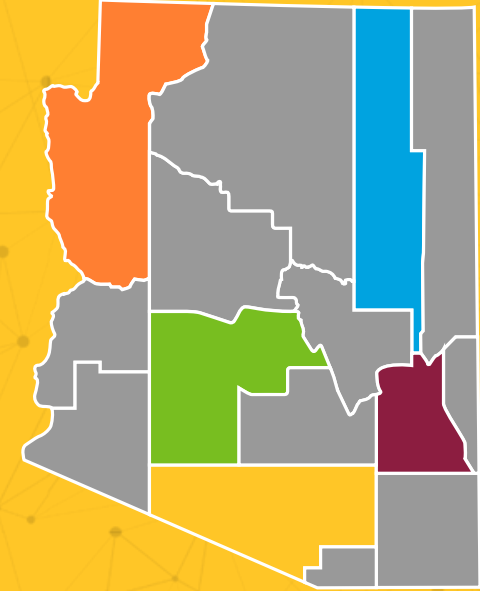


**Exploring the Social Determinants of
Substance Use Disorders
among Young Adults Experiencing
Homelessness in the Southwest United States**



**Shiyou Wu, MSW, PhD
Associate Professor**



1. **Project brief intro**
2. **Background**
3. **Data collection**
4. **Preliminary findings**
5. **Next steps**

1. Project brief introduction





Funding Support:

- U54 Pilot Project (an NIH/NIMHD Specialized Center of Excellence on Minority Health and Health Disparities; 2U54MD002316-11): Reducing Health Disparities among Homeless Young Adults: Using a Social Determinants of Health Perspective (Role: PI; 2020-2023).
- ASU Glen J. Swette Seed Grant: Identifying Intervention Targets to Reduce Disproportionality and Disparate Substance Use Outcomes Among Homeless Young Adults: A Social Determinants of Health Perspective. (Role: PI; 2022-2024).
- ASU Watts College Seed Grant Funding Initiative: Identifying Seasonal Variations in Determinants of Health Among Homeless Young Adults (Role: PI; 2023-2024).



Team members:

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Human and Social
Dimensions of
Science and
Technology PhD
student, ASU

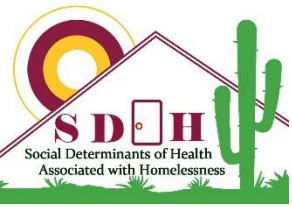
Consultant: Jennifer R. Hartmark-Hill, MD, FAAFP
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student



Community Partners:

We appreciate the following organizations' support of our research!



Research Process



U54 Pilot Project

2020-2023

Hot/Cold season
and qualitative data
collection (n=205)

ASU Watts College Seed Grant

Funding Initiative

2023-2024

• Preparation

SDoH survey
development/hot
season data
collection

ASU Glen J. Swette Seed Grant

2022-2024

Cold season data
collection (n=102)

External Grant Application

2. Background: Some statistics



Nationally...

In 2020

580,000

U.S. people experienced homelessness

1/568

U.S. people go homeless.

Arizona...

In 2020

32,041

(10979 adults + 21062 homeless students)

people experienced homelessness

1/223

Arizonans go homeless

Arizona is among the **top 5** states in the nation for lack of affordable housing options for residents living below the federal poverty line

Locally, in Maricopa County 2020...

7,419

Number of people
experiencing homelessness
on a given night

12th

Arizona's rank for
homelessness in the US by
population in 2021

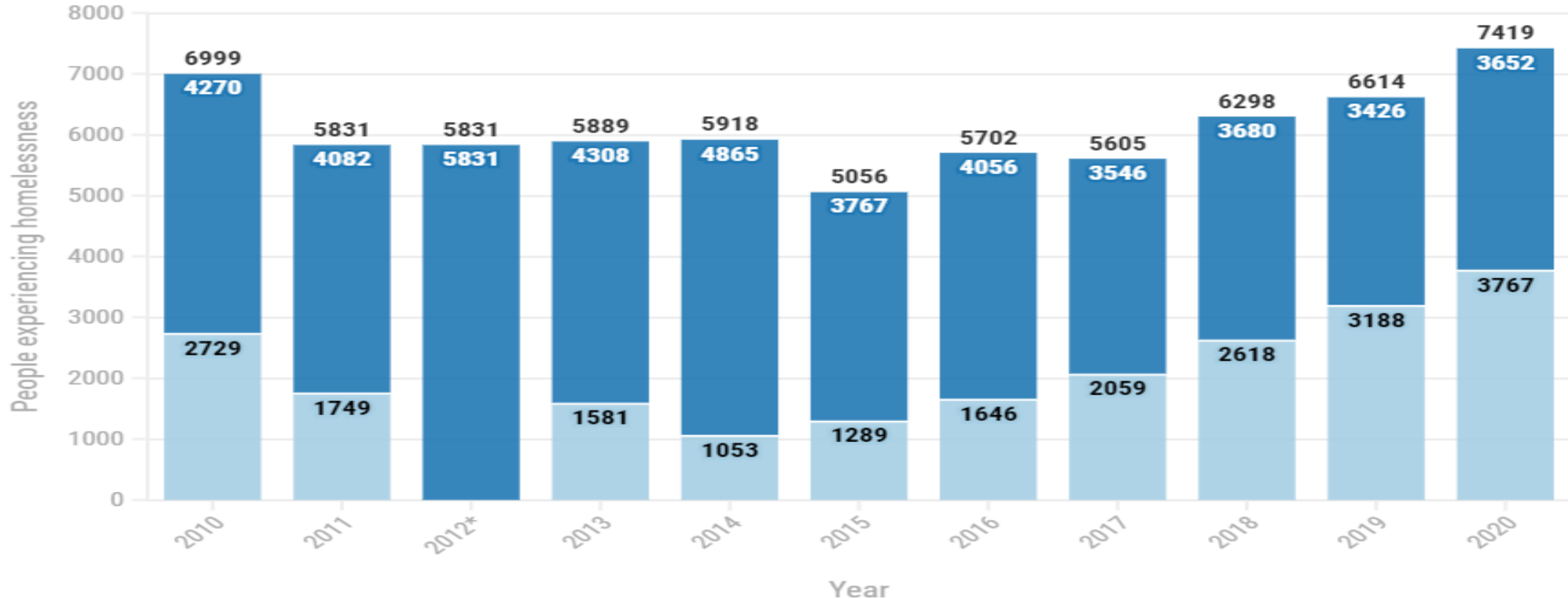
83%

Increase of unsheltered
homelessness in Maricopa
County from 2017-2020

Locally, in Maricopa County 2020...

