Reassessing Measures of Risk for Homelessness Among Families with Children in New York City

Key words: homelessness, family homelessness, homelessness prevention, risk assessment questionnaire (RAQ), informal eviction, formal eviction, landlord discord, home discord, Homebase, New York City, latent class analysis (LCA)

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Abstract

Research has established that homeless families in the United States are, largely, headed by young women; that such families enter homelessness due to housing insecurity and abuse; and that in New York City (NYC), not being a leaseholder and critical events, such as the birth of a child, increases the likelihood of families entering and re-entering the city's shelter system. This study reassessed the risks that families of a NYC homeless prevention program, Homebase, faced to entering shelters by evaluating responses by household heads to the program's Risk Assessment Questionnaire (RAQ) . RAQ items related to housing instability predicted shelter entry. High-risk profiles for shelter entry, identified by Latent Class Analysis (LCA), revealed housing and childhood security characteristics that occurred simultaneously *or* at separate periods in life. Vulnerable participants experienced abuse during childhood and home discord in adulthood, and may benefit from tailored case management services. Participants that acquired housing stability after childhood setbacks received public assistance in early life and adulthood. Social programs for at-risk youth may aid homelessness prevention efforts. The finding that participants achieved housing stability despite high eviction levels indicates a potential need to expand Homebase's eviction prevention services.

1. Introduction

Nearly half (47%) of the nearly 580,000 people counted as homeless in the 2020 national "point in time count" are families (Shinn and Khudduri, 2020; U.S. Department of Housing and Urban Development, 2020). Homeless families are predominantly young female-headed households with two children (Bassuk & Geller, 2006: 782). Several studies have established the specific characteristics of households that increase the risk of their families entering homelessness. These include minority status and recent pregnancy or birth (*demographic factors)*; being placed in foster care or moving frequently during childhood, experiencing sexual abuse during childhood and/or adulthood, and the lack of social support (*adverse social experiences*) ; and recent hospitalization for a mental health or substance use problem (*health burdens*) (Bassuk et al 1996, 1997; Bassuk & Geller 2006; Rog et al 1995; Shinn et al 1998; Weitzman 1989; Weitzman et al 1992; McChesney, 1995; Metraux and Culhane, 1999).

In this context, homeless women in families have distinct needs and capacities compared to homeless men and also poor women in housing. They are more likely than homeless men to live with their children and in shelters (Burt and Cohen, 1989; Burt et al., 2001; Meanwell, 2012: 73) but less likely to be psychiatrically disabled, previously incarcerated, and chronically homeless (Burt and Cohen, 1989; McChesney, 1995). They have been found to be "less likely" than "poor female" " households" "head[s]" "to have grown up on welfare", but more likely to have encountered abuse in their childhoods *and* adulthoods, and to have had fewer support networks (Bassuk & Rosenberg, 1988:783).

Uncovering these distinctions helps identify the particular combinations of social and economic deprivations that make young female-headed households vulnerable to homelessness

(Boyd, 1999; Bassuk & Geller, 2006: 782; McChesney, 1995:441-442; Tischler, 2007: 246). Social disruptions that tip such vulnerable families into homelessness, however, occur in a context of housing insecurity (Bassuk & Rosenberg, 2006Tischler, 2007:247).

Scholars attributed rising family homelessness in the early 1980s to the phenomenon of the number of households in poverty outpacing the available supply of affordable housing (the "low-income housing ratio")[1] (Clay, 1987; Dolbeare, 1986, 1988; Gilderbloom & Appelbaum, 1988; Hopper & Hamberg, 1986; McChesney, 1987; McChesney, 1990:192; Wright & Lam, 1987). Housing shortages amid the rising cost of the limited housing supply is a structural problem that has only worsened nationally, and particularly in large cities like New York City. The deficit in the number of affordable rental units for the bottom quartile of Americans increased from 2.863 million in 1980 to 5.271 million in 1991 (Shinn and Khudduri, 2020). In New York City, 53% of renter households currently pay more than 30% of their income on rent (an indication of "rent-burden") (Katz, 2022).

In the context of increasing housing insecurity, research found that families headed by "young" "single-mother[s]" from "minority" backgrounds were more vulnerable to falling deeper into poverty over time, but critical events – like a pregnancy, a recent birth of a child and abuse - increased their "likelihood" of becoming homeless (McChesney, 1995:442).

[1] Causes of increased poverty were attributed to economic crises that befell the poorest quintile of families during the early 1980s recession, including a fall in their "mean income" levels and a rise in their "average tax burden" (McChesney, 1990:192).

Metraux and Culhane (1999)[2] found that younger women who had recently given birth or had a child less than 1-year-old were more likely to re-enter a NYC family shelter but less likely to re-enter a single adult shelter (Metraux & Culhane, 1999:372-73,386-87). This implied that poor, young mothers with children who had found housing after being in shelters likely faced "additional financial and social strains" that undermined their stability "away from the shelter system" (ibid:391). Shinn and her colleagues[3] identified these "additional strains" (Metraux & Culhane, 1999) as housing-related factors, such as an "eviction threat" and not holding a lease (having a lease "protected" families from homelessness). The factor that most strongly predicted the likelihood of a family entering a NYC shelter was if the head of household had a "history" of living in a "shelter" as an "adult" (Shinn et al, 2013).

Indeed, the pattern in NYC of families entering shelters multiple times is a major barrier to preventing and ending homelessness in the city. Researchers have posited that the high percentage of recidivism (17%) and long periods of stay (beyond 9 months) (25%) in NYC family shelters has contributed to the rise in the city's family shelter population, which increased from about 9,500 in 2011 to 14,500 in 2015 (Hong et al, 2018:2; Coalition for the Homeless, 2022). In this context, a study by Hong and colleagues of 6,093 NYC family shelter clients[4] found that younger clients were more likely to re-enter shelters while non-US citizens were more likely to

[2] This study examined "whether… family-related characteristics", such as pregnancy, or "structural factors", like "housing…availability", affected the risk of New York City single adult and family shelter female clients of re-entering shelters (Metraux and Culhane (1999:372)

[3] This study tracked 11,105 families that had applied to NYC's flagship homeless prevention program, Homebase, between 2004 and 2008 (90% were headed by young women) (Shinn et al, 2013)

[4] This study tested several "family characteristics" to identify which ones predicted recidivism and "long stays"; 85% of respondents were "single entrants" and 31% were "long-term stayers" (Hong et al, 2018).

stay in shelters beyond 270 days[5] (Hong et al, 2018). Episodic clients (53% of their sample) – families who stayed in shelters multiple times for short periods – were more likely to have entered shelters after an eviction, be older and employed (ibid)[6].

