Vulnerability were examined. Results indicated that, in the present sample, the second version of the VI-SPDAT demonstrated poor model fit. Moreover, several items had low factor loadings, suggesting that not all of the items may be meaningfully related to the latent variable(s) (DeVellis, 2013). Although this is the first empirical study to examine the model fit of the second version of the VI-SPDAT with Single Adults, converging evidence from this study, Brown et al. (2018), and King (2018) suggest that the VI-SPDAT and its domains are perhaps deficient due to improper conceptualization and/or definition of domains. The measure and its domains may benefit from item purification or modifications to items' groupings for the various latent variables (DeVellis, 2013; MacKenzie et al., 2011; Raykov & Marcoulides, 2011).

This study also set out to examine the convergent and divergent validity of the VI-SPDAT with other measures assessing psychological symptomatology, trauma, life satisfaction, physical and mental health, and food security. Consistent with our hypotheses, total VI-SPDAT scores had positive correlations with scores on the MCSI, LEC-5, PCL-C, and U.S. Adult Food Security Survey, and negative correlations with QOl-20, and SF-12 Mental and Physical Health

Subscale scores. In other words, those with higher total VI-SPDAT scores also reported higher levels of mental health symptoms, exposure to stressful life events, posttraumatic symptomatology, and food insecurity as well as lower levels of life satisfaction and perceived physical and mental health.

Although correlations were in the predicted direction, total scores on the total VI-SPDAT had small or weak associations with scores on the QOL-20, the SF-12's Perceived Physical Health, the number of stressful life events experienced on the LEC-5, and U.S Food Security. Moreover, total VI-SPDAT scores had the highest, although moderate, correlations with scores on the MCSI, the PCL-C, and LEC-5's number of stressful life events witnessed; thus, those with higher total scores tended to report greater exposure to stressful life events, and higher levels of psychiatric and PTSD symptomatology. Together, these findings suggest that total VI-SPDAT scores may not be adequately reflecting the experiences and/or functioning of single adult's experiencing chronic homelessness in areas related to quality of life, physical health, and food security. This is of particular concern given the widespread use of the VI-SPDAT to determine vulnerability, and ultimately, priority for housing.

Convergent and divergent validity analyses were also conducted using the VI-SPDAT's domain scores. Results indicated that the History of Housing and Homelessness domain score had the weakest associations with any of the scores on the standardized measures. In fact, scores on the Housing and Homelessness domain had associations of less than or equal to .13 with all of the other measures. Given the psychometric issues (i.e., a negative alpha in this sample) with that domain, this is not unexpected. Moreover, the Risks domain scores had two significant, but low correlations with measures of psychiatric and PTSD symptomatology. The Socialization and Daily Functioning domain scores had moderate negative correlations with scores related to

perceived mental health, suggesting that those with higher Socialization and Daily Functioning scores are more likely to have mental health issues. Finally, the Wellness domain had some of the highest associations with scores on the standardized measures, and were moderately correlated with measures of stressful life events experienced, posttraumatic stress symptoms, and mental health issues.

Concurrent and predictive validity analyses were conducted to examine the degree to which VI-SPDAT scores could predict scores on the standardized measures used in the broader study evaluating Housing First. Findings from concurrent validity analyses suggest that total VI-SPDAT scores were poor predictors of reported quality of life, one key measure of mental health, physical health, and experiences of trauma. Results indicated that total VI-SPDAT scores best predicted scores on the MCSI and PCL-C, accounting for 13% and 16% of their unique variance, respectively. These results suggest that out of all the constructs examined in this study, the VI-SPDAT total score is strongest in measuring areas associated with psychological symptomatology and/or mental health, including posttraumatic stress symptoms, particularly for Male BIPOC (i.e., reference group in all of the analyses).

Although these results suggest that the VI-SPDAT may be adequately capturing information related to mental health such as psychological and PTSD symptoms for Male BIPOC, additional research is needed examining potential vulnerabilities that may not be captured equitably. This is especially of salience given the present study's finding that Whites had higher VI-SPDAT total scores than BIPOC in the concurrent validity sample, and the fact that the difference trended toward significance – these results are of particular concern when viewed in the context of converging evidence that the VI-SPDAT may be racially biased (see Cronley 2020; Wilkey et al., 2019). Future studies should work to examine the role of situational

and contextual factors in assessing vulnerabilities for individuals experiencing homelessness. Further elucidation of factors (e.g., congruence and incongruence of race and/or ethnicity of assessor and respondent, assessor training, cultural and language barriers, location of assessment, level of privacy, face-to-face vs. phone assessments) that may influence the ability to capture vulnerabilities of individuals experiencing homelessness will help inform strategies to address potential inequities in assessment and/or administration.

As for the VI-SPDAT domains, the hierarchical regressions yielded three noteworthy findings. First, scores on the Wellness domain were found to be significantly associated with scores on the MCSI and PCL-C. This finding is reinforced by the results from the hierarchical regressions with scores on the PCL-C, which found that Wellness Scores accounted for 15% of the variance in PCL-C scores. Taken together, results from the convergent and concurrent validity analyses suggest that the items on Wellness domain are likely capturing information relevant to mental health and experiences of trauma.

A second notable finding from the concurrent validity analyses is that none of the scores on the VI-SPDAT predicted scores related to physical health or quality of life. These results suggest that the VI-SPDAT needs considerable modifications as it relates to measuring the physical health of single adults experiencing chronic homelessness. This is consistent with King (2018), who found that the medical condition items on the VI-SPDAT were underreported when compared to community medical record systems, and that instances of overreporting were rare. In light of these findings, the VI-SPDAT may benefit from the inclusion of additional items assessing physical health, particularly items that are relevant to the experiences of single adults experiencing chronic homelessness. Because of the prevalence of these physical health issues among individuals experiencing homelessness, items should be added or modified so that they

adequately capture information related to drug and alcohol use; oral disease(s); injury and assault; infectious diseases such as influenza, tuberculosis, scabies, Bartonella quintana ("trench fever"), hepatitis, human immunodeficiency virus (HIV); nutrition; respiratory conditions, and chronic health conditions such as cardiovascular diseases, diabetes, hyperlipidemia, and hypertension (see Aldridge et al., 2018; Badiaga et al., 2008; Baggett et al., 2011; Fazel et al., 2014; Mackelprang et al., 2014; Wang et al., 2021; Weiser et al., 2013). More importantly, because of the previous studies suggesting the VI-SPDAT's potential for racial bias (see Wilkey et al., 2019, Cronley 2020), future iterations of the VI-SPDAT and/or related tools should be developed so that they ensure that items adequately capture information related to health conditions that disproportionately affect BIPOC and contribute to health inequities (National Academies et al., 2017).

The third noteworthy finding from the concurrent validity analyses is that scores on the Housing and Homelessness domain scores did not significantly predict any of the scores on any of the standardized measures. This is likely attributable, at least in part, to the restricted range of scores possible on the domain (0 to 2 points), and the restricted range of scores in the present sample (Crocker & Algina, 1986). However, considering the findings from convergent and concurrent validity analysis, as well as internal consistency analysis from this study and King (2018), the History of Housing and Homelessness domain is perhaps the most problematic domain on the VI-SPDAT from a psychometric standpoint, and in need of significant revisions. This domain could potentially be improved by the inclusion of items assessing housing instability and experiences of homelessness that are not limited to HUD's definition of chronic homelessness, but that also capture information related to housing insecurity across various

dimensions such as housing type, housing quality, residential instability, housing cost burden, neighborhood quality, overcrowding, and housing satisfaction (see Leopold et al., 2016).

Predictive validity analyses were conducted with individuals whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. It bears specific mention that individuals in the predictive validity sample scored significantly worse on measures related to quality of life, physical health, and psychological symptomatology when compared to those in the concurrent validity sample. Because those in the predictive validity analyses were unhoused and still experiencing homelessness 8 to 52 weeks out from their VI-SPDAT administration, these results likely reflect the fact that continued experiences of homelessness, particularly after system contact, can contribute to more pronounced adverse effects on quality of life, physical health, and psychological symptom levels. Consistent with previous studies, these results underscore the need for additional housing, particularly Permanent Supportive Housing (PSH) resources, in addition to flexibility in combining and consolidating resources to create strategies that allow for temporary housing solutions until additional PSH slots are available (Quinn et al., 2018). Additional PSH resources and greater flexibility in housing allocation and/or transfers can help ensure that individuals are housed expeditiously, and negative effects of homelessness are not exacerbated.

It is also possible that those with worse physical health, psychological symptomatology and quality of life experience longer wait times for housing. One potential explanation for this finding is that in order to qualify for housing, individual's must "obtain documentation of homeless status, disability, and the specific period of time the individual or head of household was living in an emergency shelter, safe haven, or place not meant for human habitation" (U.S. Department of Housing and Urban Development, 2015, p. 75795). While HUD permits some

flexibility in instances that individuals are not able to meet recordkeeping requirements, it is possible that those with more or greater mental health problems (i.e., poorer mental health) experience greater barriers obtaining documentation and would benefit from additional supports such as a housing navigators – i.e., dedicated staff who can provide flexible case management services (e.g., completing applications, obtaining necessary documentation, facilitating linkage to support services, etc.) to address barriers and advance housing placements (Burt, 2015). This is consistent with findings from a recent study which found that individuals with moderate vulnerability, as assessed by the first and second versions of the VI-SPDAT, had a slightly higher likelihood of establishing eligibility for housing than those at the highest vulnerability level (Balagot et al., 2019). The authors noted that this may have been because individuals with lower vulnerability may be easier to locate and "may be more able to cooperate in gathering or have access to the proper documents needed to establish eligibility" (Balagot et al., 2019, p. 155). Taken together, these findings highlight the salient role of housing navigators in the successful engagement of individuals experiencing chronic homelessness.

Predictive validity analyses detected significant associations between total VI-SPDAT scores and two mental health measures, the MCSI and SF-12's Mental Health subscale. However, further examination suggests that these associations are perhaps largely driven by scores on the Risks domain, given that it is the only domain that had a significant relationship with MCSI and SF-12 scores. Another noteworthy finding is that the associations detected with the concurrent validity sample (4 weeks or less between VI-SPDAT administration and standardized assessment completion) were not replicated with the predictive validity sample (8 to 52 weeks between VI-SPDAT administration and standardized assessment completion). These differing results may suggest that experiences of those who are chronically homeless are

extraordinarily complex and dynamic and, therefore, the use of a tool that is conducted annually may not be the best approach for adequately capturing the behavioral, social, and medical needs of those experiencing chronic homelessness. Instead, communities should consider re-assessing and/or actively monitoring the functioning of individuals experiencing chronic homelessness on a more regular and ongoing basis. While this may be challenging and costly, doing so can help in adapting service strategies (e.g., type of assistance or intervention, duration, intensity, etc.) to ensure the most efficient use of community assets and, more importantly, ensure that individuals whose situation and/or functioning deteriorates are provided with the necessary supports as soon as possible. Although the present study yield important insights, it is important to note that the predictive validity sample was small and cross-sectional. Therefore additional research is needed to further elucidate these findings and the nature of the relationships involving the VI-SPDAT and relevant standardized measures.

Limitations and Future Directions

Although this study yielded important findings regarding the reliability and validity of the VI-SPDAT, there are limitations that warrant mention. First, findings from this study may have limited generalizability given that the sample exclusively consisted of *single adults* experiencing *chronic* homelessness in Charlotte, NC. While this allows for a deeper understanding of the VI-SPDAT's ability to assess vulnerability within this subpopulation and community, it also limits generalizability to other subpopulations and/or communities that are dissimilar to Charlotte. Additional research is needed with diverse subpopulations (e.g., youth, families, etc.), different versions of the VI-SPDAT (e.g., Transition Age Youth VI-SPDAT and Family VI-SPDAT), and across various communities (e.g., smaller cities, rural areas, etc.). A greater understanding of the VI-SPDAT's reliability and validity across these other populations and settings will help inform

whether the VI-SPDAT is an appropriate tool for assessing vulnerability and, ultimately, for determining an individual's priority for housing.

Another limitation that bears mention is the study's sample size. While some analyses were adequately powered, other analyses (e.g., predictive validity analyses, CFA analyses) would have been strengthened by a larger sample. As such, the findings presented should be interpreted with caution and contextualized based on the parameters described in the methods section. Relatedly, samples for concurrent and predictive validity analyses were created by examining the number of weeks between VI-SPDAT administration and standardized measures; specifically, concurrent validity analyses involved participants whose number of weeks between VI-SPDAT and standardized assessment completion was 4 weeks or less, while the predictive validity analyses consisted of participants whose time between assessments was 8 to 52 weeks. Although not customary for concurrent and predictive validity analyses, these cut-offs were selected to help maximize sample sizes and model stability, while also considering the VI-SPDAT's real world application for decision-making for determining priority for housing allocation. While these analyses helped approximate the concurrent and predictive validity of the VI-SPDAT, those designing future studies should consider using traditional methods for assessing concurrent and predictive validity, using a longitudinal design (rather than cross-sectional), and drawing from a larger sample.