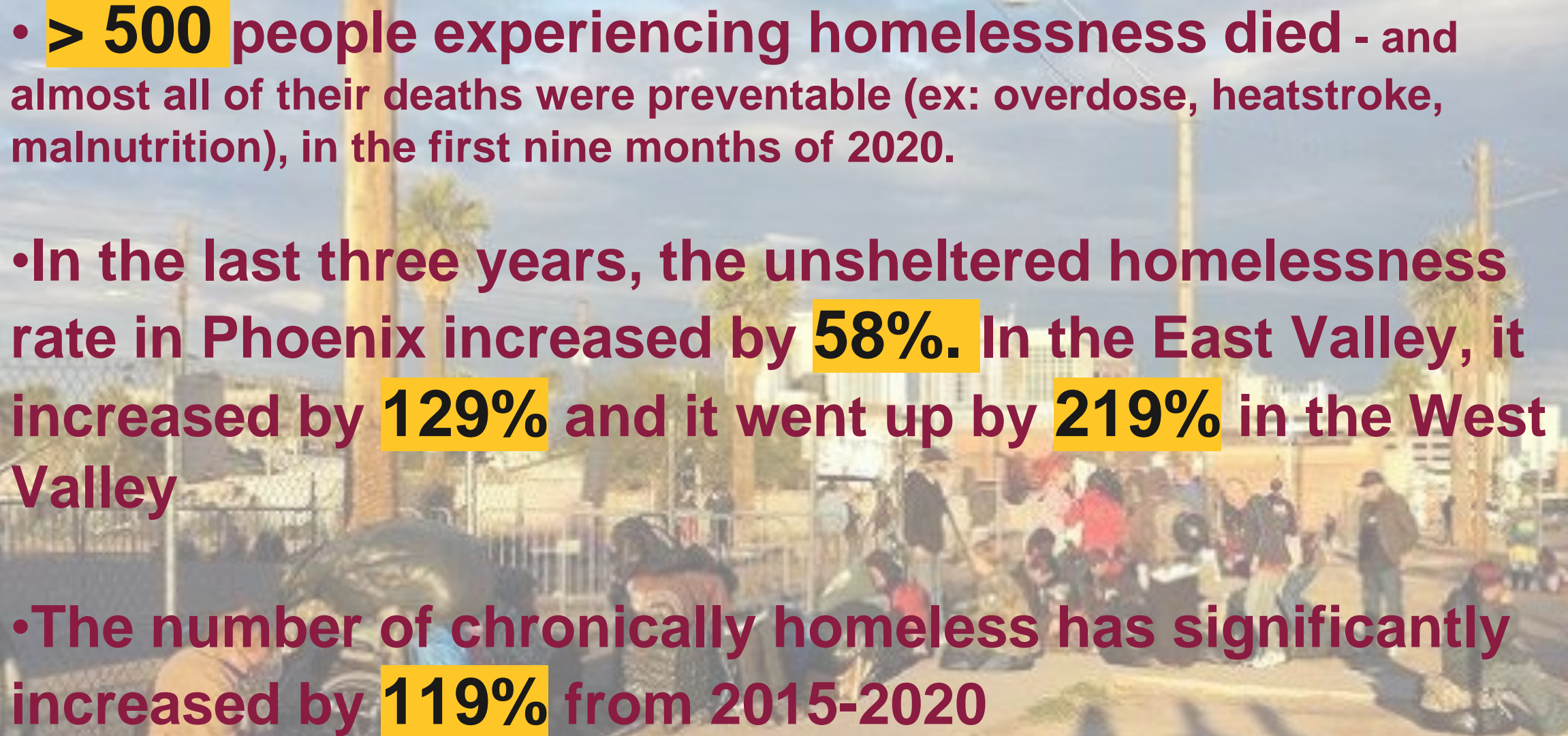
People experiencing homelessness in Maricopa County

- Unsheltered on the streets or other place not meant for human habitation
- Sheltered in emergency shelter, transitional housing or Safe Haven programs



Source: [Maricopa Regional Continuum of Care Point-in-Time Homeless Count](#) • (Graphic by Michelle Ailport/Cronkite News)

*2012 data did not include an unsheltered count

- 
- **> 500** people experiencing homelessness died - and almost all of their deaths were preventable (ex: overdose, heatstroke, malnutrition), in the first nine months of 2020.
 - In the last three years, the unsheltered homelessness rate in Phoenix increased by **58%**. In the East Valley, it increased by **129%** and it went up by **219%** in the West Valley
 - The number of chronically homeless has significantly increased by **119%** from 2015-2020

Homeless people often struggling in the extreme hardship environment and desperate situations, and usually facing violent criminal behaviors, high prevalence of substance abuse disorders, high risk for preventable disease and premature death, and untreated physical and mental health issues. (The Council of Economic Advisers, 2019).



Addiction and Homelessness Statistics

68%

of cities reported that substance abuse was the largest cause of homelessness among single adults.

66% of homeless veterans suffer from alcohol or drug abuse

38%

of all homeless people abuse alcohol

36%

of all homeless people suffered from a substance use disorder, a mental health condition, or both (HUD, 2019).

Homeless people are

9 times more

likely to die from an opioid overdose than the general population.

Homeless young people...

From 2016 to 2017,

Young adults experiencing homelessness in **unsheltered** locations increased by nearly **30%**,

Unsheltered children rates was declined by **3.5%**, and

Unsheltered older adults rates was increased by **8%**

(Henry et al., 2018)

Homeless young people...

According to a National Network for Youth study,

1.7 million youths experience at least one night of homelessness yearly.

One in 10 young adults ages 18-25 experienced homelessness over a 12-month period.