Ending family homeless in NYC therefore requires dual interventions. Policymakers must ensure programs that can prevent vulnerable, particularly female-headed, households from entering homelessness (primary prevention) *and* enable families that live in shelters – episodically and chronically - to permanently exit homelessness (secondary prevention) (Culhane et al, 2011). In this context, rental subsidies facilitate homeless families' housing stability by enabling their access to affordable and decent quality accommodations (Rog & Gutman, 1997; Shinn et al, 2005; Stretch & Krueger, 1992). Subsidies targeted specifically to "episodic-recidivist" shelter families have also led to their faster rates of housing access and lower recidivism rates than families that have received standard shelter services (Levitt et al, 2013). The concerted effort by NYC's Department of Homelessness (DHS) efficient provisioning of subsidized housing to family shelter clients between 1997 and 2003 was attributed to the reduction of the family shelter population during that period (O'Flaherty and Wu, 2006).

Subsidies also help prevent poor families from entering homelessness. In one study, 3.3% of families that received a housing voucher entered homelessness compared to 12.5% of families who did not (they were placed on a waiting list) (Wood et al, 2008; cited in Shinn & Cohen, 2019).

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[5] Chronically homeless clients (26%) exhibited both of these predictive characteristics, and they were also more likely to lack regular income (Hong et al, 2018)

[6] Similarly, a study of New York, Columbus (Ohio), Philadelphia, and Massachusetts, found that the pathways into shelter among family homeless clients were due more to structural barriers associated with housing instability than "personal" issues, such as "disabilities and other behavioral health barriers" (Culhane et al., 2007: 20).

However, programs that ensure additional services are still required to significantly reduce rates of homelessness (Bassuk et al, 2020). NYC's Homebase program is a formidable example. This homelessness prevention program provides rental subsidies and community-based services and has reduced shelter entries in locations in which it operates by as much as 5-11%[7] (Goodman et al., 2016; Rolston et al, 2013; Shinn & Cohen, 2019). HELP USA, the employer of this paper's co-authors, is one NYC Homebase implementing agency and work with about 5,500 households (80-85% are families) each year.

Homebase provides eviction prevention; public benefits; education and job placement; financial management; and relocation, short-term financial, and emergency rental assistance services to households that are deemed imminently vulnerable to homelessness in 23 NYC locations that have high rates of families entering the shelter system (New York City Human Resources Administration Department of Social Services, n.d.). As of October 2021, NYC's Homebase program had prevented 97 % of families with children, 97.3% of adult family households, and 92.4% of single adults from entering shelters within one year of their enrollment (The City of New York, 2022:160).

This success is partly attributed to a fairly accurate method of assessing client risks to homelessness, a process that is the basis for program enrollment. Implementing agencies use a Risk Assessment Questionnaire (RAQ) that incudes indicators identified by researchers to

[7] In New York City, shelter occupancy and entry rates are accurate indices for homelessness because a Court Ordered legal right to shelter requires the city to provide shelter upon demand (*Callahan v. Carey*, 1979).

significantly predict shelter entry[8] (Shinn et al., 2013), such as demographic characteristics (e.g., pregnancy status), types of social disruption (e.g., involvement in child protective services), and forms of housing instability (e.g., landlord discord) (Shinn et al., 2013). Homebase provides the full range of services to clients that score at least a 7 on the RAQ's 25-point scale and fewer services to those that score below 7 (Mullen et al, 2022). A recent evaluation of the RAQ[9] concluded that it "remained robust" tool that has "generally maintained its predictive power over time" (ibid:933-934). Among all indicators, "housing-related items" were highly predictive (e.g., shelter history as an adult, a conflict with a landlord, and not holding a lease) (Mullen et al., 2022). "Childhood adversity indicators" were somewhat predictive; a history of receiving public assistance as a child was "slightly associated" with applying to a shelter; having " been in foster care" and "abused or assaulted" as a child "moderately" affected the "higher risk" of "applying for shelter" (Mullen et al, 2022: 928-929).

2. Study Objective

Similar to Mullen et al (2022), the research purpose of this study was to reassess the RAQ by identifying the risk factors for shelter entry among families with children that were admitted to HELP USA's Homebase program between July 1, 2016, and June 30, 2019. As a Homebase implementing agency, a simultaneous objective was to identify groups of client risk profiles to better serve the program's families with the highest risk for homelessness. We tracked shelter entry for the full range of families - with scores below *and* above the 7-point threshold - that applied for shelter *after* being admitted to Homebase between fiscal years 2017-

[8] in an analysis of self-reported Homebase client data (from 2004 to 2008) (Shinn et al, 2013)

[9] The study evaluated the power of the RAQ to predict shelter applications, among 49,345 unique families with children that had applied to Homebase between 2013 and 2016 (Mullen et al., 2022).

2019 and entered shelters at any time between those fiscal years – after their Homebase admission and December 1, 2020. These clients received Homebase prevention services during these years.

In this context, we aimed to: (1) describe the basic characteristics of participants entering HELP USA's Homebase programs in New York City during fiscal years 2017-2019; (2) identify characteristics from the Risk Assessment Questionnaire (RAQ, Shinn, Greer, Bainbridge, Kwon, & Zuiderveen, 2013) that predict shelter entry among this sample of Homebase participants; (3) identify those characteristics that predicted shelter entry over and above the RAQ score, and (4) use latent class analysis to identify potential participant profiles and their respective susceptibility to shelter entry.

3. Methods & Data

This study used administrative data for fiscal years 2017-2019 supplied by New York City's Department of Homeless Services (DHS) on HELP USA's Homebase participants who were designated at admission as a "family with children". Data were originally collected by HELP USA's case managers during the participant's intake assessment to Homebase. During these years, there were over 9,000 admissions of families with children to Homebase programs at HELP USA, in three catchment areas of the Bronx identified as high risk for housing instability. These catchment areas encompass eleven zip codes totaling about 50% of the geographic area of the Bronx, with a population base of approximately 700,000 residents. Data analyzed were based on the first admission of a family in the fiscal years 2017-2019. This yielded data for a sample of 9,630 families with children who were admitted to HELP USA's Homebase program.

Measures

Demographics. The intake assessment asked about participant age, current employment, education, marital status, and gender (binary only).

