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Financial Matters: Housing Security and Eviction
during the Transition from Foster Care to Adulthood

A dissertation submitted in partial satisfaction of the
requirements for the degree
Doctor of Philosophy in Social Welfare

by

Brenda Ann Tully

2022

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ABSTRACT OF THE DISSERTATION

Financial Matters: Housing Security and Eviction
during the Transition from Foster Care to Adulthood

by

Brenda Ann Tully

Doctor of Philosophy in Social Welfare
University of California, Los Angeles, 2022
Professor Todd M. Franke, Chair

Secure housing contributes to individual and family well-being and full participation in life (Bratt, 2002). Securing housing in early adulthood can be difficult for young people earning low incomes and with little or no family support, including youth exiting foster care to adulthood (Dworsky et al., 2012). The life course perspective suggests that perceived relationship quality with birth parents, economic social role transitions, and social stratification based on race are key factors in housing security during the transition to adulthood (Britton, 2013; Gillespie, 2020; Lei & South, 2016). However, these factors have not been studied among young adults aging out of foster care. Additionally, literature gaps on young adults' housing outcomes after exiting care require a further inquiry into multidimensional housing trajectories and initiating investigation into eviction. This dissertation aimed to fill these gaps using Midwest Evaluation of Adult Functioning of Former Foster Youth data. Analyzing longitudinal data collected between 2002

and 2011, during the Great Recession, this study identified young adult's latent housing trajectories after foster care exit, established an eviction rate and count of repeated evictions, and examined the relationships between young adult's perceived relationship quality with their birth mothers and fathers, time-varying economic measures, race and ethnicity, and housing trajectories and eviction. The multidimensional housing measure identified three housing trajectories: insecure, precarious, and secure. State of foster care residence, sex, education, children, housing subsidy, and income at wave 4 were associated with housing trajectories (i.e., secure versus precarious). Young adults' eviction rate was 21%. Among the evicted group, 79% of young adults were evicted once and 21% experienced 2 to 4 evictions. The study demonstrated compelling evidence for relationships between economic hardship at ages 21, 23 or 24, and 26, and eviction. Homelessness, occupancy type at wave 3, and food insecurity at wave 4 were related to eviction also. Perceived quality of relationship with birth mothers and fathers and race and ethnicity were not associated with housing outcomes. Implications highlight the need to expand housing subsidies for youth transitioning from foster care to adulthood to mitigate precarious housing trajectories and universal guaranteed income to reduce economic hardship.

Keywords: Transition to Adulthood, Foster Care, Housing Security, Eviction, Economic Hardship, Life Course

The dissertation of Brenda Ann Tully is approved.

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University of California, Los Angeles

2022

To my friend, Jen, who did not live to see this day.

Thank you for your belief in me. I did it.

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Leap, J., **Tully, B.A.**, Benson, S., & McCarthy, S.J. (2017, December). *Stanislaus County Probation Department Racial and Ethnic Disparities – T.A.P. Grant, Year Three Evaluation Final Report.* Leap & Associates.

Pulido, M.L., **Tully, B.A.**, Holloway, J.L. (2015). Safe Touches: A child sexual abuse prevention program offers promising results among multi-racial children. *APSAC Advisor, 27*(1), 1-8.

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Chapter One: Introduction

Statement of the Problem

Secure housing contributes to individual and family well-being and full participation in life (Bratt, 2002). For young adults, secure housing is a foundation to engage in life domains, like education, employment, and health, during a pivotal developmental period (Johnson et al., 2010; Yen et al., 2009). However, in the United States, housing is rife with unequal burden and often insecurity. Defining characteristics of insecure housing are “limited or uncertain availability, ...access, ...or ability to acquire stable, safe, adequate, and affordable housing and neighborhoods” (Cox et al., 2017, p. 7). Asian, Black, and Latinx, more than white households, contend with housing insecurity due primarily to longstanding discriminatory governmental policies and industry practices (Gaddis & Ghoshal, 2020; Joint Center for Housing Studies (JCHS), 2021; Korver-Glenn, 2018; Loya & Flippen, 2020; Rosen et al., 2021; Turner et al., 2013; Watson et al., 2020). Additionally, people who earn low incomes and rent encounter severe shortages of affordable housing (i.e., 82% of people earning \$25,000 or less in 2019), leading to a substantial risk of housing insecurity (JCHS, 2021). Lack of affordable housing forces people to make difficult decisions about allocating limited funds for basic needs, like food, shelter, and transportation (Ehrenreich, 2002; Popkin et al., 2016).

Parental support can help ease these decisions and stabilize housing for young adults. Since the 1970s, parents have increasingly supported their young adult children by providing financial and material resources, including housing (Schoeni & Ross, 2005). Across income levels, parents channel about 10% of their permanent income to young adult children (Wightman et al., 2012). However, high-income families funnel more resources to their young adults in real terms, which compounds inequality (Sage & Johnson, 2012; Swartz, 2009).

Securing housing in early adulthood can be especially difficult for young people earning low incomes and with little or no family support, including youth exiting foster care to adulthood. Young people without family support face multiple obstacles when attempting to secure rental housing. Difficulty saving for the security deposit and first month's rent, as well as challenges finding a co-signer and lack of rental history can leave property owners hesitant to rent to young adults (Dworsky et al., 2012).

Housing insecurity and the threat of or actual eviction impose significant consequences. Housing insecurity diminishes physical and mental health, medical care access, attendance and performance in school and work, and frays social connections (Casselmann, 2021; Desmond & Gershenson, 2016; Herbers et al., 2012; Kushel et al., 2006; Kushel et al., 2007; Reina et al., 2021; Sandoval-Olascoaga et al., 2021; Sills & Rich, 2021). Eviction increases emergency medical services use, short- and medium-term general health problems, depression, anxiety, homelessness risk, and long-term credit damage (Collinson & Reed, 2018; Hatch & Yun, 2021; Hoke & Boen, 2021; Humphries et al., 2019). Consequences may be particularly dire while transitioning to adulthood, perhaps more so for young adults formerly in foster care.

Study Overview and Purpose

The primary study aims were to establish the housing trajectories, eviction frequency, and count of repeated evictions among young people transitioning from foster care to adulthood. Next, this study examined how changes in the perceived quality of relationship with birth mothers and fathers, food insecurity, economic hardship, and income related to housing trajectories between age 21 and 26 and eviction between age 19 and 26. Further, this study assessed to what extent housing trajectories and eviction varied by race and ethnicity. The final

aim investigated how race and ethnicity moderated associations between perceived quality of relationship with birth mothers and fathers, economic hardship, and housing trajectories.

This study generated new knowledge that addresses critical gaps in the existing literature about housing outcomes of young adults who aged out of foster care, including (1) limited information about outcomes beyond homelessness and ostensibly no studies of eviction, (2) shallow understanding of the role of birth parent(s) (Cushing et al., 2014; Havlicek, 2021), (3) dearth of studies that examine economic resources or hardships, and (4) conflicting results about the differential effects of, and apparent lack of moderation analyses using race and ethnicity (Berzin et al., 2011; Dworsky et al., 2010; Fowler et al., 2009; Shah et al., 2016).

The study used data from the Midwest Evaluation of Adult Functioning of Former Foster Youth (Midwest Study) to examine the relationship between young adults' perceived relationship quality with their birth mothers and fathers, time-varying economic measures, race and ethnicity, and housing outcomes, specifically housing trajectories and eviction. Midwest Study data were gathered during in-person and telephone survey interviews with young people on a wide range of topics expected to be relevant to housing. This dissertation used data from all five waves of the Midwest Study, beginning when respondents were age 17 and still in foster care and ending when they were ages 25 or 26 (data collected between 05/2002-03/2003 and 10/2010-05/2011, respectively) and had exited foster care five to eight years earlier.

The life course perspective (LCP) and housing insecurity literatures led to hypothesizing that race and ethnicity, perceived quality of relationship with each birth parent, food insecurity, economic hardship, and income would be significantly associated with housing trajectories and eviction. Additionally, it was expected that interaction effects between race and ethnicity,

perceived quality of relationship with birth mothers and fathers, and economic hardship would be significant in the housing trajectories model. Detailed hypotheses are in Chapter Three.

Significance of the Study

This dissertation makes several contributions to the existing literature on housing outcomes among young people transitioning from foster care to adulthood. First, it created a new, multidimensional housing trajectory measure that facilitates a nuanced view of the complex housing experiences of young adults exiting care. Second, it extended the study of multidimensional housing outcomes from age 20 through 26. Third, it established an eviction rate and count of repeated evictions for young adults formerly in care. Fourth, this dissertation identified relationships between economic measures and housing trajectories and eviction, which contributed distinctly from education and employment proxies. Fifth, it explored an understudied phenomenon whereby some young people turn to their birth parents for support, including housing, after exiting care. And, finally, this dissertation contributed by embedding race and ethnicity into analyses to consider both direct and indirect effects on housing trajectories. The study data were collected before, during, and after the Great Recession, and the results provide insight into the potential timing effects of economic measures and housing outcomes. This dissertation's findings have implications for developing social work practice and policy to better prepare young people for transitioning to adulthood while still in care, improve access to affordable housing, and the resources and skills young people transitioning to adulthood from foster care need to maintain it.

Structure of this Proposal

This chapter provides a broad introduction to this study's significance and purpose. Chapter Two discusses the life course perspective (LCP), defines key constructs, and draws on

population-level LCP research about development during the transition to adulthood and young people's housing arrangements. This chapter engages with social context as used in the LCP, which proposes that social inequities engrained in the construction of race and ethnicity in the United States are important to understanding variation within cohorts and change over time. The chapter identifies sociohistorical policies designed to support young people exiting foster care to adulthood. Finally, it frames the research questions and study design. Chapter Three identifies forms of housing insecurity in the U.S. and prevalence rates where available. It highlights research on young adult housing insecurity and, when possible, studies about young people who transitioned from foster care to adulthood. Chapter Four describes the research design and methods. Chapter five presents the results. Chapter six discusses how the study contributes to the literature on housing outcomes of young people transitioning from foster care to adulthood, study limitations, social work practice and policy implications, and directions for future research.

Chapter Two: Life Course Perspective Overview

The life course perspective (LCP) provides insights into human development through an ecological lens (Elder et al., 2015). This study focuses on the transitional phase of development between adolescence and adulthood, often referred to as early or young adulthood (Côté, 2014; Shanahan, 2000). Specifically, the LCP guides this study's focus on a cohort of youth exiting foster care during the transition to adulthood, between ages 17 and 26 years old, and how their housing transitions may be distinguished by changes in perceived relationship dynamics with birth mothers and fathers, changes in financial circumstances, and race and ethnicity. Life-course concepts and framework guide the variable selection and analysis for this study. Concurrently, LCP literature from the field of demography suggests how this study is situated in time and how the transition to adulthood may vary in three life domains (i.e., housing, parental relationships,

and finances) based on race and ethnicity. This chapter describes the LCP, defines four key LCP concepts that inform the research questions, and draws insights from population-level analyses of young adulthood and housing transitions. Finally, to situate the study in sociohistorical time, the period between 2002 and 2011 when Midwest Study data were collected is described briefly, along with the federal foster care policies that framed aging out of care for this cohort. The literature presented here and in Chapter 3 inform the conceptual framework for this study.

The LCP views human development as influenced by accumulating experiences within and among interpersonal relationships, institutions, and socio-historical contexts across time (Elder et al., 2015). Experiences earlier in the life course “are relevant to understanding social adaptations later” (Elder & Giele, 2009, p. 9). Experiences accumulate via social role transitions across life domains (e.g., family, school, work, housing, etc.) throughout the life course.

Change is wide-ranging during young adulthood. In the 20th century, young adulthood was marked by transitions in five life domains: completing education, entering employment, leaving the parental home, marriage, and birth of the first child (Settersten, 2012; Shanahan, 2000). However, demographic studies have documented shifts in the order, timing, and several markers (i.e., social role transitions) that indicate the transition to adulthood (see Settersten, 2012). Early adulthood life-course research has investigated the phenomena associated with these population-level shifts. It has sought to understand variations in social role transitions, specifically how these transitions relate to the timing of leaving and returning to the parental home based on age (18-35 years old), socioeconomic status, gender, perceived relationship closeness with parents, and race and ethnicity (Britton, 2013; Gillespie, 2020; Goldscheider et al., 2014; Kamo, 2000; Lei & South, 2016; South & Lei, 2015). Given this literature’s emphasis on population-level role changes in young adulthood, these studies have not considered the

experiences of youth transitioning into adulthood from living situations other than a family member's home. Nevertheless, aspects of this research help guide thinking about how young people in alternative living arrangements may be constrained in the timing of some role transitions, how their lives are linked with others, their life domain trajectories, and how each of these factors may relate to their housing experiences.

Social Role Transitions

Role transitions occur at the individual level and comprise changes in status and identity in both social and personal realms, and over time generate “social patterning” within the population (Elder et al., 2015). Individuals simultaneously hold multiple social roles (e.g., student, employee, parent, etc.). Role transitions occur within, rather than between, life domains (Jackson & Berkowitz, 2005). While individuals exercise agency in choosing which roles to pursue, they do so within opportunities that can be advantaged or constrained (Elder & Giele, 2009; García Coll et al., 1996). Advantages and constraints are conferred in relational dynamics, culture, societal norms and expectations, governmental structures, and social inequalities or social stratification (e.g., arising out of social constructions of gender, race, ethnicity, and socioeconomic class and associated hierarchical valuations of categories therein) that are embedded in the social context and historical time (García Coll et al., 1996; Lee & Waithaka, 2017; MacMillan & Copher, 2005; O’Rand, 2009; Schoon & Lyons-Amos, 2016). Given the influences of human agency and varied access to opportunities, the age at which people enter and leave social roles, or whether they ever engage in a particular social role, varies, despite norms that prevail in the aggregate (Jackson & Berkowitz, 2005).

Young adulthood is a time of considerable role change (Settersten, 2012). As youth transition to adulthood, they commonly experience shifts in their relationships with family,

friends, romantic partners, and with institutions and systems, such as education, employment, the economy, and housing. Further, system-involved youth experience role transitions with service systems, such as mental health, legal, and foster care (McMillen & Raghavan, 2009; Osgood et al., 2010). During this transition period, young adults learn to navigate new dynamics in how their lives are linked with other people and institutions across ecological levels (i.e., micro, mezzo, and macro). Young adults who age out of foster care often have facilitated contact with their mothers and/or fathers during their time in the care (Havlicek, 2021). When they age out of the system, they navigate their relationships directly with their parents. This constitutes a role transition. Little research investigates these relationships (Havlicek, 2021).

Additionally, like their peers, young adults exiting foster care must begin to financially support themselves, however they do so without the financial and other resources provided by many parents and with limited resources from the foster care system (Courtney, 2009; Goldfarb, 2014; Osgood et al., 2010; Swartz et al., 2011). How youth exiting care to adulthood navigate these social role transitions is not well understood (Havlicek, 2021; Nadon, Park, Feng, & Courtney, 2022). The current study investigates social role transitions using measures of perceived relationship quality with birth mother and father, three waves of economic hardship, food insecurity, and income data and their associations to housing security after youth exit care.

Linked Lives and Interdependence

The LCP concept of linked lives captures the dynamic quality of relationships in the life course. Across development, individuals' lives are interdependent with other individuals, families, and social groups (Djundeva, 2015; Elder et al., 2015). Interdependence is bidirectional. Linked lives also encompass the ecological nature of relationships between and among the micro, mezzo, and macro strata (Hutchinson, 2005). As families evolve, individuals' conditions

change, and as systems and institutions evolve, the social conditions in which individuals and families operate also shift (MacMillan & Copher, 2005). The linked lives principle aligns with calls over the past 15 years for people who work in the foster care system to shift emphasis from preparing youth for *independent* living to supporting youth in developing a set of *interdependent*, long-term relationships from which they can draw support across life domains (Avery & Freundlich, 2009; Mendes & Moslehuddin, 2006; Scannapieco et al., 2007).

The life course literature suggests two key ways parents' and young adult children's lives are linked through parental resource-sharing: shared housing (i.e., co-residence) and emotional support (e.g., the perceived closeness of youth-parent relationships; Swartz, 2009; White, 1994). The LCP literature explores the timing of young people leaving *and* returning to their parental homes after moving out. This review focuses on returning to live with parents, given that the current study's young adult sample had been removed from their parents' homes as children or adolescents and are transitioning to adulthood from foster care. Where the returning home literature is not developed, specifically associations with family relational dynamics, the studies on leaving home are reviewed.

Nearly half of young people who leave their parental homes in the U.S. return (Goldscheider & Goldscheider, 1999). Young adults are more likely to return to their parents' home when they experience role transitions, like losing a job, ending a relationship, consistent disengagement from school or work, or completing education or military service (Da Vanzo & Goldscheider, 1990; South & Lei 2015). Young people are less likely to return home when they report more responsibility for their finances, experience poverty, and as they get older (Da Vanzo & Goldscheider, 1990; Sandberg-Thoma et al., 2015; South & Lei, 2015). Evidence relating to race/ethnicity and patterns of returning to the parental home is mixed. A recent study found that

Black and Latinx young adults were less likely to return to their parents' homes than white young adults (Gillespie, 2020), while previous studies report null results (Da Vanzo & Goldscheider 1990; South & Lei 2015).

Studies investigating young adults who unexpectedly left home or transitioned into “adult” roles before age 18 offer additional context. Young adults who left their parents' homes unexpectedly returned more frequently than those whose departures were not abrupt (Da Vanzo & Goldscheider, 1990). Warner and Houle (2018) explored to what extent “precocious, or early life course transitions” might be associated with returning home using data from the National Longitudinal Survey of Youth (1997 cohort; p. 1). They found that young adults who left the parental home, cohabitated, married before age 18, or dropped out of high school by age 19 were more likely to return home. However, youth who entered parenthood before age 18 were less likely to return home. No effect was observed for youth who entered full-time employment before age 18. Further, the authors tested for variation in early transitions and returning home by gender, race/ethnicity, family connection, and family and young adult socioeconomic status and found no evidence for differences (Warner & Houle, 2018).

Youth whose departure from parental homes is considered precocious experience accelerated transitions to adulthood (Staff et al., 2004). Studies documenting the association between precocious transitions in certain life domains (e.g., leaving high school before completion, early marriage or cohabitation, etc.) and higher or lower rates of returning home suggest that parents may act as buffers against housing insecurity for young people whose transition to adulthood has been accelerated. Exiting the parental home to foster care placement is abrupt but does not meet Warner and Houle's definition of “precocious” (2018); however, studies have identified that youth aging out of care frequently experience accelerated transitions

to adulthood (Geneen & Powers, 2007; Marion et al., 2017; Rogers, 2011). Their birth parents also may act as buffers against insecure housing due to youth's accelerated transitions to adulthood after aging out of foster care.

Research indicates that perceived relationship closeness between young adults and their parents bear a role in the timing of young people leaving home in the U.S. but not in returning (Gillespie, 2020; Goldscheider et al., 2014; South & Lei, 2015; Warner & Houle, 2018). However, few studies of returning home have measured perceived relationship closeness (Warner & Houle, 2018). Evidence from the leaving home literature suggests a gendered effect but with mixed results (Gillespie, 2020; Goldscheider et al., 2014). Gillespie (2020) found that daughters who felt close to mothers and sons who felt close to fathers were likely to leave the parental home earlier than peers with less close relationships. In contrast, Goldscheider and colleagues (2014) found that warmer relationships between parents and female and male adult children were associated with delayed home leaving. How race and ethnicity may moderate the association between perceived relationship quality and housing transitions appears untested to date and is part of the current study design (Goldscheider et al., 2014).

Parental resource-sharing in the forms of co-residence and emotional support may be relevant to young people transitioning from foster care to adulthood. Several studies indicate that after aging out of care, some young people's lives are linked to their birth parents via co-residence (e.g., 17% of 19-year-olds in one study, Courtney et al., 2005; Havlicek, 2021), and social support is associated with more stable housing outcomes (e.g., reduced risk for homelessness) though specific forms of social support remain to be tested (Dworsky, & Courtney, 2009; Prince et al., 2019). The current study created measures of young people's

perceived relationship quality with their birth mothers and fathers, using contact frequency and perceived closeness, to test associations with housing trajectories and eviction.

Trajectories

The concept of trajectories is central to the LCP and defined as a series of role transitions embedded within and forming pathways through different life domains that interact dynamically over time (MacMillan, 2005). For example, life domain changes in housing (e.g., leaving a parent's home or foster care to live with friends or romantic partner) intertwine with employment (e.g., changes in income use, commute time) and with relationships (e.g., changes in adult supervision, responsibilities among friends, negotiating space with an intimate partner) in dynamic ways. Building on this, the interconnected trajectories of one person's life interact with those of other people with whom the individual is linked (Schoon, 2015). The heterogeneity of youth aging out of foster care warrants further investigation into how their housing experiences may vary over time and supports creating a multidimensional measure of their housing trajectories (Courtney et al., 2010; Fowler et al., 2009; Shpiegel & Ocasio, 2015).

Social Contexts

Social context became integral to the LCP as increasingly interdisciplinary research investigated human development in its ecological environs (Elder et al., 2015).¹ Social contexts are the social and physical environments to which people are exposed and interact throughout life (Elder et al., 2015). Social institutions like schools or places of worship, neighborhood characteristics like parks or pollution, and social policies exemplify social contexts. (Elder & Giele, 2009). Individual, family, and group interactions within social contexts are formative to development and accumulate across generations (Elder et al., 2015). The influence of any given

¹ This ecological framing stems from the work that Bronfenbrenner began in the 1970s.

social context varies based on exposure duration, intensity, and timing in the life course (Alvarado, 2018; Chaudry & Wimer, 2016; O’Rand, 2009). Several aspects of social context require discussion, including social inequalities, selection, and adaptation.

Inequalities entrenched in social contexts and historical times constrain personal choice (i.e., “bounded agency;” Dannefer & Kelley-Moore, 2008). Moreover, social inequalities restrict opportunities based on gender, race, ethnicity, and socioeconomic class, which compound across the life course and generations. Social disparities are referred to as a “distinctive feature” of institutions and situated in the “ecological process of place and its multiple levels,” changing form over time (Elder et al., 2015, p. 7). On the other hand, social contexts confer advantages to individuals and groups based on social categorizations with cumulative positive effects across life and generations. Social inequalities as described in the LCP are not unique and evoke how García Coll and colleagues (1996) used the concept of social stratification to undergird their integrative model for the study of developmental competencies in minority children. Drawing from Tumin (1967), they define social stratification as a “process that sorts individuals into a hierarchy of groups based on their imputed relative worth, utility, or importance to the society in which they live” (García Coll et al., 1996, p. 1897). Social stratification manifests in the differential access to resources children and families face based on social position, specifically race, ethnicity, and social class (for full theoretical model see García Coll et al., 1996).

Differential opportunities are illustrated via the LCP process of selection. Selection refers to the two-way process by which individuals, families, and groups select the social institutions or contexts they would like to engage in and how the institutions may screen out some people while selecting others (Elder et al., 2015). For example, studies demonstrate that as people search for housing, realtors, property owners, lending agencies, and millennials who post online “roommate

wanted” ads engage in selection processes that vary based on race and ethnicity (Gaddis & Ghoshal, 2020; Korver-Glenn, 2018; Loya & Flippen, 2020; Rosen et al., 2021; Turner et al., 2013). Through “selection,” these discriminatory practices mean that Asian, Black, and Latinx Americans often spend more time and energy looking for and securing housing, while white Americans who are similarly situated gain access more efficiently.

Individuals and groups who face structural inequality and discriminatory selection processes find strategies to work around these barriers through social adaptation. Adaptive strategies are drawn from personal, family, and collective learning, skill transmission, and culture that has been transferred through the generations (Elder & Giele, 2009; García Coll et al., 1996). Prolonged constrained choice may manifest in social role transitions and trajectories that are more complex and varied for Black and Latinx young adult women and men (García Coll et al., 1996; Jackson & Berkowitz, 2005). One adaptive strategy among filial groups and communities may involve greater acceptance and validity of heterogeneous life courses (García Coll et al., 1996; MacMillan & Copher, 2005).

The current study considers social contexts by assessing a series of moderation effects. The study tests how associations between perceived relationship quality with birth mothers and fathers and housing trajectories may be moderated by race and ethnicity. Further analyses examine how race and ethnicity may moderate relationships between economic hardship at three times during the Great Recession and the housing trajectories of youth exiting care to adulthood.

The Interplay of Historical Time and Space

The LCP emphasizes locating research in its sociohistorical context (Elder & Giele, 2009). The interplay of lives in historical time and space situates the contextual and structural influences surrounding Midwest Study data collection between 2002 and 2011, encompassing

the Great Recession (2007-2009; Pilkauskas et al., 2011). The Great Recession is discussed in the context of three demographic trends of young adulthood, co-residence with parents, employment, and financial independence, each of which influence housing options and access.

In the U.S., the percentage of young adults, ages 18-31, living with parents remained steady from 1981 through 2007 (31-32%), yet by 2012 following the Great Recession this percentage increased to 36% (Frye, 2013). Moreover, 56% of 18- to 24-year-olds lived with parents in 2012. Frye (2013) attributed longer family co-residence to shifts that occurred between 2007 and 2012, including rising college enrollment among 18- to 24-year-olds (35% to 39%), and declining employment (70% to 63%) and marriage (30% to 25%) among 18- to 31-year-olds. While the decline in young adult employment during the Great Recession was significant, the shock was part of an ongoing trend.