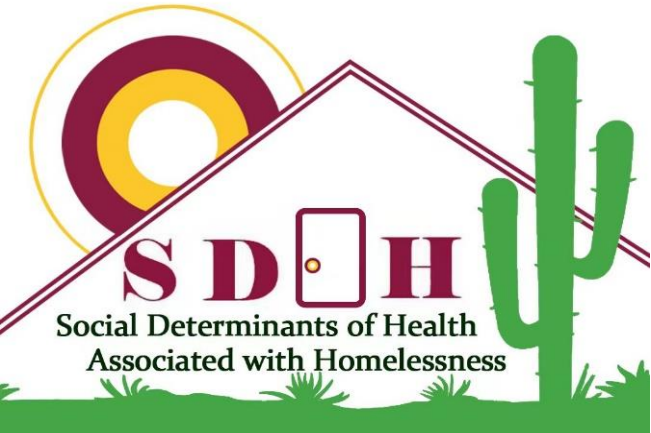
That's approximately 3.5 million young adults

According to the Research Triangle Institute in North Carolina,

teens and young adults between the ages of 12 and 21 are at **a far greater risk of drug abuse** than those who are not homeless.

Overall, these statistics show that compare to children and older adults, young adults experience the highest increasing rate of homelessness, especially these in unsheltered locations. Therefore, more attention is needed on homeless young adults.





3. Research Process

- Projects
- Data collections

A quick review of the tools

Among homeless populations

Lack of comprehensive tools

Table 1. Summary of Domains of Sample Needs Assessment Tools

Name of Survey/Scale	Year	Location	Population	Individual					Interpersonal				Institutional		
				PH	MH	AD	FS	SH	DV	FD	HS	SS	JE	TS	HC
1 Needs Assessment of Homeless Adults	2000	Buffalo, NY	Adults	1	1	1	1			1	1	1	1	1	1
2 Unmet Needs among Homeless	2014	Birmingham, AL	Adults	1	1	1									
3 Homeless Assessment Form	N/A	UK	General	1	1	1									
4 Quality Improvement & Innovation Partnership Needs Assessment	2009	Ontario, Canada	General							1					1
5 Primary Care Quality-Homeless Instrument	2014	USA	Veterans		1	1				1	1				1
6 Homeless Health Needs Assessment	2018	London, UK	General	1	1	1		1		1				1	1
7 Needs Assessment on Homelessness	2014	New Haven, CT	General		1	1			1		1		1		
8 Homeless Health Needs Assessment	2011	Devon, UK	General	1	1	1		1		1	1				
9 Healthcare for Homeless Needs Assessment	2017	Harris County, TX	General	1	1	1			1	1	1		1	1	1
10 Fullerton Homeless Needs Assessment	2013	Fullerton, CA	General	1	1	1			1		1		1	1	1
11 Homeless Health Needs Assessment: York	2018	York, UK	General	1	1	1			1						
12 Homeless Needs Assessment	2016	Seattle, WA	General	1	1	1			1	1	1				
13 Housing and Homeless Status Assessment	2017	US Nationwide	General				1				1				
14 Downtown Women's Needs Assessment	2016	Los Angeles, CA	General	1	1	1			1	1	1				
15 Perceived Needs of Homeless Persons	2011	Harris County, TX	General	1	1	1				1	1	1	1	1	
16 Street Needs Assessment Report	2018	Toronto, Canada	General	1	1	1					1		1		
17 Survey of Arizona's Homeless Population	2013	Arizona Statewide	General	1	1	1			1		1	1	1		1
18 Current SHOW/SMP Needs Assessment Scale	2019	Phoenix, AZ	General	1		1				1	1			1	1
Total				14	15	16	2	2	7	10	13	3	7	6	8

Notes. PH: Physical health; MH: Mental health; AD: Addictions; FS: Physical safety; SH: Sexual health; DV: Domestic violence; FD: Food; HS: Housing/Shelter; SS: Social Support; JE: Job/ employment; TS: Transportation; HC: Health care



Common reasons for homelessness:

The causes of homelessness among young adults are complex and varied. For example, **disabilities, mental illness, addiction, domestic violence, job loss, poverty, family conflict, been physically or sexually abused** are the common reasons for homelessness.

Compare to general young population, homeless young people experience higher levels of physical, emotional, and mental health problems, higher rates of sexual abuse, and higher level of involving high-risk activities such as substance abuse, dealing drugs, stealing, prostitution and risky sexual behavior.

(Bao et al., 2000; Boateng et al., 2018 Cauce et al., 2000; Homeless,2012; Rew et al., 2008;)

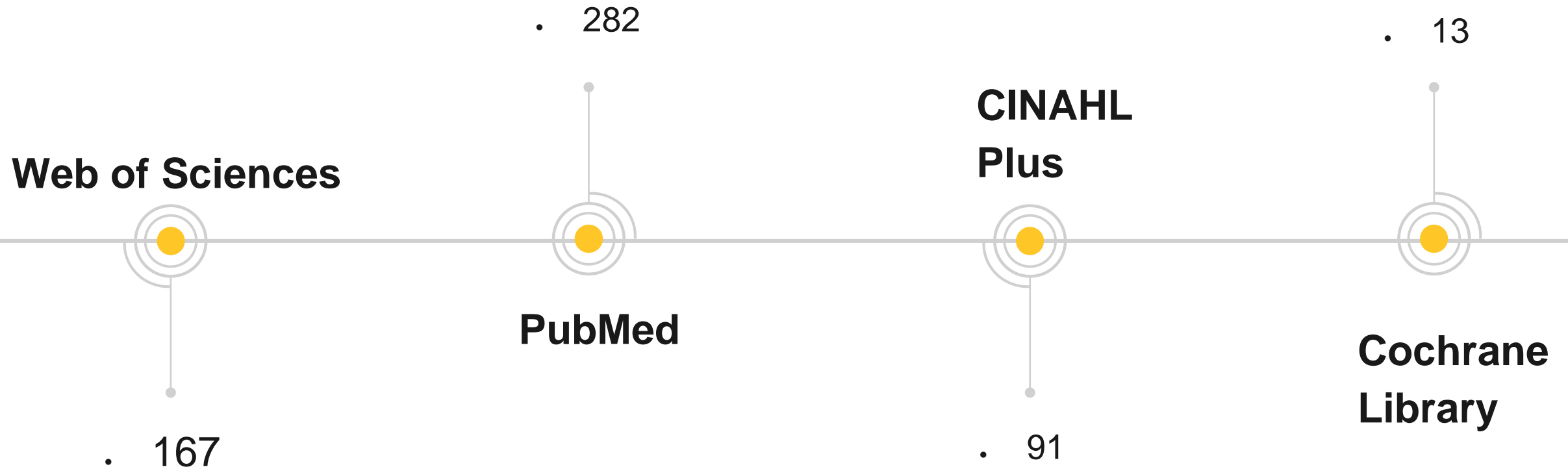
3.1 Scale development



Phase 1: Item development



A scoping review (n = 212)