Notwithstanding the aforementioned limitations, this study has notable strengths. First, this study provides one of the first comprehensive examinations of the second version of the VI-SPDAT's reliability and validity with a sample of single adults experiencing chronic homelessness. Second, this study is the first in-depth examination of the VI-SPDAT's criterion and construct validity with other standardized measures assessing a wide range of constructs

(e.g., trauma, quality of life, physical health, mental health, etc.). In turn, the study yielded considerable data about the VI-SPDAT's qualities as an assessment tool. In summary, the results from this study suggest that the VI-SPDAT is strongest in measuring areas associated with psychological symptomatology and/or mental health; however, there are significant limitations in its internal consistency and its ability to capture the vulnerability and needs of individuals experiencing chronic homeless in areas related to qualify of life, physical health, and food security. Indeed, findings from this study raise concerns related to the VI-SPDAT's ability to adequately reflect the complex and dynamic behavioral, social, and medical needs of those experiencing chronic homelessness.

While the development of the VI-SPDAT may have been evidence-informed, and it was created as well as refined with the input of individuals with lived experience and service providers, the tool could be improved by the use of best practices in test construction and scale development. Specifically, if the measure is to be used, it is necessary for revisions to be grounded in critical, best practice steps for conceptualizing, developing, and validating scales related to item development, scale construction (e.g., extraction of factors), and scale evaluation (e.g., tests of dimensionality, tests of internal consistency and inter-rater reliability, invariant factorial structure across various subsamples; see, e.g., DeVellis, 2013; Fowler, 1995; Raykov & Marcoulides, 2011). It is hoped that the findings from this in-depth examination of the VI-SPDAT can be used to guide the development of screening methods or assessments that reliably, adequately, and equitably assess individuals' vulnerability and priority for homelessness assistance. The next section discusses implications, potential next steps, and policy recommendations based on the findings of this study.

Policy Recommendations and Implications

It is important to note that since the inception of this study, a third version of the VI-SPDAT has been released. According to OrgCode, the third version improves the collection of information related to domestic violence experience, criminal justice involvement, and clarifies physical and behavioral health questions (OrgCode, 2020), which may address some of the issues identified in this study. However, in December of 2020, Iain De Jong, the president and Chief Executive Officer of OrgCode, published a blog post announcing that it may be time to put "the VI-SPDAT to rest" and create a "tool or an approach framed through an equity lens" (2020b). This post may have been in response to a recently published study by Cronley (2020), which found that in a sample of individuals experiencing homelessness in the southeastern U.S., White women scored consistently higher on the VI-SPDAT compared to all men and Black women, despite similar numbers of both Black and White women reporting that a trauma and abuse led to their recent experience of homelessness. The author concluded that the VI-SPDAT may be racially biased, given that being White and reporting homelessness due to experiences of trauma directly and significantly predicted higher vulnerability scores on the VI-SPDAT (Cronley, 2020).

Since the publication of the blog posts, VI-SPDAT materials have been removed from OrgCode's website, and OrgCode has communicated that they will provide support for the VI-SPDAT 3.0 until 2022 (De Jong, 2020a). It remains unclear whether communities will switch to the VI-SPDAT 3.0 or stop using the tool in the future. However, until a replacement is identified, many communities will likely continue to use the VI-SPDAT 2.0, perhaps with some modifications to the weighting of some questions and/or domains, or with supplemental questions given that it remains integrated into so many Coordinated Entry processes.

Before discussing potential future directions and implications, it is important to reiterate that the VI-SPDAT was rarely used as intended. Specifically, the VI-SPDAT was designed to collect information to determine whether an individual or family *should be assessed* for particular housing intervention using the full SPDAT (De Jong, 2019). However, communities have not employed this approach and instead have relied on the VI-SPDAT as the sole source for determining housing priority and allocation. Nevertheless, the issues brought forth by the present study, Brown et al (2018), Cronley (2020), King (2018), and Wilkey et al., (2018) highlight the need for communities as well as HUD to reflect on whether the allocation of housing should continue to be based on such assessment scores. If so, multiple points must be considered.

First, the development of a tool that assesses the needs of a diverse population is a very substantial undertaking requiring rigorous testing and scrutiny. Validation of an instrument and/or tool is a continuous and iterative process (Crocker & Algina, 1986; DeVellis, 2013), and if the allocation of housing resources should continue to be based on assessment scores, it is necessary for HUD to dedicate resources to the development, testing, and refinement of a tool until it meets the criteria to be considered *valid, reliable,* and *equitable*. Local Continuums of Care (CoC) generally do not have the resources nor the technical expertise to refine a tool without the support of researchers or practitioners with expertise in psychometrics and measurement development.

Second, because many communities have been using the VI-SPDAT for assessments, these archival data can be used to help inform revisions to that measure or future developments of a tool. Exploratory CFA analyses were conducted as part of this study to determine whether modifications could be made to improve model fit. Results suggested that the best model fit was achieved with (1) the use of 5 latent first-order factors, which consisted of Service Utilization,

Risk of Harm, Socialization and Daily Functioning, Wellness and Health, and Substance Use and Mental Health; and (2) the removal of items 1-3, 4f, 7, 10-11, 14, 17, 20, and 22. Because of the small sample size across groups, measurement invariance analyses were not possible; however, future studies should build off of the findings from this study (and others such as Brown 2018, King 2018, and Wilkey et al., 2019) by examining whether results are reproduceable across a wide range of populations, communities, and racial and ethnic groups.

It is important to note that these analyses were exploratory and that they relied on a small sample of individuals experiencing chronic homelessness in Charlotte, NC. The removal of these items does not indicate that these areas are not relevant to decision-making or important to measure; rather, it suggests that in the present sample, the factor loadings were unstable, which could have been reflected one of more of several factors, such as the small sample size, the characteristics of the sample, the wording of questions, participants' unwillingness to provide honest responses to sensitive items, and construct underrepresentation, among others (DeVellis, 2013; Fowler, 1995; Raykov & Marcoulides, 2011). Because the developers of the VI-SPDAT did not follow best practices for scale development and validation, additional studies with larger samples are needed to inform improvements to the VI-SPDAT to support its reliability and validity, across a wide range of populations and/or groups (Guadagnoli & Velicer, 1988).

Of salience to this discussion, since the inception of this study, many communities have responded to issues with the VI-SPDAT by modifying the assessment. One example is King County, Washington (2021), which has been recognized by some communities as one of the pioneers in making improvements to the VI-SPDAT and approaching Coordinated Entry using a racial equity lens, in part because they have formed an interim prioritization workgroup to ensure that racial equity is a factor in household prioritization. As part of its efforts, King County's

interim workgroup created new weighted formulas based on data such as length of time homeless and responses to supplemental questions about such areas as living history, disabilities, and criminal background information.

Furthermore, the workgroup has been intentional in their efforts to facilitate racial equity by taking critical steps such as reviewing response patterns by people of color and White respondents, and monitoring changes on a monthly basis based on the newly-developed formulas (King County, 2021). While such modifications are key for reducing racial inequities in the allocation of housing, communities must also ensure that any tools are rigorously tested based on the fundamentals of psychometric validity and reliability. Otherwise, the same issues experienced by the VI-SPDAT are likely to continue and/or or cause new issues to develop.

Other communities have responded to issues with the VI-SPDAT by also creating Vulnerability Reviews. For example, Charlotte's CoC created the Vulnerability Review Committee (VRC) to address instances in which caseworkers believe that an individual's VI-SPDAT score is not reflective of their true vulnerability. While the VRC is a necessary safeguard, CoCs should take additional steps to help with quality improvement and monitoring of assessment processes. First, it is recommended that VRCs begin capturing information about the nature of the referrals to the VRC to allow for in-depth examination. Future studies can engage in document analysis capturing information about the referral (e.g., demographic characteristics of client, client's history of homelessness and stable housing, why the VI-SPDAT or any assessment tool does not adequately capture client's vulnerability) to help identify common themes across referrals, which can then inform future changes to the tool(s). Second, CoCs should consider building into assessments a space to capture assessor's thoughts as to whether the assessment adequately captures a client's service need or vulnerability. This

information could help inform future iterations of the VI-SPDAT or housing assessment and can ensure that data are captured in real-time. Finally, CoCs should work with assessors and individuals with lived experience to get feedback on the data that were captured throughout the year, and to allow a space for discussion for potential solutions. Together, these efforts can help inform the development of a new tool via a participatory process that is informed by a variety of stakeholders and data sources.

Conclusion

The present study provided valuable insight into the VI-SPDAT's ability to reliability and adequately assess vulnerability with single adults experiencing chronic homelessness. The findings from this study helped highlight some of the strengths as well as limitations of the VI-SPDAT. As noted by Devillis (2013), "although imperfect measurement may be better than no measurement at all in some situations, we should recognize our measurement procedures are flawed and temper our conclusions accordingly" (p. 13). It is hoped that the findings from this study will inform future iterations of the VI-SPDAT and/or potential adaptations by communities using the VI-SPDAT to ensure that the vulnerability of individuals experiencing chronic homelessness is adequately assessed and, most importantly, that the measures employed provide information that can be used to reduce inequities.

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Table 1

Participant Demographic Information for Full Sample

BIPOC (%)	65.2
Race (%)	
American Indian	1.5
Black	63.7
White	34.8
Ethnicity (%)	
Hispanic / Latino	2.0
Non-Hispanic / Non-Latino	93.6
Don't Know	4.4
Male (%)	73.5
High School Graduate (%)	70.6
Age: M (SD)	51.3 (9.9)
60 years or older (%)	9.8
Veteran (%)	5.4
Number of years experiencing homelessness: M (SD)	7.7 (7.2)
Experienced homelessness 5 years or more (%)	45.3

Note. $N = 204$. BIPOC = Black, Indigenous, and Persons of Color.

Table 2

Descriptive Statistics for Scores on the Second Version of the Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults

	Minimum	Maximum	Mean	*SD*
History of Housing and Homelessness	0	2	1.84	.39
Risks	0	4	2.18	1.22
Socialization & Daily Functioning	0	4	2.47	1.07
Wellness	0	6	3.18	1.80
Total Score	1	16	9.76	3.39

Note. N = 204.

Table 3

Item Intercorrelations for the History of Housing and Homelessness Domain

	1. Where do you sleep most frequently?	2. How long has it been since you lived in permanent stable housing?	3. In the last three years, how many times have you been homeless?
1. Where do you sleep most frequently?	-		
2. How long has it been since you lived in permanent stable housing?	.081	-	
3. In the last three years, how many times have you been homeless?	.051	-.299	-

Note. N = 204. Items were dichotomized according to the scoring of the Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT).

Table 4

Reliability Statistics for the Second Version of The Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults

Scale	Cronbach's Alpha	Number of Items
History of Housing and Homelessness (items 1-3)	-.232	3
Risks (items 4-9)	.732	11
Socialization and Daily Functioning (items 10-14)	.284	5
Overall Wellness (items 15-27)	.650	15
Wellness – Health and Wellbeing (items 15-20)	.239	6
Wellness – Substance and Mental Health (items 21-27)	.635	9
Entire Measure, excluding History of Housing and Homelessness domain (items 4-27)	.801	31
Entire Measure (items 1-27)	.795	34

Note. N = 204.

Table 5

Standardized Factor Loadings of the Second Version of the Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults

Items[a]	Model 1: Single Factor	Model 2: Hierarchical Model				
	Global Vulnerability	Second-order factor: Global Vulnerability	First-order Factor 1: Risks	First-order Factor 2: Socialization & Daily Functioning	First-order Factor 3: Wellness-Health	First-order Factor 4: Wellness Substance Use and Mental Health
1. Sleep Location	.28	.35				
2. Length of Homeless	.24**	.26***				
3. Frequency Homeless	.06	.03				
4. a) ER Visit	.83***		.89			
b)Ambulance	.71***		.76***			
c) Hospitalized	.66***		.71***			
d) Crisis Service	.46***		.51***			
e) Crime Involved	.59***		.63***			
f) Jail	.38***		.42***			
5. Being Attacked	.62***		.65***			
6. Being Threatened	.60***		.63***			
7. Legal Issues	.38***		.42***			
8. Exploitation	.62***		.65***			
9. Risky Behaviors	.65***		.68***			
10. Owe Money	.24***			.27		
11. Income	.06			.08***		
12. Social Activities	43***			.48***		
13. Basic Needs	.45***			.52***		
14. Social Relations	.47***			.48***		
15. Physical Health	.28***				.29	
16. Chronic Health Issue	.39***				.40***	
17. HIV/AIDS	.00				-.05***	

18. Disability	.34***					.37***
19. Sickness	.43***					.49***
20. Pregnancy	.24**					.25***
21. Past Drinking/ Drugs	.49***					.53
22. Current Drinking/ Drugs	.27***					.31***
23. a) Mental Health	.66***					.72***
b) Head Injury	.53***					.57***
c) Learning Disability	.44***					.48***
24. Mental Issue	.40***					.45***
25. Medications	.50***					.56***
26. Medications Abuse	.75***					.81***
27. Abuse	.66***					.71***

First Order Factors

Factor 1: Risks	.66***
Factor 2: Socialization	1.03***
Factor 3: Wellness - Health	1.03***
Factor 4: Substance Use and Mental Health	1.04***

Goodness of Fit Statistics	χ^2	df	RMSEA	(95% CI)	CFI	TLI
Model 1: Single Factor	1112.884***	527	.074	(.068-.080)	.807	.795
Model 2: Hierarchical Model	1023.802***	523	.069	(.062-.075)	.835	.823

Notes. RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index. Analyses in this table replicate the confirmatory factor analysis (CFA) approach by Brown and colleagues (2018) with version 1 of the Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) to allow for comparisons with version 2. Unlike Brown and colleagues, the presurvey item indicating whether an individual is 60 or older is not included, given that its inclusion did not allow for the model to converge. Questions 11 through 13 are reverse scored. ***$p < .001$. Significance levels are not listed for the first item for each latent variable given that the indicator is constrained to 1

to allow the remaining items to be scaled to the latent factor. When an indicator is constrained, no estimates are provided.