Data suggest that, in the U.S., young adults' ability to achieve economic independence eroded from the early 1970s through late 2000s (Sironi, 2018; Sironi & Furstenberg, 2012). Proportionally, fewer young adults who worked full-time were financially self-sufficient in 2007 (i.e., earned 200% of the federal poverty threshold) than in 1987 or 1973 (Sironi & Furstenberg, 2012). During and following the Great Recession, the likelihood of employment in a low-paid job increased across all educational levels for men and women with the greatest increase among the most highly educated (Sironi, 2018). Research demonstrates that young adults of color² were less likely than their white peers to achieve financial independence between ages 22 and 28 (i.e., 31% less likely when controlling for parents' education levels; Sironi & Furstenberg, 2012). Further, young adult (18- to 24-year-old) poverty rates increased from 1967 through 2013 and

² Researchers did not disaggregate race and ethnicity further (Sironi & Furstenberg, 2012).

superseded all other age groups between 1995 and 2013³ (Wimer et al., 2020). Poverty rates for Black and Latinx young adults were nearly double that of white young adults from 2000 through 2013 (Wimer et al., 2020). These data align with studies identifying strong relationships between limited economic resources and longer co-residence with parents among Black and Latinx young adults (Britton, 2013; Gillespie, 2020; Kamo, 2000; White, 1994).

Young people who age out of foster care earn significantly less than their non-fostered peers (Courtney et al., 2011). Studies also document high poverty rates among young adults after exiting care (Courtney et al., 2007; Pecora et al., 2006). Given the financial strains of young adults formerly in foster care and the sociohistorical context of the Great Recession, this study includes three different economic measures, economic hardship, food insecurity, and income, at three timepoints in the analyses of housing trajectories and eviction.

Federal and State Foster Care Policies

The federal government has recognized its responsibility to better prepare and support youth transitioning from foster care to adulthood. Federal policies developed over the past 40 years have incentivized state governments to enhance services and financial resources for adolescents in foster care. Several key policies frame the current study's sociohistorical context. These policies established and later expanded funding and outcome measurement for services designed to help youth develop skills for daily living, access health insurance, pay for education and training, and remain in foster care until age 21.

The Consolidated Omnibus Budget Reconciliation Act (1985) contained the Independent Living Program (ILP), marking the first federal policy mandating and funding “preparation for

³ The poverty calculation used an anchored version of the Supplemental Poverty Measure (SPM) applied to data covering 1967 through 2013. The SPM accounts for both cash and non-cash benefits, deducts necessary expenses (e.g., taxes, out-of-pocket medical costs, etc.), and accounts for geographic differences (see Wimer et al., 2020).

adulthood” services for young people likely to age out of foster care. Since its passing, Congress has updated the ILP regularly. The Foster Care Independence Act (1999), known as the Chafee Foster Care Independence Program (CFCIP), replaced the ILP and added three key components: doubled Federal funding to \$140 million annually, required the U.S. Department of Health and Human Services (DHHS) to set state-level outcome measures and reporting structures, and expressed congressional interest in states expanding Medicaid coverage to youth from ages 18 to 21. Iowa and Wisconsin expanded Medicaid coverage to age 21 in 2006 and 2009, respectively (Youth Policy Institute of Iowa, n.d.; Wisconsin Department of Health Services, 2017). Youth in the Midwest Study did not benefit from Medicaid expansion in either state because they had already aged out. Medicaid coverage for young adults exiting care up to age 26 was formally mandated by the Affordable Care Act (ACA) in 2014 (ACA, 2010; Bullinger & Meinhofer, 2021). Illinois expanded coverage to young people between ages 19 and 26 who were in or who had exited care, as mandated by the ACA, thus no Midwest Study participants from Illinois benefitted from this expanded coverage (Illinois Department of Children and Family Services, 2013).

The Educational and Training Voucher (ETV) was added to federal legislation in 2001. ETV provides up to \$5,000 annually for education and vocational training through age 21 or 23, including to youth who aged out (Chafee Foster Care Independence Act (CFCIA), 2001). ETV dispersed \$45.2 million dollars (AFC, 2015, p. 17) to assist 17,100 youth in fiscal year 2011 with average awards of \$2,600 (Fernandes-Alcantara, 2014, p. 15). Midwest Study participants were eligible for ETV in all three states. The enactment of the Family First Prevention Services Act (2018) extended ETV resources to young people to age 26 with a maximum of five years total funding per individual.

The Fostering Connections to Success and Increasing Adoptions Act (2008) allowed states to extend foster care services to youth to age 21. This legislation offered funding for new types of housing support, including foster care or independent living placement, rent subsidies for youth living outside foster care (up to 30% of a state's federal funding), and provisions for youth to return to care if needed and receive services until age 21. Fostering Connections (2008) required states to opt into extended foster care (EFC) by passing legislation to guide state-level implementation of the Act and submitting implementation plans for approval to the Administration for Children and Families (part of the U.S. DHHS). States selected the conditions under which youth are eligible for EFC based on five conditions outlined in the federal legislation: in high school or equivalent, vocational, or post-secondary education, engaged in services that help remove obstacles to employment, employed at least 80 hours per month, or exempt from preceding requirements due to a medical condition (Fernandes-Alcantara, 2019). Before Fostering Connections (2008), a few states allowed youth to remain in care beyond age 18 (up to age 19, 20, or 21) using state money for costs.

Extended foster care services to age 21 were available in Illinois at the time of the current study (Courtney et al., 2004). Iowa and Wisconsin had not opted in yet and youth had to exit foster care by their 18th birthdays.⁴ However, Illinois required (and still requires) that youth who remain in foster care beyond age 18 meet one of the five conditions set in the federal legislation. Illinois selected the broadest set of conditions allowed under Fostering Connections (2008) to receive federal reimbursement for care and services provided to youth ages 18 to 21. In practice,

⁴ Iowa has funded its own extended care and, since 2006, allowed youth to remain in foster care beyond age 18, through age 19, if in high school or equivalent education (Fernandes-Alcantara, 2014). Midwest Study participants from Iowa had already reached age 21 and did not benefit from the age extension. Wisconsin opted in to extended foster care in 2015, allowing youth to reside in care until age 21 if in high school or equivalent education or training and only if they have a documented disability.

the eligibility conditions, or deservingness standards, may vary as foster care staff and judges determine whether to approve EFC to individual youth.

The policies outlined have enhanced the type of training and support youth likely to age out of foster care may receive. The youth cohort in the current study had access to early life skills programming by their states. Studies of life skills participation and programming show considerable variation in youth participation by state, topics covered, frequency, and dosage (Okpych, 2015; Chor et al., 2018). Moreover, most studies have documented null findings related to life skills services received and housing outcomes, with one recent exception (Administration for Children and Families (ACF), 2008; Courtney et al., 2011; Huang et al., 2022; Prince et al., 2019; Rosenberg & Kim, 2018). Further, studies document no relationship between receiving employment skills training and employment outcomes at ages 19 or 21 (Huang et al., 2022; Prince et al., 2019).⁵

Increasingly, the evidence supports reduced risk of homelessness among youth who remain in EFC. Studies using the National Youth in Transition Dataset (NYTD), based on national cohort surveys⁶ of youth in foster care at age 17 with follow-up at ages 19 and 21, have identified reduced risk for homelessness at ages 19 and 21 among youth who remain in care beyond age 18 (Huang et al., 2022; Kelly, 2020; Prince et al., 2019). The CalYOUTH Study, an evaluation of EFC in California, using a representative cohort sample of youth who were the first to benefit from EFC in the state and administrative data for youth in the years before and after EFC, also found that extended care was associated with decreased odds of homelessness,

⁵ Given the considerable federal investment in life skills services for adolescents and young adults likely to, or aging out of foster care and the limited data suggesting that these services (or specific programs in some studies) are associated with improving outcomes, the Office of Planning, Research, and Evaluation and the Administration for Children and Families are currently supporting the development and evaluation of new and promising models of transition support for youth at risk of homelessness upon exit from foster care (Cole, Shiferaw, & Bradley, 2021).

⁶ NYTD surveys are federally mandated by the Fostering Connections Act (2008). The surveys are administered by states every three years and began with the 2011 cohort.

frequency and number of days homeless, and couch surfing between ages 21 and 23 (Courtney et al., 2021).

These foster care policies and outcome studies illuminate the support and efficacy surrounding the preparation for, and foster care exit experiences of Midwest Study participants. The federal government has increased funding and the types of learning, financial, and housing supports available to young people likely to transition from foster care to adulthood since the mid-1980s. From a LCP perspective, the federal government has expanded and extended its parental role as legal guardian of youth in foster care who are anticipated to age out and offered states incentives to do the same (Courtney, 2009). The enhancement of life skills development opportunities is positive. However, research to date demonstrates little efficacy in this service line as it relates to homelessness or employment (ACF, 2008; Courtney et al., 2011; Huang et al., 2022; Prince et al., 2019; Rosenberg & Kim, 2018). Extension of foster care beyond age 18 to age 21 has proven effective in decreasing homelessness among young people who are eligible to participate and live in states that have EFC (Courtney et al., 2021; Huang et al., 2022; Kelly, 2020; Prince et al., 2019). Thus, important gaps remain for youth who do not qualify for EFC in states that have enacted it, often youth who are greatest risk for difficult outcomes, and for youth in states where foster care has not been extended and youth continue to age out at 18-years-old.⁷

The sociohistorical context, especially the unfavorable job market for young adults at the population level and the null effect of life skills development programs on either employment or housing outcomes for young adults exiting care, suggests that Midwest Study participants likely experienced significant barriers to employment as the study progressed through the Great Recession. The effects of the Great Recession on young adult employment likely were magnified

⁷ Oregon and Utah are the remaining two states that have not opted in to extended foster care as of 2022 (Child Welfare Information Gateway, 2022).

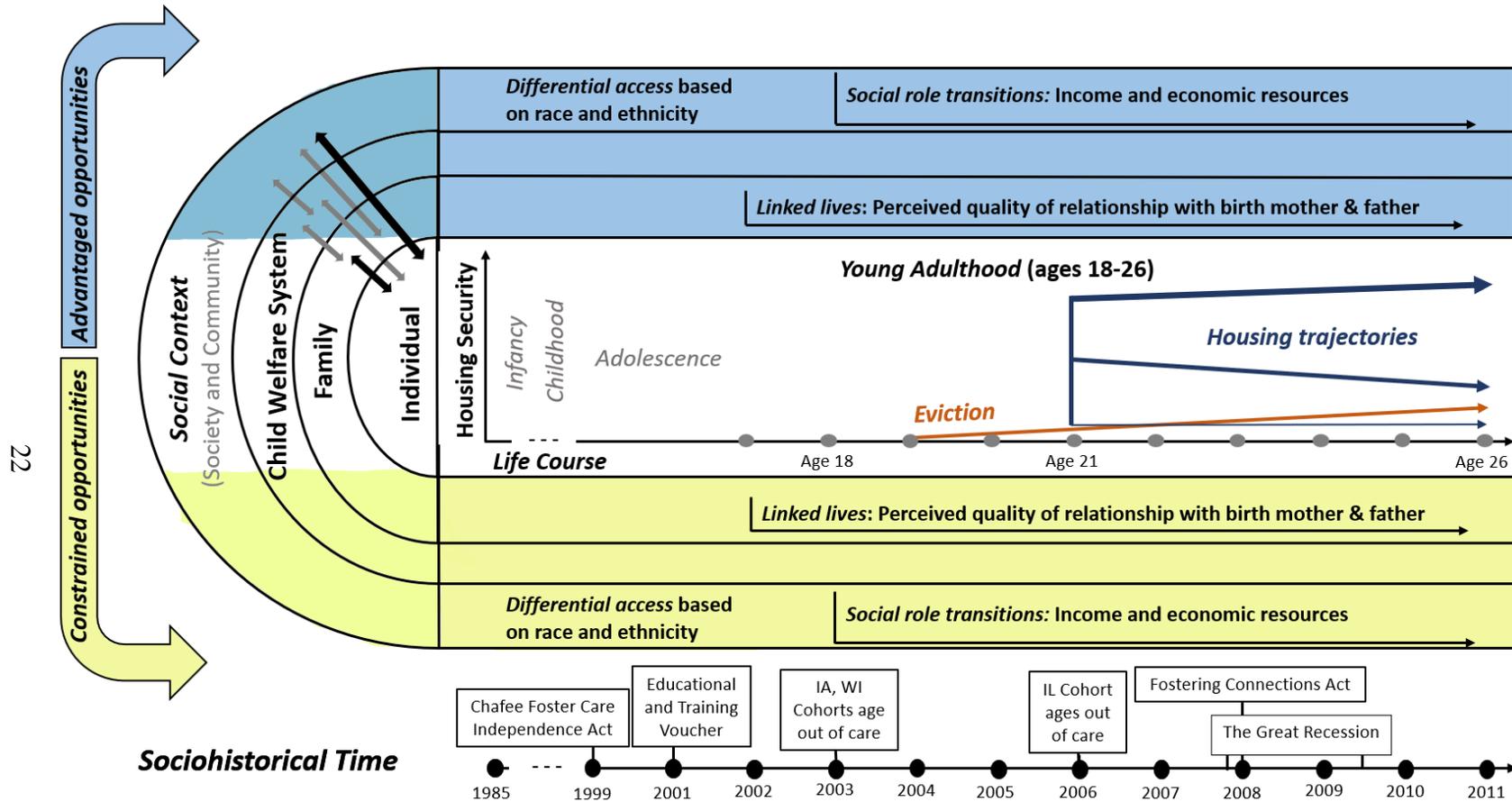
for young people exiting foster care, potentially manifesting in lower incomes and more economic hardship, food and housing insecurity. Moreover, young people in the study with poor perceived relationship quality with either parent may not have seen a birth parent as a housing resource, perhaps leaving this group at greater risk for insecure housing.

Summary

Figure 1 summarizes how the LCP guides this investigation of housing trajectories and eviction during young adulthood for youth aging out of care from ages 17 through 26. Young adults often experience social role transitions in many life domains, including family, economic status, and housing (Settersten, 2012; Shanahan, 2000). This study incorporates the LCP concept of linked lives by considering the perceived quality of participants' relationships (PQoR) with birth mothers and fathers on housing outcomes. Social role transitions are incorporated as the study tests the extent to which changes in participants' income and measures of economic hardship at three timepoints may be associated with differing housing trajectories or exposure to eviction. The study incorporates social context by considering how racial and ethnic inequalities may manifest by moderating relationships between PQoR, economic hardship measures, and housing trajectories. Applying the LCP reinforces leaving care as a complex process that unfolds over time for which longitudinal data, like the Midwest Study, is especially well-suited (Brady & Gilligan, 2018; White & Wu, 2014). Chapter three builds on the life course perspective and reviews the literature on housing insecurity, including housing trajectories and eviction.

Figure 1.

Life Course Perspective: Key Concepts Applied to the Proposed Study



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Note. This figure (adapted from Zubrick et al., 2014, p. 96) depicts key LCP concepts that frame this study of housing security among youth transitioning from foster care to adulthood. LCP concepts that are bold and italicized are defined in this chapter and guided study design. The rounded portion of the figure shows macro, mezzo, and micro influences on human development, which takes place over time as displayed in the rows moving from left to right. The curved arrows at the far left indicate how opportunities can be advantaged (in blue) or constrained (in yellow) by individual or family decisions or experiences, systems, and social context. The small, straight arrows toward the figure’s upper left indicate the dynamic interactions between and among ecological levels. The sociohistorical timeline identifies important policy and economic events potentially influencing this study.

Chapter Three: Literature Review

Housing Insecurity in the United States Today

This literature review discusses housing insecurity, definitions of key measures, prevalence estimates where available, and correlates for specific forms of housing insecurity. Housing insecurity research on adults and families is reviewed first, followed by studies of young adults, then young people exiting foster care to adulthood. Attention is concentrated on housing insecurity among people earning low incomes because young adults who exit foster care tend to be among this group (Courtney et al., 2011; Dworsky et al., 2010; Harris et al., 2009).

Housing insecurity research is hindered by the lack of uniform construct definition and measurement, rendering comparisons across studies challenging (Cox et al., 2016; Frederick et al., 2014; Leopold et al., 2016). Housing insecurity has been operationalized using singular or combined constructs such as affordability (e.g., rent-to-income ratio, arrears, unpaid utility bills or service disconnection, etc.), crowding, doubling up (i.e., moving in with others to pool resources), physical housing and neighborhood conditions, frequent moves, forced moves (e.g., threat of or eviction filing, rent increases, etc.), and homelessness (see Cox et al., 2017 and Routhier, 2019). Two multidimensional housing insecurity indices indicate significantly higher rates of tenuous housing in the United States than studies using single measures (Cox et al., 2017; Routhier, 2019). Housing unaffordability accounted for the largest share of housing insecurity during tests of both indices, however, the other domains added distinct value to these complex measures. The housing insecurity literature continues to encompass varied measures. This review begins with literature using multidimensional measures, then moves on to measures of affordability, eviction, and homelessness.

Multidimensional Measures

The economic conditions of individuals and households are consistently associated with multidimensional housing insecurity among adults and families, net of education and employment (Kang, 2019; King, 2018; Lee et al., 2021). King (2018) found significant associations between food insecurity, material hardship, low income, and public assistance receipt and a multidimensional housing insecurity measure that included missed rent or mortgage payment, doubled-up, moved more than once, evicted, homeless or stayed in a shelter, car or abandoned building. Lee and colleagues (2021) identified a bidirectional relationship between food and housing insecurity using data from the Fragile Families and Child Wellbeing Study. Here insecure housing comprised a set of risk factors, including instances of not paying full rent or mortgage, not paying full utility bills, evicted for not paying rent, doubled up due to finances, stayed in a shelter, car or abandoned building, and borrowed money to help pay bills. Families who experienced food and housing instability were more likely to be Black or Latinx (compared to white) and have household income equal to or less than 199% of the federal poverty line (Lee et al., 2021). In addition to economic conditions, non-economic factors contribute to multidimensional measures of insecure housing.

Living with children, deficits in social support, and poor health are related to insecure housing (dimensions described above; King, 2018). Kang (2019) used two different constructions of multidimensional housing insecurity: the first termed “churning residential mobility” in which people move due to unaffordability, overcrowding, or living doubled up (taken collectively as “precarious housing”) but because of constrained options they experience the same precarities again; the second is “nonprogressive residential mobility” when people are displaced from previously secure housing and then move into precarious housing conditions.

After adjusting for household income and housing costs changes, Kang (2019) found that living with more family members temporarily warded off housing instability, but longer-term shared arrangements with family or non-family increased housing instability.

Shifting to youth who transition from foster care to adulthood, young people who exit care to adulthood move more frequently, more often live without family, and reside in lower quality neighborhoods than similarly situated peers, net of race, gender, poverty, education level, drug use, teen parenting, and family home risk (Berzin et al., 2011). Longitudinal studies of young adults formerly in foster care provide more information about how their complex housing arrangements and conditions change over time. Five multidimensional housing insecurity studies using three unique sets of data from young adults formerly in foster care are discussed next.

Four of the five studies demonstrate that many young people transitioning from foster care to adulthood do so with secure housing which they maintain or obtain after a short initial period of insecurity. The first and second studies used the same dataset sampled from a cohort of youth ages 19 to 23 ($N=265$; 34% response rate, no non-response differences) who exited care at age 18 or older in Detroit in 2002 and 2003 (Fowler et al., 2009; 2011). Interviews were conducted in 2005 and 2006 using retrospective life history methods to gather information about participants' housing, education, and employment experiences during the first two years after exiting care. They asked respondents to recall their experiences in each of the three life domains in three-month intervals. The first study categorized housing as literal homelessness (i.e., shelter or place not meant for human habitation), precarious housing (i.e., co-residence with relatives, friends, or others due to lack of funds to live elsewhere), and stable housing (i.e., all other arrangements) and used growth mixture modeling to determine four distinct qualitative groups (Fowler et al., 2009). The four groups were coded as continuously stable ($n = 153$; 58%),

increasingly stable ($n = 31$; 12%), decreasingly stable ($n = 29$; 11%), and unstable ($n = 52$; 20%). Findings over time and across classes indicated that young people of color experienced greater decreases in housing stability. Additionally, compared to the continuously stable group, the continuously unstable group experienced more placement changes while in care, as did the decreasingly stable group who were also younger when they left care.

The second study used person- and variable-centered analytic tools to assess the level of heterogeneity in young adult transitions across three critical life domains: housing (i.e., permanent, precarious, or inadequate or restrictive), education, and employment in the two years following exit from care (Fowler et al., 2011). Three distinct qualitative groups were identified: stable-engaged (i.e., stably housed and in work or school, $n = 108$, 41%), stable-disengaged (i.e., stably housed with others and not in work or school, $n = 80$, 30.2%), and instable-disengaged (i.e., unstably housed or homelessness and not in work or school, $n = 77$, 29.1%). Significant differences within groups were found. Within the stable-disengaged group, being younger at foster care exit was associated with lower initial employment and predicted growth in housing stability. Within the instable-disengaged group, leaving care younger predicted membership. Between group differences included higher initial employment in the stable-engaged group than the two other groups, and lower initial housing stability and employment throughout follow-up in the instable-disengaged group compared to the other groups. Qualitatively, the stable-disengaged group lived most commonly with relatives or birth parents rather than independently.

Studies three and four used the same administrative dataset to understand differences in longitudinal housing experiences of young adults (ages 16-26; $N=3,551$) who aged out of care and participated in a multi-state transitional independent living program at any time between 2010 and 2014 (Hasson et al., 2017; Reynolds et al., 2018). The dataset was drawn from case

management records, which tracked participant housing (i.e., secure-independent, secure-dependent, semi-secure, and insecure), education, and employment weekly on average across their time in the program. The maximum number of data collection points was 31. In the first study using this data, researchers conducted a survival analysis which showed an increase in the percentage of young women and young men living in secure-independent housing and a decrease in secure-dependent housing arrangements over time (Hasson et al., 2017). By gender, the proportion of young women who secured independent housing was significantly greater than young men. The proportion of young people in the semi-secure and insecure groups was relatively stable. Factors associated with increased odds of time to secure housing included older age, female gender, education (high school diploma or GED and above versus no high school diploma), and employment (looking for full-time work, working full- or part-time versus unemployed). In contrast, race was associated with decreased odds of time to secure housing (i.e., Black young adults time to secure housing was 12% lower than whites).

Using a variation of the dataset described above ($N=2,913$; participants aged 17-22), researchers tested the overburdening hypothesis to assess if going to school and working were associated with risk for negative housing outcomes over time (i.e., measured dichotomously: secure/provided housing versus insecure housing) (Reynolds et al., 2018). The study found that school attendance and working part- or full-time as a high school student were associated with decreased odds of insecure housing, while earlier experiences of housing insecurity increased the odds of current housing insecurity (i.e., by 15-18 times).

The final study was based on data collected from young people ($N = 172$; ages 18-21 years; 19.6 years mean age at data collection) in Southern California to document changes in housing quality measures at monthly intervals up to 24 months after aging out (Tyrell & Yates,

2017). Young people completed a retrospective monthly residential history timeline recounting between 12 and 24 months at a time. The nine-point housing quality scale measured and summed nine aspects of young people's housing, including place of residence, occupancy length, number of bedrooms, bathrooms, and people in the household, relationship to respondent, and any public or social network money used to support the living arrangement. Results indicated that young people moved from living situations in which others met all or most of their needs upon aging out of care (i.e., rating 4, moderately low quality) to situations that involved paying \$150 or less toward monthly rent and more stable arrangements (i.e., rating 5-6, moderate to moderately high quality). Those who reported living independently (i.e., alone or contributing equally to housing costs with a roommate or partner) totaled 23% of the sample at the end of the 24 months. Factors associated with improved housing quality over time included being older at foster care exit, female gender, parenting a young child, and having at minimum a high school diploma or GED.

This body of research confirms that young people transitioning from foster care to adulthood experience heterogeneity in their housing experiences over time. Significant proportions of study participants achieved secure housing in the years following exit from foster care. These findings also indicate that young people frequently shared housing with others that was considered secure or stable by young people or researchers. Independent living, as in living alone, was relatively rare. While these studies did not incorporate measures of social support, the frequency with which young people who were securely housed lived with other people may speak to the importance of the concept of linked lives in the life course perspective. Critically, a portion of participants experienced decreasing housing stability or consistently remained in unstable housing. Risk factors for this group appear to be exiting care younger, incomplete high school or equivalent education, and low employment levels, suggesting poor economic resources

and prospects or fewer connections to other people who might provide tangible support or even be a resource for co-residence.

Considering the full set of literature using multidimensional measures of housing insecurity, the racial and ethnic aspect of risk stands out as common, with Black and Latinx people at greater risk than white (Fowler et al., 2009; Hasson et al., 2017; Lee et al., 2021). Divergent findings about the risk versus protective role of parenting in adult versus young adult studies, respectively, are also notable (King, 2018; Tyrell & Yates, 2017). Perhaps parenting youth leaving foster care seek out and access more supports than other low-income parents. Varying employment measures were protective against housing insecurity in three of the five studies of young adults formerly in foster care (Fowler et al., 2011; Hasson et al., 2017; Reynolds et al., 2018). These measures may have served as proxies for their economic circumstances. Finally, the lack of direct measures of young people's financial situations is striking in the foster care outcome studies given the importance of economic resources in the adult and family studies. This gap needs exploration.