Risk Assessment Questionnaire (RAQ). The RAQ (Shinn, Greer, Bainbridge, Kwon, & Zuiderveen, 2013) is a 15-item questionnaire used by agencies affiliated with DHS in New York City to determine eligibility for Homebase. It was developed to direct homelessness prevention services more efficiently to those clients who would most benefit from Homebase. Responses are scored and then summed to provide a continuous score of risk. Some items, previously identified as being important and potent indicators of risk are weighted more heavily than others (e.g., given two points rather than one). Summed scores thus range from 0-25 points, with higher scores indicating greater risk of imminent homelessness and shelter entry. Items pertain to family characteristics (e.g., pregnancy, children under two years of age, employment status of the head of household), involvement with government agencies or institutions, such as child welfare involvement or the criminal justice system, prior applications for shelter, and discord with the landlord or head of the doubled-up household. All items, including their respective weights, are described in Table 1. The eviction variable includes formal eviction – a notice from the New York City Housing Court system – as well as informal eviction (i.e., being asked to leave one's accommodation). All mentions of "eviction" throughout this study therefore include formal and informal evictions.

Shelter entry. The primary outcome variable used was dichotomous, where 1 equaled shelter entry and 0 equaled no entry. This variable indicated whether Homebase clients admitted to the program between fiscal years 2017-19 applied for shelter *after* they were admitted to Homebase. The data was retrieved in December 2020. 'Shelter entry', therefore, reflects those

participants who entered shelter until that month. This variable was created based on administrative records of clients applying for DHS funded shelters between July 2016 and June 2019. Thus, the possible window of time for clients to enter shelter varied by participant from one to up to three years. Clients who received Homebase services and subsequently entered any New York City shelter were recorded as having entered shelter. Those who did not enter shelter in the window recorded were coded as having no shelter entry.

3.1 Analytic Plan

To address the aims, the analytic plan contained four stages. For aim 1, descriptive of Homebase enrollees were generated. For aim 2, we first tested demographics. Education, employment, gender, and age were added to the model to determine which of these factors should be included as covariates in models . Additional covariates include "readmittance" to Homebase that occurred after a "case exceeded 120 days" and instances when a new housing issue created a new case. The program mandates that cases end after 120 days. In reality, some clients continue receiving services after this period by being readmitted to the program. Variables that were significant at the $p < .05$ were kept as covariates for the models. Next, each RAQ item was tested independently (by itself) as a predictor of shelter entry. All significant RAQ predictors, at the $p < .001$ level (using a Bonferroni correction), and significant covariates were entered into a logistic regression model together. Insignificant predictors in the logistic regression model were then removed in a backwards, stepwise fashion to obtain this stage's final model. For aim 3, we added the RAQ sum score to the model that was yielded from aim 2 to identify factors that predicted the outcome over and above the standard measure of risk. All insignificant predictors ($p > .001$) were removed using the backwards regression approach .

For aim 4, we performed a latent class analysis (LCA). We first tested all RAQ variables, which yielded an unwieldy 8-class solution, in which 6 classes comprised less than 5% of the sample and the remaining belonged to two large groups. Fit statistics, such as entropy, and an examination of the proportions of participants endorsement of the variables indicated that the LCA could be refined with a different combination of variables. We next tested three domains of the RAQ items: current vulnerability, housing and childhood factors did. We then selected variables from those two groups based on two qualities: 1) the graphic representation of the differentiation of classes and 2) the input from shelter directors, who had more than 20 years of experience are co-authors of this paper. This method resulted in narrowing the analysis down to the eight variables that differentiated profiles most effectively. Of the final eight, three items related to current housing security: had a signed lease, reported discord with landlord, and reported home discord; and five items related to childhood insecurity: reported staying in a shelter as a child, reported being on public assistance as a child, reported being in foster care as a child, reported experiencing multiple moves as a child, and reported being abused (physically, emotionally, or sexually) as a child. LCA models were fit using MPlus 7.3 (Muthen & Muthen, 1998-2001) to evaluate possible two- to seven-class models. The Akaike information criterion (AIC, Akaike, 1974), Bayesian information criterion (BIC, Schwartz, 1978), Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LMRT, Lo, Mendell, & Rubin, 2001), and entropy (Ramaswamy et al.,1993) were generated for each model that fit a distinct number of classes. The best fitting model was finalized by identifying the one with the lowest BIC, the lowest AIC and the highest entropy as possible. The LMRT statistic indicated whether the model fit was significantly better than the other class solutions. Next, the final class solution was validated by

examining whether the classes yielded significantly different endorsement of the eight items used to differentiate the classes. We then examined differences across classes on demographics and the remaining RAQ risk factors. Finally, we tested the odds of shelter entry for each class compared with the class that demonstrated the lowest proportion who entered shelter.

4. Results

4.1 Descriptives of Homebase Participants

Table 1 shows the characteristics of participants entering HELP USA's Homebase program during fiscal years (FY) 2017 to 2019. The sample was comprised mostly of single women with children, just under 40 years old, who were currently unemployed and had no high school education or equivalent. Almost all the participants had received or were receiving public assistance, regardless of employment status, in the last six months. One-fifth identified as White, and one-fifth reported speaking a primary language other than English. We must elaborate on our use of the 'Identified as White' variable in context of other analyses of racial and ethnic indicators of homeless prevention service clients[10]. The 'Identified as White' variable in this study corresponds to people in the database that we received from the NYC Department of Social Services (DSS) who identified their "race" as White', among the population who identified their "ethnicity" as "Hispanic/Latino". The DSS database has two fields that are used to determine demographic groups. One field is "ethnicity", which contains the choices "Hispanic/Latino", "non-Hispanic/Latino", "refused" and "don't know" . The other field is "race", which contains the choices: "American Indian or Alaskan Native", "Asian", "Black or

[10] The authors provided the following explanation to the New York City Department of Social Services (DSS), which they approved before our submission of this article to Cities Journal.

African American," "Native Hawaiin or Other Pacific Islander," "refused" and "don't know". In this context, DSS treats "Hispanic/Latino" as one ethnic category that is inclusive of multiple racial categories, such as White Hispanic/Latino and Black Hispanic/Latino groups. White (non-Hispanic/Latino) and Black (non-Hispanic/Latino) "races" are separate demographic categories, respectively. In our sample, over 40% of respondents (among Hispanic/Latino & non-Hispanic/Latino ethnicities) indicated 'don't know' for their race and 60% of ethnic Hispanic/Latino people indicated 'don't know' as their race. The large portion of 'don't knows' in this sample of Homebase participants prohibited analysis of predictive differences across races. The study, therefore, assessed the predictive capacity of the sizable Hispanic/Latino variable. It also tested the predictive capacity of the subset of the Hispanic/Latino population that identified as White. 'Identified as White', in this study, is therefore the subset of the Hispanic/Latino ethnic group that belongs to what is deemed as the White race. It is neither a separate demographic category from Hispanic/Latino nor a mix of Hispanic/Latino Whites and non-Hispanic/Latino Whites .