[a]Item names have been abbreviated.

Table 6

Standardized Factors for Best Fitting Model Based on Exploratory Analyses

Items[a]	Factor 1: Service Utilization	Factor 2: Risk of Harm	Factor 3: Socialization and Daily Functioning	Factor 4: Wellness and Health	Factor 5: Substance Use and Mental Health
4 a) ER Visit	.99				
b)Ambulance	.84***				
c)Hospitalized	.82***				
d) Crisis Service	.56***				
e) Crime Involved	.58***				
5. Being Attacked		.64			
6. Being Threatened		.62***			
8. Exploitation		.65***			
9. Risky Behaviors		.70***			
12. Social Activities			.66		
13. Basic Needs			.70***		
15. Physical Health				.32	
16. Chronic Health Issue				.45***	
18. Disability				.40***	
19. Sickness				.49***	
21. Past Drinking/Drugs					.50
23. a) Mental Health					.74***
b) Head Injury					.56***
c) learning disability					.51***
24. Mental Issue					.48***
25. Medications					.58***
26. Medications Abuse					.82***
27. Abuse					.68***

First Order Factors

Factor 1: Service Utilization	.53
Factor 2: Risk of Harm	.99***
Factor 3: Socialization and Daily Functioning	.68***
Factor 4: Wellness and Health	.99***
Factor 5: Substance Use and Mental Health	.93***

Goodness of Fit Statistics	$\chi2$	*df*	*RMSEA (95% CI)*	*CFI*	*TLI*
Hierarchical model	365.861***	225	.056 (.045-.066)	.941	.933

Notes. RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index. Original question numbers listed on the Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) were retained to help readers reference the VI-SPDAT assessment. Questions 11 to 13 are reverse scored. Through an iterative process, items were removed if they had low factor loadings and/or substantially reduced overall model fit. ***p < .001. Significance levels are not listed for the first item for each latent variable given that the indicator is constrained to 1 to allow the remaining items to be scaled to the latent factor. When an indicator is constrained, no estimates are provided.
[a]Item names have been abbreviated.

Table 7

Pearson Correlations Between the Second Version of The Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults Scores and Standardized Measures Completed Within 4 Weeks

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. History of Homelessness	-												
2. Risks	.15	-											
3. Socialization and Daily Functioning	.26*	.39**	-										
4. Wellness	.31*	.61**	.43**	-									
5. VI-SPDAT Total Score	.38**	.79**	.69**	.90**	-								
6. QOL-20	-.03	-.12	-.22	-.17	-.20	-							
7. MCSI	.10	.26*	.19	.37**	.34**	-.46**	-						
8. SF-12 (Perceived Mental Health)	-.08	-.17	-.31*	-.20	-.27*	.52**	-.56**	-					
9. SF-12 (Perceived Physical Health)	-.05	.11	.04	.02	.05	-.01	.02	-.17	-				
10. LEC – 5 (Events Experienced)	.02	.24	-.11	.30*	.21	-.16	.19	-.14	-.13	-			
11. LEC-5 (Events Witnessed)	.13	.21	.05	.39**	.31*	-.04	.14	-.15	-.01	.47**	-		
12. PCL-C	.11	.33**	.23	.43**	.42**	-.45**	.78**	-.56**	-.07	.30*	.25	-	
13. Food Security	.05	.14	.14	.14	.18	-.38**	.34**	-.56**	-.20	.24	.14	.40**	-

Notes. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed). All measures listed are measures collected within 4 or less of Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) administration. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist for DSM-5, specifically the number of stressful life events experienced. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version.

Table 8

Participant Demographic Information for Concurrent Validity Analyses

BIPOC (%)	60.9
Race (%)	
American Indian	3.1
Black	57.8
White	39.1
Ethnicity (%)	
Hispanic / Latino	1.6
Non-Hispanic / Non-Latino	93.8
Don't Know	4.7
Male (%)	73.4
High School Graduate (%)	77.8
Age: M (SD)	51.4 (10.5)
60 years or older (%)	10.9
Veteran (%)	9.4
Number of years experiencing homelessness: M (SD)	6.5 (5.3)
Experienced homelessness 5 years or more (%)	43.8

Note. N = 64. BIPOC = Black, Indigenous, and Persons of Color.

Table 9

Descriptive Statistics for Second Version of the Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults Scores, by Gender and Race

		History of Housing and Homelessness	Risks	Socialization	Wellness	VI-SPDAT Total Score
Male	*n*	47	47	47	47	47
	M	1.89	2.23	2.60	3.55	10.40
	SD	.37	1.29	1.04	1.79	3.53
Female	*n*	17	17	17	17	17
	M	1.71	2.76	2.06	3.71	10.29
	SD	.47	1.09	1.25	2.11	4.01
BIPOC	*n*	39	39	39	39	39
	M	1.79	2.15	2.21	3.44	9.67
	SD	.47	1.23	1.06	1.87	3.56
White	*n*	25	25	25	25	25
	M	1.92	2.72	2.84	3.84	11.48
	SD	.28	1.24	1.11	1.86	3.53
Total	*N*	64	64	64	64	64
	M	1.84	2.38	2.45	3.59	10.38
	SD	.41	1.25	1.11	1.87	3.63

Note. Participants only include those whose Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) and standardized measures were administered within 4 weeks of one another. BIPOC = Black, Indigenous, and Persons of Color.

Table 10

Descriptive Statistics for Scores on Standardized Measures, by Gender and Race

		QOL-20	MCSI	SF-12 (Mental Health)	SF-12 (Physical Health)	LEC-5 (Events Experienced)	LEC-5 (Events Witnessed)	PCL-C	Food Security
Male	*n*	46	46	46	46	46	46	46	46
	M	74.22	21.28	40.97	43.33	4.72	2.98	43.24	6.74
	SD	16.38	10.89	11.15	11.27	2.77	2.52	14.49	3.19
Female	*n*	16	16	16	16	16	16	16	16
	M	70.13	23.31	40.88	42.11	6.69	2.94	50.88	8.87
	SD	23.82	13.33	13.05	11.23	3.42	3.47	16.63	1.54
BIPOC	*n*	38	38	38	38	38	38	38	38
	M	74.89	23.37	41.77	44.73	4.97	2.89	45.71	6.66
	SD	18.58	12.35	12.50	10.30	3.17	2.76	14.43	3.18
White	*n*	24	24	24	24	24	24	24	24
	M	70.42	19.33	39.65	40.30	5.62	3.08	44.42	8.29
	SD	18.31	9.71	10.02	12.18	2.86	2.83	16.90	2.40
Total	*N*	62	62	62	62	62	62	62	62
	M	73.16	21.81	40.95	43.01	5.23	2.97	45.21	7.29
	SD	18.46	11.49	11.56	11.18	3.05	2.76	15.31	2.99

Note. Sample only includes those whose Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) and standardized measures were administered within 4 weeks of one another. BIPOC = Black, Indigenous, and Persons of Color. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist 5 for DSM-5. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version.

Table 11

Hierarchical Multiple Regression Using the Second Version of the Vulnerability Index - Service Prioritization Decision Assistance Tool History of Housing and Homelessness Domain Score to Predict Quality of Life Interview Scores

		b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.03	.03	.53
	(Constant)	75.63	3.30		22.89	.000	69.02	82.24			
	White	-4.72	4.81	-.13	-.98	.330	-14.35	4.90			
	Female	-3.62	5.37	-.09	-.67	.503	-14.37	7.13			
	Age	.10	.23	.06	.42	.678	-.36	.56			
Step 2									.03	.00	.03
	(Constant)	75.64	3.33		22.70	.000	68.97	82.30			
	White	-4.58	4.92	-.12	-.93	.356	-14.42	5.26			
	Female	-3.85	5.56	-.09	-.69	.492	-14.98	7.28			
	Age	.09	.23	.05	.39	.700	-.38	.56			
	History of Housing & Homelessness	-1.09	6.00	-.02	-.18	.857	-13.09	10.92			

Note. N = 64. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 12

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	$\varDelta R^2$	$F\varDelta$
Step 1								.03	.03	.53
(Constant)	75.63	3.30		22.89	.000	69.02	82.24			
White	-4.72	4.81	-.13	-.98	.330	-14.35	4.90			
Female	-3.62	5.37	-.09	-.67	.503	-14.37	7.13			
Age	.10	.23	.06	.42	.678	-.36	.56			
Step 2								.03	.00	.27
(Constant)	75.25	3.41		22.09	.000	68.43	82.06			
White	-3.95	5.06	-.11	-.78	.438	-14.08	6.18			
Female	-3.23	5.46	-.08	-.59	.557	-14.15	7.70			
Age	.06	.24	.03	.24	.814	-.43	.55			
Risks	-1.07	2.05	-.07	-.52	.604	-5.18	3.04			

Note. N = 64. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 13

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization & Daily Functioning Domain Score to Predict Quality of Life Interview Scores

		b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.03	.03	.53
	(Constant)	75.63	3.30		22.89	.000	69.02	82.24			
	White	-4.72	4.81	-.13	-.98	.330	-14.35	4.90			
	Female	-3.62	5.37	-.09	-.67	.503	-14.37	7.13			
	Age	.10	.23	.06	.42	.678	-.36	.56			
Step 2									.07	.05	3.07
	(Constant)	75.26	3.26		23.12	.000	68.75	81.78			
	White	-1.96	4.98	-.05	-.39	.695	-11.94	8.01			
	Female	-6.11	5.47	-.15	-1.12	.269	-17.06	4.84			
	Age	.00	.23	.00	.02	.984	-.46	.47			
	Socialization & Daily Functioning	-3.94	2.25	-.24	-1.75	.085	-8.44	.56			

Note. N = 64. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 14

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.03	.03	.53
(Constant)	75.63	3.30		22.89	.000	69.02	82.24			
White	-4.72	4.81	-.13	-.98	.330	-14.35	4.90			
Female	-3.62	5.37	-.09	-.67	.503	-14.37	7.13			
Age	.10	.23	.06	.42	.678	-.36	.56			
Step 2								.05	.02	1.26
(Constant)	75.36	3.31		22.79	.000	68.74	81.98			
White	-3.95	4.85	-.11	-.82	.418	-13.66	5.75			
Female	-3.63	5.36	-.09	-.68	.501	-14.36	7.10			
Age	.05	.23	.03	.20	.840	-.42	.52			
Wellness	-1.43	1.27	-.15	-1.12	.265	-3.98	1.12			

Note. $N = 64$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 15

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization
Decision Assistance Tool's Total Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.03	.03	.53
(Constant)	75.63	3.30		22.89	.000	69.02	82.24			
White	-4.72	4.81	-.13	-.98	.330	-14.35	4.90			
Female	-3.62	5.37	-.09	-.67	.503	-14.37	7.13			
Age	.10	.23	.06	.42	.678	-.36	.56			
Step 2								.05	.03	1.74
(Constant)	75.04	3.31		22.64	.000	68.41	81.67			
White	-2.83	4.99	-.08	-.57	.573	-12.82	7.16			
Female	-4.04	5.35	-.10	-.75	.454	-14.74	6.67			
Age	.02	.24	.01	.09	.927	-.45	.49			
Total VI-SPDAT Score	-.89	.68	-.18	-1.32	.192	-2.24	.46			

Note. N = 64. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 16

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.48
(Constant)	22.92	2.08		11.04	.000	18.77	27.08			
White	-2.93	3.04	-.13	-.96	.340	-9.01	3.16			
Female	.66	3.37	.03	.20	.845	-6.09	7.41			
Age	-.22	.14	-.20	-1.53	.132	-.51	.07			
Step 2								.08	.01	.86
(Constant)	22.92	2.08		11.02	.000	18.75	27.08			
White	-3.38	3.08	-.14	-1.10	.277	-9.56	2.79			
Female	1.39	3.47	.05	.40	.689	-5.55	8.33			
Age	-.20	.15	-.19	-1.40	.167	-.49	.09			
History of Housing and Homelessness	3.41	3.68	.12	.93	.357	-3.95	10.77			

Note. $N = 62$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male, Black, Indigenous, and Persons of Color. None of the models reached statistical significance.