Phase 1: Item development

- Identification of domain(s) and item generation
- Content validity assessment



Phase 2: Scale development

- Development of icons
- Pre-testing of questions
 - Icons pre-test
 - Item pre-test

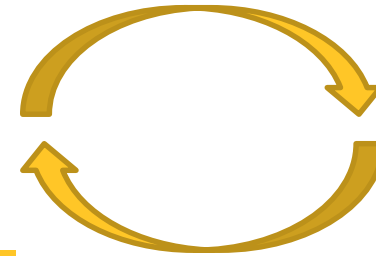


Phase 3: Scale evaluation

- Sampling and survey administration
- Tests of dimensionality
- Reliability
- Validity

Literature review

- Derive measurement items from literature
- Adopt items from the current agencies (e.g., SHOW, U.S.Vets)
- Identify the domains and items
- Corroborate with insights from experts review



Experts review

- Invited experts and agency staff to review the items
- Judge items' content and face validity by expert
- Modify items as necessary
- Corroborate with insights from literature review

Phase 1: Item development

- Identification of domain(s) and item generation
- Content validity assessment



Phase 2: Scale development

- Development of icons
- Pre-testing of questions
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 - Item pre-test



Phase 3: Scale evaluation

- Sampling and survey administration
- Tests of dimensionality
- Reliability
- Validity



Social Determinants of Health Survey

1. Thank you for agreeing to participate in the survey. These questions are important to help service providers and researchers better understand the needs of people in our community who are experiencing homelessness.
2. The survey is completely optional and anonymous. Please Do Not write your name on it. If you choose not to do the survey, your services at this agency will not be affected in any way.
3. There are no right or wrong answers. Just pick the answer that makes sense to you, and choose your answers quickly so that you can finish.
4. Please answer each question. If you do not find an answer that fits you, use the response that comes closest. If any question does not apply to you, or you are not sure what it means, just ask the survey administrator for help. You can skip any question that you do not wish to answer.
5. In exchange for your time, you will receive a \$20 gift card.
6. Please answer the following questions by marking the most appropriate answer.

Survey Sites:

- U.S.Vets
- SMP/SHOW
- Grace Lutheran Church
- Others _____

Screen Questions:

1. Your date of birth: ____Month ____Year
2. Verbal consent: (Interviewer to read the IRB-approval consent information)
Do you agree to participate in this study?
 Yes [continue to Part A] No [End the survey]

Part A Demographics

A1. What is your current gender identity? [Check all that apply]

- Male Female
- Transgender Male/Trans Man/ Female-to-Male (FTM)
- Transgender Female/Trans Woman/ Male-to-Female (MTF)
- Genderqueer, neither exclusively male nor female
- Additional Gender Category/ (or Other), please specify _____
- Decline to answer, please explain why _____
- Prefer not to answer

A2. What is your marital status?

- Married Widowed Divorced
- Never married Separated
- In a relationship but not married

A3. How many children do you have : _____

A4. How many of your children are living with _____

A6. Are you currently employed?

- [Check all that apply]
- Full-time Part-time
- Seasonal/sporadic (including day labor)
- Not employed, looking for work
- Not employed, in school
- Not employed, unable to work
- Not employed, not looking for work
- Don't know Prefer not to answer

A7. What is your highest education level?

- Less than high school degree
- High school diploma or GED
- One to three semesters of college
- Bachelor's degree (BA/BS)
- Beyond a college (BA/BS) degree
- Prefer not to answer

- 1) Screening questions (n= 2)
- 2) Demographics (n= 8)
 - Gender identity
 - Marital status
 - Family members
 - Sexual orientation
 - Employment
 - Education
 - Race/ethnicity



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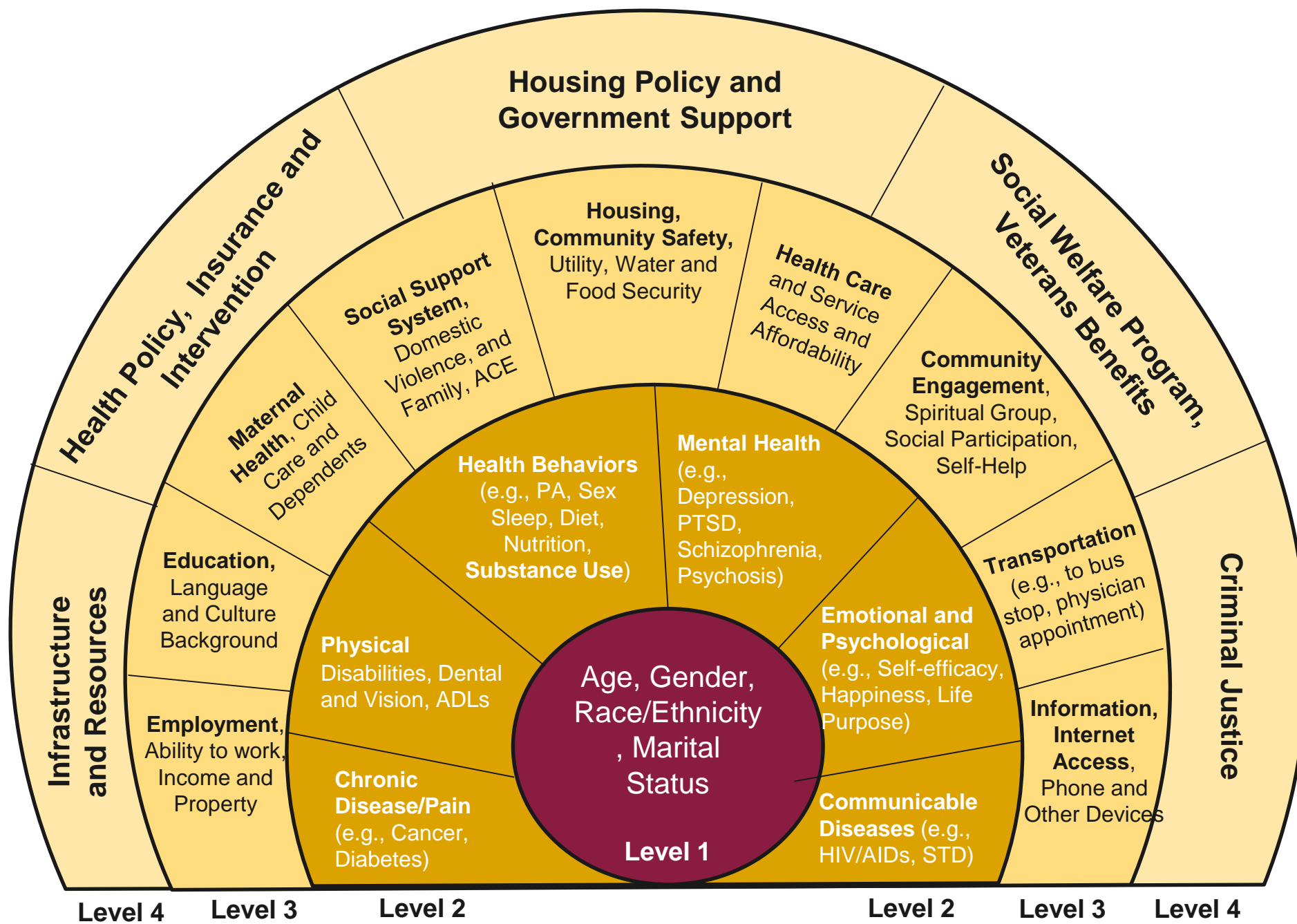
- Less than high school degree
- High school diploma or GED
- One to three semesters of college
- Bachelor's degree (BA/BS)
- Beyond a college (BA/BS) degree
- Prefer not to answer