Just under 80% reported being evicted or asked to leave in the past 6 months. Among this sample, 1,538 participants (16%) were admitted to Homebase two or more times, each time for a new housing issue. Others (610 participants, 6.3%) were "readmitted" because their case required more than the usual 120 days of Homebase services. There were 174 participants (1.8%) who experienced both a case that went longer than 120 days and having to reopen their case due to a new housing issue. Just under 12% entered shelter during the period of data collection.

4.2 Independent Predictors of Shelter Entry

Table 1 shows the parameter estimates for all the covariates and RAQ items entered in models predicting shelter alone, or one at a time without controlling for other predictors. The covariates identifying as Hispanic/Latino, speaking a primary language other than English, having one's case extended beyond 120 days and having a new case opened due to a new issue all significantly lowered the odds of shelter entry (by 44%, 50%, 87%, and 76%, respectively). For every year older a participant was, odds of shelter entry decreased by 4%. Current employment was also protective, lowering the odds of shelter entry by 38%.

Among the RAQ characteristics in Table 1 that are listed under *current vulnerability* , having a child 2 years old or younger increased odds of shelter entry by 80%, ever had child welfare involvement by 88%, and an institution or a shelter in the past 6 months by almost 800%. All the items listed in Table 1 under *housing characteristics* significantly predicted shelter entry. Having a signed lease and receiving a formal or informal eviction *decreased* the odds of shelter entry by 77% and 40%, respectively. All other predictors increased the odds of shelter entry. Odds of shelter entry more than tripled for those who moved more than once in the past year or applied to a shelter in the past 3 months. Each level increase in the severity of discord within the household or with one's landlord was associated with a 15% and 10% increase of entry into shelter . The data set obtained from the New York City Department of Social Services contained a range of multiple answers from 'no problem' to 'very big problem' for these variables. We treated these variables continuously. Among the items listed in Table 1 under *life history* variables, having lived in a shelter since age 18 increased the odds of shelter entry by more than 500%, whereas having been in a shelter prior to age 18 or having been in foster care increased the odds of shelter entry by 97% and 74%, respectively.

4.3 Final Model Predicting Shelter Entry

When all the significant RAQ predictors and covariates were entered into a model together, four variables were protective factors and five were risk factors (Table 2). Having one's case extend beyond 120 days, having a new case opened, age (treated continuously), and having a signed lease all decreased the odds of shelter entry. As an applied comparison to highlight the importance of age (a covariate), a 30-year-old Homebase participant has 30% lower odds of entering shelter than a 20-year-old. Having a child less than 2 years old, each level increase in the severity of discord with one's landlord, being in an institution or shelter in the past 6 months and having ever been in a shelter either as an adult or a child were all associated with greatly increased odds of shelter entry.

4.4 Predictors of Shelter Entry Over and Above RAQ Score

When the RAQ score was entered into the model, the four protective factors remained significant, and only four risk factors remained significant (Table 3). Over and above one's RAQ score, odds of shelter entry increased significantly with each level increase in the severity of discord with one's landlord, been in an institution, or experienced some kind of shelter stay be it in the past 6 months or any time before or since age 18.

4.5 Profiles of Risk (LCA)

Table 4 shows the fit statistics for each of the models tested encompassing two to seven classes. A six-class solution demonstrated the best model fit, with highly differentiated classes. The latent class results for the most effective variables had far better fit statistics, fewer classes, and better differentiation than the results for all variables. Figure 1 demonstrates the proportion of each class endorsing the eight variables, which are also listed in Table 5. It is important to

note that while all the classes demonstrated high levels of insecurity during their lives, we titled them in relation to one another (i.e., high security in a label indicates high security relative to the other classes).

Class 1 included 3.2% of the sample. Only about half of the household heads in Class 1 reported having a signed lease. Respondents in this class had the highest reported rate of any home discord and just under half reported any landlord discord. Respondents in this class also demonstrated the highest proportions of any class for experiencing multiple moves as a child, placement in foster care and abuse. We named this class *Moderate Housing Security and Very Low Childhood Security*.

Class 2 included 7.5% of the sample. Those in Class 2 had the second lowest proportion of having a signed lease, the highest proportion reporting any discord with their landlord, and the second highest proportion reporting any home discord compared to all the other classes. In terms of childhood security, this class demonstrated some of the lowest proportions on all the indicators. We named this class *Low Housing Security due to Discord and High Childhood Security*.

Class 3 was the largest class, including 55.3% of the sample. One hundred percent of those in Class 3 had a signed lease. Those in Class 3 also demonstrated one of the lowest rates of any home discord and only midrange landlord discord. Like Class 2, household heads in this class demonstrated some of the lowest proportions on all the childhood security indicators. We named this group *High Housing and Childhood Security*.

Class 4 included 12.4% of the sample. Of the household heads in this class, 94.5% endorsed having a signed lease, as well as mid-range proportions on landlord and home discord

compared to the other classes. What specifically differentiated this class was that 94.5% of its members reported having been in a shelter as a child, while simultaneously reporting relatively low proportions on all the other childhood indicators. We named this group *High Housing Security and Childhood History of Homelessness*.

Class 5 included 17.2% of the sample. Of the household heads of Class 5, 98.3% reported having a signed lease. Like Class 3, members of Class 5 demonstrated one of the lowest rates of any home discord and a mid-range proportion of landlord discord. Among the childhood security indicators, 99% of members of this class reported being on public assistance as a child, the highest proportion among all the classes. Class 5 members also reported high rates of multiple moves as a child (95.7%), yet lower proportions on all the other indicators compared to the other classes. We named this class *High Housing Security and Moderate Childhood Security*.

