Evaluating the Influence of Demographic Factors, Self-Perceived Self Efficacy, and Needs on Being Housed at Discharge from a Transitional Care Program

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Introduction

Homelessness is a significant public health concern in the United States. Medical respite programs for people experiencing homelessness (PEH) help PEH with ongoing medical problems by providing a safe place to recover from illness and injury.[1] Many also offer case management services, including helping people find housing;[2] these programs are referred to as transitional care programs. Some programs have been shown to improve housing status for PEH upon their exit from the program.[3,4,5,6] While we have substantial evidence about what factors may make a person more likely to become homeless, there is less research on demographic factors and other individual characteristics that increase the likelihood of PEH becoming rehoused, with none focusing on which factors increase the likelihood of PEH becoming rehoused after transitional care program engagement.

Education and gender have well-supported effects on the likelihood of PEH becoming rehoused; however, the impact of age, race, and mental illness is much more heterogenous. PEH with higher education are more likely to exit homelessness than those with less education.[7,8] Female PEH have consistently been shown to have a higher likelihood of exiting homelessness compared to male PEH[9,10] as well, although that research is somewhat dated. There is some evidence that older PEH have more difficulty being rehoused,[11] but other evidence suggests that age is not a factor.[8] Research has shown that Black people are less likely to exit homelessness than White people,[12] but it has also been found that being White is not a predictor of exiting homelessness.[8] Research on the effects of mental illness on the likelihood of exiting homelessness are mixed.[8,13,14,15] There is also overall little research on the effect of other characteristics associated with personal capacity on rehousing. While there is minimal, dated evidence that higher self-perceived self-efficacy may be associated with PEH being rehoused,[9,16] there is no literature about basic need burden and its impact on PEH being rehoused.

1. What is the demographic distribution of transitional care program participants including age, race, gender, and education?
2. What is the distribution of self-efficacy scores among participants?
3. What is the unmet basic need burden and mental healthcare status of DHCT participants upon enrollment?
4. Do any of these demographic factors or other characteristics predict a higher likelihood of a participant having an outcome of being housed upon discharge from the program?

We hypothesized that PEH who are younger, female, White, have higher levels of educational attainment, and who do not have nor need mental healthcare would be more likely to be rehoused after transitional care program engagement. We also hypothesized that PEH who have higher self-efficacy and fewer unmet basic needs would be more likely to be rehoused.

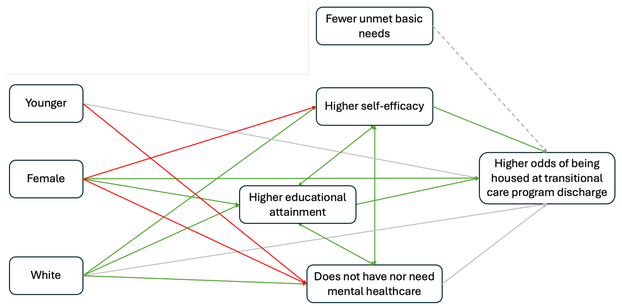

Figure 1: Known relationships between variables. A red arrow indicates a negative relationship; green: positive; gray: mixed; gray dashed: hypothesized.[7-30]

Methods

Study design, setting, and participants. This study used regression analysis on the administrative dataset of the Durham Homeless Care Transitions (DHCT) program to identify factors associated with likelihood of being housed upon discharge from the program. The data from 186 of the total 187 DHCT participants' initial experiences in DHCT were compiled and included.

Data collection. Intake information used in this study included: (1) an enrollment form, which gathered demographic information, (2) a self-efficacy rating scale, and (3) a has/needs form to document items and services that the client had, needed, or did not need. When participants were discharged from DHCT, it was determined whether the participant no longer met the federal definition of homelessness and therefore considered housed upon discharge.

Measures. Criteria for including variables in the study were that (1) we had reason to believe the variable may be associated with a difference in likelihood of being housed, based on prior literature or, for the case of lacking literature around unmet basic needs, our own hypotheses, (2) there were no or few missing data points, and (3) the data could be interpreted meaningfully.

Analysis. Bivariate analysis was completed among all variables. Significance was assessed at p<.1 and p<.05. Association metrics were generated for each bivariate relationship. The threshold for collinearity was determined to be a correlation coefficient >|0.6| for a significant bivariate relationship. Then we created a multivariable, stepwise regression model.