- Individual level (**n= 40**)
 - Health/mental health/happiness/health behaviors (15)
 - Sexual behavior (5)
 - Substance use (behavior, perception, access; 20)

- Interpersonal level(**n= 25**)
 - Family/friend connection/ social support (5)
 - Church participation (4)
 - ACEs (10)
 - Domestic violence (1)
 - Social media (1)
 - Criminal experience (4)

- Social-Economic/living environment (**n= 131**)
 - Income/ financial situation (7)
 - Homeless-related questions (8)
 - Food security (7)
 - Covid 19 related questions (6)
 - Insurance/health care (11)
 - Transportation/internet access/smart phone (16)
 - Help seeking (10)
 - Social support/discrimination/ stigma (15)
 - Access of help resources (25)
 - Needs assessment/services match and mismatch (26)





Notes:

- Level 1:** Individual characteristics;
- Level 2:** Individual health related factors;
- Level 3:** Left to right, Inter-personal/relationship to community resources;
- Level 4:** Societal, policy and government factors.

- ADLs:** Activities of daily living
- PA:** Physical activity
- PTSD:** Posttraumatic stress disorder
- STD:** Sexually transmitted diseases
- ACE:** Adverse childhood experience

Conceptual Framework of Social Determinants of Health Among Homeless Young Adults

3.2 Data collection





Hot Season Survey Settings (n=205)

Sheltered (n = 96; 47%):



Unsheltered / Mixed (n =109; 53%):



Outskirt HSC



Cold Season Survey (n=102)

Sheltered (n = 35; 34%):



Unsheltered / Mixed (n =67; 66%):

4. Preliminary Findings



1. Demographics



(1) Variables	(2) Measures	(3) Mean/%	(4) SD
Demographics			
Age	By year (18-34)	29.06	4.5
Gender Identity	Male =1; female =0	66.67%	
Sexual Orientation	Straight=1; others =0	83.42%	
Race/Ethnicity			
White	Yes=1; no =0	31.71%	
Black	Yes=1; no =0	13.17%	
Latinx	Yes=1; no =0	14.15%	
Native American	Yes=1; no =0	22.93%	
Mixed or other	Yes=1; no =0	18.05%	
Marital Status			
Married or in-relationship	Yes=1; no =0	18.32%	
Divorced or separated	Yes=1; no =0	18.32%	
Never married	Yes=1; no =0	63.37%	
Employment Status			
Fully employed	Yes=1; no =0	9.05%	
Part time job	Yes=1; no =0	13.57%	
Not employed but looking for job	Yes=1; no =0	42.71%	
Not employed and unable to work	Yes=1; no =0	34.67%	
Education			
Less than high school	Yes=1; no =0	24.87%	
High school	Yes=1; no =0	58.03%	
Some college and higher	Yes=1; no =0	17.10%	
Have child/children	Yes=1; no =0	49.27%	
Living with child/children	Yes=1; no =0	8.78%	