Class 6 included 4.3% of the sample. Those in Class 6 had the lowest proportion of having a signed lease of any class (19.5%). Members of Class 6 also had the lowest proportion of any landlord discord and a middle range proportion of home discord. While this class demonstrated a relatively high proportion of household heads reporting having been in a shelter as a child, it had the lowest proportion on public assistance as a child. Few members of Class 6 reported experiencing all the other childhood indicators. We named this class *Low Housing Security and Moderate Childhood Security.*

Table 5 shows additional characteristics by class membership, demonstrating high differentiation among classes. Class 1 (*Moderate Housing Security and Very Low Childhood Security)* and Class 6 (*Low Housing Security and Moderate Childhood Security*) shared characteristics that separated them from the rest: these groups were the youngest; the most

female; the most unemployed; and had the highest proportions of moving in the last year. While both classes had high rates of pregnancy, children younger than two, being in an institution in the past 6 months, and applied for shelter in the last 6 months, Class 6 demonstrated almost twice the rates of these characteristics compared to Class 1. Class 1 also had the most native English speakers. Interestingly, Classes 1 and 6 also demonstrated the least amount of tenure with Homebase and the highest rate of shelter entry (27.2% and 39.8%, respectively).

Class 2 (*Low Housing Security due to Discord and High Childhood Security*) was distinguished by the fact that it was the least White, the most educated, the most employed, and had the lowest proportion on welfare. Although members in Class 2 had the second lowest rate of having a signed lease and the high level of current landlord discord, Class 2 appeared to have the highest socioeconomic status of all the classes based on education and employment.

Those in Class 3 appeared to have a high level of stability in their lives, as evidenced by the high rate of having a signed lease and relatively low proportions on all other indicators. Class 3 had the oldest members, the most members who identified as Hispanic/Latino, the fewest females, the fewest single members, and the most members who did not speak English as a native language. Perhaps due to their relatively older age, members of this class were least likely to be pregnant or have children under age 2. While this class had the highest proportion of members who experienced eviction, no one moved more than once in the last year, and it had the lowest rate of entry to shelter (7.4%).

Class 4 (*High Housing Security and Childhood History of Homelessness*) had the most members with child welfare involvement, the second lowest rate of eviction, and the highest

proportion of members requiring a new Homebase case to open. Class 4 also had the lowest rate of recently applying for shelter. Just under 17% of members in Class 4 entered shelter.

Finally, Class 5 (*High Housing Security and Moderate Childhood Security*) was the group with the greatest chronicity of being on welfare in their lifetime—99% of the members had been on welfare as a child and had the highest proportion of members currently on welfare (87.8%). Class 5 was also the least educated. Despite these socioeconomic barriers, Class 5 had the second lowest rate of shelter entry (11.4%).

Table 6 shows the odds of shelter entry for all the classes compared to Class 3, the class with the lowest proportion of shelter entry. Classes 1 and 6 were the two classes with the highest odds of shelter entry, demonstrating 4.7 and 8.2 times the odds of shelter entry, respectively, compared to Class 3. Classes 2 and 4 demonstrated just over twice the odds of shelter entry compared to Class 3. Class 5 demonstrated the smallest increase in odds of shelter entry over Class 3, with an odds ratio of 1.6.

5. Discussion

Our study extends the work of Mullen et al (2022) by identifying risk profiles of families for entering shelter even after receiving comprehensive Homebase services. Findings reveal that over and above RAQ score (which performs well in predicting shelter entry), four indicators (landlord discord, been in an institution or shelter in last 6 months, shelter stay since age 18, and shelter stay prior to age 18) emerged as significant predictors of shelter entry. These findings are consistent with the literature (Shinn et al 1998, Shinn et al 2005, Shinn et al 2013). Indeed, shelter stays have been identified as the best predictor of future homelessness (Shinn et al 2013, Greer 2014, Shinn & Cohen 2019).

Four key protective factors were also identified from our logistic regression analyses: having a Homebase case open for longer than 120 days, having a new admission to Homebase for a new housing issue, being older, and having a lease. The findings related to these first two indicators are particularly interesting, given their implications for service provision improvement. While being older has been identified in the literature as a protective factor (Shinn et al 1998, Shinn et al 2005, Shinn et al 2013) new and repeat admissions to Homebase had not previously been analyzed to measure predictiveness. These new findings should be understood in context of findings in the literature that confirm both the impact of Homebase on reducing homelessness among New York City clients (Rolston et al 2013, Goodman et al 2016, and Shinn & Cohen 2019) *and* on specific services, such as rental housing subsidies (Wood et al 2008) and financial assistance (Evans et al 2016, Shinn & Cohen 2019) that Homebase provides and that have been studied in other programs and cities.

The LCA profiles reveal an opportunity to respectively *integrate* and *expand* specific preventative services under Homebase in context of profile attributes. For example, the higher likelihood of those in Class 1 and Class 6 to have been in institutions or shelters in the previous six months and to have moved more than once indicates a need to expand *intensive case management* to people with similar attributes. Household heads in these classes that also are pregnant or have children under the age of two may require the highest priority services. Those in Class 1 also had high rates of childhood trauma and instability, further establishing the need to expand this component of the program. The experiences of female heads of households of being in foster care or being abused during childhood is associated with their lack of social support later in life (Bassuk et al., 1996, 1997; Rog et al., 1998; Weitzman, 1989; Weitzman, Knickman,

and Shinn, 1992; Bassuk & Geller, 2006; McChesney, 1995; Metraux and Culhane, 1999). In that context, interventions that provide resources to such families is also needed. HELP USA shelter staff anecdotally note that because questions on childhood disruption often elicit client reluctance to respond, intake workers are trained to ask only RAQ questions and collect binary answers to assess their service needs so that all fields needed to calculate the risk score are entered. Case managers then subsequently work with clients to attend to these needs and only glean more information on sensitive issues as required and at clients' discretion. Mullen et al (2022) removed most childhood adversity indicators from their model due, in part, to reservations that Homebase staff expressed about "asking…clients sensitive questions about their childhood" such as "abuse" (931).

Class 3 is the largest and, arguably, most stable cohort with 100% with a signed lease, the highest rate of eviction, greatest rate of employment, and the lowest probability for shelter entry. These results indicate that a signed lease, largely made possible by employment, and the formal or informal notice of eviction may initiate avenues to obtain critical resources to avoid shelter entry. In 2017, New York City was the first city in the nation to pass legislation requiring legal assistance – a "right to counsel" – for tenants in housing court. There is some indication that the implementation of the law significantly reduced evictions between 2017 and 2019 (Miranova,2020).