Affordability

Housing affordability, a primary cause of homelessness and eviction, along with individual- or household-level income and poverty are other common measures of housing insecurity (Aubry et al., 2021; Parolin, 2021; Shinn, 2010; Shinn & Khadduri, 2020). Affordability is measured in many ways from financial hardship markers that threaten housing security (e.g., difficulty paying rent, unpaid rent or utilities, or utility disconnection) to housing or rent cost burden (i.e., cost of mortgage or rent and utilities as a percentage of income; conventionally, costs exceeding 30% of income indicate cost burden) (Leopold et al., 2016; Watson et al., 2020). Financial hardship measures derived from two nationally representative

samples⁸ indicate upward trends in households with unpaid rent or mortgage (from 6 to 8%) and difficulty paying for housing (from 15 to 18%) between 2005 and 2011 (JCHS, 2006; 2013; Siebens, 2013). These increases in housing insecurity track from pre- to post-Great Recession.

Turning to young adults, 18% of a nationally representative sample of 18- to 32-year-olds reported housing insecurity measured by economic hardship (i.e., one affirmative response to not enough money to pay full rent or mortgage, evicted for not paying rent, not enough money to pay full utility bill, or utility disconnected due to nonpayment) (Curry, 2017). By way of comparison, 45% of the Midwest Study sample of 26-year-olds who aged out of foster care reported at least one of the same four economic hardships (Courtney et al., 2011). More recently, data gathered from a nationally representative young adult sample, ages 18-25, revealed that 15% of young adults living in rental households and 17% who rented on their own were behind on rent (Morton & Daniels, 2021). Rates of being behind on rent differed by race and ethnicity, and individuals were behind on rent at higher rates than households across nearly all racial and ethnic groups (i.e., Asian 16 vs. 20%, Black 23 vs. 25%, Hispanic (all races) 14 vs. 17%, other 19 vs. 13%, and white 8 vs. 10%, respectively).

In 2019, 82% of people earning less than \$25,000 per year experienced rent cost burdens, with 62% moderately and 20% severely burdened (i.e., rent and utilities that cost 31-50% and more than 50% of their incomes, respectively) (JCHS, 2020). Information on rent cost burdens faced by young adults is limited. Newman and colleagues (2018) determined that average rent cost burdens for young adults, ages 21 to 24, steadily increased from 2000 to 2013 (i.e., 41 to 46%) as a function of increasing unemployment and decreasing earnings among young adults,

⁸ The U.S. Department of Housing and Urban Development, American Housing Survey (AHS) and U.S. Census Bureau, Survey of Income and Program Participation (SIPP).

and rental markets absorbing homeowners who lost homes in the Great Recession, thus reducing supply for income-strapped young adults.

Two studies have tested housing insecurity conceptualized by affordability measures among young adults. The first study showed that repeated childhood emotional abuse was associated with higher odds of housing insecurity using economic hardship measures (Curry, 2017). In the second study, housing insecurity was operationalized by having no or only slight confidence in one's household or own ability to pay the next month's rent or mortgage (Morton & Daniels, 2021). Protective factors included bachelor or graduate degree (versus no high school diploma), higher household income, and having health insurance. Risk factors included Black or Asian race and Hispanic ethnicity (compared to white), living in rental housing (versus ownership household), numerous economic measures (i.e., income loss, expectations of losing employment income, being out of work, lower income, and food insecurity), greater worry and depressive symptoms, and reporting poor or fair physical health. Among young people who aged out of foster care in the Midwest Study, tests for bivariate differences in economic hardship, including not enough money to pay rent, showed significant differences between young adults at ages 19 and 26 who aged out of foster care and a nationally representative sample and between LGB young adults compared to their straight peers at age 21, all of whom aged out (Courtney et al., 2011; Dworsky, 2013).

The literature identifying the lack of housing affordability as a cause of housing insecurity allows measures of affordability to act as proxies for housing insecurity in the studies reviewed in this section (Aubry et al., 2021; Lee et al., 2021; Parolin, 2021; Shinn, 2010; Shinn & Khadduri, 2020). However, the relationship between affordability measures and housing

insecurity has not been established yet for young adults exiting foster care. This is a significant gap in the literature.

Eviction

National measures of eviction are difficult to calculate because no unified tracking system exists (Desmond & Gershenson, 2016; Hartman & Robinson, 2003). Additionally, studies show that the threat of eviction or court eviction filings also facilitate forced moves among tenants, which adds to the complexity of defining and difficulty quantifying eviction (Desmond, 2016; Hartman & Robinson, 2003). However, data compiled in the Eviction Lab National Database through 2018 estimate that the height of eviction in the U.S. was in 2006 when 3.1% of renter households were evicted at the peak of the housing bubble preceding the Great Recession (Desmond et al., 2018). By 2016, the estimate declined to 2.3%, translating to about 1 million evictions per year, though more than twice as many eviction filings were made (Desmond et al., 2018).

Individual and family factors are related to eviction. Financial hardship, education level, network disadvantage, larger family size, families with children, and physical and behavioral health conditions are associated with eviction among adults in the U.S. (Brisson & Covert, 2015; Desmond & Gershenson, 2017; Desmond, et al., 2019; Montgomery et al., 2017; Phinney et al., 2007), while results about gender are mixed (Desmond, 2012; Montgomery et al., 2017). A recent systematic review of eviction studies from 1900 to 2017, consistently linked financial hardship (e.g., inability to pay rent, late rent payments, debt payments, previous financial difficulty, and unemployment) with eviction (Tsai & Huang, 2019).

A recent study investigated the relationship between food insecurity, using the United States Department of Agriculture (USDA) measure, and eviction. A mediation model showed

that material hardship explained 89% of the indirect effect on eviction and 49% of the total effect of food insecurity (along with social support (5%) and maternal depression (2%)) on eviction (King, 2018). This study highlights the importance of including separate food and material hardship measures in eviction studies, as each account for distinct dimensions of hardship.

The findings from this review of eviction run parallel to those regarding housing insecurity more broadly; both consistently implicate individual or family economic difficulties, supporting the inclusion of individual economic measures (i.e., food insecurity, material hardship, and income) in analyses of eviction and housing insecurity. Understanding the dynamics associated with eviction is essential to devising macro and micro strategies to thwart it.

The harsh consequences of eviction make intervention development urgent (Benfer et al., 2020). Eviction is associated with long-term deleterious individual outcomes that speak to the circular nature of difficult financial and personal circumstances that precede eviction and those that follow. Financial consequences of eviction have been demonstrated at least two years later such as job loss, difficulty renting subsequent housing, and material hardship (Desmond & Kimbro, 2015; Humphries et al., 2019). Additionally, increased psychosocial difficulties such as worsened physical and mental health, including increased suicide risk and greater parenting stress, followed eviction (Desmond & Kimbro, 2015; Fowler et al., 2015). Recent quasi-experimental studies found increased financial strain leading up to an eviction filing among people who were eventually evicted and those who were not, evidence of poor credit and consumer activity for up to two years following an eviction, and sizeable and persistent risks for homelessness, residential instability, and use of emergency medical care following eviction (Collinson & Reed, 2018; Humphries et al., 2019). Insecure housing risks and consequences have the potential to disrupt and derail young people during the transition to adulthood.

A small and growing body of research considers the experience of eviction in young adulthood, specifically the health consequences. Eviction is linked with negative general and mental health, specifically depression and anxiety, in the short- and medium-term among young adults (Hatch & Yun, 2021; Hoke & Boen, 2021). Additionally, by gender and race there may be differential and timing effects of eviction on health (Hatch & Yun, 2021). Based on the literature reviewed, studies have not been conducted yet on eviction among young adults aging out of foster care. However, young people who transition from foster care may have unique risks given the limited scaffolding they may have received and an unreliable financial safety net once they leave care (Greeson et al., 2020; Ruff & Linville, 2021). More studies are needed to build this body of knowledge.

Homelessness

Homelessness has dominated research on housing insecurity. Definitions of homelessness vary, though broadly refer to people without stable or adequate housing. Federal definitions include some combination of unsheltered or literal homeless (i.e., living outside or in a place not meant for human habitation), sheltered (e.g., shelter or temporary housing program), or doubled up (e.g., shared housing with friends or family due to inability to afford another place to live) (U.S. Department of Housing and Urban Development (HUD), 2019a; McKinney-Vento Homeless Assistance Act, 2015; Runaway and Homeless Youth Act, 2017). Definitions of homelessness for youth generally expand to include living in risky or dangerous situations, such as trading sex for housing, being trafficked, physical abuse, or violence or threat due to a youth's sexual orientation (HUD, 2019b, p. 3).

National estimates of homelessness in the United States are based in the most recent point-in-time (PIT) counts completed in January 2020 and comprise people who are unsheltered

and sheltered (but not doubled up).⁹ Over 580,000 people were homeless (39% unsheltered and 61% sheltered) (Henry et al., 2021). Most (70%) were individual adults and 30% were families. Among people counted, disproportionality prevailed across all racial and ethnic groups.¹⁰ Young adults, ages 18-24, comprised 8% of all people counted as homeless. Among youth and young adults (10% under age 18 and 90% ages 18-24), 35% were Black, 48% were white, and 25% were Latinx (inclusive of all races). Beyond the PIT count, population estimates for young adult homelessness were ascertained for the first time relatively recently.

Population-level estimates of young adult housing insecurity, measured as homelessness or couch surfing¹¹ indicate that 9.7% or 3.4 million young adults, ages 18-25, experience housing insecurity each year in the U.S. (Morton et al., 2018). Over 20% of young adults in this sample reported couch surfing in the past 12 months (Curry et al., 2017). Risk analyses specific to homelessness found that young adults at greater relative risk had less than a high school diploma, were unmarried parents, came from households with less than \$24,000 annual income, identified as Black, or lesbian, gay, bisexual, or transgender (LGBT; Morton et al., 2018). Other studies using nationally representative data identified that running away, lower educational attainment, foster care placement, neglect, and past family and recent financial difficulties as a young adult were associated with increased odds of homelessness before age 25 (Brakenhoff et al., 2015; Shelton et al., 2009; van den Bree et al., 2009). In contrast, the protective factors included family

⁹ The 2021 U.S. Department of Housing and Urban Development (HUD) PIT count of unsheltered homelessness was conducted in part or full in 210 locations, but results were not nationally representative (HUD, 2022). The risk of COVID-19 infection and potential spread led some communities to cancel the count of people living unsheltered in January 2021. Hence, the 2020 PIT results are presented here.

¹⁰ Black people were 39% of people counted as homeless vs. are 12% of the U.S. population, Latinx (of all races) 20% vs. 16%, Indigenous 3% vs. 1.5%, Asian 1% vs. 6%, and white 48% vs. 74%, respectively (Henry et al., 2021).

¹¹ This study defined homelessness as, “explicit homelessness” which included “experiences of sleeping in places not meant for living or staying in shelters.” The authors defined couch surfing as “staying with others... while lacking a safe and stable alternative living arrangement.” In the population-level estimates, they counted both explicit homelessness and couch surfing as homeless (Morton et al., 2017).

relationship quality and Hispanic ethnicity. The experiences of youth who exit foster care to adulthood and homelessness are discussed next.

Compared to the national estimate of homelessness among young adults, and the most recent PIT count, young people who exit foster care to adulthood are at higher risk for homelessness. Studies that draw samples of young adults who aged out of foster care from different parts of the U.S. indicate 2 to 4 times the magnitude of homelessness compared to the population estimates (i.e., 20-40%; Bender et al., 2015; Courtney et al., 2010; Firdion, 2004; Pecora et al., 2006; Yates & Grey, 2012). Additionally, when young people exiting foster care to adulthood are compared to youth involved in child protective services but never placed in foster care and youth who were placed and later reunified with a parent, the former were at greater risk for homelessness (Berzin et al., 2011; Shook et al., 2013). These and other studies identified characteristics and risk factors associated with homelessness among youth who age out of care.

Factors consistently associated with homelessness among young adults exiting foster care include placement instability, running away from foster care placements, previous episodes of homelessness, and juvenile legal system involvement (Crawford et al., 2015; Dworsky & Courtney, 2009; Dworsky et al., 2013; Prince et al., 2019; Shah et al., 2016). Results vary regarding the relationship between race and ethnicity and homelessness. In Washington state and a national sample both using administrative data, Black youth were at greater risk for homelessness than youth of other races and ethnicities (Prince et al., 2019; Shah et al., 2016), however in numerous studies, including those using Midwest Study data, race and ethnicity were not significant (Berzin et al., 2011; Dworsky et al., 2010; Dworsky et al., 2013; Dworsky & Courtney, 2009; Fowler et al., 2011; Hasson et al., 2017). Lesbian, gay, and bisexual (LGB) youth who age out of foster care are at greater risk for homelessness than their straight peers

(Poirier et al., 2018; Shpiegel & Simmel, 2016). Social support, measured as placement with a relative or at least one positive relationship with an adult, has been identified as protective against homelessness in the first year following foster care exit, as have remaining in care beyond age 18 and being female (Berzin et al., 2011; Dworsky & Courtney, 2009; Dworsky et al., 2013; Prince et al., 2019; Shah et al., 2016; White et al., 2011).

Taken together, data indicate that young people who exit foster care to adulthood experience homelessness at higher rates than peers in the population, however, several common factors associated with homelessness exist, including running away, measures of social support, and LGB identity (Brakenhoff, et al., 2015; Dworsky & Courtney, 2009; Dworsky et al., 2013; Morton et al., 2018; Poirier et al., 2018; Shelton, et al., 2009; van den Bree et al., 2009). Running away may indicate crises due to conflict in relationships or abuse at home with leaving viewed as the only way out. Social support likely buffers young adults from homelessness in several ways, such as opportunities for co-residence, financial assistance, instrumental resources, or emotional connection. LGB young adults often experience social exclusion from family and foster care providers, and discrimination in employment and housing, which likely exacerbate loss of housing (Shpiegel & Simmel, 2016; Wilson & Kastanis, 2015). For young adults who aged out of care, remaining in care past age 18 may help reduce the risk of homelessness by giving young people more time to mature and develop the skills and credentials needed to navigate housing more successfully. The gender differences in homelessness may be a function of young men having more contact with the criminal legal system, which then severely destabilizes housing (Courtney et al., 2011). In turn, young women who parent may receive supports that buffer them from homelessness. Limited research has studied other forms of housing insecurity experienced by young adults who have aged out of foster care (Collins & Curtis, 2011).

Summary

This review identified several gaps in the research on housing insecurity during the transition to adulthood among young people exiting foster care. Previous studies of housing insecurity (excluding homelessness) among this group of young adults have not tested direct measures of economic resources or hardships. The proposed study will address this gap by focusing on the relationships between food insecurity, economic hardship, income, and housing trajectories and eviction. The consideration of social support and housing outcomes of young people exiting foster care has been limited to studies of homelessness, and social support has been consistently tied to reductions in homelessness (Dworsky & Courtney, 2009; Kelly, 2020; Prince et al., 2019; Shah et al., 2016). Further, studies using multidimensional measures of housing security report the common occurrence of young people living with others after aging out of foster care (Fowler et al., 2009; Fowler et al., 2011; Hasson et al., 2017; Reynolds et al., 2018; Tyrell & Yates, 2017). Thus, there is a gap in the non-homelessness housing literature around social supports. The proposed study is designed to address this gap by exploring to what extent participants' quality of relationship with their birth mothers and fathers may influence housing trajectories or eviction during the transition to adulthood.

Further, the current research design may expand what is known about changes in housing security over time in several ways. First, this study is among the first to use direct economic measures to study the housing outcomes of young adults formerly in foster care. Second, the time-varying quality of relationship and economic measures will account for the dynamic nature of these domains, especially during the period of rapid change in young adulthood. Third, the housing trajectories encompass change in housing between ages 21 and 26, extending the age at which housing outcomes have been measured in previous studies. Finally, to date, eviction as a

discrete housing outcome has not been studied in research with youth transitioning to adulthood from care. Thus, research questions on eviction will lay groundwork for this line of inquiry.

Research Questions and Hypotheses

Research Question I. What housing trajectories (i.e., latent classes based on five housing-related variables, including security of living situation, occupancy type, homelessness, eviction, and number of household members at each wave 3-5) do young people who age out of foster care experience over time (i.e., between waves 3-5)?

Research Question I.A. How are housing trajectories associated with individual-level factors (I.A.1-I.A.3. below) when adjusted for sex, parenting status, employment experience at wave 1, highest education level by wave 5, public housing or receipt of rental assistance waves 3-5, and a set of foster care experience variables at wave 1 (i.e., state of foster care residence, history of running away from placement, number of placement moves, last placement setting, and work experience):

I.A.1. race/ethnicity?

I.A.2. perceived quality of relationship with **a.** birth mother and **b.** birth father measures?

I.A.3. **a.** economic hardship, **b.** food insecurity, and **c.** income?

I.A.4. race/ethnicity, perceived quality of relationship with birth mother and father, economic hardship, food insecurity, and income?

Research Question I.B. What is the role of interactions between:

I.B.1. race/ethnicity and perceived quality of relationship with birth mother and father on housing trajectories?

I.B.2. race/ethnicity and economic hardship on housing trajectories?

I.B.3. race/ethnicity and perceived quality of relationship with birth mother and father

AND race/ethnicity and economic hardship on housing trajectories?

Hypotheses:

I.A.1. Latinx ethnicity and white race as compared to African American/Black race will be associated with more secure housing trajectories.

I.A.2. Higher perceived quality of relationship with birth mother and father will be associated with more secure housing trajectories.

I.A.3.a. Economic hardship will be associated with less secure housing trajectories.

I.A.3.b. Food insecurity will be associated with less secure housing trajectories.

I.A.3.c. Lower income will be associated with less secure housing trajectories.

I.B.1. The association between perceived quality of relationship with birth mother and father and housing trajectories will depend on race/ethnicity. African American/Black participants with higher perceived quality of relationship with mother and father will experience less secure housing than Latinx or white participants.

I.B.2. The association between economic hardship and housing trajectories depends on race/ethnicity. African American/Black participants with economic hardship will experience less secure housing than Latinx or white participants.

Research Question II.A. What proportion of young people who age out of foster care experience eviction between ages 19 and 26 years?

Research Question II.B. How many times do young people who age out of foster care experience eviction between ages 19 and 26 years of age?

Research Question III. How is eviction associated with individual-level factors (III.A.1-III.A.3. below) when adjusted for sex, parenting status, employment experience at wave 1, highest education level by wave 5, public housing or receipt of rental assistance waves 3-5, homelessness between waves 3-5, and a set of foster care experience variables at wave 1 (i.e.,

state of residence while in foster care, history of running away from placement, number of placement moves, last placement setting, and work experience):

III.A.1. race/ethnicity?

III.A.2. perceived quality of relationship with birth mother and father?

III.A.3. a. economic hardship, **b.** food insecurity, and **c.** income?

III.A.4. race/ethnicity, income, economic hardship, food insecurity, and perceived quality of relationship with birth mother and father?

Hypotheses:

III.A.1. African American/Black race will be associated with greater likelihood of eviction as compared to Latinx ethnicity and white race.

III.A.2. Higher perceived quality of relationship with birth mother and father will be associated with lower likelihood of eviction.

III.A.3.a. Economic hardship will be associated with greater likelihood of eviction.

III.A.3.b. Food insecurity will be associated with greater likelihood of eviction.

III.A.3.c. Lower income will be associated with greater likelihood of eviction.

Chapter Four: Methods

Overview

This chapter describes the study methods. First, the survey design, topics, sampling frame, and data collection procedures are introduced. Next, the data used in the analyses are described, including the procedures used to create measures. Finally, the statistical analyses are identified and explained.

Midwest Evaluation of Adult Functioning of Former Foster Youth Study Procedures

This study used secondary data from the Midwest Evaluation of Adult Functioning of Former Foster Youth (Midwest Study). The Midwest Study was a longitudinal, cohort design study that collected data in 5 waves between 2002 and 2011 at approximately two-year intervals. Participants were recruited and first surveyed at 17 years old, and the final survey was administered when participants were 25 to 26 years old (Courtney et al., 2011). The study aimed to evaluate youth outcomes as they transitioned from foster care into adulthood following the Chafee Foster Care Independence Act (CFCIA) of 1999. CFCIA doubled federal funding and increased flexibility for self-sufficiency training to prepare youth in foster care for adulthood (CFCIA, 1999). The Midwest Study survey gathered data about the subsequent domains: demographic characteristics, family of origin, history of maltreatment, foster care experiences, family contact, social supports, independent living services, current living situations, mental and physical health, education, employment and earnings, economic hardship, government benefit and entitlement receipt, sexual behaviors, marriage, children and parenting, delinquent behaviors and criminal system contact, victimization, civic participation, religion, feelings about the transition to adulthood, life satisfaction, future orientation, and mentoring.

The Midwest Study involved partnerships among Chapin Hall, three state departments responsible for administering public child welfare services, including the Illinois Department of Children and Family Services, Iowa Department of Human Services, Wisconsin Department of Health and Family Services, and University of Wisconsin Survey Center. The study responsibilities were divided as follows. The state departments provided initial funding and lists of youth meeting the study eligibility criteria (see below for details). Chapin Hall designed and managed the study, analyzed data, and produced reports. And the University of Wisconsin Survey Center administered each wave of surveys (Courtney et al., 2004). Next, the sampling strategy, consent, timing, data collection methods, and response rates are described.

The Midwest Study sampling frame included youth between ages 17 and 17.5 years old during 2002 who resided in foster care in Illinois, Iowa, or Wisconsin. Youth were included if, at recruitment, they were supervised by the state public child welfare agency in any of the three states, met the age criteria, and entered foster care before their 16th birthday for reasons other than delinquency (Courtney et al., 2004). Exclusion criteria comprised youth who were absent from care without permission or missing from placement, youth with developmental disabilities or severe mental health conditions, youth placed in psychiatric hospitals, incarcerated, or unable to participate in English during recruitment. All youth meeting inclusion criteria in Iowa and Wisconsin were invited to participate in the study. In Illinois, due to the large population of youth in care and the study budget, two-thirds of the youth who met study criteria were randomly sampled and invited to participate.

The University of Wisconsin Survey Center collected data during waves 1 and 2 primarily in person with limited data collected by telephone. During waves 3, 4, and 5, the Survey Center conducted interviews in-person and via telephone. To minimize social desirability

bias, during all five waves Audio Computer Aided Self Interviewing (ACASI) was employed for questions about sexual orientation, sexual behaviors, pregnancy, parenting, illegal behaviors and arrests, convictions, and incarceration, and victimization (Courtney et al., 2007; Courtney et al., 2010; Courtney et al., 2011).

The five data waves were collected between May 2002 and May 2011. Figure 2 provides information by wave, including the data collection dates, cohort members' age, the last wave during which respondents were interviewed, sample sizes, and response rates. Wave 1 data collection transpired between May 2002 and March 2003, when youth were 17 or 18. The response rate was 96%, with 732 of 762 eligible youth participating. The 732 respondents became the baseline sample. The response rates for subsequent waves ranged from 81 to 82% of the baseline sample, with a final wave 5 sample size of 596 respondents.

Figure 2.

Midwest Study Data Collection Dates, Participation by Wave, and Response Rates

Wave	Data Collection Dates	Age (in years)	Last Interviewed in Wave				N	Response Rate
			1	2	3	4		
1	05/2002 - 03/2003	17-18	--	--	--	--	732 ^a	--
2	03/2004 - 12/2004	19	603	--	--	--	603	82%
3	03/2006 - 01/2007	21	78	513	--	--	591	81%
4	07/2008 - 04/2009	23-24	26	44	532	--	602	82%
5	10/2010 - 05/2011	25-26	6	20	29	541	596	81%

Note. Adapted from Courtney et al., 2011, p. 4.

^a A total of 762 youth were eligible to participate in the Midwest Study. Among those eligible, 96% or 732 youth were enrolled in the study and interviewed in the first wave. No information is available about the 30 eligible youth who did not enroll (Courtney et al., 2011, p. 3).

Importantly, state laws varied regarding the age that youth were legally required to leave foster care, or “aged out” of care. In Iowa and Wisconsin, youth could remain in foster care until

age 18 years, so at wave two youth had been discharged from the child welfare system for about one year; while in Illinois, youth could remain in foster care until age 21 years, so many youth continued to reside in foster care at wave two. By wave three data collection, when youth were age 21, all participants had exited the child welfare system and had been discharged between one month and three years earlier.

Sample

The sampling frame for this dissertation included Midwest Study respondents from wave 1. The sample for research question I included respondents from wave 1 who had sufficient data in waves 3, 4, and/or 5 to be included in the latent class analysis that resulted in the housing trajectory outcome variable (i.e., respondents with data for all five variables in at least two of three waves or with data for three or four outcome variables in all three waves). The sample for research questions I.A. and I.B. included respondents in the two largest housing trajectory latent classes with complete data for the predictor variables. For research questions II.A. and II.B., the sample comprised all respondents who answered the eviction question at any wave 2 through 5. The sample for research question III, modeling eviction after aging out of foster care, excluded respondents who did *not* answer the eviction question in wave 5 and respondents without complete data for the predictor variables in the model.