Table 17

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.48
(Constant)	22.92	2.08		11.04	.000	18.77	27.08			
White	-2.93	3.04	-.13	-.96	.340	-9.01	3.16			
Female	.66	3.37	.03	.20	.845	-6.09	7.41			
Age	-.22	.14	-.20	-1.53	.132	-.51	.07			
Step 2								.13	.06	4.19
(Constant)	24.02	2.09		11.49	.000	19.83	28.21			
White	-4.91	3.11	-.21	-1.58	.121	-11.14	1.33			
Female	-.35	3.32	-.01	-.10	.917	-6.99	6.30			
Age	-.13	.15	-.12	-.85	.396	-.42	.17			
Risks	2.58	1.26	.28	2.05	.045	.06	5.10			

Note. $N = 62$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$. None of the models reached statistical significance.

Table 18

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.48
(Constant)	22.92	2.08		11.04	.000	18.77	27.08			
White	-2.93	3.04	-.13	-.96	.340	-9.01	3.16			
Female	.66	3.37	.03	.20	.845	-6.09	7.41			
Age	-.22	.14	-.20	-1.53	.132	-.51	.07			
Step 2								.13	.05	3.52
(Constant)	23.18	2.04		11.38	.000	19.10	27.26			
White	-4.84	3.15	-.21	-1.54	.130	-11.14	1.46			
Female	2.21	3.40	.08	.65	.519	-4.60	9.01			
Age	-.16	.15	-.14	-1.07	.289	-.45	.14			
Socialization and Daily Functioning	2.60	1.39	.26	1.88	.066	-.17	5.38			

Note. $N = 62$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 19

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Modified Colorado Symptom Index Scores

		b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.07	.07	1.48
	(Constant)	22.92	2.08		11.04	.000	18.77	27.08			
	White	-2.93	3.04	-.13	-.96	.340	-9.01	3.16			
	Female	.66	3.37	.03	.20	.845	-6.09	7.41			
	Age	-.22	.14	-.20	-1.53	.132	-.51	.07			
Step 2									.20	.13	8.94**
	(Constant)	23.49	1.96		12.01	.000	19.57	27.41			
	White	-4.13	2.88	-.18	-1.43	.157	-9.89	1.64			
	Female	.75	3.16	.03	.24	.813	-5.58	7.08			
	Age	-.15	.14	-.14	-1.08	.285	-.42	.13			
	Wellness	2.26	.76	.36	2.99	.004	.75	3.77			

Note. $N = 62$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). ** $p < .01$.

Table 20

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Modified Colorado Symptom Index Scores

		b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.07	.07	1.48
	(Constant)	22.92	2.08		11.04	.000	18.77	27.08			
	White	-2.93	3.04	-.13	-.96	.340	-9.01	3.16			
	Female	.66	3.37	.03	.20	.845	-6.09	7.41			
	Age	-.22	.14	-.20	-1.53	.132	-.51	.07			
Step 2									.20	.13	9.28**
	(Constant)	23.88	1.97		12.14	.000	19.94	27.82			
	White	-5.57	2.97	-.24	-1.87	.066	-11.53	.38			
	Female	1.21	3.16	.05	.38	.704	-5.12	7.53			
	Age	-.12	.14	-.11	-.86	.392	-.40	.16			
	Total VI-SPDAT Score	1.21	.40	.38	3.05	.004	.42	2.01			

Note. $N = 62$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). ** $p < .01$.

Table 21

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.34
(Constant)	42.15	2.16		19.48	.000	37.82	46.48			
White	-2.95	3.12	-.12	-.95	.348	-9.19	3.29			
Female	-1.23	3.47	-.05	-.35	.725	-8.17	5.72			
Age	.02	.15	.02	.15	.883	-.28	.32			
Step 2								.02	.00	.29
(Constant)	42.15	2.18		19.36	.000	37.79	46.51			
White	-2.66	3.18	-.11	-.83	.408	-9.03	3.72			
Female	-1.66	3.58	-.06	-.46	.645	-8.83	5.51			
Age	.01	.15	.01	.07	.942	-.29	.31			
History of Housing and Homelessness	-2.09	3.86	-.07	-.54	.590	-9.83	5.64			

Note. N = 63. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 22

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	*SE*	*B*	*t*	*Sig.*	95% CI LB - UB		R^2	ΔR^2	*FΔ*
Step 1								.02	.02	.34
(Constant)	42.15	2.16		19.48	.000	37.82	46.48			
White	-2.95	3.12	-.12	-.95	.348	-9.19	3.29			
Female	-1.23	3.47	-.05	-.35	.725	-8.17	5.72			
Age	.02	.15	.02	.15	.883	-.28	.32			
Step 2								.04	.02	1.20
(Constant)	41.51	2.24		18.55	.000	37.03	45.99			
White	-1.79	3.29	-.08	-.54	.589	-8.37	4.80			
Female	-.62	3.51	-.02	-.18	.860	-7.65	6.41			
Age	-.03	.16	-.03	-.21	.834	-.35	.28			
Risks	-1.48	1.35	-.16	-1.09	.278	-4.18	1.23			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 23

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.34
(Constant)	42.15	2.16		19.48	.000	37.82	46.48			
White	-2.95	3.12	-.12	-.95	.348	-9.19	3.29			
Female	-1.23	3.47	-.05	-.35	.725	-8.17	5.72			
Age	.02	.15	.02	.15	.883	-.28	.32			
Step 2								.11	.09	6.20*
(Constant)	41.85	2.08		20.14	.000	37.69	46.01			
White	-.52	3.15	-.02	-.16	.870	-6.81	5.78			
Female	-3.47	3.45	-.13	-1.01	.319	-10.37	3.43			
Age	-.06	.15	-.05	-.41	.686	-.35	.23			
Socialization and Daily Functioning	-3.52	1.41	-.34	-2.49	.016	-6.35	-.69			

Note. N = 63. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *p < .05.

Table 24

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

		b	SE	B	t	Sig.	LB	- UB	R^2	ΔR^2	$F\Delta$
							95% CI				
Step 1									.02	.02	.34
	(Constant)	42.15	2.16		19.48	.000	37.82	46.48			
	White	-2.95	3.12	-.12	-.95	.348	-9.19	3.29			
	Female	-1.23	3.47	-.05	-.35	.725	-8.17	5.72			
	Age	.02	.15	.02	.15	.883	-.28	.32			
Step 2									.05	.03	2.12
	(Constant)	41.81	2.16		19.39	.000	37.50	46.13			
	White	-2.21	3.13	-.09	-.70	.484	-8.47	4.06			
	Female	-1.17	3.44	-.04	-.34	.735	-8.05	5.71			
	Age	-.02	.15	-.02	-.14	.890	-.32	.28			
	Wellness	-1.21	.83	-.19	-1.46	.151	-2.87	.45			

Note. N = 63. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 25

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.34
(Constant)	42.15	2.16		19.48	.000	37.82	46.48			
White	-2.95	3.12	-.12	-.95	.348	-9.19	3.29			
Female	-1.23	3.47	-.05	-.35	.725	-8.17	5.72			
Age	.02	.15	.02	.15	.883	-.28	.32			
Step 2								.08	.06	3.97
(Constant)	41.45	2.14		19.36	.000	37.16	45.73			
White	-1.00	3.20	-.04	-.31	.756	-7.40	5.40			
Female	-1.55	3.39	-.06	-.46	.649	-8.34	5.24			
Age	-.05	.15	-.05	-.35	.728	-.35	.25			
Total VI-SPDAT score	-.87	.43	-.27	-1.99	.051	-1.73	.00			

Note. N = 63. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 26

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	1.11
(Constant)	45.30	2.02		22.44	.000	41.26	49.33			
White	-4.33	2.91	-.19	-1.49	.142	-10.16	1.49			
Female	-2.31	3.24	-.09	-.71	.478	-8.79	4.17			
Age	-.09	.14	-.08	-.64	.524	-.37	.19			
Step 2								.06	.00	.12
(Constant)	45.29	2.03		22.27	.000	41.22	49.37			
White	-4.16	2.98	-.18	-1.40	.168	-10.11	1.80			
Female	-2.57	3.35	-.10	-.77	.446	-9.27	4.13			
Age	-.10	.14	-.09	-.68	.501	-.38	.19			
History of Housing and Homelessness	-1.25	3.61	-.05	-.35	.730	-8.48	5.97			

Note. N = 63. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 27

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

		b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.05	.05	1.11
	(Constant)	45.30	2.02		22.44	.000	41.26	49.33			
	White	-4.33	2.91	-.19	-1.49	.142	-10.16	1.49			
	Female	-2.31	3.24	-.09	-.71	.478	-8.79	4.17			
	Age	-.09	.14	-.08	-.64	.524	-.37	.19			
Step 2									.08	.03	1.75
	(Constant)	46.01	2.08		22.14	.000	41.85	50.17			
	White	-5.64	3.05	-.25	-1.85	.070	-11.75	.48			
	Female	-2.99	3.26	-.12	-.92	.363	-9.51	3.53			
	Age	-.03	.15	-.03	-.19	.852	-.32	.26			
	Risks	1.66	1.25	.19	1.32	.192	-.85	4.17			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 28

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

		b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.05	.05	1.11
	(Constant)	45.30	2.02		22.44	.000	41.26	49.33			
	White	-4.33	2.91	-.19	-1.49	.142	-10.16	1.49			
	Female	-2.31	3.24	-.09	-.71	.478	-8.79	4.17			
	Age	-.09	.14	-.08	-.64	.524	-.37	.19			
Step 2									.06	.01	.33
	(Constant)	45.36	2.03		22.31	.000	41.29	49.43			
	White	-4.88	3.08	-.22	-1.59	.118	-11.04	1.28			
	Female	-1.81	3.37	-.07	-.54	.594	-8.56	4.95			
	Age	-.07	.14	-.07	-.49	.623	-.36	.22			
	Socialization and Daily Functioning	.79	1.38	.08	.57	.570	-1.98	3.56			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 29

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	1.11
(Constant)	45.30	2.02		22.44	.000	41.26	49.33			
White	-4.33	2.91	-.19	-1.49	.142	-10.16	1.49			
Female	-2.31	3.24	-.09	-.71	.478	-8.79	4.17			
Age	-.09	.14	-.08	-.64	.524	-.37	.19			
Step 2										
(Constant)	45.35	2.05		22.15	.000	41.25	49.44	.05	.00	.06
White	-4.45	2.97	-.20	-1.50	.140	-10.40	1.50			
Female	-2.32	3.27	-.09	-.71	.480	-8.85	4.22			
Age	-.08	.14	-.08	-.58	.566	-.37	.20			
Wellness	.19	.79	.03	.23	.815	-1.39	1.76			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 30

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	1.11
(Constant)	45.30	2.02		22.44	.000	41.26	49.33			
White	-4.33	2.91	-.19	-1.49	.142	-10.16	1.49			
Female	-2.31	3.24	-.09	-.71	.478	-8.79	4.17			
Age	-.09	.14	-.08	-.64	.524	-.37	.19			
Step 2								.06	.01	.47
(Constant)	45.53	2.06		22.14	.000	41.41	49.64			
White	-4.98	3.07	-.22	-1.62	.110	-11.13	1.17			
Female	-2.20	3.26	-.09	-.68	.501	-8.72	4.32			
Age	-.06	.14	-.06	-.45	.657	-.35	.22			
Total VI-SPDAT Score	.29	.42	.09	.69	.495	-.55	1.12			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 31

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist For DSM-5

	b	SE	B	t	Sig.	LB	- UB	R^2	ΔR^2	$F\Delta$
						95% CI				
Step 1								.12	.12	2.76
(Constant)	4.28	.53		8.10	.000	3.22	5.34			
White	1.02	.77	.16	1.32	.191	-.52	2.56			
Female	1.88	.86	.27	2.18	.033	.16	3.59			
Age	-.04	.04	-.13	-1.00	.320	-.11	.04			
Step 2								.12	.00	.15
(Constant)	4.28	.53		8.04	.000	3.21	5.34			
White	.97	.79	.15	1.23	.223	-.60	2.54			
Female	1.95	.89	.28	2.20	.032	.17	3.73			
Age	-.04	.04	-.12	-.94	.353	-.11	.04			
History of Housing and Homelessness	.37	.96	.05	.38	.703	-1.55	2.28			