Class 4, which was differentiated from other classes due to having the highest rate of childhood homelessness and 16.8% of whom entered shelter, demonstrates the need for preventative services for adults with histories of shelter stays during their childhoods to both avoid shelter entry and insecure housing as an adult. Members of Class 4 demonstrated high rates

of having a signed lease and the lowest rate of application to shelter in the past 3 months, suggesting that a history of homelessness as a child presents unique risks for adult homelessness. Additionally, given the correlation between poverty, serious mental health conditions and child welfare involvement, the large proportion of household heads in this class reporting child welfare involvement is a potential indicator of other vulnerabilities not captured by the RAQ. It suggests that perhaps more well differentiated classes would emerge with a wider range of data about their biopsychosocial status.

Interestingly, Class 5 exhibits the highest rate of having engaged in the welfare system both as a child and as an adult prior to their inclusion into the Homebase program. These household heads were also the least educated. It is possible that for this group, which had the next to lowest rates of shelter entry, contact with the welfare system may also provide a certain level of protection, providing access to multiple service systems across time.

It is notable from these LCA findings that a lack of having a signed lease alone did not differentiate the classes with the most risk. For example, Class 2 had the second to lowest rate of having a signed lease, but the lowest odds for entry into shelter compared to the classes other than Class 3. While Class 6 had the lowest rate of a signed lease and the highest rate of shelter entry, Class 1 demonstrated only a middle range proportion of having a signed lease and yet also demonstrated the second to highest odds for shelter entry. Childhood trauma featured large in Class 1's attributes but not nearly as much as in Class 6. More data on the applicants to Homebase might provide more critical information about how these two Classes differed beyond leases and trauma—helping social service systems ultimately to better support these vulnerable groups.

There are five limitations of this study. First, data acquired and analyzed on Homebase is restricted to HELP USA's client base and does not therefore cover the total reach of the program across New York City. Nor would findings apply to homelessness prevention programs outside of New York City. The findings should therefore be interpreted and generalized accordingly. Secondly, we were unable to distinguish between formal and informal evictions on the RAQ, which may function differently as risk factors. Third, the data examined here were also largely cross-sectional. It is not possible to determine whether and how risk factors for shelter-entry may change over time. Data were collected during a time in New York City that involved regular changes in homeless policy. Thus, it may be that in past or future fiscal years, with different programs in place, distinct risk factors might be identified. Because of this possibility, investigators implementing this study performed a form of "member checking", a qualitative research technique in which researchers return to study participants to verify that the findings are in fact representative of their experiences (Charmaz, 2006). In lieu of speaking with clients, who are already experiencing extreme vulnerability, our research team presented findings to HELP USA case managers and shelter directors who work within the Homebase programs. These employees reported that the findings very much aligned with their years of experience of having a greater challenge in helping people who had no signed lease or childhood disruption. Fourth, although the data did not indicate "aftercare services" that clients received it is certain that some clients did receive these services. Homebase began providing aftercare services to families leaving shelters to help them reintegrate into their communities *after* the RAQ was designed and implemented. This could affect the interpretation of risk factors regarding the recent use of shelters. The RAQ's definition of an institution is restricted to shelter, jail/prison, or treatment

programs (in hospitals or in mental institutions). It does not specifically refer to aftercare programs. However, the indicator "been in an institution in the last 6 months" may include some heads of households who are participating in aftercare services. It is possible that some participants may have perceived aftercare programs to qualify as an institution, but this indicator does not reliably include aftercare participants. Lastly, our "case went longer than 120 days" variable is intended to measure the relationship between a Homebase readmittance on the risk of entering shelter. We acknowledge that research has established that the risk for shelter entry is highest immediately after families apply to the Homebase program (Shinn et al., 2013). There is a potential that our finding that this variable protects one from entering shelter may be an artifact of measuring the predicator after the successful outcome of not entering shelter has occurred. Conclusions made from the findings should be made cautiously, as the items of the RAQ are only one set of characteristics that could possibly inform entry into shelter. Service programs evolve. Key risk factors and risk profiles for shelter entry may also change over time. That said, the RAQ is an incredibly useful starting point for identifying risks. Future research should include a replication of this study across additional fiscal years with additional descriptive variables. How, for example, do substance use and mental health conditions enhance or inhibit engagement with programs such as Homebase? Understanding the dynamic process of homelessness prevention services and how clients respond is critical for future eradication of homelessness. In addition, future research should expand our understanding of what it means for homelessness to live without a lease, experience landlord discord and to experience childhood disruption. How, for example, do substance use and mental health conditions enhance or inhibit engagement with programs such as Homebase? With more information about these

characteristics and how and when they impact risk for homelessness, prevention programs can begin to intervene even further upstream, prior to a housing instability crisis.

6. Conclusion

This study provides a direction for honing Homebase services by identifying degrees of vulnerability to shelter entries that are located along a continuum of adverse experiences that occur at specific life stages. These composites of vulnerability include experiencing homelessness during childhood (Class 6), the inability to secure a signed lease and escape discord with one's landlord as a renting adult (Class 2) , or the occurrence of multiple vulnerabilities at different periods in life, such as having, both been abused during childhood and experienced home discord as an adult (Class 1). The positive impact that public assistance may have had on vulnerable children on their ability to continue accessing the welfare system and achieving housing stability as adults (Class 5) indicates the need for investment in and acknowledgement of social programs that serve at-risk children as explicit vehicles for the prevention of homelessness later in life. Robust homeless prevention programs, like Homebase, and reliable and valid measures of risk, such as the RAQ, can begin to provide a sea-change in the way we understand and treat homelessness before it occurs. With increasing attention on the success of programs like Homebase, including research that aims to identify ways to strengthen such programs, it is possible that federal policy makers will turn their attention towards these more effective ways of addressing the major social problem of homelessness.