The flow chart of cases retained and lost for each research question (Figure 3) shows survey respondents and nonrespondents in the upper portion of the figure and item nonresponse in the lower portions. Initially, 762 young adults were invited to participate in the Midwest Study, 30 did not respond. The 732 who responded formed the wave 1 baseline sample. The flow chart then divides into two sections. It focuses on item nonresponse with research question I, I.A., and I.B. about housing trajectories on the left and research questions II and III about

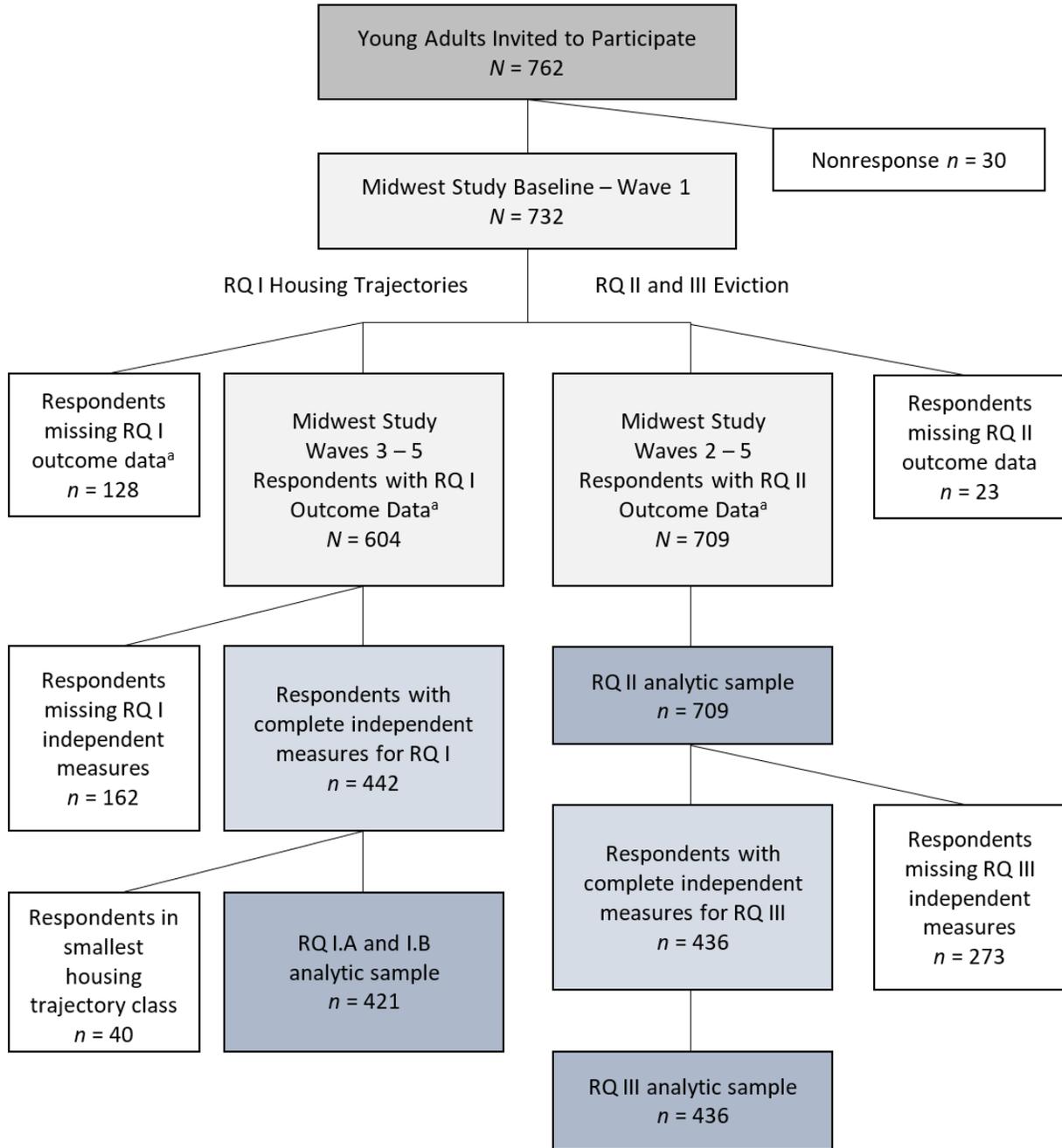
eviction on the right. For housing trajectories, 604 respondents from the baseline sample participated in two or more waves 3, 4, and/or 5. They provided data sufficient for inclusion in the latent class analysis to create the housing trajectory outcome variable (see above paragraph for inclusion criteria). In comparison, 128 respondents were excluded due to insufficient or missing data for the outcome.

The 604 respondents with housing trajectory outcome data comprised the sample to answer research question I about which housing trajectories young people experienced after aging out of foster care. For research questions I.A. and I.B., 162 respondents were missing data for one or more predictor variables and excluded from analyses, as were the 40 respondents in the smallest housing trajectory class. The final analytic sample for research question I.A. and I.B. was 421 respondents.

For eviction, among the 732 baseline respondents, 709 answered the eviction question at least once in waves 2 through 5, while 23 respondents never answered an eviction question and were excluded from the analysis. The analytic sample for research questions II.A. and II.B. comprised all 709 respondents. For research question III, 273 respondents were lost due to item nonresponse for one or more predictor variables. The analytic sample for research question III was 436.

Figure 3.

Flow Chart of Cases Retained and Lost to Determine Analytic Sample Sizes



Dependent Variables: Housing – Young Adulthood Life Domain 1

Housing is the first young adulthood life domain of concern in this study. The research questions considered two housing outcomes: housing trajectory classes and eviction.

Housing Trajectory Classes

The housing trajectory measure was created using latent class analysis (LCA). LCA is a statistical technique designed to identify heterogeneous sub-groups of a sample using select indicator variables (Hagenaars & McCutcheon, 2002). Statistical theory suggests that respondents' answers to combinations of survey questions (e.g., categorical or categorical and continuous variables for LCA) are patterned and indicative of qualitatively different class membership for sample sub-groups (Muthén & Muthén, 2000). The indicator variables used in the housing trajectories LCA included data from five housing-related questions in waves 3, 4, and 5 of The Midwest Study. The questions asked with whom respondents lived, number of household members, occupancy type, and experiences of homelessness and eviction (Table 1).

The first question, “Where do you live now or where do you stay most often?” initially contained 14 response options (i.e., your place (apartment, house, trailer, etc.), own room in a motel, hotel or SRO, with birth parent(s), with other relative(s), with former foster parent(s), with spouse/partner, with friends, group quarters (dorm, military, etc.), hospital, treatment or rehabilitation facility, jail, prison or another correctional facility, homeless, other, don't know, or refused¹²). These were condensed into categories: insecure, semi-secure, secure-dependent, and secure-independent, drawn from previous work by Hasson and colleagues (2017)¹³. The

¹² Don't know and refused were recoded as missing for all variables.

¹³ The 12 Midwest Study categories for current living situation were grouped into the four categories defined by Hasson, Reynolds, and Crea (2017) as follows. Secure-independent included living in own place, with spouse/partner, or friends. Secure-dependent included living with birth parent(s), other relative(s), or former foster parent(s). Semi-secure comprised residence in group quarters (dorm, military, etc.), hospital, treatment or rehabilitation facility, and other. Insecure encompassed residing in own room in motel, hotel or SRO, being detained

categories were coded from 0/insecure to 3/secure-independent. In each wave most respondents lived in secure-independent housing followed by secure-dependent. Missing data ranged from a high of 9% of cases in wave 3 to a low of 5% of cases in wave 4.

The number of household members was determined via a crosstabulation of two questions, “Do you live alone or with others?” and “How many people live with you? If someone usually lives with you but is away temporarily, include him or her.” The resulting variable ranged from 0 to 5 or more, with 0 indicating the respondent lived alone. The largest percentage of respondents lived with one other household member in wave 3 and two other members in waves 4 and 5. Missing data ranged from 10% of cases in wave 3 to 5% in wave 4.

Occupancy type was formed by asking, “Do you, or your spouse (if applicable), own this house/apartment, do you rent, or something else?” The five categories (i.e., respondent owns, respondent and spouse/partner jointly own, spouse/partner owns separately from respondent, rents, or other-neither owns nor rents) were collapsed into three categories: 0/other, 1/rents, 2/owns. In each wave, half or more respondents rented. In wave 3, 9% of respondents were missing occupancy data, while 5% were missing data in wave 4.

Homelessness was established by respondents’ answers to one of two questions. The initial question was, “Have you ever been homeless for at least one night since we last talked to you on [date]? That is, did you sleep in a homeless shelter or in a place where people weren’t meant to sleep because you didn’t have a place to stay?” The response choices included yes or no. The second question asked, “How many different times have you found yourself homeless for one or more nights since we last talked to you?” If respondents did not answer the initial

in jail, prison or another correctional facility, or homeless. Don’t know and refused were coded as missing. Hasson et al. (2017) created their grouping categories drawing on earlier studies by Fletcher, Kisler, and Reback (2014) and Berzin, Rhodes, and Curtis (2011).

question about homelessness and answered the second question, they were considered to have experienced homelessness. Homelessness was coded 0/no and 1/yes. Between 12% and 14% of respondents reported experiencing at least one episode of homelessness in waves 3, 4, and 5. The percentage of missing data for homelessness across waves ranged from a high of 22% in wave 3 to 5% in wave 4.

Finally, respondents were asked, “Was there a time during the past 12 months when you were evicted from your apartment or lost your home because you did not have enough money to pay your rent or mortgage?” Answers were coded 0/no and 1/yes. When taken together in the LCA, the resulting housing trajectory classes incorporated multidimensional measures of housing security (Cox et al., 2017; Routhier, 2019). Eviction was experienced by 7% and 10% of respondents from waves 3 to 5. Between 8% and 14% of respondents’ eviction data was missing.

Table 1.*Descriptive Statistics for Variables in Housing Trajectory Latent Class Analysis (N = 604)*

Variables included in LCA	Wave 3		Wave 4		Wave 5	
	N	%	N	%	N	%
Living situation type						
Secure-independent	321	53.15	366	60.6	391	64.74
Secure-dependent	159	26.32	143	23.68	124	20.53
Semi-secure	27	4.47	21	3.48	19	3.15
Insecure	40	6.62	45	7.45	36	5.96
Missing	57	9.44	29	4.80	34	5.63
Number of other household members						
0 (respondent lived alone)	66	10.93	72	11.92	70	11.59
1	123	20.36	109	18.05	96	15.89
2	101	16.72	131	21.69	127	21.03
3	94	15.56	108	17.88	101	16.72
4	57	9.44	53	8.77	68	11.26
5 or more	101	16.72	99	16.39	100	16.56
Missing	62	10.26	32	5.29	42	6.95
Occupancy type						
Other (neither rented nor owned)	226	37.42	172	28.48	136	22.52
Rented	304	50.33	368	60.93	382	63.25
Owned ^a	17	2.81	35	5.79	51	8.44
Missing	57	9.44	29	4.80	35	5.79
Homeless at least once ^b						
No	399	66.06	488	80.79	485	80.30
Yes	74	12.25	86	14.24	77	12.75
Missing	131	21.69	30	4.97	42	6.95
Evicted (in past 12 months)						
No	474	78.48	510	84.44	497	82.28
Yes	43	7.12	48	7.95	59	9.77
Missing	87	14.40	46	7.62	48	7.95

^a Respondent owned housing individually, with spouse/partner, or spouse/partner owned.

^b In wave 3, respondents were asked about experiencing homelessness at least once since leaving foster care, while in waves 4 and 5 the timeframe asked since their last interview.

Housing Trajectory Latent Class Analysis

MPlus 8 statistical analysis software was used to conduct the LCA because the program uses full information maximum likelihood (FIML) to analyze latent classes (Muthén & Muthén, 1998-2017). FIML uses the available data for each case to determine the highest likely probability for each variable in each class. The LCA included the five housing variables from waves 3, 4, and 5 above described and began by modeling one class. Per standard LCA procedures, the number of classes was increased by one until the model fit statistics, like entropy, Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Sample-size Adjusted BIC (SABIC), indicated the best fit. Further, classes must make practical sense (Weller et al., 2020). See Table 2 for the number of classes, fit statistics, and class sizes.

The three-class model was chosen by statistical measures (AIC of 13595.30 and BIC of 13934.38) and class interpretability. While class models with lower AIC, BIC, and SABIC are preferred, additional factors led to choosing the three-class model. Entropy is a measure of the accuracy of model definition on a scale from 0 to 1 where entropy above .8 is acceptable (Muthén & Muthén, 2000; Weller et al., 2020). Entropy for the three-class solution was 0.84. Average latent class probabilities indicate the degree of differentiation between membership in each class compared to the other two classes, and probabilities above .9 are desirable (Wang et al., 2017; Weller et al., 2020). The probability of distinct membership in the three classes was .93, .92, and .94, respectively (Table 3). Additionally, qualitative interpretability supported the three-class model (Weller et al., 2020). The three-class housing trajectory solution is described in detail in the results chapter in answer to research question I.

Table 2.*Housing Trajectory Latent Class Analysis Fit Statistics and Class Frequencies*

Class Solution	Entropy	<u>Fit Statistics</u>			<u>Class Frequencies</u>									
		AIC	BIC	SABIC	<u>Class 1</u>		<u>Class 2</u>		<u>Class 3</u>		<u>Class 4</u>		<u>Class 5</u>	
					<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
2 Classes	0.81	13816.35	14045.33	13880.24	376	62.25	228	37.75						
3 Classes	0.84	13595.30	13934.38	13689.92	310	51.33	254	42.05	40	6.62				
4 Classes	0.82	13415.83	13865.00	13541.17	260	43.05	197	32.62	85	14.07	62	10.26		
5 Classes	0.85	13291.23	13850.48	13447.29	258	42.72	85	14.07	96	15.89	41	6.79	124	20.53

54 **Table 3.***Housing Trajectory 3-class Model Average Latent Class Probabilities for Most Likely Class Membership*

Average Latent Class Probabilities for Most Likely Class Membership	<u>Latent Classes</u>		
	1	2	3
1	0.93	0.07	0.00
2	0.07	0.92	0.01
3	0.00	0.06	0.94

Eviction

The eviction variable reflected participants' responses to the question, "Was there a time during the past 12 months when you were evicted from your apartment or lost your home because you did not have enough money to pay your rent or mortgage?" This question was asked in waves 2 through 5. Responses were coded dichotomously (0/no, 1/yes) by wave. A new dichotomous ever-evicted variable was created to identify participants who ever reported an eviction during the study (1/yes) versus those who did not (0/no). This dichotomous variable was used in the descriptive analysis for research question II.A. For research question II.B., an eviction count variable covering waves 2 through 5 was created to reflect the number of waves during which respondents reported being evicted (range 0-4). Finally, the dichotomous ever-evicted variable was used as the outcome for the analytic model for research question III.

Predictor Variables

The key predictor variables for this dissertation's research questions included race/ethnicity as a social context measure, linked lives measures of perceived quality of relationship with birth mother and birth father, and social role transition economic measures from waves 3, 4, and 5, including economic hardship, food insecurity, and income. These variables are described next.

Race and Ethnicity

Race and ethnicity data for wave 1 were used for the study because the variable contained nearly complete data for the baseline sample (missing, $n = 3$). Two questions were asked, one about ethnicity and the second about race: "Do you consider yourself to be Hispanic?" followed by "What is your race? Would you say you are White, Black, Asian or Pacific Islander, American Indian or Alaskan Native or mixed race?" Participants were allowed to choose only

one socially constructed racial category in the second question. The race/ethnicity variable constructed for analyses was a cross tabulation of the two questions. Participants who indicated Hispanic ethnicity were coded as Latinx. Black and white respondents were retained separately as non-Latinx. Due to small sample sizes, respondents who identified as Asian or Pacific Islander, American Indian or Alaskan Native, or multi-racial were grouped as “other, non-Latinx,” recognizing that information about these distinct groups was lost.

***Perceived Quality of Relationship with Birth Parent(s) or Linked Lives – Young Adulthood
Life Domain 2***

Two variables measuring respondents’ perceived quality of relationship with their birth parent(s) were constructed: one for mothers and the second for fathers. Each measure was constructed using latent class analysis (LCA) drawing on respondents’ answers to one contact frequency and one perceived relationship closeness variable for each parent at each survey wave (i.e., five measures of contact frequency and five measures of perceived relationship closeness each for mothers and fathers; Tables 4 and 5, respectively). To be included in the LCAs, respondents had to have data for at least three survey waves, including waves 1 or 2 and 5. Descriptions of each indicator variable used in the LCAs, and descriptive statistics follow.

Perceived Quality of Relationship with Birth Mother: Variables Used in LCA.

The ten variables representing the two domains, contact frequency and perceived closeness from each survey wave, were used to create the latent classes for perceived quality of relationship with birth mother (Table 4). Regarding frequency of contact, in wave 1, participants were asked first if they had visited their biological mother in the past year, then “How many visits did you have with your mother last year?” The number of visits was a count from 1 to 301. A new count variable was created to account for participants who reported no visits in the past

year, a deceased mother, or being adopted (range: 0 to 301). In wave 2, the question about visits the participant had with their mother mirrored wave 1 but was preceded by the clarifier “with whom participants did not live” (range: 1 to 301). Per coding procedures for wave 1, a new number of visits with biological mother variable was created to include participants who had zero visits. In addition, participants who reported living with their birth mother were coded as having 365 visits. Thus, the wave 2 variable for number of visits ranged from 0 to 365.

In waves 3 through 5, the measure of contact frequency with biological mother changed to account for all participants having aged out of foster care by wave 3. Participants were asked, “How often are you in contact with your birth mother these days- either in person or by phone/email?” The 9 ordinal categories included never, less than once a year, once or twice a year, several times a year, once or twice a month, several times a month, once or twice a week, several times a week, and every day (coded 0 to 8, reflecting increasing contact).

Ultimately, each wave’s contact frequency was recoded (waves 1 and 2) or condensed (waves 3-5) into the same scale. This ordinal scale comprised five categories: never, several times per year or less, one to three times monthly, one to three times weekly, and nearly every day (coded 0-4). The contact frequency variable from each wave was used in the perceived quality of relationship with birth mothers LCA (Table 4). In wave 1, nearly one-half of respondents never had contact with their mothers. This decreased to just over one-fifth in wave 3, then steadily increased in waves 4 and 5 to 29%. In contrast, 4% of respondents had nearly daily contact with their mothers and this group increased to include one-quarter of respondents in waves 3, 4, and 5. Missing data ranged from under 1% in waves 1 and 5 to 14% in wave 2.

Five variables focused on perceived relationship closeness. The perceived closeness to biological mother item was asked at each wave, “In general, would you say that you feel very

close, somewhat close, not very close, or not at all close to your biological mother these days?”

The 4-point scale was coded from 0/not at all close to 3/very close (Table 4). The five closeness variables were included in the LCA for perceived quality of relationship with birth mother. The largest percentage of respondents in each wave, between one-quarter and one-third, perceived feeling very close to their mothers. Missing data was largest in wave 3 (25%) and smallest in wave 5 (15%).

Table 4.*Descriptive Statistics for Variables in Latent Class Analysis for Perceived Quality of Relationship with Birth Mother (N = 570)*

Variables included in LCA	<u>Wave 1</u>		<u>Wave 2</u>		<u>Wave 3</u>		<u>Wave 4</u>		<u>Wave 5</u>	
	N	%	N	%	N	%	N	%	N	%
Contact frequency with birth mother										
Never	255	44.74	174	30.53	121	21.23	139	24.39	164	28.77
Several times per year or less	140	24.56	110	19.30	72	12.63	60	10.53	63	11.05
One to three times monthly	87	15.26	82	14.39	80	14.04	81	14.21	67	11.75
One to three times weekly	60	10.53	50	8.77	91	15.96	110	19.30	131	22.98
Nearly every day	24	4.21	73	12.81	142	24.91	137	24.04	144	25.26
Missing	4	0.70	81	14.21	64	11.23	43	7.54	1	0.18
Perceived closeness with birth mother										
Not at all close	93	16.32	90	15.79	88	15.44	104	18.25	127	22.28
Not very close	64	11.23	57	10.00	55	9.65	54	9.47	54	9.47
Somewhat close	119	20.88	126	22.11	135	23.68	141	24.74	146	25.61
Very close	159	27.89	180	31.58	151	26.49	154	27.02	159	27.89
Missing	135	23.68	117	20.53	141	24.74	117	20.53	84	14.74

Perceived Quality of Relationship with Birth Father: Variables Used in LCA.

The latent classes for perceived quality of relationship (PQoR) with birth fathers were constructed like those for birth mothers but using the father-focused variables. Thus, the latent class analysis used ten variables about birth fathers in two domains, contact frequency and perceived closeness from each wave (Table 5). The final contact frequency variables used in the LCA for PQoR with birth fathers included the categories never, several times per year or less, one to three times monthly, one to three times weekly, and nearly every day (coded 0-4; Table 5). About half to nearly three-quarters of respondents reported never having contact with their birth fathers in waves 1 through 5, while between 2% and 9% had contact nearly daily. In wave 5 data was complete, however 14% of respondents were missing contact data in wave 2.

The perceived closeness to birth father survey question, “In general, would you say that you feel very close, somewhat close, not very close, or not at all close to your biological father these days?” was asked in all five waves. The five perceived closeness variables with the four-point scale (coded 0/not at all close to 3/very close; Table 5) were used in the LCA for PQoR with fathers. The largest percentage of respondents perceived not close relationships with their fathers, ranging from two-fifths in waves 1 and 5 to one-quarter in wave 3. Missing data was more common for this variable, ranging from 40% in wave 3 to a low of 19% in wave 5.

Table 5.*Descriptive Statistics for Variables in Latent Class Analysis for Perceived Quality of Relationship with Birth Father (N = 570)*

Variables included in LCA	<u>Wave 1</u>		<u>Wave 2</u>		<u>Wave 3</u>		<u>Wave 4</u>		<u>Wave 5</u>	
	N	%	N	%	N	%	N	%	N	%
Contact frequency with birth father										
Never	404	70.88	304	53.33	259	45.44	265	46.49	300	52.63
Several times per year or less	89	15.61	83	14.56	77	13.51	74	12.98	77	13.51
One to three times monthly	43	7.54	41	7.19	60	10.53	82	14.39	79	13.86
One to three times weekly	24	4.21	34	5.96	55	9.65	56	9.82	70	12.28
Nearly every day	9	1.58	26	4.56	50	8.77	45	7.89	44	7.72
Missing	1	0.18	82	14.39	69	12.11	48	8.42	0	0.00
Perceived closeness with birth father										
Not at all close	230	40.35	218	38.25	145	25.44	201	35.26	236	41.40
Not very close	53	9.30	45	7.89	41	7.19	53	9.30	39	6.84
Somewhat close	79	13.86	88	15.44	97	17.02	94	16.49	100	17.54
Very close	85	14.91	83	14.56	64	11.23	76	13.33	84	14.74
Missing	123	21.58	136	23.86	223	39.12	146	25.61	111	19.47

Perceived Quality of Relationship Latent Class Analyses.

The classes for perceived quality of relationship (PQoR) with birth mothers and PQoR with birth fathers for each participant were determined using latent class analysis (LCA). Like the housing trajectory classes, MPlus 8 statistical analysis software was used to conduct the LCAs because the program uses full information maximum likelihood, thus retaining cases with partial missing data (FIML; Muthén & Muthén, 1998-2017). Each LCA included ten relationship variables (i.e., five perceived closeness and five contact frequency variables) from waves 1 through 5. The same procedures used in the housing trajectory LCA were employed to conduct the PQoR LCAs and assess the number of classes that best fit the data. Tables 6 and 7 show the number of classes, fit statistics, and class sizes for PQoR with birth mother and father, respectively.

The three-class model for both PQoR with mothers and PQoR with fathers had a combination of the best fit statistics (e.g., for mothers, entropy: 0.88, AIC: 12035.159, and BIC: 12500.14; for fathers, entropy: 0.91, AIC: 9426.846, and BIC: 9891.83) and highest degree of differentiation in class membership between the three classes. The probability of distinct membership for PQoR with mothers in classes 1, 2, and 3 was .95, .95, and .94, respectively (Table 8), while the probability of distinct class membership for fathers was .97, .94, and .95 in class 1, 2, and 3, respectively (Table 9).

Table 6.*Perceived Quality of Relationship with Birth Mother Latent Class Analysis Fit Statistics and Class Frequencies*

Class Solution	Entropy	Fit statistics			Class frequencies									
		AIC	BIC	SABIC	Class 1		Class 2		Class 3		Class 4		Class 5	
					N	%	N	%	N	%	N	%	N	%
2 Classes	0.92	12449.79	12758.33	12532.93	342	60.00	228	40.00						
3 Classes	0.88	12035.16	12500.14	12160.47	201	35.26	158	27.72	211	37.02				
4 Classes	0.87	11891.33	12512.75	12058.79	175	30.70	100	17.54	133	23.33	162	28.42		
5 Classes	0.89	11829.89	12607.76	12039.51	161	28.24	103	18.07	42	7.37	92	16.14	172	30.00

Table 7.*Perceived Quality of Relationship with Birth Father Latent Class Analysis Fit Statistics and Class Frequencies*

Class Solution	Entropy	Fit statistics			Class frequencies									
		AIC	BIC	SABIC	Class 1		Class 2		Class 3		Class 4		Class 5	
					N	%	N	%	N	%	N	%	N	%
2 Classes	0.93	9810.72	10119.26	9893.87	345	60.53	225	39.47						
3 Classes	0.91	9426.85	9891.83	9552.15	281	49.30	109	19.12	180	31.58				
4 Classes	0.89	9319.15	9940.57	9486.61	117	20.53	245	42.98	63	11.05	145	25.44		
5 Classes	0.91	9240.90	10018.77	9450.53	93	16.32	67	11.75	250	43.86	58	10.18	102	17.90

Table 8.

Perceived Quality of Relationship with Birth Mother 3-class Model Average Latent Class Probabilities for Most Likely Class Membership

Average Latent Class Probabilities for Most Likely Class Membership	<u>Latent classes</u>		
	1	2	3
1	0.95	0.00	0.05
2	0.00	0.95	0.05
3	0.05	0.01	0.94

Table 9.