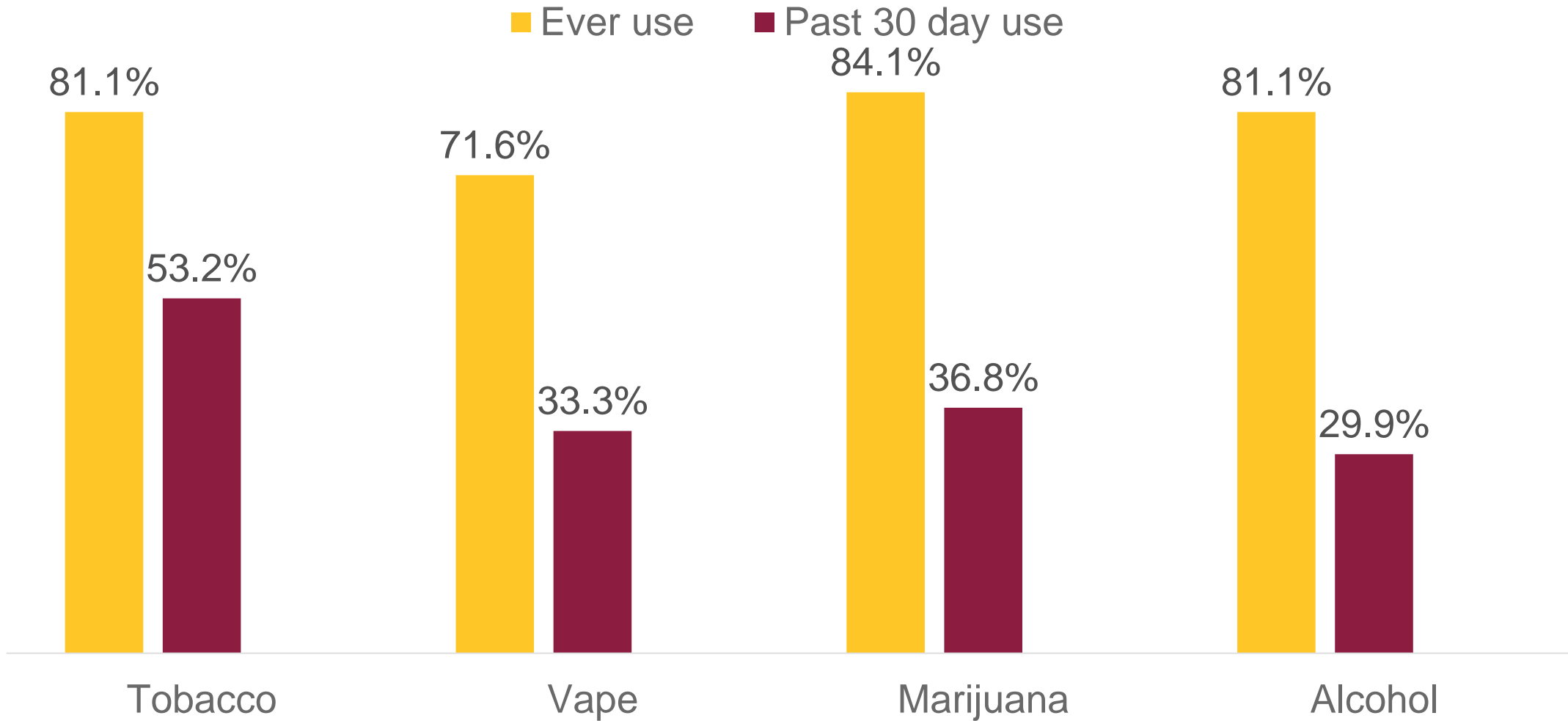
Interpersonal

Family and friends Support	Yes=1; no =0	54.95%
Attend religious services	Yes=1; no =0	29.06%
Use social media	Yes=1; no =0	78.92%
Domestic Violence	Yes=1; no =0	56.86%
Criminal History	Yes=1; no =0	48.98%
Self-perception as homeless	Yes=1; no =0	64.39%

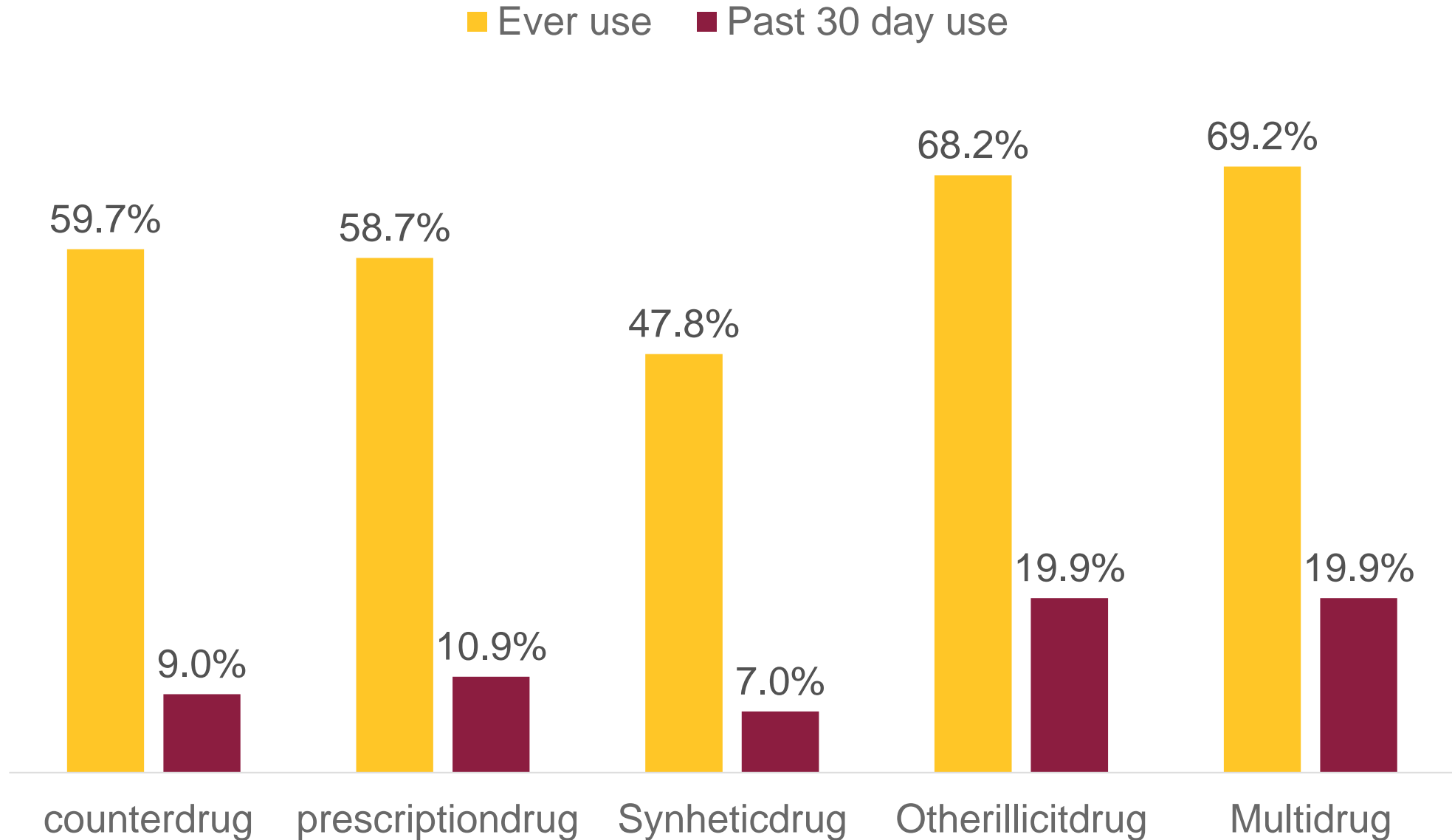
Socioeconomic/Living Environment

Sufficient income	Yes=1; no =0	17.07%
Aged out of foster care	Yes=1; no =0	7.80%
Enough food to eat	Yes=1; no =0	38.92%
Have health insurance	Yes=1; no =0	88.00%
Can go anywhere (transportation)	Yes=1; no =0	53.92%
Had internet Access	Yes=1; no =0	64.71%
Had smartphone	Yes=1; no =0	62.25%
Adequate support services	Yes=1; no =0	63.68%
Social discrimination	Yes=1; no =0	42.08%
Can get help	Yes=1; no =0	79.70%