Note. $N = 64$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 32

Hierarchical Multiple Regression Using Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

		b	SE	B	t	$Sig.$	95% CI LB	-	UB	R^2	ΔR^2	$F\Delta$
Step 1										.12	.12	2.76
	(Constant)	4.28	.53		8.10	.000	3.22		5.34			
	White	1.02	.77	.16	1.32	.191	-.52		2.56			
	Female	1.88	.86	.27	2.18	.033	.16		3.59			
	Age	-.04	.04	-.13	-1.00	.320	-.11		.04			
Step 2										.14	.02	1.13
	(Constant)	4.40	.54		8.14	.000	3.32		5.49			
	White	.77	.80	.12	.96	.343	-.84		2.38			
	Female	1.75	.87	.25	2.02	.048	.01		3.48			
	Age	-.02	.04	-.08	-.63	.530	-.10		.05			
	Risks	.35	.33	.14	1.06	.292	-.31		1.00			

Note. N = 64. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 33

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

		b	*SE*	*B*	*t*	*Sig.*	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.12	.12	2.76
	(Constant)	4.28	.53		8.10	.000	3.22	5.34			
	White	1.02	.77	.16	1.32	.191	-.52	2.56			
	Female	1.88	.86	.27	2.18	.033	.16	3.59			
	Age	-.04	.04	-.13	-1.00	.320	-.11	.04			
Step 2									.14	.01	.99
	(Constant)	4.25	.53		8.02	.000	3.19	5.30			
	White	1.27	.81	.20	1.57	.122	-.35	2.89			
	Female	1.65	.89	.24	1.85	.069	-.13	3.43			
	Age	-.05	.04	-.16	-1.20	.235	-.12	.03			
	Socialization and Daily Functioning	-.36	.37	-.13	-.99	.324	-1.10	.37			

Note. $N = 64$. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretationThe reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 34

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.12	.12	2.76
(Constant)	4.28	.53		8.10	.000	3.22	5.34			
White	1.02	.77	.16	1.32	.191	-.52	2.56			
Female	1.88	.86	.27	2.18	.033	.16	3.59			
Age	-.04	.04	-.13	-1.00	.320	-.11	.04			
Step 2								.19	.07	4.91*
(Constant)	4.36	.51		8.50	.000	3.34	5.39			
White	.78	.75	.13	1.04	.303	-.72	2.29			
Female	1.88	.83	.27	2.26	.028	.21	3.55			
Age	-.02	.04	-.08	-.61	.547	-.09	.05			
Wellness	.44	.20	.27	2.22	.031	.04	.83			

Note. $N = 64$. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$.

Table 35

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	$\varDelta R^2$	$F\varDelta$
Step 1								.12	.12	2.76
(Constant)	4.28	.53		8.10	.000	3.22	5.34			
White	1.02	.77	.16	1.32	.191	-.52	2.56			
Female	1.88	.86	.27	2.18	.033	.16	3.59			
Age	-.04	.04	-.13	-1.00	.320	-.11	.04			
Step 2								.15	.03	1.88
(Constant)	4.38	.53		8.27	.000	3.32	5.44			
White	.70	.80	.11	.88	.381	-.89	2.30			
Female	1.95	.85	.28	2.28	.026	.24	3.66			
Age	-.02	.04	-.08	-.65	.517	-.10	.05			
VI-SPDAT Total Score	.15	.11	.18	1.37	.176	-.07	.36			

Note. $N = 64$. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 36

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

		b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.10	.10	2.22
	(Constant)	43.45	2.71		16.05	.000	38.04	48.87			
	White	.97	3.90	.03	.25	.804	-6.84	8.78			
	Female	6.55	4.34	.19	1.51	.137	-2.15	15.24			
	Age	-.31	.19	-.22	-1.69	.097	-.69	.06			
Step 2									.12	.02	1.20
	(Constant)	43.46	2.70		16.08	.000	38.05	48.87			
	White	.23	3.95	.01	.06	.955	-7.69	8.14			
	Female	7.63	4.45	.22	1.72	.092	-1.27	16.53			
	Age	-.29	.19	-.20	-1.53	.132	-.66	.09			
	History of Housing and Homelessness	5.26	4.80	.14	1.10	.278	-4.34	14.86			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 37

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool Risks Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

		b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	$\varDelta R^2$	$F\varDelta$
Step 1									.10	.10	2.22
	(Constant)	43.45	2.71		16.05	.000	38.04	48.87			
	White	.97	3.90	.03	.25	.804	-6.84	8.78			
	Female	6.55	4.34	.19	1.51	.137	-2.15	15.24			
	Age	-.31	.19	-.22	-1.69	.097	-.69	.06			
Step 2									.16	.06	4.34*
	(Constant)	44.93	2.73		16.47	.00	39.47	50.40			
	White	-1.73	4.01	-.06	-.43	.668	-9.76	6.30			
	Female	5.14	4.28	.15	1.20	.235	-3.43	13.71			
	Age	-.19	.19	-.13	-.97	.334	-.57	.20			
	Risks	3.43	1.65	.28	2.08	.042	.14	6.73			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$.

Table 38

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	$Sig.$	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	2.22
(Constant)	43.45	2.71		16.05	.000	38.04	48.87			
White	.97	3.90	.03	.25	.804	-6.84	8.78			
Female	6.55	4.34	.19	1.51	.137	-2.15	15.24			
Age	-.31	.19	-.22	-1.69	.097	-.69	.06			
Step 2								.17	.07	4.70*
(Constant)	43.78	2.63		16.64	.000	38.52	49.05			
White	-1.72	3.98	-.06	-.43	.668	-9.69	6.26			
Female	9.02	4.37	.26	2.07	.043	.28	17.76			
Age	-.22	.19	-.16	-1.21	.231	-.60	.15			
Socialization and Daily Functioning	3.88	1.79	.28	2.17	.034	.30	7.47			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$.

Table 39

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	2.22
(Constant)	43.45	2.71		16.05	.000	38.04	48.87			
White	.97	3.90	.03	.25	.804	-6.84	8.78			
Female	6.55	4.34	.19	1.51	.137	-2.15	15.24			
Age	-.31	.19	-.22	-1.69	.097	-.69	.06			
Step 2								.25	.15	11.55**
(Constant)	44.37	2.51		17.69	.000	39.35	49.39			
White	-1.06	3.64	-.03	-.29	.773	-8.35	6.24			
Female	6.40	4.00	.19	1.60	.115	-1.61	14.41			
Age	-.20	.17	-.14	-1.13	.263	-.55	.15			
Wellness	3.28	.97	.40	3.40	.001	1.35	5.21			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). ** $p < .01$.

Table 40

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	2.22
(Constant)	43.45	2.71		16.05	.000	38.04	48.87			
White	.97	3.90	.03	.25	.804	-6.84	8.78			
Female	6.55	4.34	.19	1.51	.137	-2.15	15.24			
Age	-.31	.19	-.22	-1.69	.097	-.69	.06			
Step 2								.21	.16	12.16**
(Constant)	44.90	2.52		17.84	.000	39.86	49.94			
White	-3.05	3.76	-.10	-.81	.420	-10.58	4.48			
Female	7.21	3.99	.21	1.81	.076	-.77	15.20			
Age	-.16	.18	-.11	-.91	.365	-.51	.19			
Total VI-SPDAT Score	1.78	.51	.42	3.49	.001	.76	2.80			

Note. $N = 63$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). ** $p < .01$.

Table 41

Summary of Variance Accounted for by Vulnerability Index - Service Prioritization Decision Assistance Tool (VI-SPDAT) Scores When Predicting Scores on Standardized Measures Conducted Within 4 Weeks of VI-SPDAT Administration

Dependent Variable	Independent Variable				
	Housing and Homelessness ΔR^2	Risks ΔR^2	Socialization and Daily Functioning ΔR^2	Wellness ΔR^2	Total VI-SPDAT Score ΔR^2
QOL-20	.00	.00	.05	.02	.03
MCSI	.01	.06	.05	.13**	.13**
SF-12 (Mental Health)	.00	.02	.09*	.03	.06
SF-12 (Physical Health)	.00	.03	.01	.00	.01
LEC-5	.00	.02	.01	.07*	.03
PCL-C	.02	.06*	.07*	.15**	.16**

Note. $N = 62 - 64$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist, specifically the number of stressful life events experienced. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 4 weeks of one another. Step 1 in the hierarchical regressions included the control variables gender (Male or Female), race (White or Black, Indigenous, and Persons of Color), and age (in years). *$p <.05$. **$p < .01$.

Table 42

Participant Demographic Information for Predictive Validity Analyses

BIPOC (%)	67.9
Race (%)	
American Indian	0.0
Black	67.9
White	32.1
Male (%)	76.8
High School Graduate (%)	66.1
Age: M (SD)	51.4 (10.1)
60 years or older (%)	10.7
Veterans (%)	3.6
Number of years experiencing homelessness: M (SD)	7.4 (7.1)
Experienced homelessness 5 years or more (%)	46.4

Note. $N = 56$. BIPOC = Black, Indigenous, and Persons of Color.

Completed Within 8 to 52 Weeks

Table 43

Pearson Correlations Between Scores on the Second Version of the Vulnerability Index - Service Prioritization Decision Assistance Tool for Single Adults and Standardized Measures Completed Within 8 to 52 Weeks

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. History of Housing & Homelessness	-												
2. Risks	.23	-											
3. Socialization & Daily Functioning	.39**	.15	-										
4. Wellness	.17	.31*	.38**	-									
5. VI-SPDAT Total Score	.49**	.63**	.67**	.82**	-								
6. QOL-20	-.10	-.19	-.11	.01	-.09	-							
7. MCSI	.11	.38**	.20	.12	.27*	-.51**	-						
8. SF-12 (Perceived Mental Health)	-.09	-.41**	-.23	-.14	-.30*	.71**	-.77**	-					
9. SF-12 (Perceived Physical Health)	.05	-.15	.12	-.20	-.12	-.05	.00	-.07	-				
10. LEC – 5 (Stressful Life Events Experienced)	-.03	.27*	-.06	.05	.09	-.37**	.47**	-.42**	-.28*	-			
11. LEC-5 (Stressful Life Events Witnessed)	-.07	.22	.08	-.10	.03	-.16	.06	-.19	.05	.24	-		
12. PCL-C	-.01	.36**	.08	.06	.17	-.58**	.68**	-.67**	.02	.49**	.16	-	
13. Food Security	.30*	.26	.24	.10	.30*	-.28*	.30*	-.32*	.02	.22	.10	.39**	-

Notes. N = 56. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. All measures listed were collected within 8 to 52 weeks of VI-SPDAT administration. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist for DSM-5. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

Table 44

Descriptive Statistics for Vulnerability Index - Service Prioritization Decision Assistance Tool Scores, by Gender and Race

		History of Housing and Homelessness	Risks	Socialization	Wellness	VI-SPDAT Total Score
Male	*n*	43	43	43	43	43
	M	1.84	2.09	2.77	3.44	10.26
	SD	.43	1.21	.95	1.45	2.88
Female	*n*	13	13	13	13	13
	M	1.69	2.54	2.62	3.15	10.08
	SD	.48	.66	.96	1.46	2.18
BIPOC	*n*	38	38	38	38	38
	M	1.79	2.03	2.71	3.24	9.87
	SD	.41	1.15	.96	1.38	2.63
White	*n*	18	18	18	18	18
	M	1.83	2.56	2.78	3.67	10.94
	SD	.51	.98	.94	1.57	2.82
Total	N	56	56	56	56	56
	M	1.80	2.20	2.73	3.37	10.21
	SD	.44	1.12	.94	1.45	2.72

Note. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. BIPOC = Black, Indigenous, and Persons of Color. Sample only includes those participants whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another.

Table 45

Descriptive Statistics for Scores on Standardized Measures, by Gender and Race

		QOL-20	MCSI	SF-12 (Mental Health)	SF-12 (Physical Health)	LEC-5 (Stressful Life Events Experienced)	LEC-5 (Stressful Life Events Witnessed)	PCL-C	Food Security
Male	*n*	43	43	43	43	43	43	43	43
	M	64.86	28.95	38.22	38.55	4.21	2.28	49.40	7.26
	SD	20.54	13.66	11.39	11.21	3.28	2.71	15.85	3.34
Female	*n*	13	13	13	13	13	13	13	13
	M	60.62	31.23	35.80	35.69	5.46	1.77	55.00	6.85
	SD	26.60	15.22	13.80	10.55	2.57	1.74	20.64	3.67
BIPOC	*n*	38.00	38	38	38	38	38	38	38
	M	63.32	29.45	38.03	38.24	4.21	2.16	49.68	6.79
	SD	23.29	14.48	11.77	11.55	3.43	2.63	17.28	3.59
White	*n*	18	18	18	18	18	18	18	18
	M	65.06	29.56	36.86	37.16	5.11	2.17	52.83	7.94
	SD	19.22	13.09	12.48	10.12	2.45	2.33	16.83	2.86
Total	N	56	56	56	56	56	56	56	56
	M	63.87	29.48	37.66	37.89	4.50	2.16	50.70	7.16
	SD	21.90	13.93	11.90	11.03	3.16	2.51	17.04	3.39

Note. BIPOC = Black Indigenous Persons of Color. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist for DSM-5. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version. Participants only include those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another.