Perceived Quality of Relationship with Birth Father 3-class Model Average Latent Class Probabilities for Most Likely Class Membership

Average Latent Class Probabilities for Most Likely Class Membership	<u>Latent classes</u>		
	1	2	3
1	0.97	0.00	0.03
2	0.00	0.94	0.06
3	0.03	0.02	0.95

Perceived Quality of Relationship Class Descriptions

The descriptive statistics for each class in the three-class PQoR LCA solutions were analyzed qualitatively (Appendices A and B). The PQoR with birth mother classes were named very poor, fair, and very good. The PQoR with birth father classes were labeled extremely poor, poor, and good. The characteristics of the classes for each PQoR variable are described next.

PQoR with Birth Mother Class 1: Very Poor.

The first PQoR with birth mother class ($n = 158$), was characterized by respondents primarily having no contact with their mothers across the waves (81%, 76%, 75%, 78%, and 79%, respectively) with many fewer having contact several times per year or less (16%, 17%, 17%, 15% and 15%). Respondents in class 1 who felt not at all close to their mothers steadily

increased over time from 60% in wave 1 to 94% in wave 5, while respondents feeling not very or somewhat close decreased. This group was qualitatively named as having very poor PQoR with birth mother (coded as 0).

PQoR with Birth Mother Class 2: Fair.

The second PQoR with birth mother class ($n = 211$) was characterized by increasing contact frequency and decreasing perceptions of relationship closeness, particularly between waves 2 and 3. Most respondents in this class reported no contact or contact several times per year or less with their mothers in waves 1 and 2 (71% and 57%). However, by later waves, most class members, between 53% and 55%, reported increased contact, either one to three times per month or week. Over half of class 2 respondents perceived their relationships with their mothers to be somewhat or very close in waves 1 and 2 (59% and 65%). However, in later waves, class members indicated perceptions of decreasing closeness to their mothers with two-thirds to nearly three-quarters reporting feeling somewhat or not very close. As a result, this class was labeled with fair PQoR with birth mother (coded as 1).

PQoR with Birth Mother Class 3: Very Good.

The final PQoR with birth mother class ($n = 201$) was characterized by increasing contact and class members perceiving somewhat or very close relationships with their mothers. Contact progressively increased from fairly evenly distributed frequencies across all contact categories, except nearly every day, which was lowest in wave 1 (9%) to over 80% of class members in contact with their mothers one to three times per week or more in waves 3, 4, and 5. Among this final class, perceptions of closeness with their birth mother was high across all waves with 88% of members reporting somewhat or very close relationships in wave 1 to 96% or more reporting

the same in waves 2 through 5. Members in the third class were qualitatively described as having very good PQoR with birth mother (coded as 2).

PQoR with Birth Father Class 1: Extremely Poor.

The first PQoR with birth father class ($n = 281$) was characterized by respondents (i.e., between 90% and 96%) having no contact with their fathers across the waves. In addition, most respondents (i.e., between 83% and 94%) in this class felt not at all close to their fathers over time. Thus, respondents in this class were qualitatively identified as having extremely poor PQoR with birth father (coded as 0).

PQoR with Birth Father Class 2: Poor.

Latent class 2 for the PQoR with birth father was characterized by respondents' low but increasing contact frequency and perceptions of increasing relationship closeness ($n = 211$). In wave 1, most respondents (61%) had no contact with their fathers. In contrast, by wave 5 the frequency of contact reported by respondents was more evenly distributed (i.e., 23% never, 31% several times per year or less, 23% one to three times monthly, and 19% one to three times weekly), except for contact nearly every day (3%). About 40% of respondents in class 2 reported feeling not at all close to their fathers in waves 1 and 2. Yet in waves 3, 4, and 5 the largest percentage of respondents (36% in each wave) felt somewhat close to their fathers. Respondents in class 2 were identified as having fair PQoR with their birth fathers (coded as 1).

PQoR with Birth Father Class 3: Good.

The last PQoR with father class was characterized by contact frequency that increased from wave 1 to 3 then stabilized and perceived closeness with birth fathers that was relatively stable at the low end of the scale and fluctuated somewhat at the high end over time ($n = 201$). Over half of respondents (56%) reported contact never or several times per year or less in wave

1. By wave 3, contact for most respondents (69%) had increased to one to three times per week or nearly daily, then stabilized at or near this level in waves 4 and 5. Among class 3 PQoR with birth father, most respondents perceived their closeness with their fathers as very or somewhat close across all five study waves, accounting for between 91% and 96% of respondents across waves. Based on these response patterns, class 3 was labeled as respondents having good PQoR with their fathers (coded as 2).

Economic Factors – Social Role Transitions – Young Adulthood Life Domain 3

Three constructs, economic hardship, food insecurity, and income, comprised the economic measures used in analyses for research questions I.A., I.B., and III. These time-varying measures captured respondents' social role transitions related to economic circumstances and financial resources between ages 21, 23/24, and 25/26 (waves 3 through 5).

Economic hardship.

Economic hardship was measured using five questions asked in waves 3 through 5. Each question asked participants to consider the past 12 months as the reference period. The first question inquired, "Was there ever a time when you did not buy clothing or shoes that you needed because you did not have enough money?" Other questions covered topics including times when participants could not pay their rent or mortgage, a utility bill, and telephone service or gas or electricity shut off due to non-payment. Responses for each question were coded 0/no and 1/yes. (Descriptive statistics for the five economic hardship variables are in Appendix C.) A count variable was created for each wave (range 0 to 4) with 0 indicating no economic hardship and 4 reflecting the most severe economic hardship. Economic hardship count variables from waves 3, 4, and 5 were included in the models for research questions I.A., I.B., and III.

Food Insecurity.

The United States Department of Agriculture (USDA) Food Insecurity Scale was used in the Midwest Study waves 3 through 5 (Bickel et al., 2000). The USDA scale includes question numbers (i.e., Q2, Q3, Q4, Q8, Q8a, Q9, Q10, Q11, Q12, Q12a¹⁴), descriptions of three food security constructs by increasing severity (i.e., anxiety or perception of inadequate food budget or supply in household, perceptions of inadequate quality of food eaten in household, and reported instances or consequences of reduced food intake), ten related questions, and scoring instructions (Appendix D). The reference period was the past 12 months. Sample questions from least to most severe and categorical responses included, Q2, “You worried whether your food would run out before you got money to buy more.” with categories including 3/never true, 2/sometimes true, and 1/often true. This scale was reverse coded to reflect worsening conditions as numbers increased. And the question, Q12, at the severe end of the food insecurity spectrum asked, “Did you (or any of the other adults in your household) not eat for a whole day because there wasn't enough money for food?” coded as 0/no or 1/yes. (Descriptive statistics for the eight food insecurity variables are in Appendix E.)

The established scoring procedure for the USDA Food Insecurity Measure for adults was used, including dealing with missing data (see Bickel et al., 2000), with two modifications. Items Q8a and Q12a are questions about the frequency of the preceding food insecurity item (Q8 and Q12, respectively) and were not asked consistently across the Midwest Study waves. To account for this inconsistency, the two frequency items were dropped from the waves in which they were collected. The scale scores typically range from 0 to 10, but because two items were dropped, the scale ranged from 0 to 8. The three-level measure which delineated food secure (scores 0-2;

¹⁴ The Midwest Study survey included the eight USDA Food Insecurity Scale questions pertaining to children (i.e., Q5, Q6, Q7, Q13, Q14, Q14a, Q15, Q16) in waves 4 and 5 only and were excluded from analysis.

coded 0) from food insecure without hunger (scores 3-5; coded 1) and food insecure with hunger (scores 6-8; coded 2) was used in the logistic regression models for housing trajectory classes and eviction.

Income.

Income was determined using participant responses to the question, “During the last 12 months, how much income did you receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or for anything else?” Responses to this question were continuous. Participants who responded “don’t know” to the above income question were asked the follow-up question, “Please look at this card. Can you tell me the letter of the category that is your best estimate of the amount you received last year in wages, salary, commissions and tips?” Participants could choose one of five responses: \$1-5000, \$5001-10000, \$10001-25000, \$25001-50000, or \$50001 or more. For the current study, participants were coded as having \$0 annual income if they had not worked in the previous 12 months or were incarcerated and not asked about income. Income was constructed as an ordered categorical variable for waves 3 through 5. Thus, six income categories (e.g., \$0, \$1-5000, \$5001-10000, \$10001-25000, \$25001-\$50,000, or more than \$50,000) were used. Ultimately, the income variable for each wave was included as a continuous measure in analyses for research questions I.A., I.B., and III.

Covariates

Sex

Sex was a binary variable with categories for male and female in wave 1. A transgender category was added in waves 4 and 5, though only one respondent identified as transgender female. Sex data from wave 1 (coded as 0/male and 1/female) was used in analyses for both housing trajectory and eviction models.

Foster Care Experiences through Age 17 (Wave 1)

Five foster care experience variables were included in analyses. Data for each variable was collected at wave 1 when respondents were 17 years old. Three states, Illinois, Iowa, and Wisconsin were included in the Midwest Study. For analyses, Iowa and Wisconsin were combined to account for the policies in both states that required youth to exit foster care at age 18. In contrast, the extended care policy in Illinois allowed youth to remain in care until age 21. The state variable was coded 1/Iowa and Wisconsin and 2/Illinois. The state variable was included in all regression models.

The Midwest Study asked respondents, “How many different foster homes, group homes, or residential treatment centers have you been in since first entering the foster care system?” This count variable was included in analyses. Respondents were also asked, “Have you ever run away from a foster home or group home? (by run away, we mean staying away for at least one night).” Those who said yes were asked the follow-up question, “How many times have you run away from a foster home or group home?” The count variable was used in analyses with zero indicating respondents who never ran away.

Further, participants reported where they lived at age 17 in response to the question, “Do you live in a foster home without relatives, in a foster home with relatives, in group care home, a residential treatment facility or child caring institution, in an adoptive home, in an independent living arrangement, or somewhere else?” The six categories were collapsed into five because very few respondents reported living in an adoptive home at age 17. The categories were coded and used in the regression models: 0/relative foster home, 1/non-relative foster home, 2/independent living, 3/group care or residential treatment or institution, and 4/other.

Finally, regarding employment experience at wave 1, participants were asked, “Have you ever been employed?” and “Are you currently working at a full- or part-time job or jobs?” both coded 0/no and 1/yes. A crosstab of the two variables was used to form an ordinal variable indicating employment experience at age 17 as 0/none, 1/past, and 2/current. The five foster care variables were added to both the housing trajectory and eviction models.

Education, Level Reached

Education was collected at each wave. Education was a seven-level ordinal variable (e.g., no high school diploma or GED, GED, high school diploma, one or more years of college with no degree, associate degree, bachelor degree, and one or more years of graduate school). For the current study, one variable indicated the highest level of education each respondent reached throughout the study. This decision was made after building the analytic models adding education variables by wave and losing respondents due to wave non-response or missing education data at one or more waves. The highest education level variable used in the regression analyses included 0/some high school, 1/high school diploma or GED, and 2/postsecondary education. Few respondents had completed postsecondary and graduate-level education, so the categories were combined to reflect any time in postsecondary education.

Children

The question, “Do you have any living children?” was asked at each wave. The variable constructed and used in the analyses reflected whether respondents had ever had a child throughout the study (0/no and 1/yes). Like the education variable, the children variable was added to the models at each wave with negative effects on the sample size for the housing trajectory and eviction analyses. Given the association between having children and housing

outcomes, the decision was made to retain the variable as one that captured respondents' parenthood status cumulatively (King, 2018; Tyrell & Yates, 2017).

Homelessness

The homelessness measure was used as a separate variable in the eviction analysis addressing research question III. It was constructed as noted in the housing trajectories outcome variable section. Further, the variables for waves 3, 4, and 5 were combined. This variable reflected all respondents who reported experiencing at least one night of homelessness in the wave 3, 4, and/or 5 survey. The documented association between eviction and homelessness led to the decision to retain a cumulative measure of homelessness, rather than drop the variable from the eviction analysis (Morton et al., 2018).

Lived in Public Housing or Received Rental Assistance

In waves 3 through 5, the Midwest Study survey included two questions per wave about past or current public housing residence or rental assistance receipt. The first question asked respondents, "Have you lived in public housing or received any rental assistance in the form of a certificate or voucher?" The timeframes respondents were asked to recall changed between wave 3 and waves 4 and 5, with two-year and 12-month recall periods. Regarding current housing assistance, participants were asked the same question in waves 3 through 5, "Are you currently living in public housing or receiving any rental assistance in the form of a certificate or voucher?" Responses were 0/no and 1/yes. A new, single variable about public housing or rental assistance receipt was created based on a cross tabulation of the two variables per wave (e.g., 0/no housing assistance or 1/yes received public housing or rental assistance currently or in the past year or two). Finally, to address the sample size issues, the new variables for waves 3, 4, and 5 were combined to reflect having ever received housing assistance or public housing.

Occupancy Type

As described in the Housing Trajectory Classes section above, occupancy type was included as a separate set of variables in the eviction analysis for research question III. The variable for waves 3, 4, and 5 included three types of housing occupancy. Other (coded as 0) was endorsed by respondents who, as an individual or with a spouse or partner, neither rented nor owned their housing. The remaining two occupancy types reflected respondents who rented (coded as 1) or owned (coded as 2) by themselves or with a spouse or partner. The three-category variable for waves 3, 4, and 5 was included in the eviction analysis.

Statistical Analyses

Numerous analyses, in addition to the latent class analyses already described, were conducted in this study using descriptive, bivariate, and logistic regression tools. Stata statistical software release 17 was used for all analyses except the latent class analyses conducted in MPlus 8, as previously mentioned (Muthén & Muthén, 1998-2017; StataCorp, 2021). Missing data was addressed differently based on the analyses and statistical software used. The analytic approaches are described next.

Descriptive Statistics

Descriptive statistics included means and frequencies for each variable in the analyses. Descriptive statistics supported identifying outliers and distributions and described the sample. These analyses were also used to indicate variation in data between and across waves and the proportion of missing data for each variable.

Missing Data

Only cases with complete data were retained for all but two analyses. Missing data in the USDA Food Insecurity Scale was imputed using the instructions provided by Bickel and

colleagues (2000, pp. 36-38). The LCA for the housing trajectory classes and the perceived quality of relationship with birth mother and birth father classes used cases with complete and incomplete data (Tables 1, 4, and 5, as described previously in the respective LCA sections for the three variables). Finally, the descriptive, bivariate, and logistic regression analyses retained only cases with complete data for the predictor variables.

Cases included in the analyses and cases excluded due to missing data were compared to determine if any covariates were associated with analytic or excluded group membership. The housing trajectory analytic sample was statistically different from the sample excluded due to missing variables (Appendix F). Respondents who were more likely to be in the analytic than excluded sample included those with secure versus precarious housing trajectory and respondents with a high school diploma or GED and postsecondary education versus some high school. The analytic and excluded samples were similar on numerous variables, including state of foster care residence, race and ethnicity, sex, number of foster care placements, number of times ran away, children, and subsidized housing.

There were also statistical differences between the evicted analytic sample and the respondents excluded due to missing data (Appendix G). Respondents more likely to be in the evicted analytic sample included respondents who were evicted, white versus Black and Latinx respondents, females versus males, and respondents with a high school or equivalency diploma and postsecondary education versus some high school. Respondents less likely to be in the evicted analytic sample included respondents who were from Illinois versus Iowa or Wisconsin, living in group care, residential treatment, or institutional settings compared to non-relative foster homes, and ever versus never homeless. The samples were not different in numerous

ways, including number of foster care placements, number of times ran away from placement, employment experience, children, and subsidized housing.

Tests of Collinearity and Multicollinearity

Collinearity and multicollinearity between and among predictor variables in logistic regression must be assessed. When variables are collinear or multicollinear, parameter estimates are unstable, and variances are inaccurate. This may lead to inaccurate confidence intervals and errors in determining significance (Midi et al., 2010). A correlation matrix was created with all predictor variables and covariates using the appropriate tests based on variable structure combinations (e.g., ANOVA, Pearson's correlation, X^2 test of independence, etc.) to calculate appropriate measures of association or relationship (Appendix H). Generally, correlations less than .8 are acceptable (Hosmer et al., 2013; Midi et al., 2010). The highest correlation was .53 between two wave 3 variables, economic hardship and food insecurity. Thus, collinearity was not a concern for the two models. Multicollinearity was assessed through the variance inflation factor (VIF). VIF measures the amount of variance shared by each predictor variable and all other predictor variables (Hosmer et al., 2013; O'Brien, 2007). No agreement exists for a VIF threshold, though the measure begins at 1 and VIFs closer to 1 indicate a lack of multicollinearity (Midi et al., 2010; O'Brien, 2007). VIF for the housing trajectory model was 1.40 and eviction model was 1.44. Hence, multicollinearity was not detected.

Regression Analyses

Logistic regression was used to analyze the two models in this study based on the binary construction of both outcome variables. The housing trajectory classes that were compared were precarious versus secure for the first research question parts A. and B. For the third research question, ever versus never evicted respondents were compared. Logistic regression is designed

to analyze binary or dichotomous outcome variables and accommodates both categorical and continuous predictor variables (Afifi et al., 2012). Logistic regression results are reported in log-odds. The log-odds were exponentiated into odds ratios (e^{β}) in the results chapter to facilitate interpretation (Afifi et al., 2012).

Assumptions associated with logistic regression were assessed. Logistic regression assumptions include the linearity of continuous independent variables and the log-odds of the dependent variable, no extreme and influential outliers, and no multicollinearity (Hosmer et al., 2013; Leung, 2021; Stoltzfus, 2011). Further, all cells in the individual cross tabulations between the categorical predictor variables and the outcome variable must be populated to ensure the main effects model statistics can be computed (UCLA, n.d.).

Preliminary regression analyses comprised of wave-specific independent variables (i.e., independent variables from wave 1, then wave 2, followed by wave 3, etc.) assessed for associations between the predictor variables and the dependent variables at each timepoint. After that, the models were built by adding one set of variables by theoretical cluster to assess how the model changed with each cluster until the full model for each research question was represented. For example, the covariates were added to the analyses for each model, then the linked lives measures (i.e., perceived quality of relationship with birth mother and father), followed by the social role measures related to economic conditions, and finally, for the housing trajectory model interaction effects testing the social conditions (i.e., interactions between race/ethnicity and linked lives measures and race/ethnicity and the social role measure of economic hardship).

Post-estimation analyses were used to test for significance among additional categories within some categorical variables (e.g., highest education level and occupancy type). Dunn Bonferroni corrections for multiple comparisons were applied to adjust alpha levels

conservatively for categorical variables with more than two categories (e.g., race/ethnicity, highest education level, occupancy type, and perceived quality of relationship with birth mother and father). Corresponding confidence intervals were adjusted as well and are reflected in the bivariate and regression tables.

Summary

In summary, Figure 4 depicts the life course perspective conceptualization of the outcomes, predictor variables, and time sequence of events model. The current study uses the linked lives concept to consider how latent differences in respondents' perceived quality of relationships with their birth mothers and fathers relate to their housing trajectories and eviction. The latent classes reflect how groups of respondents perceive quality of relationship with birth mothers and fathers change from the beginning of the study to the end, from age 17 to 26. This study also incorporates the LCP idea of social role transitions by measuring respondents' level of economic hardship, food insecurity, and income at three separate times, ages 21, 23 or 24, and 26, to see how the timing of each measure may be associated with housing trajectory classes and eviction. Additionally, respondents' social role transitions related to housing experiences are assessed. The eviction model includes measures of occupancy type and homelessness as distinct housing experiences that may be associated with eviction. The LCP concept of trajectories drove the creation of housing trajectory classes using the five different housing variables from three survey waves when respondents were ages 21, 23 or 24, and 26. The housing trajectory classes represent social role transitions in the domain of housing. Finally, social context may serve to constrain or advantage groups of people based on race and ethnicity. This LCP concept informed the inclusion of race and ethnicity, as well as interactions between race and ethnicity and PQoR with birth mother and father and between race and ethnicity and the economic hardship measures

at waves 3, 4, and 5 when respondents were ages 21, 23 or 24, and 25. Life course research supports this study's conceptualization of variables and the time sequence of events modeled.

Figure 4.

Life Course Perspective Variable Conceptualization and Time Sequence of Events Model

Life Course Perspective Construct Measurement Variables	Time				
	Wave 1 (05/02- 03/03)	Wave 2 (03/04- 12/04)	Wave 3 (03/06- 01/07)	Wave 4 (07/08- 04/09)	Wave 5 (10/10- 05/11)
Linked Lives					
Perceived quality of relationship with birth mother	—————→				
Perceived quality of relationship with birth father	—————→				
Social Roles					
Economic status					
• Economic hardship	--	--	+ →	+ →	+
• Food insecurity	--	--	+ →	+ →	+
• Income	--	--	+ →	+ →	+
Housing outcome measures					
• Living situation at time of survey	--	--	+ →	+ →	+
• Number of household members	--	--	+ →	+ →	+
• Occupancy type	--	--	+ →	+ →	+
• Homeless	--	--	+ →	+ →	+
• Eviction (<i>RQ II and III outcome</i>)	--	+ →	+ →	+ →	+
Trajectories					
Housing trajectory classes (<i>RQ I outcome</i>)	--	--	—————→		
Social Context					
Race and ethnicity	^				
Perceived quality of relationship with birth mother x race and ethnicity	—————→				
Perceived quality of relationship with birth father x race and ethnicity	—————→				
Economic hardship x race and ethnicity	--	--	+ →	+ →	+

+ Indicates potentially time varying measure is available at corresponding wave.

-- Indicates measure is not available or not used at corresponding wave.

^ Indicates time constant measure is available.

→ Indicates a potential social role or status transition.

————→ Indicates a trajectory (i.e., series of social role or status transitions).

Chapter Five: Results

Overview

This chapter describes the study results, focused on the housing trajectory models first and the eviction model second. The housing trajectory section begins by describing how the three housing trajectory classes were named, answering research question I. Next, the descriptive and bivariate statistics for the analytic sample are summarized. The logistic regression results and model fit statistics for the housing trajectory model are reported and were used to answer research questions I.A. and I.B. The eviction model results are presented similarly. Research questions II.A. and II.B. are answered using descriptive statistics on the proportion and number of times respondents were evicted. Descriptive and bivariate statistics for the eviction analytic sample are presented, followed by model fit statistics and logistic regression results for the eviction model answering research question III.

Housing Trajectory Results

Research question I. was answered by analyzing the crosstabulation between the three-housing trajectory latent classes and the descriptive statistics of the variables used to create the classes (Table 10). The three distinct, multidimensional housing trajectories were qualitatively named insecure, precarious, and secure based on these descriptive statistics. Among the 604 Midwest Study respondents included in the latent class analysis, nearly 7% ($n = 40$) experienced a consistently insecure housing trajectory after aging out of foster care, 42% ($n = 254$) experienced a precarious housing trajectory, and over half (51%, $n = 310$) experienced a consistently secure housing trajectory. The multidimensional housing characteristics of each housing trajectory class are described next.

Housing Trajectory Class 1: Insecure

The insecure housing class, $n = 40$, was characterized by respondents living in primarily insecure settings across waves 3, 4, and 5 (68%, 87%, and 60%, respectively) with smaller percentages of secure-dependent arrangements (24%, 10%, and 28%). The occupancy type of the insecure class was 100% other (not renters or owners) at waves 3 and 4, and 83% other at wave 5 with the remainder renting (17%). Large proportions of the insecure group experienced homelessness in the years after exiting foster care (81%, 74%, and 75% in waves 3, 4, and 5), likewise with eviction (82%, 88%, and 79%). Finally, the insecure class had the largest mean household size. Respondents lived with 4 to 5 other people.

Housing Trajectory Class 2: Precarious

The second housing trajectory class was characterized by increasing independence and precarity, $n = 254$. In waves 3 and 4, half or more respondents in this class lived in secure-dependent arrangements (50% and 54%, respectively). The next largest groups in waves 3 and 4 lived in secure-independent housing (37% and 34%, respectively). By wave 5 nearly half of respondents resided in secure-independent living situations (47%) and fewer lived in secure-dependent settings (42%). Participants in the precarious class compared to the insecure class had lower rates of the occupancy type other than renting or owning (61%, 53%, and 39%, waves 3, 4, and 5, respectively) and higher rates of renting (increased from 39% in wave 3 to 58% in wave 5) and owning (increased from 1% in waves 3 and 4 to 3% in wave 5). Despite rising rates of independent housing, respondents in the precarious group experienced increasing housing precarity, namely homelessness and eviction over time (homelessness: 15%, 18%, 23% and eviction: 12%, 14%, and 21%, by wave, respectively). The precarious class members shared a household with a mean of 3 other people.

Housing Trajectory Class 3: Secure

The final housing trajectory class, characterized by high independence and increasingly secure housing situations (secure), was also the largest class, $n = 310$. The proportion of the secure class living in secure-independent arrangements increased from wave 3 to 4 (83% to 95%) and remained stable at wave 5. Members of the secure class primarily rented their housing across the three waves (76%, 87%, and 81%), while the proportion of this class owning a home increased over time (5%, 11%, and 15%). Regarding homelessness and eviction, the secure group had decreasing rates of these adverse events from waves 3 to 5 (from 15% to 5% for homelessness and 5% to 1% for eviction). Further, the secure class lived in the smallest households with two other people on average.