2.Substance Use(Hot season data)



2.Substance Use(Hot season data)

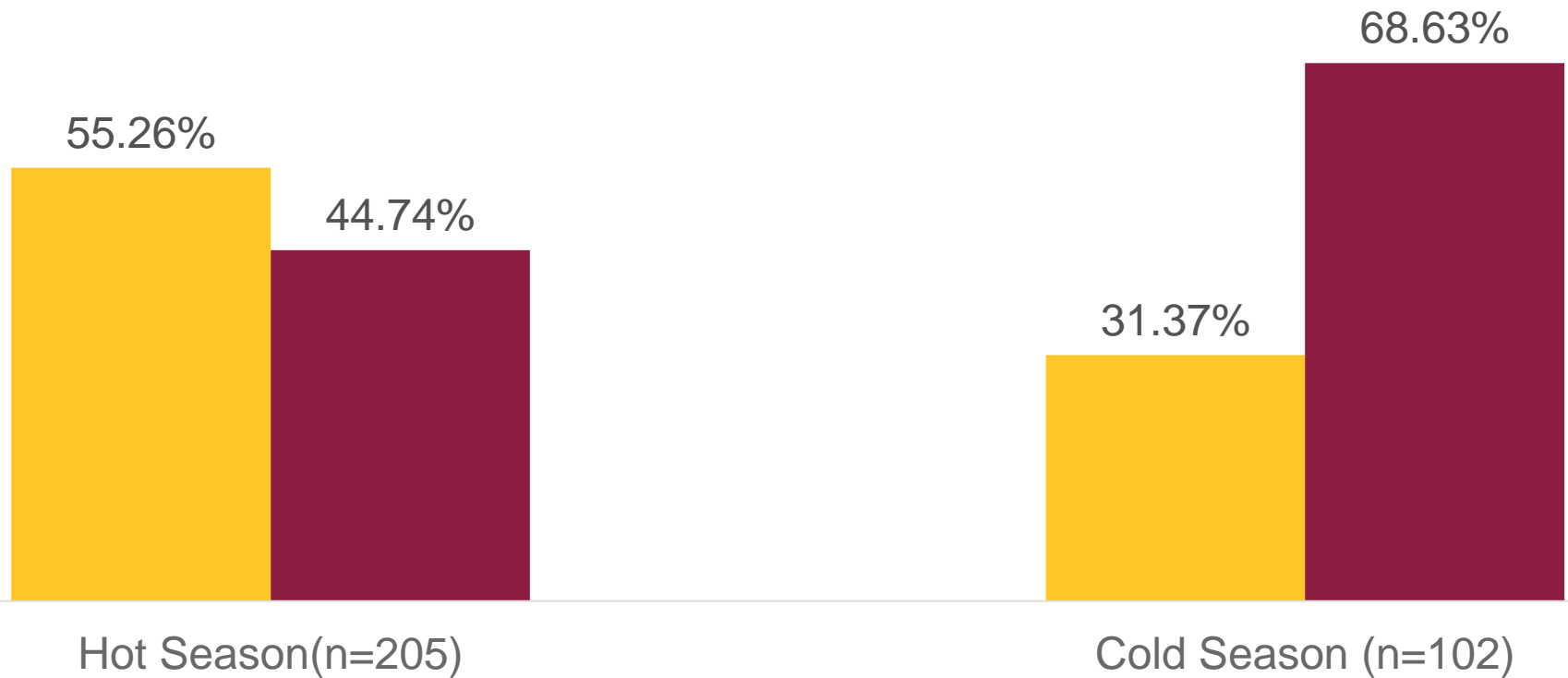


Substance use disorders



Have you ever been diagnosed with Substance use disorders?

■ Yes ■ No

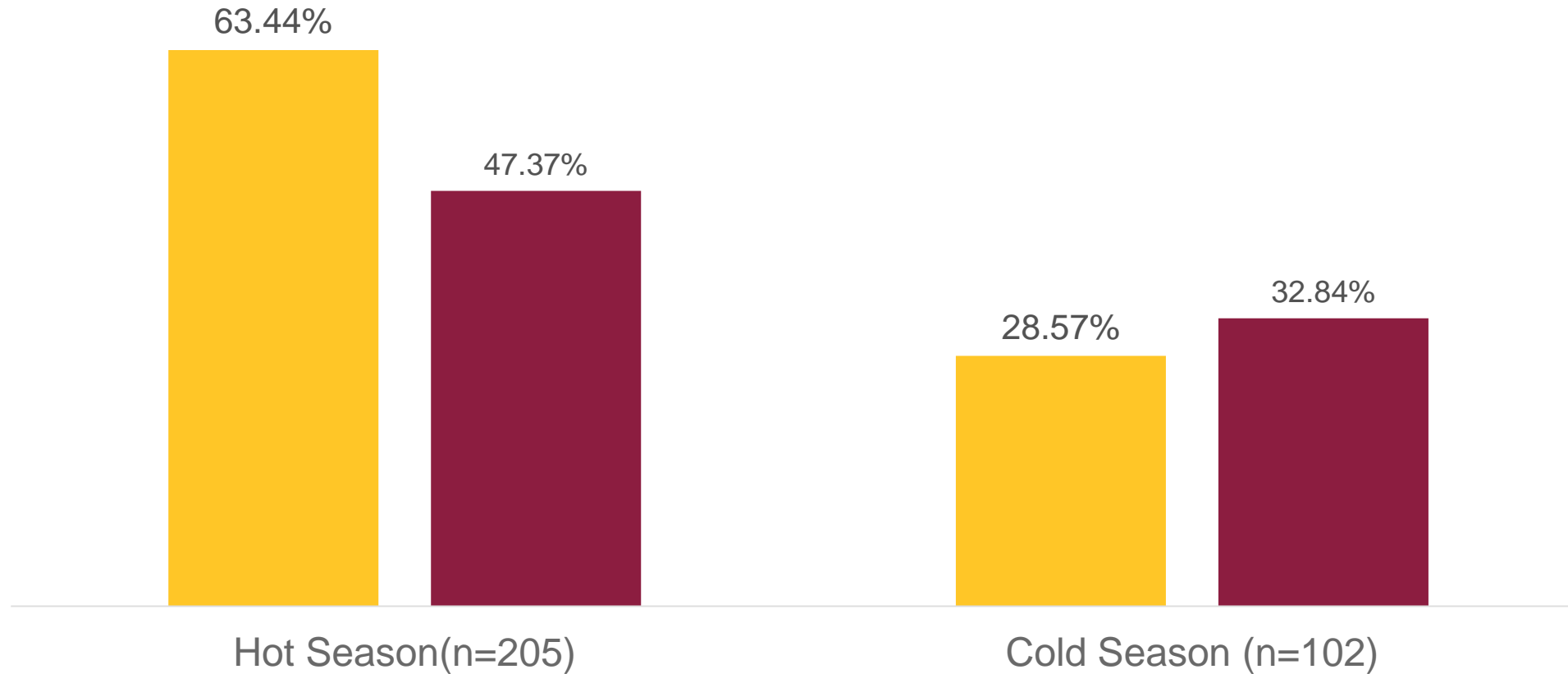


Substance use disorders



Have you ever been diagnosed with Substance use disorders?