Table 46

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	62.70	4.08		15.37	.000	54.51	70.88			
White	4.48	6.57	.10	.68	.499	-8.71	17.67			
Female	-2.15	7.10	-.04	-.30	.763	-16.40	12.10			
Age	.46	.31	.21	1.47	.148	-.17	1.09			
Step 2								.08	.03	1.89
(Constant)	62.27	4.06		15.35	.000	54.12	70.41			
White	5.68	6.58	.12	.86	.392	-7.52	18.88			
Female	-2.95	7.06	-.06	-.42	.678	-17.13	11.23			
Age	.59	.33	.27	1.82	.075	-.06	1.25			
History of Housing & Homelessness	-9.63	7.00	-.20	-1.38	.175	-23.69	4.43			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 47

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	62.70	4.08		15.37	.000	54.51	70.88			
White	4.48	6.57	.10	.68	.499	-8.71	17.67			
Female	-2.15	7.10	-.04	-.30	.763	-16.40	12.10			
Age	.46	.31	.21	1.47	.148	-.17	1.09			
Step 2								.07	.03	1.48
(Constant)	61.73	4.14		14.92	.000	53.43	70.04			
White	5.90	6.65	.13	.89	.379	-7.45	19.24			
Female	-.90	7.14	-.02	-.13	.900	-15.24	13.44			
Age	.39	.32	.18	1.25	.219	-.24	1.03			
Risks	-3.40	2.79	-.17	-1.22	.229	-9.00	2.21			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 48

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	62.70	4.08		15.37	.000	54.51	70.88			
White	4.48	6.57	.10	.68	.499	-8.71	17.67			
Female	-2.15	7.10	-.04	-.30	.763	-16.40	12.10			
Age	.46	.31	.21	1.47	.148	-.17	1.09			
Step 2								.06	.01	.66
(Constant)	63.18	4.14		15.27	.000	54.88	71.49			
White	4.62	6.60	.10	.70	.487	-8.62	17.87			
Female	-2.55	7.14	-.05	-.36	.722	-16.89	11.78			
Age	.46	.31	.21	1.45	.152	-.17	1.09			
Socialization & Daily Functioning	-2.56	3.16	-.11	-.81	.421	-8.91	3.78			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 49

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	62.70	4.08		15.37	.000	54.51	70.88			
White	4.48	6.57	.10	.68	.499	-8.71	17.67			
Female	-2.15	7.10	-.04	-.30	.763	-16.40	12.10			
Age	.46	.31	.21	1.47	.148	-.17	1.09			
Step 2								.05	.00	.01
(Constant)	62.71	4.12		15.21	.000	54.43	70.99			
White	4.41	6.69	.09	.66	.512	-9.01	17.84			
Female	-2.10	7.20	-.04	-.29	.772	-16.55	12.35			
Age	.46	.32	.21	1.46	.151	-.17	1.10			
Wellness	.17	2.10	.01	.08	.938	-4.05	4.38			

Note. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. $N = 56$. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 50

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Quality of Life Interview Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	62.70	4.08		15.37	.000	54.51	70.88			
White	4.48	6.57	.10	.68	.499	-8.71	17.67			
Female	-2.15	7.10	-.04	-.30	.763	-16.40	12.10			
Age	.46	.31	.21	1.47	.148	-.17	1.09			
Step 2								.06	.01	.56
(Constant)	62.48	4.11		15.21	.000	54.23	70.73			
White	5.39	6.71	.12	.80	.426	-8.09	18.87			
Female	-2.27	7.13	-.04	-.32	.751	-16.59	12.04			
Age	.46	.31	.21	1.47	.148	-.17	1.10			
Total VI-SPDAT Score	-.84	1.12	-.10	-.75	.457	-3.08	1.40			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life Interview. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 51

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Modified Colorado Symptom Index Scores

		b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.02	.02	.35
	(Constant)	29.54	2.63		11.22	.000	24.25	34.82			
	White	-.95	4.24	-.03	-.22	.824	-9.45	7.56			
	Female	1.48	4.58	.05	.32	.748	-7.71	10.67			
	Age	-.18	.20	-.13	-.88	.381	-.58	.23			
Step 2									.05	.03	1.37
	(Constant)	29.77	2.63		11.32	.000	24.49	35.05			
	White	-1.61	4.26	-.05	-.38	.707	-10.17	6.95			
	Female	1.92	4.58	.06	.42	.677	-7.27	11.11			
	Age	-.25	.21	-.18	-1.19	.239	-.67	.17			
	History of Housing and Homelessness	5.32	4.54	.17	1.17	.247	-3.79	14.43			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 52

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risk Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	29.54	2.63		11.22	.000	24.25	34.82			
White	-.95	4.24	-.03	-.22	.824	-9.45	7.56			
Female	1.48	4.58	.05	.32	.748	-7.71	10.67			
Age	-.18	.20	-.13	-.88	.381	-.58	.23			
Step 2								.16	.14	8.34**
(Constant)	30.92	2.51		.000	.000	25.88	35.96			
White	-2.99	4.03	-.10	-.74	.462	-11.08	5.11			
Female	-.32	4.33	-.01	-.07	.941	-9.02	8.38			
Age	-.08	.19	-.06	-.44	.663	-.47	.30			
Risks	4.89	1.69	.39	2.89	.006	1.49	8.29			

Note. N = 56. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). **p < .01.

Table 53

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	29.54	2.63		11.22	.000	24.25	34.82			
White	-.95	4.24	-.03	-.22	.824	-9.45	7.56			
Female	1.48	4.58	.05	.32	.748	-7.71	10.67			
Age	-.18	.20	-.13	-.88	.381	-.58	.23			
Step 2								.06	.04	2.28
(Constant)	28.96	2.63		11.02	.000	23.68	34.24			
White	-1.12	4.19	-.04	-.27	.791	-9.53	7.29			
Female	1.95	4.54	.06	.43	.669	-7.15	11.06			
Age	-.17	.20	-.13	-.88	.385	-.58	.23			
Socialization and Daily Functioning	3.03	2.01	.21	1.51	.138	-1.00	7.06			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 54

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Modified Colorado Symptom Index Scores

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	29.54	2.63		11.22	.000	24.25	34.82			
White	-.95	4.24	-.03	-.22	.824	-9.45	7.56			
Female	1.48	4.58	.05	.32	.748	-7.71	10.67			
Age	-.18	.20	-.13	-.88	.381	-.58	.23			
Step 2								.03	.02	.80
(Constant)	29.63	2.64		11.23	.000	24.33	34.93			
White	-1.40	4.28	-.05	-.33	.745	-9.99	7.19			
Female	1.85	4.61	.06	.40	.689	-7.40	11.11			
Age	-.17	.20	-.12	-.84	.406	-.58	.24			
Wellness	1.20	1.34	.12	.89	.376	-1.50	3.90			

Note. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. $N = 56$. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretationThe reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 55

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Modified Colorado Symptom Index Scores

						95% CI		R^2	ΔR^2	$F\Delta$
		b	SE	B	t	Sig.	LB - UB			
Step 1								.02	.02	.35
	(Constant)	29.54	2.63		11.22	.000	24.25 34.82			
	White	-.95	4.24	-.03	-.22	.824	-9.45 7.56			
	Female	1.48	4.58	.05	.32	.748	-7.71 10.67			
	Age	-.18	.20	-.13	-.88	.381	-.58 .23			
Step 2								.10	.08	4.46*
	(Constant)	29.91	2.56		11.71	.000	24.78 35.04			
	White	-2.55	4.18	-.09	-.61	.545	-10.93 5.84			
	Female	1.69	4.44	.05	.38	.704	-7.21 10.60			
	Age	-.18	.20	-.13	-.94	.354	-.58 .21			
	VI-SPDAT total score	1.47	.69	.29	2.11	.040	.07 2.86			

Note. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. MCSI = Modified Colorado Symptom Index. $N = 56$. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$.

Table 56

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

		b	SE	B	t	Sig.	95% CI LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1									.07	.07	1.32
	(Constant)	37.52	2.19		17.13	.000	33.13	41.91			
	White	.69	3.53	.03	.19	.847	-6.39	7.77			
	Female	-1.05	3.81	-.04	-.28	.784	-8.70	6.60			
	Age	.31	.17	.26	1.85	.070	-.03	.65			
Step 2									.10	.03	1.78
	(Constant)	37.30	2.18		17.11	.000	32.92	41.67			
	White	1.31	3.53	.05	.37	.712	-5.78	8.41			
	Female	-1.47	3.80	-.05	-.39	.701	-9.08	6.15			
	Age	.38	.17	.32	2.17	.035	.03	.73			
	History of Housing and Homelessness	-5.02	3.76	-.19	-1.33	.188	-12.57	2.54			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 57

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risk Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

		b	SE	B	t	$Sig.$	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.07	.07	1.32
	(Constant)	37.52	2.19		17.13	.000	33.13	41.91			
	White	.69	3.53	.03	.19	.847	-6.39	7.77			
	Female	-1.05	3.81	-.04	-.28	.784	-8.70	6.60			
	Age	.31	.17	.26	1.85	.070	-.03	.65			
Step 2									.20	.13	8.57**
	(Constant)	36.35	2.08		17.44	.000	32.17	40.54			
	White	2.41	3.35	.10	.72	.476	-4.32	9.13			
	Female	.47	3.60	.02	.13	.898	-6.76	7.69			
	Age	.23	.16	.20	1.45	.153	-.09	.55			
	Risks	-4.12	1.41	-.39	-2.93	.005	-6.94	-1.29			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). ** $p < .01$.

Table 58

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.32
(Constant)	37.52	2.19		17.13	.000	33.13	41.91			
White	.69	3.53	.03	.19	.847	-6.39	7.77			
Female	-1.05	3.81	-.04	-.28	.784	-8.70	6.60			
Age	.31	.17	.26	1.85	.070	-.03	.65			
Step 2								.13	.05	3.21
(Constant)	38.08	2.17		17.57	.000	33.73	42.43			
White	.86	3.46	.03	.25	.805	-6.08	7.80			
Female	-1.51	3.74	-.05	-.40	.687	-9.02	6.00			
Age	.31	.16	.26	1.86	.068	-.02	.64			
Socialization and Daily Functioning	-2.97	1.66	-.24	-1.79	.079	-6.29	.36			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 59

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.32
(Constant)	37.52	2.19		17.13	.000	33.13	41.91			
White	.69	3.53	.03	.19	.847	-6.39	7.77			
Female	-1.05	3.81	-.04	-.28	.784	-8.70	6.60			
Age	.31	.17	.26	1.85	.070	-.03	.65			
Step 2								.09	.02	1.00
(Constant)	37.43	2.19		17.08	.000	33.03	41.83			
White	1.11	3.55	.04	.31	.756	-6.02	8.24			
Female	-1.40	3.83	-.05	-.37	.716	-9.08	6.28			
Age	.30	.17	.26	1.80	.078	-.04	.64			
Wellness	-1.12	1.12	-.14	-1.00	.321	-3.36	1.12			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 60

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Mental Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.07	.07	1.32
(Constant)	37.52	2.19		17.13	.000	33.13	41.91			
White	.69	3.53	.03	.19	.847	-6.39	7.77			
Female	-1.05	3.81	-.04	-.28	.784	-8.70	6.60			
Age	.31	.17	.26	1.85	.070	-.03	.65			
Step 2								.16	.09	5.67
(Constant)	37.17	2.10		17.67	.000	32.95	41.39			
White	2.17	3.44	.09	.63	.530	-4.73	9.07			
Female	-1.25	3.65	-.04	-.34	.734	-8.58	6.08			
Age	.32	.16	.27	1.96	.056	-.01	.64			
Total VI-SPDAT score	-1.36	.57	-.31	-2.38	.021	-2.51	-.21			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 61

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	39.21	2.08		18.81	.000	35.03	43.40			
White	-1.64	3.36	-.07	-.49	.628	-8.38	5.10			
Female	-3.26	3.63	-.13	-.90	.373	-10.54	4.02			
Age	-.08	.16	-.08	-.53	.599	-.41	.24			
Step 2										
(Constant)	39.29	2.11		18.65	.000	35.06	43.52	.02	.00	.22
White	-1.85	3.41	-.08	-.54	.591	-8.70	5.01			
Female	-3.12	3.67	-.12	-.85	.399	-10.48	4.24			
Age	-.11	.17	-.10	-.64	.526	-.45	.23			
History of Housing and Homelessness	1.69	3.64	.07	.46	.644	-5.61	8.99			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 62