Table 10.*Descriptive Statistics Used to Name the Three Housing Trajectory Classes (N = 604)*

Housing Trajectory Latent Classes	<u>Class 1</u> Insecure (<i>n</i> = 40)	<u>Class 2</u> Precarious (<i>n</i> = 254)	<u>Class 3</u> Secure (<i>n</i> = 310)
Variables Used in Latent Class Analysis	%	%	%
Security of Living Situation Wave 3			
Insecure	67.65	6.14	1.05
Semi-secure	8.82	6.14	3.51
Secure-dependent	23.53	50.44	12.63
Secure-independent	0.00	37.28	82.81
Security of Living Situation Wave 4			
Insecure	87.18	4.62	0.00
Semi-secure	2.56	6.72	1.34
Secure-dependent	10.26	54.20	3.36
Secure-independent	0.00	34.45	95.30
Security of Living Situation Wave 5			
Insecure	60.00	5.04	0.00
Semi-secure	7.50	5.88	0.68
Secure-dependent	27.50	41.60	4.90
Secure-independent	5.00	47.48	94.52
Occupancy Type Wave 3			
Other (neither rented nor owned)	100.00	60.53	18.95
Rented	0.00	38.60	75.79
Owned ^a	0.00	0.88	5.26
Occupancy Type Wave 4			
Other (neither rented nor owned)	100.00	52.94	2.35
Rented	0.00	46.22	86.58
Owned ^a	0.00	0.84	11.07
Occupancy Type Wave 5			
Other (neither rented nor owned)	82.50	38.82	3.77
Rented	17.50	58.20	81.16
Owned ^a	0.00	2.95	15.07
Homeless Incident Wave 3 ^b			
No	81.25	84.57	85.58
Yes	18.75	15.43	14.42
Homeless Incident Wave 4 ^c			
No	73.68	81.93	88.93
Yes	26.32	18.07	11.07
Homeless Incident Wave 5 ^c			
No	75.00	77.31	94.86
Yes	25.00	22.69	5.14

Housing Trajectory Latent Classes	<u>Class 1</u> Insecure (<i>n</i> = 40)	<u>Class 2</u> Precarious (<i>n</i> = 254)	<u>Class 3</u> Secure (<i>n</i> = 310)
Variables Used in Latent Class Analysis	%	%	%
Evicted in last 12 months Wave 3			
No	82.35	87.61	95.39
Yes	17.65	12.39	4.61
Evicted in last 12 months Wave 4			
No	88.00	85.96	95.97
Yes	12.00	14.04	4.03
Evicted in last 12 months Wave 5			
No	79.31	78.72	98.97
Yes	20.69	21.28	1.03
	M	M	M
Number of Household Members			
Wave 3	4.84	2.98	1.80
Wave 4	4.84	2.86	1.82
Wave 5	4.38	3.03	1.90

^a Respondent owned housing individually, with spouse/partner, or spouse/partner owned.

^b In wave 3, respondents were asked about experiencing homelessness at least once since leaving foster care.

^c In waves 4 and 5, respondents were asked to report experiencing homeless at least once since their last interview.

Descriptive Statistics for the Housing Trajectory Model

The housing trajectory analysis included a sample size of 421 respondents. Descriptive statistics for the analytic sample showed that 42% of respondents ($n = 177$) experienced a precarious housing trajectory between ages 21 and 26 (Table 11), while 58% ($n = 244$) secured housing by age 21 and maintained housing security through age 26. As noted in the Methods chapter, the regression analysis did not include the insecure class due its small sample size.

Black respondents comprised the largest portion of the sample (52%, $n = 220$), followed by white (33%, $n = 139$) and Latinx (8%, $n = 33$) respondents. Over half of the study sample was female (59%, $n = 250$) with the rest identifying as male. Females and males had different patterns of housing trajectory class membership. Among males, most were in the precarious class (52%, $n = 89$), while most females were in the secure class (65%, $n = 162$).

Five foster care variables from wave 1 were included in the model. The state of residence while in foster care indicated that respondents who lived in Iowa and Wisconsin accounted for 39% of the sample ($n = 165$), while the remainder (61%, $n = 256$) resided in Illinois while in foster care. The mean number of placements respondents experienced through age 17 was 6 (range: 1-42). Respondents ran away from their foster care placements an average of 3 times (range: 0-21). The most common foster care placements at age 17 were non-relative and relative foster homes (39%, $n = 166$ and 30%, $n = 128$, respectively). Finally, by age 17 nearly half of respondents had past employment experience (45%, $n = 190$), nearly 40% were currently employed (39%, $n = 164$), and under one-fifth had no work experience (16%, $n = 67$).

By age 26, nearly half of the study sample had some postsecondary education (49%, $n = 205$), two-fifths had earned a high school diploma or GED (41%, $n = 172$), and 10% had completed some high school ($n = 44$). Respondents with postsecondary education had more

variation in housing trajectories (68%, $n = 140$ secure and 32%, $n = 65$ precarious) than respondents with a high school or equivalent diploma (49%, $n = 84$ secure and 51%, $n = 88$ precarious) or some high school education (45%, $n = 20$ secure and 55%, $n = 24$ precarious). Two-thirds of respondents had at least one child by age 26 (67%, $n = 282$), while the rest had none. Less than one-quarter of respondents had lived in subsidized housing at some time between ages 21 and 26 (23%, $n = 95$).

The life course perspective construct of linked lives was measured by perceived quality of relationship (PQoR) with birth mother and father. The latent class frequencies for PQoR with birth mother were highest for the fair class (39%, $n = 164$), slightly lower for the very good class (35%, $n = 147$), and lower yet for the very poor class (26%, $n = 110$). For PQoR with birth father, class sizes varied more. Half of the sample ($n = 210$) was in the extremely poor class, 30% ($n = 126$) in the poor class, and 20% ($n = 85$) in the good class.

Descriptive statistics for the three economic measures, which documented social role transitions over time, indicated relatively low levels of economic hardship (range: 0-5) among respondents across waves 3, 4, and 5 (means: 1.30, 1.37, and 1.34, respectively), consistent levels of food security (76%, 73%, and 77% by wave), and incomes that skewed very low across waves. Respondents with no income or incomes from \$1-5,000 ranged from 60% in wave 3 to 54% in wave 5, while respondents earning \$25,001-50,000 and \$50,001 or more increased from 4% in wave 3 to 17% in wave 5. Some variation in economic measures across housing trajectory classes was found, particularly for wave 5 economic hardship (precarious class mean: 1.56, and secure class mean: 1.18) and income in the waves 3, 4, and 5.

Table 11.*Descriptive Statistics by Housing Trajectory Latent Classes and for Total Sample (N = 421)*

Housing Trajectory Model	Precarious ^a		Secure ^a		Total ^b		
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%	
Housing trajectories	177	42.04	244	57.96	421	100	
Race and ethnicity							
Black	105	47.73	115	52.27	220	52.26	
Latinx	12	36.36	21	63.64	33	7.84	
White	49	35.25	90	64.75	139	33.02	
Other	11	37.93	18	62.07	29	6.89	
Sex							
Male	89	52.05	82	47.95	171	40.62	
Female	88	35.20	162	64.80	250	59.38	
Foster Care Variables at W1							
State of residence while in foster care							
Iowa and Wisconsin	60	36.36	105	63.64	165	39.19	
Illinois	117	45.70	139	54.30	256	60.81	
Number of:							
Foster care placements (range 1-42)		M	sd	M	sd	M	sd
Times ran away from placement (range 0-21)		5.73	5.76	5.52	6.03	5.61	5.91
		3.24	6.48	2.21	4.82	2.64	5.60
		<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Foster care placement type							
Foster home, relative(s)	55	42.97	73	57.03	128	30.40	
Foster home, non-relative	57	34.34	109	65.66	166	39.43	
Independent living	16	51.61	15	48.39	31	7.36	
Group care/residential treatment/inst.	36	58.06	26	41.94	62	14.73	
Other	13	38.24	21	61.76	34	8.08	
Employment experience							
None	32	47.76	35	52.24	67	15.91	
Past	86	45.26	104	54.74	190	45.13	
Current	59	35.98	105	64.02	164	38.95	
Highest education level by W5							
Some high school	24	54.55	20	45.45	44	10.45	
High school or GED	88	51.16	84	48.84	172	40.86	
Postsecondary	65	31.71	140	68.29	205	48.69	
Any children W1-5							
No	68	48.92	71	51.08	139	33.02	
Yes	109	38.65	173	61.35	282	66.98	

Housing Trajectory Model	Precarious ^a		Secure ^a		Total ^b	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Lived in subsidized housing W3-5						
No	150	46.01	176	53.99	326	77.43
Yes	27	28.42	68	71.58	95	22.57
Linked Lives Measures						
Perceived relationship quality w/birth mother						
Very poor	40	36.36	70	63.64	110	26.13
Fair	66	40.24	98	59.76	164	38.95
Very good	71	48.30	76	51.70	147	34.92
Perceived relationship quality w/birth father						
Extremely poor	79	37.62	131	62.38	210	49.88
Poor	57	45.24	69	54.76	126	29.93
Good	41	48.24	44	51.76	85	20.19
Social Role Transitions: Economic Measures						
	M	sd	M	sd	M	sd
Economic hardship W3 (range 0-5)	1.38	1.56	1.24	1.40	1.30	1.47
Economic hardship W4 (range 0-5)	1.53	1.61	1.26	1.48	1.37	1.55
Economic hardship W5 (range 0-5)	1.56	1.74	1.18	1.48	1.34	1.60
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Food insecurity W3						
Food secure	137	42.68	184	57.32	321	76.25
Food insecure without hunger	17	34.69	32	65.31	49	11.64
Food insecure with hunger	23	45.10	28	54.90	51	12.11
Food insecurity W4						
Food secure	130	42.48	176	57.52	306	72.68
Food insecure without hunger	25	37.31	42	62.69	67	15.91
Food insecure with hunger	22	45.83	26	54.17	48	11.40
Food insecurity W5						
Food secure	131	40.18	195	59.82	326	77.43
Food insecure without hunger	24	42.86	32	57.14	56	13.30
Food insecure with hunger	22	56.41	17	43.59	39	9.26
Income in past 12 months W3						
No income	54	55.67	43	44.33	97	23.04
\$1-5000	69	43.95	88	56.05	157	37.29
\$5001-10000	32	40.51	47	59.49	79	18.76
\$10001-25000	17	24.29	53	75.71	70	16.63
\$25001-50000	4	26.67	11	73.33	15	3.56
More than \$50000	1	33.33	2	66.67	3	0.71

Housing Trajectory Model	Precarious ^a		Secure ^a		Total ^b	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Income in past 12 months W4						
No income	57	56.44	44	43.56	101	23.99
\$1-5000	62	51.24	59	48.76	121	28.74
\$5001-10000	27	45.76	32	54.24	59	14.01
\$10001-25000	18	20.45	70	79.55	88	20.90
\$25001-50000	7	18.42	31	81.58	38	9.03
More than \$50000	6	42.86	8	57.14	14	3.33
Income in past 12 months W5						
No income	63	53.39	55	46.61	118	28.03
\$1-5000	57	51.82	53	48.18	110	26.13
\$5001-10000	14	30.43	32	69.57	46	10.93
\$10001-25000	24	32.43	50	67.57	74	17.58
\$25001-50000	14	27.45	37	72.55	51	12.11
More than \$50000	5	22.73	17	77.27	22	5.23

^a When row frequencies and percentages are added across the precarious and secure columns, the sum of the frequencies equals the frequency in the total cell for that row, and the sum of the percentages equal 100%.

^b The total *N* column is the sum of the sample sizes for each variable category in that row. When the frequencies and percentages in the total columns are added for each variable, they sum to the total sample size, *N* = 421, and 100%.

Bivariate Statistics for the Housing Trajectory Model

Bivariate statistics indicated significant associations between the predictor variables sex, highest level of education by wave 5/age 26, subsidized housing (waves 3-5), economic hardship at wave 5, and income at waves 3, 4, and 5 and housing trajectory classes (Table 12).

Specifically, female relative to male participants were expected to have higher odds of a secure versus precarious (*OR* 2.00, *SE* .40) housing trajectory. Relative to respondents with some high school education and a high school or equivalency diploma, respondents with post-secondary education had higher odds of a secure versus precarious housing trajectory (*OR* 2.58, *SE* .87 and *OR* 2.26, *SE* .48, respectively). Respondents who had children before or over the course of the study were more likely to experience a secure compared to precarious housing trajectory (*OR* 1.52, *SE* .32). Living in subsidized housing at any point between waves 3 through 5 was associated with higher odds of a secure versus precarious housing trajectory (*OR* 2.15, *SE* .54). Several economic measures, representing social role transitions, were significant in bivariate analyses. For each additional form of economic hardship respondents reported at age 26/wave 5, their odds of having a secure compared to precarious housing trajectory decreased by 14% (*OR* .86, *SE* .05). Finally, in bivariate analyses, higher incomes at waves 3, 4, and 5 were associated with higher odds of a secure over precarious housing trajectory (*OR* 1.44, *SE* .13, *OR* 1.48, *SE* .11, and *OR* 1.35, *SE* .09). The linked lives measures (i.e., perceived quality of relationship with birth mother and father) and the social context measures (i.e., race/ethnicity and the interaction effects (results not shown) between race/ethnicity and linked lives measures and race/ethnicity and economic hardship) were not significant.

Logistic Regression Results for the Housing Trajectory Model

The logistic regression model was statistically significant ($p < 0.0001$) and had a pseudo- R^2 of 0.19. Models with pseudo- R^2 between 0.20 and 0.40 are considered a good fit, as the pseudo- R^2 produces a metric much lower than the R^2 used to assess the variance explained in linear regression (McFadden, 1977; Lee, 2013). Though the pseudo- R^2 in this study is slightly lower than the range suggested by McFadden, additional logistic regression diagnostic tools demonstrated acceptable model fit. The receiver operating characteristic curve (ROC) provides a concordance-index of 0.78, on a scale where 0 is a completely misspecified model, .5 is a model with a 50% probability of a correct outcome prediction, and 1 is a model that is 100% correctly specified (Meurer & Tolles, 2017). Similarly, the model classification statistics showed that the model correctly classified respondents with a secure housing trajectory 86% of the time and respondents with a precarious housing trajectory less frequently (59% of the time). Within in this overall model framework, the logistic regression results demonstrated significant associations between sex, state, highest education level, children, subsidized housing, and income and housing trajectory classes when holding all other variables constant (Table 12).

Specifically, respondents with greater odds of a secure versus precarious housing trajectory included female relative to male respondents ($OR\ 2.49, SE\ .65$), one foster care experience variable: participants who lived in Iowa or Wisconsin versus Illinois while in foster care ($OR\ 1.99, SE\ .56$), those with any postsecondary education versus a high school diploma or GED ($OR\ 2.93, SE\ .84$), who had children ($OR\ 2.12, SE\ .57$), or lived in subsidized housing at any point between wave 3 and 5 ($OR\ 2.81, SE\ .85$), holding all else constant. Among the economic measures, which marked social role transitions, one was significant. As respondents'

income increased by each unit at age 24/wave 4, the odds of a secure versus precarious housing trajectory increased by 33% (*OR* 1.33, *SE* .15), adjusting for all else.

Finally, predictor variables not associated with housing trajectories in the main effects model included four foster care experience covariates from wave 1: number of foster care placements, number of times ran away from foster care, foster care placement type, and employment experience at age 17; education level; the two linked lives measures: perceived quality of relationship (PQoR) with birth mother and PQoR with birth father; and, most of the social role transition economic measures: economic hardship and food insecurity at waves 3, 4, and 5 and income at waves 3 and 5. Further, the social context measures were not significant, including race/ethnicity and the six interaction effects. The interactions were conducted between race and ethnicity and PQoR with birth mother, PQoR and with birth father, and the economic hardship variables for waves 3, 4, and 5 (results not shown).

Table 12.*Bivariate Statistics and Logistic Regression Model for Housing Trajectory Classes (N = 421)*

Housing Trajectory Model	Bivariate statistics (N = 421)			Logistic regression (N = 421)				
	OR	SE	95% CI	OR	SE	95% CI		
Precarious Housing Trajectory (reference group)	1			1				
Secure Housing Trajectory								
Race and ethnicity								
Black	1			1				
Latinx	1.60	0.62	0.75 - 3.41	1.09	0.49	0.45 - 2.65		
White	1.68	0.37	0.98 - 2.86	1.33	0.40	0.73 - 2.40		
Other	1.49	0.61	0.67 - 3.31	1.00	0.48	0.39 - 2.56		
Sex								
Male	1			1				
Female	2.00	*	0.40	1.34 - 2.97	2.49	*	0.65	1.50 - 4.15
Foster Care Variables at W1								
State of residence while in foster care								
Iowa and Wisconsin	1.47	0.30	0.99 - 2.20	1.99	*	0.56	1.15 - 3.44	
Illinois	1			1				
Number of:								
Foster care placements	0.99	0.02	0.96 - 1.03	1.01	0.02	0.97 - 1.06		
Times ran away from foster care	0.97	0.02	0.94 - 1.00	0.99	0.02	0.95 - 1.04		
Foster care placement type								
Foster home, relative(s)	1			1				
Foster home, non-relative	1.44	0.35	0.90 - 2.32	1.27	0.38	0.70 - 2.29		
Independent living	0.71	0.28	0.32 - 1.55	0.46	0.24	0.16 - 1.26		
Group care/residential treatment/institution	0.54	0.17	0.29 - 1.01	0.77	0.31	0.35 - 1.70		
Other	1.22	0.48	0.56 - 2.64	0.97	0.48	0.37 - 2.54		

Housing Trajectory Model	Bivariate statistics (N = 421)			Logistic regression (N = 421)		
	OR	SE	95% CI	OR	SE	95% CI
Employment experience						
None	1			1		
Past	1.11	0.31	0.63 - 1.93	1.01	0.34	0.52 - 1.97
Current	1.63	0.48	0.91 - 2.89	0.83	0.30	0.41 - 1.70
Highest education level by W5						
Some high school	1			1		
High school or GED	1.15	0.39	0.59 - 2.23	0.74	0.31	0.33 - 1.66
Postsecondary	2.58 *	0.87	1.15 - 5.80	2.16	0.92	0.94 - 4.99
Postsecondary vs. high school or GED	2.26 *	0.48	1.35 - 3.76	2.93 *	0.84	1.47 - 5.82
Any children W1-5						
No	1.00			1		
Yes	1.52 *	0.32	1.01 - 2.29	2.12 *	0.57	1.25 - 3.60
Lived in subsidized housing W3-5						
No	1			1		
Yes	2.15 *	0.54	1.31 - 3.53	2.81 *	0.85	1.55 - 5.10
Linked Lives Measures						
Perceived relationship quality with birth mother						
Very poor	1			1		
Fair	0.85	0.22	0.52 - 1.40	0.57	0.17	0.31 - 1.03
Very good	0.61	0.16	0.37 - 1.01	0.59	0.18	0.32 - 1.09
Perceived relationship quality with birth father						
Extremely poor	1			1		
Poor	0.73	0.17	0.47 - 1.14	0.73	0.20	0.43 - 1.26
Good	0.65	0.17	0.39 - 1.08	0.64	0.20	0.35 - 1.19
Social Role Transitions: Economic Measures						
Economic hardship W3	0.94	0.06	0.82 - 1.07	0.83	0.09	0.67 - 1.01
Economic hardship W4	0.90	0.06	0.79 - 1.02	0.93	0.09	0.77 - 1.13
Economic hardship W5	0.86 *	0.05	0.77 - 0.98	0.92	0.09	0.77 - 1.11

Housing Trajectory Model	Bivariate statistics (N = 421)			Logistic regression (N = 421)				
	OR	SE	95% CI	OR	SE	95% CI		
Food insecurity W3								
Food secure	1			1				
Food insecure without hunger	1.40	0.45	0.75 - 2.63	1.57	0.63	0.71 - 3.46		
Food insecure with hunger	0.91	0.27	0.50 - 1.64	0.77	0.33	0.33 - 1.81		
Food insecurity W4								
Food secure	1			1				
Food insecure without hunger	1.24	0.34	0.72 - 2.14	1.74	0.63	0.86 - 3.54		
Food insecure with hunger	0.87	0.27	0.47 - 1.61	1.49	0.65	0.63 - 3.49		
Food insecurity W5								
Food secure	1			1				
Food insecure without hunger	0.90	0.26	0.50 - 1.59	1.42	0.53	0.68 - 2.94		
Food insecure with hunger	0.52	0.18	0.27 - 1.02	0.67	0.32	0.27 - 1.68		
Income W3	1.44	*	0.13	1.20 - 1.72	1.18	0.15	0.92 - 1.52	
Income W4	1.48	*	0.11	1.28 - 1.72	1.33	*	0.15	1.07 - 1.66
Income W5	1.35	*	0.09	1.19 - 1.55	1.07	0.10	0.89 - 1.29	
_cons				0.23	*	0.15	0.06 - 0.83	

* p-value less than 0.05

Eviction Results

Descriptive Statistics for the Eviction Model

The sample size for the eviction analyses for research questions II.A. and II.B. included 709 respondents. Research question II.A. asked what proportion of young people who aged out of foster care experienced eviction between ages 19 and 26. Descriptive statistics in Table 13 indicate that over one-fifth of this analytic sample (21%, $n = 149$) experienced at least one eviction between ages 19 and 26. Research question II.B. asked how many times young people who aged out of care experienced eviction between ages 19 and 26. Among the 149 respondents who were evicted, 82% experienced one incident ($n = 122$) and 18% experienced two or more evictions ($n = 27$; Table 13). The mean number of evictions was 1.22 (sd 0.27) among respondents who had been evicted.

Table 13.

Descriptive Statistics for Eviction: Frequency, Count, and Mean (N = 709)

Variable	<i>n</i>	%
Ever Evicted W2-5		
No	560	78.98
Yes	149	21.02
Evicted Count W2-5		
0	560	78.98
1	122	17.21
2	22	3.10
3	4	0.56
4	1	0.14
	M	sd
Eviction Count, full sample ($N = 709$)	0.26	0.55
Eviction Count, evicted sample ($n = 149$)	1.22	0.27

The sample size for the eviction logistic regression analysis was 436 respondents (Table 14). Among this sample, just over three-fourths were never evicted (76%, $n = 330$) and just under one-fourth experienced at least one eviction (24%, $n = 106$). The descriptive statistics for variables modeled in both the housing trajectory and eviction analyses were similar. The variables described next highlight variables that were in the eviction but not housing trajectory model and where eviction rates differed across variable categories.

Two-thirds of the sample had at least one child by age 26 (66%, $n = 289$), while one-third had no children (34%, $n = 147$). Eviction rates were higher for respondents with children (27%, $n = 79$) than without children (18%, $n = 27$). Nearly 30% of respondents had been homeless (28%, $n = 123$) and among this group two-fifths had also been evicted (42%, $n = 51$), while under one-fifth of the never homeless respondents were evicted (18%, $n = 55$). Over time, an increasing percentage of sample participants occupied their homes through renting (58%, 67%, and 69% in waves 3, 4, and 5) and owning (3%, 7%, and 10%, respectively), as opposed to other arrangements which decreased by wave (39%, 26%, and 21%). However, eviction rates increased among sample participants who lived in other occupancy arrangements (29%, 32%, and 40% in waves 3, 4, and 5) but remained stable for renters (22%, 23%, and 22%) and owners (13%, 10%, and 11%) over time.

The mean economic hardship among respondents was similar across the waves (1.26 at wave 3 and 1.32 at waves 4 and 5); yet within waves, respondents who had been evicted had higher mean economic hardship (2.00, 2.18, and 2.30 by wave) compared to the sample who had not been evicted (1.02, 1.05, and 1.01 by wave). About three-quarters of the study sample was food secure in waves 3, 4, and 5 (77%, 74%, and 77%). Wave 5 was the only time point when a

larger percentage of respondents who experienced food insecurity, in this case with hunger, had been evicted (60%, $n = 24$) than not evicted.