Table 1

Characteristics of Participants of HomeBase on their First Admission during Fiscal Years 2017-2019: Results of Logistic Regression Models with Independent Predictors of Shelter Entry[i]

	M (SD) or %	***b***	***SE***	***p-value***	***OR***	***95% CI for OR:***	
Variables	**N=9,630**					***Lower Level***	***Upper Level***
Potential Covariates							
Female gender (male is reference)	90.4%	-.048	.105	.650	.953	.775	1.172
Marital status: Single, never married	67.2%	.071	.071	.315	1.074	.934	1.234
Identifies as White[11]	20.2%	.086	.089	.337	1.089	.915	1.298
Identifies as Hispanic/Latino	64.1%	-.419	.065	.000	.658	.579	.746
Primary language other than English	20.8%	-.689	.094	.000	.502	.418	.604
Case went longer than 120 days	6.3%	-2.07	.316	.000	.126	.068	.235
New housing issue caused new case	16%	-1.26	.130	.000	.238	.220	.365
Family Characteristics							
Number of Children	1.9 (1.2)	.056	.026	.032	1.058	1.005	1.114
Number of Adults	1.4 (.71)	-.128	.047	.007	.880	.803	.965
Predictors (RAQ Items, weight)							
Age (1 point if under 28, 2 points if under 22)	39.8 (10.0)	-.042	.004	.000	.959	.952	.965
High school diploma or GED (1 point if not)	44.5%	.092	.063	.148	1.096	.968	1.241
Currently employed (1 point if not)	44.6%	-.473	.066	.000	.623	.548	.710
Current Vulnerability							
Youngest child is less than 2 years old (1 point)	17.9%	.588	.074	.000	1.800	1.557	2.082
Pregnant (1 point)	2.7%	.384	.170	.024	1.468	1.053	2.048
Currently on welfare (2 points)	86.0%	.197	.096	.041	1.218	1.008	1.471

Ever had child welfare involvement (i.e., ACS case) (2 points)	5.3%	.635	.116	.000	1.888	1.503	2.371
Been in an institution in last 6 months (includes prison, shelter, or treatment) (1 point)	4.5%	2.193	.10	.000	8.965	7.337	10.956
Housing Characteristics							
Have a signed lease (1 point if not)	89.0%	-1.460	.076	.000	.232	.200	.270
Eviction (2 points)	78.0%	-.510	.070	.000	.600	.524	.688
Moved at least 1 time in past year (1-2 points)	16.3%	1.134	.070	.000	3.110	2.710	3.568
Level of discord with landlord (1-2 points)	53.9%	.095	.023	.000	1.100	1.051	1.151
Level of discord with household (1-2 points)	19.6%	.140	.026	.000	1.151	1.092	1.212
Applied to shelter in last 3 mos. (2 points)	6.2%	1.335	.095	.000	3.800	3.155	4.577
Life History							
Stayed in an NYC shelter since age 18 (3 points)	43.7%	1.822	.077	.000	6.183	5.317	7.190
Been in a shelter prior to age 18 (1-2 points)	10.9%	.679	.085	.000	1.972	1.668	2.331
On public assistance prior to age 18 (1-2 points)	58.7%	.137	.065	.034	1.147	1.010	1.303
In foster care as a child (1-2 points)	4.2%	.554	.133	.000	1.741	1.342	2.259
Moved 4+ times before age 18 (1-2 points)	26.1%	.165	.070	.018	1.180	1.029	1.353
Abused as a child (1-2 points)	9.5%	.321	.098	.001	1.378	1.136	1.671
Risk Assessment Questionnaire (RAQ)total score?	9.0 (2.7)	.272	.012	.000	1.313	1.283	1.343
Entered shelter	11.8%	--	--	--	--	--	--

Table 2

Predictors of Shelter Entry without the RAQ Sum Score

	b	***SE***	***p-value***	**OR**	**95% C.I. for OR**	
					Lower	**Upper**
Case went longer than 120 days	-2.01	0.34	0.000	0.13	0.07	0.26
New housing issue caused new case	-1.28	0.14	0.000	0.28	0.21	0.36
Age	-0.03	0.004	0.000	0.97	0.96	0.98
Youngest child less is less than 2 years old	0.31	0.09	0.000	1.37	1.15	1.63
Been in an institution or shelter in last 6 months	1.14	0.12	0.000	3.14	2.46	4.00
Have a signed lease	-0.96	0.10	0.000	0.38	0.32	0.46
Level of discord with landlord	0.14	0.03	0.000	1.15	1.10	1.21
Stayed in NYC shelter since 18	1.93	0.08	0.000	6.87	5.82	8.10
Been in a shelter prior to age 18	0.79	0.10	0.000	2.20	1.81	2.67

Table 3

Predictors of Shelter Entry Over and Above Risk Assessment Questionnaire Score

	b	***SE***	***p-value***	**OR**	**95% C.I. for OR**	
					Lower	**Upper**
Case went longer than 120 days	-1.92	0.33	0.000	0.15	0.08	0.28
New housing issue caused new case	-1.29	0.14	0.000	0.28	0.21	0.36
Age	-0.03	0.004	0.000	0.97	0.96	0.98
Been in an institution or shelter in last 6 months	1.04	0.13	0.000	2.82	2.21	3.60
Have a signed lease	-0.85	0.10	0.000	0.43	0.35	0.52
Level of discord with landlord	0.10	0.03	0.000	1.10	1.04	1.16
Stayed in NYC shelter since 18	1.82	0.09	0.000	6.15	5.21	7.28
Been in a shelter prior to age 18	0.62	0.10	0.000	1.86	1.53	2.27
Risk Assessment Questionnaire (RAQ)	.08	.02	0.000	1.08	1.05	1.11

Table 4

Fit Statistics for Potential LCA Models

	AIC	BIC	LMRT	p	Entropy
2 Class	67513.5	67635.5	2952.98	<.0001	0.779
3 Class	66949.9	67136.4	574.66	<.0001	0.636
4 Class	66757.0	67008.0	208.38	0.0181	0.560
5 Class	66656.1	66971.7	117.45	0.0005	0.623
6 Class	**66591.3**	**66971.5**	**81.80**	**<.0001**	**0.595**
7 Class	66560.2	67004.9	48.60	0.1795	0.550

Table 5

Characteristics by Class Membership

CLASS	***1***	**2**	**3**	**4**	**5**	**6**		
	Moderate Housing and Very Low Childhood Security	*Low Housing Security Due to Discord and High Childhood Security*	*High Housing and Childhood Security*	*High Housing Security and Childhood History of Homelessness*	*High Housing and Moderate Childhood Security*	*Low Housing and Moderate Childhood Security*	*Chi-Sq* or *F*	*p*
Count (%)	312 (3.2)	723 (7.5)	5,328 (55.3)	1,196 (12.4)	1,661 (17.2)	410 (4.3)	--	--
Variables Used to Determine Classes	**M (SD) or %**	**M (SD) or %**	**M (SD) or %**	**M (SD) or %**	**M (SD) or %**	**M (SD) or %**		
Housing Characteristics								
Have a signed lease	54.8	31.4	100	94.5	98.3	19.5	5,674	< .001
Level of discord with landlord	44.9	61.0	55.5	48.5	56.4	34.2	182	< .001
Level of discord with household	33.1	28.9	17.3	23.7	15.9	26.6	228	< .001
Childhood Characteristics								
Been in a shelter prior to age 18	50.0	18.7	34.2	94.5	41.3	68.0	1741	< .001
Public assistance prior to age 18	92.6	60.6	47.4	48.4	99.0	43.7	1630	< .001
Foster care as a child	25.6	1.5	.20	4.1	14.4	2.9	1025	< .001
Moved 4+ times before age 18	97.1	13.0	7.9	7.1	95.7	5.4	6260	< .001
Abused as a child	32.2	7.6	5.2	9.6	19.9	9.0	515	< .001