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risk Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	39.21	2.08		18.81	.000	35.03	43.40			
White	-1.64	3.36	-.07	-.49	.628	-8.38	5.10			
Female	-3.26	3.63	-.13	-.90	.373	-10.54	4.02			
Age	-.08	.16	-.08	-.53	.599	-.41	.24			
Step 2								.04	.02	1.12
(Constant)	38.79	2.12		18.28	.000	34.53	43.04			
White	-1.00	3.41	-.04	-.29	.770	-7.84	5.84			
Female	-2.70	3.66	-.10	-.74	.464	-10.05	4.65			
Age	-.11	.16	-.10	-.70	.486	-.44	.21			
Risks	-1.51	1.43	-.15	-1.06	.295	-4.39	1.36			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 63

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	39.21	2.08		18.81	.000	35.03	43.40			
White	-1.64	3.36	-.07	-.49	.628	-8.38	5.10			
Female	-3.26	3.63	-.13	-.90	.373	-10.54	4.02			
Age	-.08	.16	-.08	-.53	.599	-.41	.24			
Step 2								.03	.01	.64
(Constant)	38.97	2.11		18.43	.000	34.73	43.21			
White	-1.71	3.37	-.07	-.51	.614	-8.48	5.06			
Female	-3.06	3.65	-.12	-.84	.406	-10.38	4.27			
Age	-.08	.16	-.08	-.52	.608	-.41	.24			
Socialization and Daily Functioning	1.29	1.62	.11	.80	.428	-1.95	4.53			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 64

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	39.21	2.08		18.81	.000	35.03	43.40			
White	-1.64	3.36	-.07	-.49	.628	-8.38	5.10			
Female	-3.26	3.63	-.13	-.90	.373	-10.54	4.02			
Age	-.08	.16	-.08	-.53	.599	-.41	.24			
Step 2								.06	.05	2.46
(Constant)	39.09	2.06		19.00	.000	34.96	43.22			
White	-1.01	3.34	-.04	-.30	.763	-7.71	5.69			
Female	-3.77	3.59	-.15	-1.05	.298	-10.99	3.44			
Age	-.10	.16	-.09	-.61	.543	-.41	.22			
Wellness	-1.64	1.05	-.22	-1.57	.123	-3.74	.46			

Note. N = 56. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 65

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Physical Health Scores on the Short-Form 12 Survey

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.02	.02	.35
(Constant)	39.21	2.08		18.81	.000	35.03	43.40			
White	-1.64	3.36	-.07	-.49	.628	-8.38	5.10			
Female	-3.26	3.63	-.13	-.90	.373	-10.54	4.02			
Age	-.08	.16	-.08	-.53	.599	-.41	.24			
Step 2								.03	.01	.72
(Constant)	39.09	2.10		18.65	.000	34.88	43.30			
White	-1.11	3.42	-.05	-.32	.747	-7.98	5.77			
Female	-3.33	3.64	-.13	-.92	.364	-10.63	3.97			
Age	-.08	.16	-.08	-.52	.607	-.41	.24			
VI-SPDAT total score	-.48	.57	-.12	-.85	.400	-1.63	.66			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. SF-12 = Short-Form 12. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 66

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	3.93	.59		6.69	.000	2.75	5.11			
White	.88	.95	.13	.93	.358	-1.02	2.78			
Female	1.24	1.02	.17	1.21	.231	-.81	3.29			
Age	-.01	.05	-.02	-.14	.885	-.10	.08			
Step 2								.05	.00	.01
(Constant)	3.93	.60		6.60	.000	2.73	5.13			
White	.89	.96	.13	.92	.362	-1.05	2.83			
Female	1.23	1.04	.17	1.19	.240	-.85	3.31			
Age	-.01	.05	-.02	-.12	.908	-.10	.09			
History of Housing and Homelessness	-.07	1.03	-.01	-.07	.943	-2.14	1.99			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 67

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	3.93	.59		6.69	.000	2.75	5.11			
White	.88	.95	.13	.93	.358	-1.02	2.78			
Female	1.24	1.02	.17	1.21	.231	-.81	3.29			
Age	-.01	.05	-.02	-.14	.885	-.10	.08			
Step 2								.09	.05	2.58
(Constant)	4.11	.59		6.97	.000	2.93	5.30			
White	.61	.95	.09	.65	.521	-1.29	2.52			
Female	1.00	1.02	.14	.99	.329	-1.04	3.05			
Age	.01	.05	.02	.13	.898	-.08	.10			
Risks	.64	.40	.23	1.61	.115	-.16	1.44			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 68

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	3.93	.59		6.69	.000	2.75	5.11			
White	.88	.95	.13	.93	.358	-1.02	2.78			
Female	1.24	1.02	.17	1.21	.231	-.81	3.29			
Age	-.01	.05	-.02	-.14	.885	-.10	.08			
Step 2								.05	.00	.14
(Constant)	3.97	.60		6.62	.000	2.76	5.17			
White	.89	.96	.13	.93	.356	-1.03	2.81			
Female	1.21	1.03	.16	1.17	.246	-.86	3.29			
Age	-.01	.05	-.02	-.15	.883	-.10	.08			
Socialization and Daily Functioning	-.17	.46	-.05	-.38	.709	-1.09	.75			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 69

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Wellness Domain Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	*SE*	*B*	*t*	*Sig.*	95% CI LB - UB		R^2	ΔR^2	*FΔ*
Step 1								.05	.05	.87
(Constant)	3.93	.59		6.69	.000	2.75	5.11			
White	.88	.95	.13	.93	.358	-1.02	2.78			
Female	1.24	1.02	.17	1.21	.231	-.81	3.29			
Age	-.01	.05	-.02	-.14	.885	-.10	.08			
Step 2								.05	.00	.13
(Constant)	3.94	.59		6.64	.000	2.75	5.13			
White	.84	.96	.13	.87	.388	-1.09	2.77			
Female	1.27	1.04	.17	1.23	.225	-.81	3.35			
Age	-.01	.05	-.02	-.13	.900	-.10	.09			
Wellness	.11	.30	.05	.36	.722	-.50	.71			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 70

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Total Number of Stressful Life Events Experienced on the Life Events Checklist for DSM-5

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.05	.05	.87
(Constant)	3.93	.59		6.69	.000	2.75	5.11			
White	.88	.95	.13	.93	.36	-1.02	2.78			
Female	1.24	1.02	.17	1.21	.23	-.81	3.29			
Age	-.01	.05	-.02	-.14	.89	-.10	.08			
Step 2								.05	.00	.26
(Constant)	3.95	.59		6.66	.000	2.76	5.15			
White	.79	.97	.12	.81	.42	-1.16	2.74			
Female	1.25	1.03	.17	1.21	.23	-.82	3.32			
Age	-.01	.05	-.02	-.15	.88	-.10	.08			
VI-SPDAT total sore	.08	.16	.07	.51	.61	-.24	.41			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. LEC-5 = Life Events Checklist for DSM-5. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 71

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's History of Housing and Homelessness Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	1.89
(Constant)	50.03	3.09		16.19	.000	43.83	56.23			
White	.32	4.98	.01	.06	.949	-9.67	10.31			
Female	3.51	5.38	.09	.65	.516	-7.27	14.30			
Age	-.48	.24	-.28	-2.02	.049	-.96	.00			
Step 2								.11	.01	.43
(Constant)	-.12	5.05	.00	-.02	.980	-.12	5.05			
White	3.81	5.42	.10	.70	.486	3.81	5.42			
Female	-.53	.25	-.31	-2.11	.040	-.53	.25			
Age	3.54	5.38	.09	.66	.513	3.54	5.38			
History of Housing and Homelessness	-.12	5.05	.00	-.02	.980	-.12	5.05			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 72

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Risks Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	1.89
(Constant)	50.03	3.09		16.19	.000	43.83	56.23			
White	.32	4.98	.01	.06	.949	-9.67	10.31			
Female	3.51	5.38	.09	.65	.516	-7.27	14.30			
Age	-.48	.24	-.28	-2.02	.049	-.96	.00			
Step 2								.18	.08	5.02*
(Constant)	51.32	3.03		16.93	.000	45.24	57.41			
White	-1.60	4.87	-.04	-.33	.744	-11.38	8.18			
Female	1.83	5.23	.05	.35	.728	-8.68	12.33			
Age	-.39	.23	-.23	-1.68	.099	-.86	.08			
Risks	4.58	2.04	.30	2.24	.030	.47	8.68			

Note. $N = 56$. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). *$p < .05$.

Table 73

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Socialization and Daily Functioning Domain Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

		b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1									.10	.10	1.89
	(Constant)	50.03	3.09		16.19	.000	43.83	56.23			
	White	.32	4.98	.01	.06	.949	-9.67	10.31			
	Female	3.51	5.38	.09	.65	.516	-7.27	14.30			
	Age	-.48	.24	-.28	-2.02	.049	-.96	.00			
Step 2									.11	.01	.44
	(Constant)	49.72	3.14		15.84	.000	43.42	56.03			
	White	.23	5.01	.01	.05	.964	-9.82	10.28			
	Female	3.76	5.42	.09	.69	.490	-7.11	14.64			
	Age	-.48	.24	-.28	-2.00	.051	-.96	.00			
	Socialization and Daily Functioning	1.59	2.40	.09	.66	.510	-3.22	6.40			

Note. N = 56. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color). None of the models reached statistical significance.

Table 74

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization
Decision Assistance Tool's Wellness Domain Score to Predict Scores on the Posttraumatic
Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	LB	- UB	R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	1.89
(Constant)	50.03	3.09		16.19	.000	43.83	56.23			
White	.32	4.98	.01	.06	.949	-9.67	10.31			
Female	3.51	5.38	.09	.65	.516	-7.27	14.30			
Age	-.48	.24	-.28	-2.02	.049	-.96	.00			
Step 2								.10	.00	.14
(Constant)	50.07	3.12		16.06	.000	43.81	56.33			
White	.10	5.06	.00	.02	.985	-10.05	10.24			
Female	3.70	5.44	.09	.68	.500	-7.23	14.62			
Age	-.47	.24	-.28	-1.98	.053	-.96	.01			
Wellness	.58	1.59	.05	.37	.715	-2.60	3.77			

Note. N = 56. VI-SPDAT = Vulnerability Index - Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color).

Table 75

Hierarchical Multiple Regression Using the Vulnerability Index - Service Prioritization Decision Assistance Tool's Total Score to Predict Scores on the Posttraumatic Stress Disorder Checklist – Civilian Version

	b	SE	B	t	Sig.	95% CI LB - UB		R^2	ΔR^2	$F\Delta$
Step 1								.10	.10	1.89
(Constant)	50.03	3.09		16.19	.000	43.83	56.23			
White	.32	4.98	.01	.06	.949	-9.67	10.31			
Female	3.51	5.38	.09	.65	.516	-7.27	14.30			
Age	-.48	.24	-.28	-2.02	.049	-.96	.00			
Step 2								.13	.03	1.58
(Constant)	50.30	3.08		16.33	.000	44.12	56.48			
White	-.83	5.03	-.02	-.17	.869	-10.94	9.27			
Female	3.67	5.35	.09	.69	.496	-7.07	14.40			
Age	-.48	.24	-.28	-2.04	.046	-.96	-.01			
Total VI-SPDAT Score	1.05	.84	.17	1.26	.214	-.63	2.73			

Note. N = 56. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. PCL-C = Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. All continuous predictor variables were centered to help aid interpretation. The reference group is Male and BIPOC (i.e., Black, Indigenous, and Persons of Color).

Table 76

Summary of Variance Accounted for by Scores on the Second Version of the Vulnerability Index – Service Prioritization Decision Assistance Tool (VI-SPDAT) for Single Adults When Predicting Scores on Standardized Measures Conducted Within 8 to 52 Weeks of VI-SPDAT Administration

	Independent Variable				
Dependent Variable	Housing and Homelessness ΔR^2	Risks ΔR^2	Socialization and Daily Functioning ΔR^2	Wellness ΔR^2	Total VI-SPDAT Score ΔR^2
QOL-20	.03	.03	.01	.00	.01
MCSI	.03	.14**	.04	.02	.08*
SF-12 (Mental Health)	.03	.13**	.05	.02	.09*
SF-12 (Physical Health)	.00	.02	.01	.05	.01
LEC-5	.00	.05	.00	.00	.00
PCL-C	.01	.08*	.01	.01	.03

Note. VI-SPDAT = Vulnerability Index – Service Prioritization Decision Assistance Tool. QOL-20 = 20-item Quality of Life assessment. MCSI = Modified Colorado Symptom Index. SF-12 = Short-Form 12. LEC-5 = Life Events Checklist for DSM-5, specifically the number of stressful life events experienced. PCL-C = The Posttraumatic Stress Disorder Checklist – Civilian Version. Sample only includes those whose VI-SPDAT and standardized measures were administered within 8 to 52 weeks of one another. Step 1 in the hierarchical regressions included the control variables gender (Male or Female), race (White or Black, Indigenous, and Persons of Color), and age (in years); ΔR^2 reflects variance accounted for by VI-SPDAT after accounting for control variables. *p < .05. **p < .01.