Table 14.*Descriptive Statistics by Eviction Status (N = 436)*

Eviction Model	<u>Never evicted^a</u>		<u>Evicted^a</u>		<u>Total^b</u>	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Eviction	330	75.69	106	24.31	436	100.00
Race and ethnicity						
Black	173	75.22	57	24.78	230	52.75
Latinx	28	82.35	6	17.65	34	7.80
White	104	74.29	36	25.71	140	32.11
Other	25	78.13	7	21.88	32	7.34
Sex						
Male	143	76.88	43	23.12	186	42.66
Female	187	74.80	63	25.20	250	57.34
Foster Care Variables at W1						
State of residence while in foster care						
Iowa or Wisconsin	129	75.88	41	24.12	170	38.99
Illinois	201	75.56	65	24.44	266	61.01
Number of:	M	sd	M	sd	M	sd
Foster care placements (range 1-42)	5.42	5.87	6.20	6.08	5.61	5.92
Times ran away from placement (range 0-21)	2.59	5.54	3.05	6.12	2.70	5.68
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Foster care placement type W1						
Foster home, relative(s)	103	77.44	30	22.56	133	30.50
Foster home, non-relative	132	77.65	38	22.35	170	38.99
Independent living	22	66.67	11	33.33	33	7.57
Group care/residential treatment/institution	49	76.56	15	23.44	64	14.68
Other	24	66.67	12	33.33	36	8.26

Eviction Model	<u>Never evicted^a</u>		<u>Evicted^a</u>		<u>Total^b</u>	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Employment experience W1						
None	52	72.22	20	27.78	72	16.51
Past	148	74.00	52	26.00	200	45.87
Current	130	79.27	34	20.73	164	37.61
Highest education level by W5						
Some High School	32	65.31	17	34.69	49	11.24
High School/GED	133	73.48	48	26.52	181	41.51
Postsecondary	165	80.10	41	19.90	206	47.25
Any children W1-5						
No	120	81.63	27	18.37	147	33.72
Yes	210	72.66	79	27.34	289	66.28
Homelessness W3-5						
No	258	82.43	55	17.57	313	71.79
Yes	72	58.54	51	41.46	123	28.21
Lived in subsidized housing W3-5						
No	260	76.70	79	23.30	339	77.75
Yes	70	72.16	27	27.84	97	22.25
Occupancy type W3						
Other	120	71.01	49	28.99	169	38.76
Rents	197	78.17	55	21.83	252	57.80
Owns	13	86.67	2	13.33	15	3.44
Occupancy type W4						
Other	78	68.42	36	31.58	114	26.15
Rents	226	77.13	67	22.87	293	67.20
Owns	26	89.66	3	10.34	29	6.65

Eviction Model	<u>Never evicted^a</u>		<u>Evicted^a</u>		<u>Total^b</u>	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Occupancy type W5						
Other	54	60.00	36	40.00	90	20.64
Rents	237	78.48	65	21.52	302	69.27
Owns	39	88.64	5	11.36	44	10.09
Linked Lives Measures						
Perceived relationship quality with birth mother						
Very poor	87	78.38	24	21.62	111	25.46
Fair	126	75.00	42	25.00	168	38.53
Very good	117	74.52	40	25.48	157	36.01
Perceived relationship quality with birth father						
Extremely poor	173	80.09	43	19.91	216	49.54
Poor	92	71.32	37	28.68	129	29.59
Good	65	71.43	26	28.57	91	20.87
Social Role Transitions: Economic Measures						
	M	sd	M	sd	M	sd
Economic Hardship W3 (range 0-5)	1.02	1.25	2.00	1.79	1.26	1.46
Economic Hardship W4 (range 0-5)	1.05	1.36	2.18	1.67	1.32	1.52
Economic Hardship W5 (range 0-5)	1.01	1.36	2.30	1.83	1.32	1.59
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Food insecurity in past 12 months W3						
Food secure	269	80.06	67	19.94	336	77.06
Food insecure without hunger	32	64.00	18	36.00	50	11.47
Food insecure with hunger	29	58.00	21	42.00	50	11.47
Food insecurity in past 12 months W4						
Food secure	269	83.54	53	16.46	322	73.85
Food insecure without hunger	34	50.75	33	49.25	67	15.37
Food insecure with hunger	27	57.45	20	42.55	47	10.78

Eviction Model	<u>Never evicted^a</u>		<u>Evicted^a</u>		<u>Total^b</u>	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Food insecurity in past 12 months W5						
Food secure	273	81.01	64	18.99	337	77.29
Food insecure without hunger	41	69.49	18	30.51	59	13.53
Food insecure with hunger	16	40.00	24	60.00	40	9.17
Income in past 12 months W3						
No income	78	71.56	31	28.44	109	25.00
\$1-5000	116	73.42	42	26.58	158	36.24
\$5001-10000	63	77.78	18	22.22	81	18.58
\$10001-25000	59	84.29	11	15.71	70	16.06
\$25001-50000	12	80.00	3	20.00	15	3.44
More than \$50000	2	66.67	1	33.33	3	0.69
Income in past 12 months W4						
No income	88	77.19	26	22.81	114	26.15
\$1-5000	86	69.92	37	30.08	123	28.21
\$5001-10000	39	66.10	20	33.90	59	13.53
\$10001-25000	71	81.61	16	18.39	87	19.95
\$25001-50000	34	89.47	4	10.53	38	8.72
More than \$50000	12	80.00	3	20.00	15	3.44
Income in past 12 months W5						
No income	92	73.60	33	26.40	125	28.67
\$1-5000	75	64.66	41	35.34	116	26.61
\$5001-10000	34	70.83	14	29.17	48	11.01
\$10001-25000	65	86.67	10	13.33	75	17.20
\$25001-50000	43	86.00	7	14.00	50	11.47
More than \$50000	21	95.45	1	4.55	22	5.05

^a When row frequencies and percentages are added across the never evicted and evicted columns, the sum of the frequencies equals the frequency in the total cell for that row, and the sum of the percentages equal 100%.

^b The total *N* column is the sum of the sample sizes for each variable category in that row. When the frequencies and percentages in the total columns are added for each variable, they sum to the total sample size, *N* = 436, and 100%.

Bivariate Statistics for the Eviction Model

Bivariate statistics for the eviction model (Table 15) showed significant associations between the predictor variables having children, homelessness, occupancy type, economic hardship, food insecurity, and income and eviction. Specifically, respondents in the analytic sample who had children before or during the study or experienced homelessness between waves 3 and 5 were more likely to have been evicted (*OR* 1.67, *SE* .42; *OR* 3.32, *SE* .78, respectively) than participants without children or who remained housed. Additionally, sample participants who rented or owned their housing as compared to other occupancy arrangements in wave 5 were less likely to have been evicted (*OR* 0.41, *SE* .11 and *OR* 0.19, *SE* .10). Numerous economic measures, representing social role transitions, were significant in bivariate analyses. Economic hardship at waves 3, 4, and 5 was associated with higher odds of eviction (*OR* 1.54, *SE* .12; 1.60, *SE* .12; and *OR* 1.64, *SE* .12, respectively). In waves 3 and 4, respondents who were food insecure without hunger (*OR* 2.26, *SE* .73 and *OR* 4.93, *SE* 1.41) and with hunger (*OR* 2.91, *SE* .92 and *OR* 3.76, *SE* 1.24) had an increased likelihood of eviction as compared to respondents who were food secure. In wave 5, respondents experiencing food insecurity with hunger as compared to food secure also had an increased likelihood of eviction (*OR* 6.40, *SE* 2.25). Finally, for each unit increase in income at wave 5, respondents were less likely to have been evicted (*OR* 0.76, *SE* .06).

Logistic Regression Results for the Eviction Model

The logistic regression model for eviction was statistically significant ($p < 0.0001$) and had a pseudo- R^2 of 0.28. As noted previously, models with pseudo- R^2 between 0.20 and 0.40 are considered a good fit (McFadden, 1977; Lee, 2013). The receiver operating characteristic curve (ROC) concordance-index was 0.83, on a scale where .5 indicates a model with a 50%

probability of correctly predicting the outcome and 1 is a model that is 100% correctly specified (Meurer & Tolles, 2017). Further, the overall eviction model correctly classified the outcomes of 83% of participants; however, the sensitivity and specificity analyses indicated that the final model predicted respondents who had been evicted (48%) at about half the rate of respondents who had not been evicted (94%; Hosmer et al., 2013). In the full model there were significant associations between homelessness, occupancy type, economic hardship, and food insecurity and eviction (Table 15).

Specifically, respondents in the study sample who experienced an episode of homelessness were 2.33 (*SE* .77) times more likely to have been evicted relative to young people who had not been homeless, adjusting for the remaining variables in the model. Renting compared to other occupancy arrangements at wave 3 was protective against eviction (*OR* 0.46, *SE* .16), holding all else constant. Economic hardship was associated with eviction in waves 3, 4, and 5, such that for each additional economic hardship, sample participants' likelihood of eviction increased by about 30% at each wave (*OR* 1.32, *SE* .15; 1.33, *SE* .15; and 1.30, *SE* .13, respectively), adjusting for all else. Finally, wave 4 food insecurity without hunger relative to food security was associated with a 192% increase in having been evicted (*SE* 1.12), holding all else constant.

Variables that were not significant in the eviction model included the social context variable race and ethnicity, sex, the foster care variables, education, having children, subsidized housing, the linked lives measures (i.e., perceived quality of relationship with birth mother and with father), and income.

Table 15.*Bivariate Statistics and Logistic Regression Odds Ratios for Eviction Model (N = 436)*

Ever Evicted W2-5	<u>Bivariate Statistics (N = 436)</u>			<u>Logistic Regression (N = 436)</u>		
	OR	SE	95% CI	OR	SE	95% CI
Race/Ethnicity						
Black	1			1		
Latinx	0.65	0.31	0.26 - 1.65	0.93	0.58	0.28 - 3.13
White	1.05	0.26	0.65 - 1.70	1.95	0.72	0.94 - 4.03
Other	0.85	0.39	0.35 - 2.07	1.57	0.97	0.47 - 5.25
Sex						
Male	1			1		
Female	1.12	0.25	0.72 - 1.75	0.84	0.27	0.45 - 1.58
Foster Care Variables at W1						
State of Residence while in Foster Care						
Iowa and Wisconsin	0.98	0.23	0.63 - 1.54	1.37	0.46	0.71 - 2.65
Illinois	1			1		
Number of:						
Foster Care Placements W1	1.02	0.02	0.99 - 1.06	0.99	0.03	0.94 - 1.04
Ran Away from Foster Care W1	1.01	0.02	0.98 - 1.05	0.99	0.03	0.93 - 1.04
Foster Care Placement Type W1						
Foster home, relative(s)	1			1		
Foster home, non-relative	0.99	0.27	0.57 - 1.70	1.18	0.45	0.55 - 2.49
Independent living	1.72	0.73	0.75 - 3.94	1.78	1.02	0.58 - 5.45
Group care/residential treatment/institution	1.05	0.38	0.52 - 2.13	1.26	0.60	0.49 - 3.23
Other	1.72	0.70	0.77 - 3.83	1.73	0.88	0.63 - 4.71

Ever Evicted W2-5	Bivariate Statistics (<i>N</i> = 436)			Logistic Regression (<i>N</i> = 436)		
	OR	SE	95% CI	OR	SE	95% CI
Employment Experience W1						
None	1			1		
Past	0.91	0.28	0.50 - 1.67	0.86	0.34	0.39 - 1.87
Current	0.68	0.22	0.36 - 1.29	0.73	0.32	0.31 - 1.74
Highest Education Level by W5						
Some High School	1			1		
High School/GED	0.68	0.23	0.35 - 1.33	0.96	0.44	0.39 - 2.33
Postsecondary	0.47	0.16	0.20 - 1.07	1.03	0.50	0.40 - 2.67
Living Children W1-5						
No	1			1		
Yes	1.67 *	0.42	1.02 - 2.73	1.90	0.64	0.98 - 3.67
Experienced Homelessness W3-5						
No	1			1		
Yes	3.32 *	0.78	2.09 - 5.27	2.33 *	0.77	1.21 - 4.47
Lived in Subsidized Housing W3-5						
No	1			1		
Yes	1.27	0.33	0.76 - 2.11	0.84	0.30	0.42 - 1.68
Occupancy Type W3						
Other	1			1		
Rents	0.68	0.16	0.44 - 1.07	0.46 *	0.16	0.22 - 0.99
Owns	0.38	0.29	0.08 - 1.73	0.41	0.41	0.06 - 2.88
Occupancy Type W4						
Other	1			1		
Rents	0.64	0.16	0.40 - 1.04	0.54	0.19	0.27 - 1.08
Owns	0.25	0.16	0.06 - 1.05	0.34	0.31	0.06 - 2.03

Ever Evicted W2-5	Bivariate Statistics (<i>N</i> = 436)			Logistic Regression (<i>N</i> = 436)		
	OR	SE	95% CI	OR	SE	95% CI
Occupancy Type W5						
Other	1			1		
Rents	0.41 *	0.11	0.23 - 0.73	0.54	0.19	0.27 - 1.08
Owns	0.19 *	0.10	0.06 - 0.62	0.77	0.57	0.18 - 3.27
Linked Lives Measures						
Perceived Relationship Quality w/Birth Mother						
Very Poor	1			1		
Fair	1.21	0.35	0.68 - 2.14	1.51	0.60	0.70 - 3.27
Very Good	1.24	0.36	0.70 - 2.21	1.57	0.64	0.71 - 3.49
Perceived Relationship Quality w/Birth Father						
Extremely Poor	1			1		
Poor	1.62	0.42	0.97 - 2.69	1.23	0.41	0.64 - 2.36
Good	1.61	0.46	0.92 - 2.83	1.39	0.53	0.65 - 2.95
Social Role Transitions: Economic Measures						
Economic Hardship W3	1.54 *	0.12	1.33 - 1.78	1.32 *	0.15	1.06 - 1.66
Economic Hardship W4	1.60 *	0.12	1.38 - 1.85	1.33 *	0.15	1.07 - 1.65
Economic Hardship W5	1.64 *	0.12	1.42 - 1.88	1.30 *	0.13	1.07 - 1.59
Food Insecurity W3						
Food secure	1			1		
Food insecure without hunger	2.26 *	0.73	1.09 - 4.68	1.02	0.45	0.43 - 2.42
Food insecure with hunger	2.91 *	0.92	1.43 - 5.92	1.39	0.67	0.54 - 3.58
Food Insecurity W4						
Food secure	1			1		
Food insecure without hunger	4.93 *	1.41	2.59 - 9.37	2.92 *	1.12	1.24 - 6.89
Food insecure with hunger	3.76 *	1.24	1.79 - 7.90	1.05	0.51	0.41 - 2.71

Ever Evicted W2-5	<u>Bivariate Statistics (N = 436)</u>			<u>Logistic Regression (N = 436)</u>		
	OR	SE	95% CI	OR	SE	95% CI
Food Insecurity W5						
Food secure	1			1		
Food insecure without hunger	1.87	0.59	0.92 - 3.79	0.63	0.26	0.28 - 1.44
Food insecure with hunger	6.40 *	2.25	2.91 - 14.06	1.40	0.72	0.51 - 3.83
Income W3	0.83	0.08	0.68 - 1.01	1.09	0.17	0.81 - 1.48
Income W4	0.88	0.07	0.75 - 1.03	1.09	0.15	0.83 - 1.43
Income W5	0.76 *	0.06	0.65 - 0.88	0.84	0.10	0.66 - 1.07
Constant				0.07 *	0.06	0.01 - 0.34

Chapter Six: Discussion

Overview

This chapter discusses the study results within the life course perspective (LCP) framework, using the LCP concepts of trajectories, social role transitions, linked lives, and social context, as well as the foster care and general housing literature. The study's unique contributions and limitations are identified. To conclude, relevant social work practice, policy implications, and areas for future research are outlined.

This study was informed by aspects of the life course perspective (LCP) and examined the housing trajectories and eviction experienced by young adults after aging out of foster care. Descriptively, the study asked what housing trajectories are experienced and what is the prevalence and frequency of eviction among the sample. Results suggest that youth transitioning from foster care to adulthood experience three distinct housing trajectories from age 21 to 26: insecure, precarious, and secure. Regarding eviction, analyses identify that just over one-fifth of young adults experienced at least one eviction between ages 19 and 26. Four-fifths of this group experienced eviction once and one-fifth experienced two to four evictions.

Hypotheses posited that young people with more challenging economic social role transitions would experience less secure housing trajectories and a greater likelihood of eviction. Income at wave 4 was the only economic measure associated with housing trajectories. This result offers limited support for the hypotheses connecting difficult economic social role transitions and housing trajectories. In contrast, compelling evidence supports the relationship between three waves of economic hardship and eviction, and limited evidence suggests an association between food insecurity at wave 4 and eviction. Analyses show no associations between income and eviction. Next, hypotheses indicated that young people who perceived

higher relationship quality with their birth mothers and fathers would experience more secure housing trajectories and a lower likelihood of eviction. No evidence supports these hypotheses. The racialized social context of housing and the economy in the United States led to hypotheses surmising Latinx ethnicity versus Black race and white versus Black young adults would experience more secure housing trajectories and a lower likelihood of eviction. Again, no evidence supports these hypotheses. The final hypotheses built on the previous and anticipated that the relationship between economic social role transitions, specifically economic hardship measures, and housing trajectories would be moderated by race and ethnicity; and that the same moderating effects would be true for relationships between the linked lives perceived relationship quality with birth mothers and fathers measures and housing trajectories. However, the evidence does not support these hypotheses.

Results show that sex, state of foster care residence, education level, having children, subsidized housing, and income at age 23 or 24 (wave 4) are significantly associated with housing trajectory class (i.e., secure versus precarious), holding all else constant. This study uniquely contributes to the foster care and housing literature by studying the housing trajectories of young adults aged 21 to 26, five to eight years after aging out of care, and using direct economic measures while adjusting for proxies like education and employment. Previous studies built the literature through ages 19 to 23 and used proxies for economic measures (Fowler et al., 2009; Hasson et al., 2017; Tyrell & Yates, 2017). The eviction results specify significant relationships between homelessness, occupancy type at age 21 (wave 3), economic hardship at age 21, 23 or 24, and 26 (waves 3, 4, and 5, respectively), and food insecurity at age 23 or 24 and eviction, net other model variables. This study component is novel for examining eviction among young people who aged out of foster care, among the first studies to do so.

Housing Trajectories

The first research question asked what housing trajectories young people transitioning from foster care to adulthood experience. The current study created the housing trajectory measure using multiple housing variables, including the security of living situation, occupancy type, homelessness, eviction, and household size, from three waves of survey data. The multidimensional housing trajectory measure distinguished insecure, precarious, and secure housing trajectories among young people aged out of care from age 21 (wave 3) to age 26 (wave 5). Previous studies identified similar trajectories longitudinally; however, the mean sample age was 18.5- to 20.5-years-old at outcome measurement and, except in one study, multidimensional constructs were limited to repeated measures of living situations categorized as literal homelessness, precarious, and stable housing¹⁵ and secure-independent, secure-dependent, semi-secure, and insecure housing arrangements¹⁶ (Fowler et al., 2009; Hasson et al., 2017; Tyrell & Yates, 2017). The current study extends what is known about housing trajectories among young people aged out of foster care from age 21 to 26. It builds on complex multidimensional housing measures, like Tyrell and Yates' nine-point housing quality scale (2017).¹⁷ The complex measure used in the current study facilitates a nuanced description of housing changes within groups and

¹⁵ Literal homelessness was defined as on the streets or in a shelter. Precarious housing was temporary residence with family or friends due to inability to afford other arrangements. And stable housing included co-residence with caregivers or own apartment (Fowler et al., 2009). Data was collected retrospectively with up to XX recall periods. Housing situations were analyzed in three-month increments.

¹⁶ For definitions, see Chapter 4: Methods, housing trajectories section, footnote number 8. Data were collected prospectively drawing from case notes and represented, on average, weekly points of contact for about eight-month periods of service (Hasson et al., 2017).

¹⁷ Tyrell and Yates (2017) used retrospective methods to collect data on nine elements of housing: place of residence, length of stay, number of bedrooms and bathrooms, number of occupants and relationship to respondents, respondent's share of rent or mortgage, and receipt of public housing subsidy or housing costs paid by a significant other. The nine variables were summed to create a scale indicating extremely low housing quality (rated 1) to extremely high housing quality (rated 9). Respondents were asked to recall this information at monthly intervals up to 24 months after exiting their final foster care placements.

characteristic differences between groups. The secure and insecure housing trajectory groups demonstrate less within group variation than the precarious group.

Insecure Housing Trajectories

Subsets of young people who exit care to adulthood are identified as consistently insecurely housed. Six percent of young adults in the current study face insecure housing from age 21 to 26. This builds on previous research that found between 4 and 20% of young people aged 17.5 to 20.5 experienced consistently insecure housing after exiting foster care (Fowler et al., 2009; Hasson et al., 2017). The current study used latent class methods like Fowler and colleagues (2009), and results from the two studies strengthen the evidence that a persistent, latent insecure housing trajectory group exists among young people who age out of foster care through their mid-twenties.

Young adults in insecure housing often confront homelessness, shelter living, and couch surfing (i.e., moving from place to place after short periods; McLoughlin, 2013), which is sometimes interchanged with doubling up (i.e., living with others due to insufficient financial resources to secure other housing; Wright et al., 1998) (Fowler et al., 2009; Hasson et al., 2017). The five-component insecure housing trajectory measure in this study shows that most young people report insecure housing (e.g., shelter stays, nights in a hotel, motel, or single-room occupancy, or time in jail, prison, or other correctional facilities), with a few who indicate staying in semi-secure settings (e.g., dormitories, military barracks, hospitals, treatment or rehabilitation centers). Notably, over time between one-tenth and one-quarter of this group also occasionally lives with others in secure-dependent situations, such as with birth parents, other relatives, or former foster parents. Further, members of the insecure group report occupying housing they neither rent nor own at ages 21 and 23 or 24, with less than one-fifth renting by age

26. Between one-fifth and one-quarter of the insecure group face homelessness, and over one-fifth report an eviction over time. The insecure group members also live in large households averaging five other people at ages 21 and 23 or 24 and four other people at age 26.

Homelessness is a severe form of housing instability. A sizable proportion of young people who age out of foster care subsequently face homelessness (Bender et al., 2015; Dworsky & Courtney, 2009; Firdion, 2004; Pecora et al., 2006; Prince et al., 2019; Yates & Grey, 2012). Over half of young adults who face homelessness contend with repeated and extended episodes between ages 21 and 23 (e.g., 50% had episodes of 8 days or longer in one study and in another the median episode length was 60 nights; Courtney et al., 2009; Courtney et al., 2021). Yet, few young people exiting care remain chronically homeless (Courtney et al., 2009; Courtney et al., 2021; Fowler et al., 2009; Hasson et al., 2017). The current findings suggest that some insecurely housed young people may find reprieve with family members and former foster parents after literal homeless episodes, shelter, motel, or single room occupancy stays, and following carceral detainment. Further, results suggest that episodes of insecurity may increase during economic shocks, like the Great Recession in 2009, which coincided with wave 4 data collection when young adults in this study were 23- to 24-years-old. The multidimensional measure components suggest that the episodes of insecurity in 2009 may be due to homelessness, which increased from wave 3 to 4, rather than eviction, which decreased from the previous wave for the insecure housing trajectory group. Findings also indicate that the housing difficulties faced by members with an insecure trajectory in 2009 persisted into 2011, when the high homeless rate continued, and evictions increased to the highest level for this group (21% of members reported an eviction).

In contrast to homelessness, couch surfing and doubling up have garnered less attention in the literature on transitions to adulthood from foster care. Studies document the phenomena as common with nearly 30% of 23- or 24-year-olds and one-quarter of 26-year-olds couch surfing in the year prior (Courtney et al., 2009; 2011). Qualitative studies suggest that some young people return home to live with a parent or relative, but due to parent or relative difficulties, or interpersonal conflicts, young people leave family homes and couch surf with friends (Perez & Romo, 2011; Rome & Raskin, 2019).

Doubling up in the transition from foster care to adulthood has not been explored explicitly, though measures in the current and other studies imply the phenomenon (Fowler et al., 2009; 2011). The housing literature on doubling up is better developed and suggests that respondents in the current study who neither rent nor own their housing (100% of the insecure group at age 21 and 23 or 24) and/or live in bigger households may be doubled-up. Studies link doubling-up with economic hardship (Richard et al., 2022; Vacha & Marin, 1993). However, distinguishing doubling up from voluntary co-residence, young adults returning to live with parents or relatives, and cultural practices of intergenerational living may be challenging. Thus, insecure housing trajectory members who find themselves in secure-dependent living situations (one-quarter of members at ages 21 and 26) also may be doubled up.

Within lower income households, doubling up allows for pooling limited resources to ward off literal homelessness after financial, housing, or relational shocks (e.g., job loss, eviction, relationship dissolution; Richard et al., 2022; Vacha & Marin, 1993). However, studies show that some doubled-up arrangements lead to increased financial and/or relational stress, and overcrowding (Skobba & Goetz, 2015; VanMeeter et al., 2022). Without a lease, guests are housed dependent on hosts' discretion, and they frequently feel uncertainty (Skobba & Goetz,

2015; VanMeeter et al., 2022). For these reasons, living doubled-up generally is considered tenuous and even an underrecognized form of homelessness (Richard et al., 2022; Vacha & Marin, 1993). Doubling up and couch surfing are strategies used to maintain a roof over one's head and require further study among young adults exiting foster care.

Precarious Housing Trajectories

The precarious housing trajectory group accounts for over two-fifths of the descriptive housing trajectory sample. This is the second largest of the three housing trajectory groups in the current study. Members experience changes in component housing measures as they age through young adulthood. Among the precarious housing trajectory group, half or more members live in secure-dependent situations at age 21 and 23 or 24; at age 26 the proportion drops to about two-fifths. Precarious group members also reside in secure-independent arrangements with more than one-third doing so at ages 21 and 23 or 24 and nearly half doing so at age 26. The remainder, about 1 in 10 members, face semi-secure or insecure episodes between age 21 and 26. Precarious group members move from majority occupancies where they neither rent nor own at ages 21 and 23 or 24 to becoming majority renters with a small proportion becoming owners by age 26. As precarious group members move toward increasingly independent housing, larger proportions of the group face episodes of homelessness (i.e., increases from 15 to 23%) and eviction (i.e., increases from 12 to 21%), equaling the eviction rate of the insecure housing trajectory group at age 26. Finally, the precarious housing trajectory members live with an average of three other people between ages 21 and 26.

Previous studies identify groups with housing trajectories that improve or worsen through the transition to adulthood. Studies demonstrate that the number of young people who live in secure-dependent arrangements declines over time in favor of secure-independent settings

(Fowler et al., 2009; 2011; Hasson et al., 2017). Additionally, Fowler and colleagues (2009) identified a group who lived in stable housing upon aging out of care and became unstably housed by their early twenties. Results from the current study suggest that these trajectories may be more complicated.

The current study's multidimensional measure shows that while young people become more independently housed, they also encounter precarity through increases in homelessness and eviction. This dynamic may be related to the effects of the Great Recession in 2008 and 2009. The eviction rate for the precarious group increases more sharply between waves 4 and 5 following the Great Recession than between waves 3 and 4 before and during the Great Recession. This is possible evidence for timing effects. In contrast, rates of homelessness increase at similar increments across the three waves, suggesting an upward trend perhaps unrelated to the Great Recession. Incorporating additional housing measures, like homelessness and eviction and potentially occupancy type and household size, would facilitate a greater understanding of housing trajectories among the younger groups with increasing or decreasing housing security identified in previous research (Fowler et al., 2009; 2011; Hasson et al., 2017). Otherwise, these middle groups will remain poorly understood and ineffectively supported toward secure housing.