■ Sheltered ■ Unsheltered



Research Question: What are the risk and protective factors of SUD among young adults who are homeless.

Outcomes: SUD

Covariates:

Level 1: Demographics

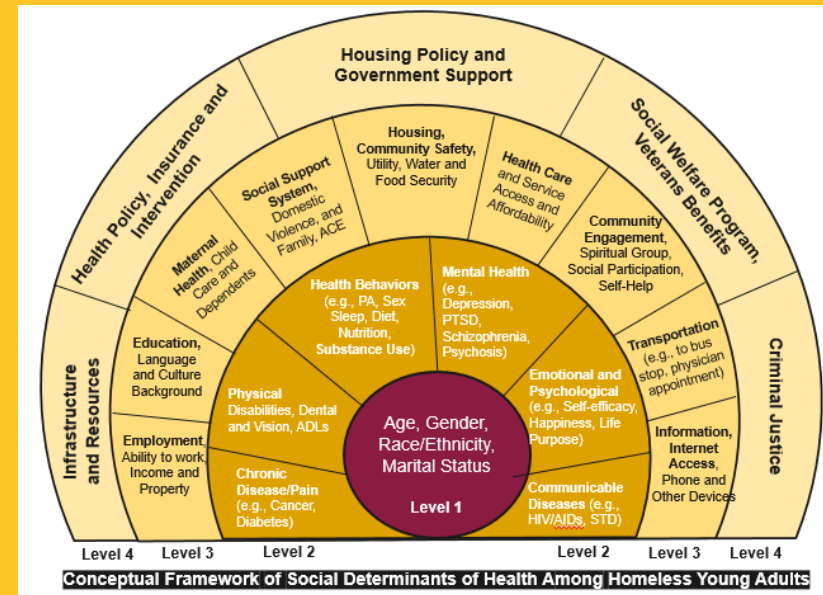
- Age
- Gender identity
- Sexual orientation
- Race/ethnicity
- Marital status
- Employment status
- Education
- Have child
- Live with Child

Level 3: Interpersonal level

- Family/friend connection/ social support
- Church participation
- ACEs
- Domestic violence
- Social media
- Criminal experience

Level 4: Social-Economic/living environment

- Income/ financial situation
- Homeless-related questions
- Food security
- Insurance/health care
- Transportation/internet access/smart phone
- Social support/discrimination/ stigma
- Access of help resources



Demographic Variables	SUD
Age	1.10 (0.11)
Female	0.66 (0.30)
straight	0.33 (0.22)
black	0.08*** (0.06)
latinx	0.43** (0.13)
native	0.44 (0.27)
mixedother	0.58 (0.35)
divsep	0.92 (1.09)
nevermarried	2.33 (2.44)
partimemp	1.97 (1.58)
notemplooking	1.85 (1.83)
notemplookingunable	1.14 (0.95)
lesshighsch	0.32+ (0.21)
highsch	1.02 (0.57)
havechild	8.08*** (3.81)
livewithchild	0.10** (0.09)

Interpersonal level	
Famifri supportive	4.12** (2.17)
Regular religious	0.64 (0.31)
ACE total	1.23* (0.10)
domesticviolence_F	2.01 (1.00)
usesocmedia	0.60 (0.31)
criminaled	1.01 (0.60)

Hot season data

Social-Economic/living environment

sufficientincome	0.54 (0.69)
selfperhomeless	1.17 (0.39)
ageoutfoster	0.09** (0.07)
enoughfoodeat	1.13 (0.85)
hadinsurance	0.81 (0.38)
cangoanywhere	1.00 (0.39)
accesstointernet	0.35 (0.26)
hadsmartphone	0.75 (0.37)
goodsupportservice	2.46 (1.88)
socdiscrim	0.74 (0.52)
cangethelp	0.75 (0.57)
Constant	0.06 (0.13)
Observations	156

Demographic Variables SUD

Age	1.10 (0.11)
Female	0.66 (0.30)
straight	0.33 (0.22)
black	0.08*** (0.06)
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notemplooking	1.85 (1.83)
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lesshighsch	0.32+ (0.21)
highsch	1.02 (0.57)
havechild	8.08*** (3.81)
livewithchild	0.10** (0.09)

sud	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
male	.6615676	.3875318	-0.71	0.481	.2098742 2.085401
divsep	.8000143	.7164877	-0.25	0.803	.1382825 4.628374
nevermarried	1	(omitted)			
straight	.2911589	.1758723	-2.04	0.041	.0891186 .9512436
AA	1.058718	.8163762	0.07	0.941	.2335713 4.798891
Latinx	5.112175	4.328965	1.93	0.054	.9723271 26.87813
otherrace	14.80718	13.03468	3.06	0.002	2.63733 83.13432
employment2	.7581603	.8628086	-0.24	0.808	.0814833 7.05429
employment3	.548139	.5570254	-0.59	0.554	.0747979 4.016908
employment4	.4020948	.4304007	-0.85	0.395	.0493408 3.276809
edulevel2	2.676328	1.852338	1.42	0.155	.6892969 10.39136
edulevel3	.7714142	.8520852	-0.23	0.814	.0885261 6.722085
edulevel4	1.418366	1.339811	0.37	0.711	.2227049 9.033309
childn	1.290572	.2212279	1.49	0.137	.9222968 1.805901
_cons	.4068152	.5277451	-0.69	0.488	.0320013 5.171624

5. Next steps





- ✓ **Comparing the Seasonal differences**
- ✓ **Qualitative Interview**





Data collection on the way...

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