Stepwise Regression Model

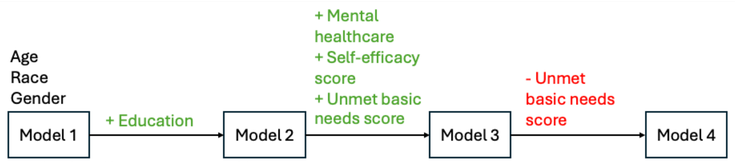

Figure 2: Multivariable stepwise regression model

Results

Table 1: Bivariate analysis p-values (above, in parentheses) and association metrics (below)

	Age	Gender, female	Race, white	Education, ≤ high school	Self-efficacy score	Unmet basic needs score	Mental healthcare, has vs. needs	Mental healthcare, has vs. n/a	Mental healthcare, needs vs. n/a
Age									
Gender, female	(0.159) 0.127								
Race, white	(0.607) 0.012	(0.163) -0.112							
Education, ≤ high school	(0.250) 0.112	(0.051)* 0.158←	(0.031)** 0.168←						
Self-efficacy score	(0.061)* -0.144	(0.755) -0.034	(0.730) 0.007	(0.005)** 0.190←					
Unmet basic needs score	(0.335) 0.071	(0.128) 0.096	(0.487) -0.046	(0.062)* -0.125	(0.003)** -0.228←				
Mental healthcare, has vs. needs	(0.047)** 0.058	(0.051)* -0.177←	(1.000) -0.006	(0.197) 0.115	(0.009)** 0.025	(0.004)** 0.157←			
Mental healthcare, has vs. n/a	(0.802) 0.237	(0.010) -0.360	(1.000) -0.014	(0.377) 0.149	(0.249) 0.102	(0.009)** 0.044			
Mental healthcare, needs vs. n/a	(0.145) 0.153	(0.234) -0.101	(1.000) -0.004	(1.000) -0.008	(0.646) 0.189	(0.811) -0.215			
Housed at discharge	(0.422) -0.078	(0.186) 0.180	(0.158) -0.118	(0.864) 0.027	(0.275) 0.096	(0.088)* 0.166←	(0.452) -0.073	(0.744) 0.080	(0.098)* 0.151←

P-values for categorical variables based on Fisher's exact test.
P-values for age and self-efficacy based on Wilcoxon rank sum test.
An asterisk (*) indicates significance at p<.1. Two asterisks (**) indicates significance at p<.05.
A left-facing arrow (←) indicates an association metric of >|0.15|, indicated only for those relationships significant at p<.1.

Table 2: Models with p-values (above) and odds ratio estimates (below)

	Model 1, n=163	Model 2, n=158	Model 3, n=144	Model 4, n=144
Age	(0.377)	(0.342)	(0.836)	(0.929)
	1.015	1.016	1.004	1.002
Gender, female	(0.128)	(0.091)*	(0.338)	(0.263)
	1.897	2.123	1.613	1.734
Race, white	(0.174)	(0.145)	(0.100)	0.114)
	1.662	1.763	2.013	1.939
Education, ≤ high school		(0.553)	(0.482)	(0.647)
		1.243	1.341	1.206
Self-efficacy score			(0.067)*	(0.110)
			0.938	0.947
Unmet basic needs score			(0.088)*	
			0.785	
Mental healthcare, has vs. needs			(0.674)	(0.627)
			1.307	1.353
Mental healthcare, has vs. n/a			(0.828)	(0.770)
			0.575	0.508
Mental healthcare, needs vs. n/a			(0.220)	(0.139)
			0.440	0.376
Concordance statistic	0.59	0.60	0.67	0.67

An asterisk (*) indicates significance at p<.1.

Conclusions

Gender. In Model 2, gender was a significant predictor of becoming housed, supporting previous literature.[9,10] In Model 3, however, gender became insignificant while two other variables became significant. This suggests that one or both of those variables, either self-efficacy score or unmet basic needs score, may be a a mediator (as there is indication that it may be on the causal pathway) for gender and the outcome of becoming housed.

Mental healthcare. Mental healthcare was significant in the bivariate analysis and not significant in the multivariable models, indicating that the bivariate relationship may be spurious. This adds to mixed literature on the role of mental illness and mental healthcare in rehousing PEH.[8,13-15]

Self-efficacy. Our Model 3 result that PEH with lower self-efficacy scores are more likely to become rehoused than PEH with higher self-efficacy scores is at odds with existing literature[9,31] and our hypothesis. Our finding may be anomalous or due to other intricate relationships among variables that have not been fully adjusted for in the model. Potentially, a lower self-efficacy score is associated with greater openness to being helped.

Unmet basic needs. In our bivariate analysis, we found that the more basic needs a participant has, the more likely they are to become rehoused, but the relationship flipped in our multivariable analysis, which indicated that participants with more unmet basic needs are less likely to be rehoused, as hypothesized. In Model 4, the removal of the unmet basic needs score variable results in the loss of significance of self-efficacy score. In other words, the unmet basic needs score is a suppressor for the negative relationship between self-efficacy score and being rehoused.

Implications. Information on factors associated with being housed upon discharge from a transitional care program can help us develop innovative solutions for helping PEH become rehoused. Some of our findings are consistent with prior literature, particularly the relationship between female gender and being rehoused. However, this study offers new insights, including indications that the relationship between gender and housing outcomes is mediated by perceived self-efficacy and unmet basic needs. The negative association between unmet basic needs and being housed is logical but has not previously been studied and suggests an opportunity to improve program outcomes by addressing such needs early and completely. In contrast to prior research, we found a negative association between self-efficacy and being housed..

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