APPENDIX A: SECOND VERSION OF THE VI-SPDAT FOR SINGLE ADULTS

VULNERABILITY INDEX - SERVICE PRIORITIZATION DECISION ASSISTANCE TOOL (VI-SPDAT)

SINGLE ADULTS   AMERICAN VERSION 2.01

Administration

Interviewer's Name	Agency	☐ Team ☐ Staff ☐ Volunteer
Survey Date DD/MM/YYYY ___/___/_____	**Survey Time** __ __ __ __	**Survey Location**

Opening Script

Every assessor in your community regardless of organization completing the VI-SPDAT should use the same introductory script. In that script you should highlight the following information:

- the name of the assessor and their affiliation (organization that employs them, volunteer as part of a Point in Time Count, etc.)
- the purpose of the VI-SPDAT being completed
- that it usually takes less than 7 minutes to complete
- that only "Yes," "No," or one-word answers are being sought
- that any question can be skipped or refused
- where the information is going to be stored
- that if the participant does not understand a question or the assessor does not understand the question that clarification can be provided
- the importance of relaying accurate information to the assessor and not feeling that there is a correct or preferred answer that they need to provide, nor information they need to conceal

Basic Information

First Name	Nickname	Last Name

In what language do you feel best able to express yourself? _____

Date of Birth	Age	Social Security Number	Consent to participate
DD/MM/YYYY ___/___/_____	_____	_____	○ Yes ○ No

IF THE PERSON IS 60 YEARS OF AGE OR OLDER, THEN SCORE 1.	SCORE: 0

4

VULNERABILITY INDEX - SERVICE PRIORITIZATION DECISION ASSISTANCE TOOL (VI-SPDAT)

SINGLE ADULTS   AMERICAN VERSION 2.01

A. History of Housing and Homelessness

1. Where do you sleep most frequently? (check one)
   - ○ Shelters
   - ○ Transitional Housing
   - ○ Safe Haven
   - ○ **Outdoors**
   - ○ **Other (specify):**

   _____

   - ○ **Refused**

IF THE PERSON ANSWERS ANYTHING OTHER THAN "SHELTER", "TRANSITIONAL HOUSING", OR "SAFE HAVEN", THEN SCORE 1.	SCORE: 0

2. How long has it been since you lived in permanent stable housing? ___ Years ☐ Refused

3. In the last three years, how many times have you been homeless? _____ ☐ Refused

IF THE PERSON HAS EXPERIENCED 1 OR MORE CONSECUTIVE YEARS OF HOMELESSNESS, AND/OR 4+ EPISODES OF HOMELESSNESS, THEN SCORE 1.	SCORE: 0

B. Risks

4. In the past six months, how many times have you...

   a) Received health care at an emergency department/room? ___ ☐ Refused

   b) Taken an ambulance to the hospital? ___ ☐ Refused

   c) Been hospitalized as an inpatient? ___ ☐ Refused

   d) Used a crisis service, including sexual assault crisis, mental health crisis, family/intimate violence, distress centers and suicide prevention hotlines? ___ ☐ Refused

   e) Talked to police because you witnessed a crime, were the victim of a crime, or the alleged perpetrator of a crime or because the police told you that you must move along? ___ ☐ Refused

   f) Stayed one or more nights in a holding cell, jail or prison, whether that was a short-term stay like the drunk tank, a longer stay for a more serious offence, or anything in between? ___ ☐ Refused

IF THE TOTAL NUMBER OF INTERACTIONS EQUALS 4 OR MORE, THEN SCORE 1 FOR EMERGENCY SERVICE USE.	SCORE: 0

5. Have you been attacked or beaten up since you've become homeless? ☐ Y ☐ N ☐ Refused

6. Have you threatened to or tried to harm yourself or anyone else in the last year? ☐ Y ☐ N ☐ Refused

IF "YES" TO ANY OF THE ABOVE, THEN SCORE 1 FOR RISK OF HARM.	SCORE: 0

VULNERABILITY INDEX - SERVICE PRIORITIZATION DECISION ASSISTANCE TOOL (VI-SPDAT)

SINGLE ADULTS   AMERICAN VERSION 2.01

See if there are differences in data from ISC and how this is scored across subgroups.

7. Do you have any legal stuff going on right now that may result   □ Y   □ N   □ Refused
    in you being locked up, having to pay fines, or that make it
    more difficult to rent a place to live?

IF "YES," THEN SCORE 1 FOR LEGAL ISSUES.	SCORE: 0

8. Does anybody force or trick you to do things that you do not   □ Y   □ N   □ Refused
    want to do?

9. Do you ever do things that may be considered to be risky   □ Y   □ N   □ Refused
    like exchange sex for money, run drugs for someone, have
    unprotected sex with someone you don't know, share a
    needle, or anything like that?

IF "YES" TO ANY OF THE ABOVE, THEN SCORE 1 FOR RISK OF EXPLOITATION.	SCORE: 0

C. Socialization & Daily Functioning

10. Is there any person, past landlord, business, bookie, dealer,   □ Y   □ N   □ Refused
    or government group like the IRS that thinks you owe them
    money?

11. Do you get any money from the government, a pension,   □ Y   □ N   □ Refused
    an inheritance, working under the table, a regular job, or
    anything like that?

IF "YES" TO QUESTION 10 OR "NO" TO QUESTION 11, THEN SCORE 1 FOR MONEY MANAGEMENT.	SCORE: 0

12. Do you have planned activities, other than just surviving, that   □ Y   □ N   □ Refused
    make you feel happy and fulfilled?

IF "NO," THEN SCORE 1 FOR MEANINGFUL DAILY ACTIVITY.	SCORE: 0

13. Are you currently able to take care of basic needs like bathing,   □ Y   □ N   □ Refused
    changing clothes, using a restroom, getting food and clean
    water and other things like that?

IF "NO," THEN SCORE 1 FOR SELF-CARE.	SCORE: 0

14. Is your current homelessness in any way caused by a   □ Y   □ N   □ Refused
    relationship that broke down, an unhealthy or abusive
    relationship, or because family or friends caused you to
    become evicted?

IF "YES," THEN SCORE 1 FOR SOCIAL RELATIONSHIPS.	SCORE: 0

VULNERABILITY INDEX - SERVICE PRIORITIZATION DECISION ASSISTANCE TOOL (VI-SPDAT)

SINGLE ADULTS   AMERICAN VERSION 2.01

D. Wellness

15. Have you ever had to leave an apartment, shelter program, or other place you were staying because of your physical health?   ❏ Y   ❏ N   ❏ Refused

16. Do you have any chronic health issues with your liver, kidneys, stomach, lungs or heart?   ❏ Y   ❏ N   ❏ Refused

17. If there was space available in a program that specifically assists people that live with HIV or AIDS, would that be of interest to you?   ❏ Y   ❏ N   ❏ Refused

18. Do you have any physical disabilities that would limit the type of housing you could access, or would make it hard to live independently because you'd need help?   ❏ Y   ❏ N   ❏ Refused

19. When you are sick or not feeling well, do you avoid getting help?   ❏ Y   ❏ N   ❏ Refused

20. FOR FEMALE RESPONDENTS ONLY: Are you currently pregnant?   ❏ Y   ❏ N   ❏ N/A or Refused

IF "YES" TO ANY OF THE ABOVE, THEN SCORE 1 FOR **PHYSICAL HEALTH**.	**SCORE:** 0

21. Has your drinking or drug use led to you being kicked out of an apartment or program where you were staying in the past?   ❏ Y   ❏ N   ❏ Refused

22. Will drinking or drug use make it difficult for you to stay housed or afford your housing?   ❏ Y   ❏ N   ❏ Refused

IF "YES" TO ANY OF THE ABOVE, THEN SCORE 1 FOR **SUBSTANCE USE**.	**SCORE:** 0

23. Have you ever had trouble maintaining your housing, or been kicked out of an apartment, shelter program or other place you were staying, because of:

   a) A mental health issue or concern?   ❏ Y   ❏ N   ❏ Refused

   b) A past head injury?   ❏ Y   ❏ N   ❏ Refused

   c) A learning disability, developmental disability, or other impairment?   ❏ Y   ❏ N   ❏ Refused

24. Do you have any mental health or brain issues that would make it hard for you to live independently because you'd need help?   ❏ Y   ❏ N   ❏ Refused

IF "YES" TO ANY OF THE ABOVE, THEN SCORE 1 FOR **MENTAL HEALTH**.	**SCORE:** 0

IF THE RESPONENT SCORED 1 FOR **PHYSICAL HEALTH** AND 1 FOR **SUBSTANCE USE** AND 1 FOR **MENTAL HEALTH**, SCORE 1 FOR **TRI-MORBIDITY**.	**SCORE:** 0

VULNERABILITY INDEX - SERVICE PRIORITIZATION DECISION ASSISTANCE TOOL (VI-SPDAT)

SINGLE ADULTS   AMERICAN VERSION 2.01

25. Are there any medications that a doctor said you should be taking that, for whatever reason, you are not taking? ☐ Y ☐ N ☐ Refused

26. Are there any medications like painkillers that you don't take the way the doctor prescribed or where you sell the medication? ☐ Y ☐ N ☐ Refused

IF "YES" TO ANY OF THE ABOVE, SCORE 1 FOR **MEDICATIONS**.	SCORE: 0

27. YES OR NO: Has your current period of homelessness been caused by an experience of emotional, physical, psychological, sexual, or other type of abuse, or by any other trauma you have experienced? ☐ Y ☐ N ☐ Refused

IF "YES", SCORE 1 FOR **ABUSE AND TRAUMA**.	SCORE: 0

Scoring Summary

DOMAIN	SUBTOTAL	RESULTS
PRE-SURVEY	0 /1	**Score: Recommendation:**
A. HISTORY OF HOUSING & HOMELESSNESS	0 /2	0-3: no housing intervention
B. RISKS	0 /4	4-7: an assessment for Rapid Re-Housing
C. SOCIALIZATION & DAILY FUNCTIONS	0 /4	8+: an assessment for Permanent Supportive Housing/Housing First
D. WELLNESS	0 /6	
GRAND TOTAL:	0 /17	

Follow-Up Questions

On a regular day, where is it easiest to find you and what time of day is easiest to do so?	place: _____ time: ___ : ____ or Night
Is there a phone number and/or email where someone can safely get in touch with you or leave you a message?	phone: (____) _____ - _____ email: _____
Ok, now I'd like to take your picture so that it is easier to find you and confirm your identity in the future. May I do so?	☐ Yes ☐ No ☐ Refused

Communities are encouraged to think of additional questions that may be relevant to the programs being operated or your specific local context. This may include questions related to:

- military service and nature of discharge
- ageing out of care
- mobility issues

- legal status in country
- income and source of it
- current restrictions on where a person can legally reside

- children that may reside with the adult at some point in the future
- safety planning

APPENDIX B: DEMOGRAPHIC INFORMATION QUESTIONNAIRE

INDIVIDUAL AND FOCUS GROUP INTERVIEW

Date of Interview: _____   *Time of Interview*_____

Location of Interview: _____

What is your age?   __ __

What Race do you identify with?
☐ American Indian or Alaska Native
☐ Asian
☐ Black or African American
☐ Native Hawaiian or Other Pacific Islander
☐ White
☐ Don't Know
☐ Other_____

What Ethnicity do you identify with?
☐ Non- Hispanic/Non-Latino
☐ Hispanic/Latino
☐ Don't Know

What is your gender?
☐ Female
☐ Male
☐ Transgender Male to Female
☐ Transgender Female to Male
☐ Other

What is your primary role at the agency you are representing for this focus group?

☐ Tenant/Service Recipient

☐ Full-Time employee

☐ Part-Time employee

☐ Volunteer

☐ Other: _____

If you are a tenant or service recipient, how long have you lived in an apartment through this agency?

_____**year(s)**

If you are an employee or volunteer, how long have you been employed at this agency (or worked as a volunteer)?

_____**year(s)**

*What is your current job title?*_____

How would you describe the primary function of the agency you are representing for this focus group?

☐ Funder

☐ Health Services

☐ Social Services Only

☐ Housing Services with Social Services

☐ Housing Services Only

☐ Other:_____

What is your highest level of education?

☐ High School Diploma

☐ Associates Degree, Focus:_____

☐ Bachelors Degree, Focus:_____

☐ Masters Degree, Focus:_____

☐ Doctorate Degree, Focus: _____

☐ Other graduate/professional degree/certificate:_____

If you were on a working group subcommittee, please select the subcommittees you have been on (check all that apply)

☐ Community Engagement
☐ Data Monitoring
☐ 250 Additional Units
☐ Evaluation
☐ Training
☐ Alternative Strategies