Other Variables by Class								
Demographics not on RAQ								
Female gender	97.1	90.5	89.5	91.0	91.1	95.4	18.2	.003
Marital status: Single	73.6	65.4	65.3	67.1	71.9	72.7	33.0	< .001
Identifies as White	20.2	18.6	20.0	21.2	18.9	24.0	5.4	.37
Identifies as Hispanic/Latino	50.8	59.9	68.1	55.2	63.7	61.7	104	< .001
Primary language not English	7.4	17.0	25.7	13.7	14.3	21.5	196	< .001
Family Characteristics								
Number of Children	1.8 (1.1)	1.7 (1.0)	1.9 (1.1)	2.1 (1.3)	2.0 (1.2)	1.7 (.97)	13.8	< .001
Number of Adults	1.3 (.6)	1.3 (.6)	1.5 (.7)	1.5 (.7)	1.5 (.7)	1.3 (.6)	20.2	< .001
Other RAQ Variables by Class								
Age	33.4 (9.0)	36.0 (10.1)	41.4 (9.9)	39.1 (9.4)	39.5 (9.3)	33.6 (9.0)	113	< .001
High school diploma or GED	51.9	53.9	43.2	48.3	40.2	45.6	56.2	< .001
Currently employed	33.7	48.7	47.7	37.7	44.4	27.6	111	< .001
Youngest child is < 2 years old	28.6	23.9	15.2	18.8	16.6	36.7	163.8	< .001
Current Vulnerability								
Pregnant	4.2	2.5	2.2	3.3	2.7	7.6	45.0	< .001
Currently on welfare	85.9	81.2	86.0	86.8	87.8	84.9	19.3	.002
Ever had child welfare involvement	10.3	3.3	1.8	22.4	4.4	4.1	846	< .001
Been in institution in last 6 mos.	21.8	5.0	0.9	5.1	1.6	46.8	2126	< .001
Housing Characteristics								
Eviction	36.2	80.4	93.9	31.1	82.7	17.8	3517	< .001

Moved at least 1 time in past year	89.7	53.0	0.0	38.1	5.7	88.0	5057	< .001
Applied to shelter in last 3 mos.	45.3	2.9	1.5	1.9	1.0	76.8	4663	< .001
Experience with Homebase								
Case went longer than 120 days	4.8	5.5	6.9	4.8	6.9	3.2	38.8	.007
New housing issue caused new case	12.5	10.4	16.1	19.1	18.1	8.8	61.6	< .001
RAQ	12.6 (3.3)	9.8 (2.8)	8.1 (2.2)	9.6 (2.6)	9.4 (2.4)	12.3 (3.0)	487	< .001
Shelter entry	27.2	14.5	7.4	16.8	11.4	39.8	511	< .001

Table 6

Class Membership Predicting Shelter Entry Compared to Class 3 (Reference Group)

	b	***SE***	***p-value***	**OR**	**95% C.I.for OR**	
					LL	***UL***
Class 1, *Moderate Housing and Very Low Childhood Security*	1.543	.137	<.001	4.676	3.572	6.123
Class 2, *Low Housing Security Due to Discord and High Childhood Security*	.752	.118	<.001	2.122	1.684	2.673
Class 4, *High Housing Security and Childhood History of Homelessness*	.925	.093	<.001	2.523	2.101	3.029
Class 5, *High Housing and Moderate Childhood Security*	.478	.093	<.001	1.613	1.344	1.936
Class 6, *Low Housing and Moderate Childhood Security*	2.109	.114	<.001	8.241	6.596	10.298

Note: All parameter estimates above are from models where the class was tested by itself.

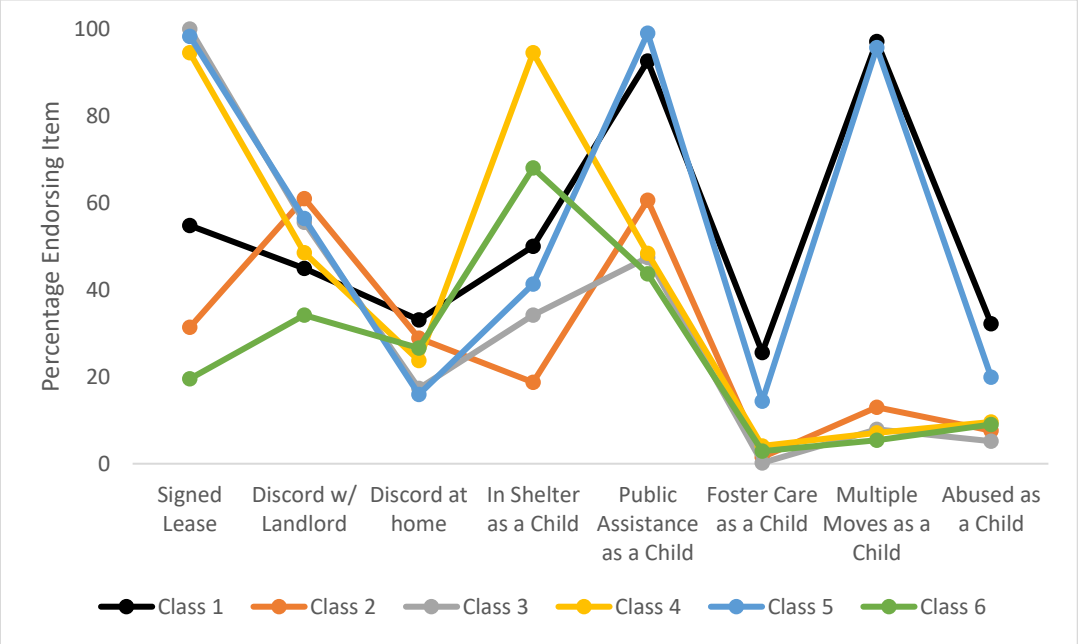

Figure 1. Proportion of each class endorsing each criterion

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