Secure Housing Trajectories

In the current study, slightly more than half of the respondents lived in secure housing nearly continuously from age 21 to 26, the largest housing trajectory group. The secure group encompasses young people who primarily live on their own or with a partner in secure-independent arrangements, very few live in secure-dependent situations, and even fewer semi-securely or insecurely. This group largely rented their housing, though an increasing portion

owned their homes over time, and almost none lived in other occupancy arrangements. Homelessness and eviction among this group were relatively low and declined over time. Further, the secure housing group members lived in the smallest households, an average of two people plus the respondent at the three data collection waves.

Identification of young people who maintain secure housing is consistent with earlier work where the proportion of young people experiencing stable housing after aging out foster care ranged from 41% to 58% (Fowler et al., 2009; Fowler et al., 2011). The current and previous studies establish that multidimensional measures of housing security identify groups of young adults who obtain and maintain primarily secure housing after exiting care into their mid-twenties. These findings build on research from studies of homelessness that indicate a sizeable subset of young people formerly in foster care do not face homelessness in the years after system exit (Dworsky et al., 2013; O'Brien et al., 2010; Pecora et al., 2006; Prince et al., 2019).

Further, the multidimensional measure used in the current study encompasses housing dimensions in addition to homelessness, making the results more robust to understanding the types of housing security young people experience (i.e., secure-independent housing arrangements, renting or owning their housing, and living in smaller households) and the difficulties they still may face. For example, at age 21 (wave 3), among the secure group, one in five occupy housing they neither rent nor own, one in seven face homelessness, and one in twenty experience eviction. Despite this group's ability to recover from these challenges as evidenced by decreases in all three measures as they age, it is concerning that between ages 19 and 21 portions of this group face episodes of precarious and insecure housing as well. Future research that explores the events preceding precarious and insecure housing episodes among otherwise securely housed young people, and the actions they take to regain stability, will help

identify housing insecurity trigger events and the economic and human capital this group uses to bounce back from adversity.

Housing Trajectories and Economic Social Role Transitions

Economic social role transitions made a limited contribution to the housing trajectory model. As young people's income increased at age 23 or 24, wave 4 in 2009, they were one-third more likely to follow a secure rather than precarious housing trajectory in the years after aging out of care, net of the rest of the model. However, incomes at age 21 and 26 were not related to housing trajectory. One possible explanation for the timing of income's significance is the Great Recession which spanned 2008-2009. Young adult employment and earnings had been dropping and poverty rates increasing as part of a larger population trend prior to the Great Recession (Frye, 2013; Sironi, 2018; Sironi & Furstenberg, 2012; Wimer et al., 2020). And during the Great Recession, young people were increasingly employed in low-wage jobs (Sironi, 2018). Thus, young people in the current study whose employment and incomes remained steady during this period may have been protected from disruptions in housing due to income loss. Whereas peers whose employment and earnings decreased as part of the Great Recession did not have the financial resources to cover their housing costs and stave off eviction, which increased for the precarious housing trajectory group at this time.

Housing Trajectories and Linked Lives – Perceived Quality of Relationship with Birth Parents

Studies document that some young people return to live with their birth parents after aging out of foster care, though this is a poorly understood phenomena (see Havlicek, 2021 for review). One aim of the current study was to begin filling this research gap. Despite links between young people who age out of foster care and their birth parents, including co-residence at times, the perceived quality of relationship between young people and their birth mothers and

fathers were not significantly associated with housing trajectories. Several factors may contribute to the null finding. The measurement intervals of this study, which took place every two years, may be too infrequent to capture short-lived co-residence between young people who have exited care and a birth parent (Rome & Raskin, 2019; Iglehart & Becerra, 2002; Perez & Romo, 2011). Further, interpersonal conflict between young adults and their parent, parent personal problems, and young adults' unfulfilled hopes for reunification may undermine the potential benefits of these relationships as they relate to housing security (Rome & Raskin, 2019; Iglehart & Becerra, 2002; Perez & Romo, 2011). In short, the complexity of these relationships may not be captured in this measure of perceived relationship quality.

Housing Trajectories and Social Context – Racial Stratification

Results from this study, using interaction effects, did not support the hypotheses built on the racialized social contexts of housing, child welfare, or economic hardship in the United States. The literature continues to be mixed on the relationship between race and the multidimensional housing outcomes of youth transitioning from foster care to adulthood (Fowler et al., 2009; Hasson et al., 2017; Tyrell & Yates, 2017). This area deserves further exploration taking heed of critical reviews about how differential treatment and racism are measured in child welfare research like the one provided by Dettlaff and colleagues (2021). Several approaches are suggested. Using measures like perceived racial/ethnic discrimination, perceived racial/ethnic identity, and county or state-level disparity indices are recommended over measuring race alone to assess the relationship between race and social context (Dettlaff et al., 2021).

Further, collaborating with Black, Latinx, and other people of color who aged out of foster care to incorporate their unique perspectives on how race, ethnicity, discrimination, and racism factor into their experiences of housing, employment, and earnings, for example, may

also help develop measures that capture how social stratification works during this transition period (Dettlaff et al., 2021). Theoretical frameworks like critical race theory, the integrative model of developmental competencies in minority children, and the social context component of the life course perspective identify how race is embedded in all structures (e.g., child welfare, housing, education, employment, income, etc.) in the U.S. (Constance-Huggins, 2012; Elder et al., 2015; Garcia Coll et al., 1996; Tumin, 1967). Future research employing these suggestions is recommended.

Housing Trajectories, Foster Care Experiences, and Control Variables

Young people who lived in foster care in Iowa and Wisconsin were twice as likely to follow secure over precarious housing trajectories. This may be related to young people in these states having exited the foster care system at age 18, as per state laws at the time, and having more time to find their way to secure housing by age 21 (Courtney et al., 2004). The multidimensional measure of housing in this study drew variables beginning at age 21. This timing may have missed earlier insecure or precarious housing experiences among the groups from Iowa and Wisconsin compared to the group from Illinois which exited care by age 21.

Sex, education, children, and subsidized housing were also important in this study. Young women were two and a half times more likely to follow a secure than precarious housing trajectory, a finding consistent with previous studies of young people exiting care and multidimensional housing outcomes (Hasson et al., 2017; Reynolds et al., 2018; Tyrell & Yates, 2017). This is typically attributed to women achieving higher education levels, less criminal legal system involvement, and custodial parenting compared with men, as each is associated with higher housing security for young people aging out of foster care (Courtney et al, 2011). Higher education levels have been associated with secure housing trajectories; however, the results in

the current study are confounding (Hasson et al., 2017; Reynolds et al., 2018; Tyrell & Yates, 2017). Specifically, three times as many young people with any postsecondary education compared to a high school diploma or GED were in the secure than precarious trajectory group, but the same was not true for any postsecondary versus some high school education. As such, these findings should be viewed cautiously. Young people who have children before or after aging out of foster care experience more secure housing compared to young people who do not have children, as is the case in previous studies (see Tyrell & Yates, 2017 for discussion).

Finally, access and uptake of subsidized housing among young people who exit care to adulthood is supportive of a secure housing trajectory (e.g., associated with following a secure housing trajectory at three times the rate of young people without housing subsidy). Access to affordable housing functions as intended to stabilize living arrangements for the young people in this study with subsidy access. The current finding fits within the housing literature which demonstrates that low-income families who gain access to housing subsidies experience greater housing security (Kim et al., 2017; Sandel et al., 2009). Qualitative research found that low-income women who had a housing voucher described experiencing less housing precarity even following periods of unstable work and relationship disruption (Skobba, 2016). The transition from foster care to adulthood field would benefit from more research in this area.

Eviction

The current study lays the foundation for the study of eviction among young people who exit foster care to adulthood. Descriptive statistics reveal that more than one-fifth of young adults experienced an eviction between age 19 and 26. This is seven times the estimated eviction rate at the height of eviction in the U.S., which peaked in 2006 during the housing bubble before the Great Recession (Desmond et al., 2018). However, this rate is on par with a sample of women

from Michigan who currently or previously accessed public assistance (Phinney et al., 2007).

Among young people in the current study who faced eviction, one-fifth faced repeated evictions (from 2 to 4 evictions). This study establishes the evidence that young people transitioning from foster care to adulthood are at elevated risk for eviction between ages 19 and 26. Factors related to eviction are discussed next.

Eviction and Economic Social Role Transitions

Economic social role transitions, specifically economic hardship, at ages 21, 23 or 24, and 26 are related to eviction experienced by young people in this study. Previous housing literature research also documented the connection between economic hardship and eviction among various adult samples, including nationally representative samples (King, 2018; see Tsai & Huang for a review). At age 23 or 24, in 2009, young people in the current study who faced food insecurity without hunger were nearly three times more likely to report an eviction between ages 19 and 26 than young adults who were food secure. However, this finding must be considered cautiously because no evidence suggests a relationship between food insecurity with hunger (versus food secure) and eviction risk. In previous studies with adults, people who faced food insecurity were at greater risk for eviction, but this association was mediated by economic hardship (King, 2018). Additional research exploring these mediation effects will be important to understanding eviction among young adults exiting care. Finally, no relationship between income and eviction was found in the current study. Previous research tends to use financial hardship, poverty, and proxy measures rather than income in eviction analyses and when income is used results have been mixed (Desmond & Gershenson, 2017; Desmond et al., 2015; King, 2018; Lee & Evans, 2020). The current correlations between income, economic hardship, and food insecurity allowed for inclusion of all three measures for three study waves. If this is the

case in future studies, including the three economic measures may be helpful for further understanding of how economic social role transitions differentially relate to eviction among youth who exit care to adulthood. Differentiating the role of each measure directs us to potentially unique intervention strategies (e.g., access to the Supplemental Nutrition Assistance Program (SNAP), direct income support, etc.).

Eviction and Linked Lives – Perceived Quality of Relationship with Birth Parents

Young people with varying degrees of perceived quality of relationship with their birth mother and fathers showed no differences in eviction in the current study. Research on social support and eviction indicates that network disadvantage is associated with higher likelihood of eviction (Desmond & Gershenson, 2017). Additional research using network-based measures may be helpful. The life course perspective linked lives concept and emphasis on promoting interdependence in the transition to adulthood from foster care call for additional research on how supportive relationships relate to eviction, perhaps using measures of network advantage and disadvantage will move this inquiry forward.

Eviction and Social Context – Racial Stratification

As a variable in the main effects model, race and ethnicity were not associated with eviction in this study. However, previous studies of eviction have identified greater risk for eviction among Black and Latinx renters compared to white and Black and Latinx female renters as compared to male renters (Hepburn et al., 2020; Robinson & Steil, 2021). As discussed in the housing trajectory section, different approaches to measurement of the racialized social context of housing in the U.S., including using perceived racial/ethnic discrimination or perceived racial/ethnic identity measures and county or state-level disparity indices (Dettlaff et al., 2021).

As an example, neighborhood racial and ethnic composition has been associated with eviction, thus multilevel modeling may help pursue this line of research.

Eviction, Foster Care Experiences, and Control Variables

None of the current study's foster care experience variables were related to eviction. It will be important for future studies to investigate potential relationships using different datasets, ideally with representative samples of young people exiting care. Homelessness is associated with eviction in the current study, which is supported by evidence linking these disruptive housing experiences in the housing literature (Cusack & Montgomery, 2017; Desmond & Kimbro, 2015). The measures of eviction and homelessness used in the current study captured any reports of eviction between ages 19 and 26 and homelessness between the ages of 18 and 26, so the temporal order of eviction and homelessness is not established in this study. However, research on eviction among adults documents that eviction is a precursor to homelessness (Cusack & Montgomery, 2017; Desmond & Kimbro, 2015). Given the high rates of homelessness among young people who exit care to adulthood and the lack of eviction measures in many previous studies, eviction measures should be included in future data collection efforts. If eviction is also a precursor to homelessness among young people exiting foster care to adulthood, eviction prevention and intervention efforts may also reduce episodes of homelessness.

Finally, at age 21 renter status is protective against eviction as opposed to a housing status where the young person is neither renter nor owner. This finding may be uncovering the experience of informal eviction among young people who are doubled up, an arrangement that previous research shows is precarious (Skobba & Goetz, 2015). The timing of this needs to be investigated further. It may be attributed to less experience in earlier adulthood navigating

potential complications in doubled-up arrangements from contributing to household expenses to interpersonal dynamics identified in previous studies of young people in the first year or two after aging out of foster care (Rome & Raskin, 2019; Perez & Romo, 2011). Future research on the benefits of lease-holding among young people transitioning from care to adulthood would help build information about the protective nature of renting.

Limitations

There are several limitations to this study. The data do not constitute a representative sample of the population of youth exiting foster care to adulthood in Illinois, Iowa, or Wisconsin, therefore the results may have not be generalizable to the foster care population in these states. Several important variables associated with housing outcomes in previous studies were not available in the Midwest Study dataset, such as age at entry into foster care and reason for removal/placement into foster care. While the response rates for the Midwest Study were high, participants were lost to follow-up over time. Further, the analytic samples differ from those excluded from the samples due to missing data for both the housing trajectories and eviction models. However, the people missing shared characteristics that are generally associated with difficult housing outcomes, for example lower education levels in both the housing trajectory and eviction samples and in the eviction sample Black, Latinx, and male respondents, so the estimates of precarious housing trajectory and eviction may be conservative (Hasson et al., 2017; Hepburn et al., 2020; Reynolds et al., 2018; Robinson & Steil, 2021). Due to the small number of respondents who reported an eviction at each wave, the eviction outcome variable was aggregated from wave 2 through 5 so the timing effects in the eviction model could not be assessed in the current study.

Implications for Social Policy and Social Work Practice

Study findings have important implications for social policy and social work practice. Policies that provide young people exiting foster to adulthood with universal access to affordable housing must be passed. Currently, an estimated 7.5% to 22% (in the current analytic sample) of young people transitioning from care to adulthood use a housing subsidy (Berzin et al., 2011). A recent study found that youth had decreased odds of homelessness in states that spent 30% of their federal Chafee Foster Care Independence Act (CFCIA) funding, the maximum allowed, on housing support for young people entering adulthood from foster care compared to states that spent less (Prince et al., 2019). This funding source is available now, however as of 2017 only eight states reported using the full 30% of CFCIA funds toward housing for youth between ages 18 and 21 (or 23 in states with extended foster care), another six used 20 to 29%, and 20 states plus Puerto Rico allocated 1 to 19% (Fernandes-Alcantara & McCarty, 2021). States not using the full allocation of funds toward room and board may have access to other sources of housing support through alternative agreements, like projects in Kentucky, Delaware, and New Mexico that partner with the state housing agency or non-profit organizations to provide affordable housing for some youth exiting care (Pergamit et al., 2012).

Another avenue for funding universal affordable housing access is through expanding and expediting access to public housing and housing choice vouchers administered through the Family Unification Program for Youth (FUPY) and Foster Youth to Independence Program (FYIP), the latter two funded through the U.S. Department of Housing and Urban Development (HUD; Fernandes-Alcantara & McCarty, 2021). FUPY has gained more attention in recent years. Previous studies found that few vouchers were held by youth as compared to families, which launched attention into the underuse of this program for youth (Dion et al., 2014; Dworsky et al.,

2017). According to a 2022 report, FUPY is ready to be evaluated (Pergamit et al., 2022). FYIP was launched by HUD in 2019 and has yet to be evaluated. Nearly all the programs mentioned here require young adults to locate private housing after securing financial assistance or obtaining a voucher. Due to the shortage of affordable housing and property owners willing to take housing vouchers, federal, state and local governments need to write and pass policies to make housing more affordable, including building new housing units (Fowler & Farrell, 2017; Pergamit et al., 2012; Pergamit et al., 2022).

Short of access to universal affordable housing, full allocation of CFCIA funds in each state or the measurable equivalent via other agreements and expansion of young adult access to public housing, FUPY, and FYIP are avenues to ensuring that young people are leaseholders and possess tenancy rights. This may help reduce the precarity of doubling up. These programs set rent at 30% of one's income which may also reduce episodes of homelessness and eviction among young people in all three housing trajectories (Fernandes-Alcantara & McCarty, 2021). Finally, affordable housing may also reduce economic hardship and subsequently eviction among young people exiting foster care to adulthood.

This study has implications for strategies to improve housing outcomes by improving the economic circumstances of young people who age out of foster care. Universal basic income (UBI) or guaranteed income (GI) programs are being implemented and evaluated among population segments of young adults formerly in care (Amon, 2021; Miranda, 2021; Opilo, 2022). UBI and GI programs have proven effective in alleviating economic insecurity among people living below or just above the federal poverty line and reducing purchases of alcohol and cigarettes (Evans & Popova, 2016; see Hasdell, 2020 for review; Marinescu, 2018). Studies consistently demonstrate that people who receive UBI or GI spend the money on necessities,

increase or maintain the number of hours they work, and begin saving for their futures (Banerjee et al., 2017; see Hasdell, 2020 for review). UBI and GI programs hold promise for improving the economic circumstances of young people transitioning to adulthood from foster care and thereby potentially reducing eviction and improving overall housing security.

Further, studies of Opportunity Passport, a program designed for youth in foster care to engage in real-life activities to manage their money effectively, including investing in savings and other assets are promising (Peters et al., 2014; 2016). The studies found that participants benefited from hands-on financial management experience and saw the connections between what they were learning and a successful transition to adulthood. The findings also revealed that adults working with young people in care need to have the knowledge of and experience with financial literacy to support youth in learning and practicing these skills. Programs like Opportunity Passport must be invested in by state and county child welfare agencies (see Edelstein & Lowenstein, 2014 for a review of programs and evidence of efficacy).

Finally, young people exiting care rely on other people for housing or share housing commonly, regardless of housing trajectory group, after aging out of care and into their mid-twenties. These findings suggest that, within the foster care system, mechanisms for supporting youth to learn and practice skills to navigate living with others are essential. Importantly, relational skills like communication, cooperation, negotiation, and conflict resolution may also benefit foster caregivers and staff and further equip these adults to work with youth in care. Self-regulation strategies are imperative to the skills just mentioned (Fowler & Farrell, 2017). Practicing these skills in current relationships while young people are in care may provide youth the experience needed to resolve conflict and negotiate expectations that will inevitably arise in shared living situations in early adulthood and beyond.

Moreover, doubled-up living arrangements often occur within one's social network. This suggests that case workers and foster caregivers should guide youth in identifying network members who might provide emergency housing and other housing-related support (Skobba & Goetz, 2015). Identifying network members should be integrated into youth's transition or independent living planning and may yield additional relational resources that could be strengthened before youth exit care. After aging out, these relationships may be more readily available when young people need support, including co-residence.

Future research is needed to enhance our understanding of the housing trajectories and eviction experienced by young people exiting foster care to adulthood. Using multidimensional measures of housing security in combination with individual measures may yield deeper understanding of complex housing dynamics. Better understanding the components and the whole of each housing trajectory may indicate where and when interventions are needed and potentially inform how to prepare youth in foster care more effectively for their transitions to housing when they exit care. Future research testing how repeated episodes of eviction and homelessness and extended episodes of the later may differ across the three housing trajectory groups would further inform risk dispersion between groups and suggest where the most intensive resources need to be directed. Exploring when and how young people who age out of foster care enter and exit doubled-up households would help ascertain what doubling up looks like among this subset of young adults. Further, qualitative inquiry into the trigger events that lead to eviction and episodes of homelessness among young people in secure housing trajectories and how they regain stability likely will point to how their experiences resemble and differ from members of precarious and insecure housing trajectory groups. This information could help

identify needs and skill sets that may be unique to the secure trajectory group, inform prevention approaches, and suggest ways to assist the precarious and insecure groups more effectively.

Evidence is growing that young people exiting care experience insecure and precarious housing trajectories upon leaving care and through their mid-twenties (Fowler et al., 2009; 2011; Hasson et al., 2017; Tyrell & Yates, 2017). Developing and implementing effective prevention and intervention approaches is critical. Subsidized housing, building financial capabilities, and the suite of relational skills described earlier may help reduce difficult housing trajectories and eviction. These strategies must be developed and evaluated in combination to determine the extent to which they disrupt longer-term instability patterns.

Studies suggest that accessing entitlements and benefits are protective against precarious housing and eviction (Lundberg et al., 2021). Thus, future research studying how receipt of government entitlements and benefits relate to housing security and eviction among the population of young people formerly in foster care is necessary. Finally, the National Youth in Transition surveys, administered by states and funded by the Chafee Foster Care Independence Act, currently only collect information on homelessness, employment, and education. Based on the results of the current study, the surveys need to be revised to include questions on economic hardship, eviction, current living situation, occupancy type, and household size so that housing security can be studied more effectively.

Appendices

Appendix A

Descriptive Statistics Used to Name the Three PQoR with Birth Mother Classes

Perceived Quality of Relationship with Birth Mother Latent Classes	<u>Class 1</u> Very Poor (<i>n</i> = 158)	<u>Class 2</u> Fair (<i>n</i> = 211)	<u>Class 3</u> Very Good (<i>n</i> = 201)
Variables Used in Latent Class Analysis	%	%	%
Contact Frequency with Birth Mother W1			
Never	81.01	40.48	21.21
Several times per year or less	15.82	30.95	25.25
One to three times monthly	2.53	17.14	23.74
One to three times weekly	0.63	8.57	20.71
Nearly every day	0.00	2.86	9.09
Contact Frequency with Birth Mother W2			
Never	76.15	24.47	16.96
Several times per year or less	16.92	32.98	15.20
One to three times monthly	1.54	25.00	19.30
One to three times weekly	3.08	7.98	18.13
Nearly every day	2.31	9.57	30.41
Contact Frequency with Birth Mother W3			
Never	74.82	8.90	0.00
Several times per year or less	16.55	21.99	3.98
One to three times monthly	6.47	30.89	6.82
One to three times weekly	0.00	25.13	24.43
Nearly every day	2.16	13.09	64.77
Contact Frequency with Birth Mother W4			
Never	78.17	10.88	3.65
Several times per year or less	15.49	19.17	0.52
One to three times monthly	5.63	26.94	10.94
One to three times weekly	0.00	31.09	26.04
Nearly every day	0.70	11.92	58.85
Contact Frequency with Birth Mother W5			
Never	79.11	14.29	4.48
Several times per year or less	14.56	16.19	2.99
One to three times monthly	2.53	23.81	6.47
One to three times weekly	1.90	31.90	30.35
Nearly every day	1.90	13.81	55.72

Perceived Quality of Relationship with Birth Mother Latent Classes	<u>Class 1</u> Very Poor (<i>n</i> = 158)	<u>Class 2</u> Fair (<i>n</i> = 211)	<u>Class 3</u> Very Good (<i>n</i> = 201)
Variables Used in Latent Class Analysis	%	%	%
Perceived Closeness with Birth Mother W1			
Not at all close	59.78	18.60	3.51
Not very close	15.22	20.93	8.19
Somewhat close	23.91	34.30	22.22
Very close	1.09	26.16	66.08
Perceived Closeness with Birth Mother W2			
Not at all close	63.33	16.75	0.58
Not very close	20.00	17.28	3.49
Somewhat close	11.11	41.36	21.51
Very close	5.56	24.61	74.42
Perceived Closeness with Birth Mother W3			
Not at all close	73.53	20.00	0.57
Not very close	14.71	23.78	0.57
Somewhat close	10.29	43.78	26.70
Very close	1.47	12.43	72.16
Perceived Closeness with Birth Mother W4			
Not at all close	85.19	17.93	1.06
Not very close	8.64	24.46	1.06
Somewhat close	3.70	50.00	24.47
Very close	2.47	7.61	73.40
Perceived Closeness with Birth Mother W5			
Not at all close	93.62	18.27	1.54
Not very close	0.00	25.38	2.05
Somewhat close	5.32	43.15	28.72
Very close	1.06	13.20	67.69

Appendix B

Descriptive Statistics Used to Name the Three PQoR with Birth Father Classes

Perceived Quality of Relationship with Birth Father Latent Classes	<u>Class 1</u> Extremely Poor <i>(n = 281)</i>	<u>Class 2</u> Poor <i>(n = 180)</i>	<u>Class 3</u> Good <i>(n = 109)</i>
Variables Used in Latent Class Analysis	%	%	%
Contact Frequency with Birth Father W1			
Never	94.31	60.56	27.78
Several times per year or less	4.63	25.56	27.78
One to three times monthly	0.71	8.89	23.15
One to three times weekly	0.36	5.00	12.96
Nearly every day	0.00	0.00	8.33
Contact Frequency with Birth Father W2			
Never	90.83	48.68	12.50
Several times per year or less	5.42	27.63	29.17
One to three times monthly	1.67	15.13	14.58
One to three times weekly	0.42	6.58	23.96
Nearly every day	1.67	1.97	19.79
Contact Frequency with Birth Father W3			
Never	95.97	13.16	0.99
Several times per year or less	4.03	42.11	2.97
One to three times monthly	0.00	21.05	27.72
One to three times weekly	0.00	14.47	32.67
Nearly every day	0.00	9.21	35.64
Contact Frequency with Birth Father W4			
Never	89.92	17.50	4.81
Several times per year or less	6.98	35.00	0.00
One to three times monthly	1.16	32.50	25.96
One to three times weekly	1.16	10.63	34.62
Nearly every day	0.78	4.38	34.62
Contact Frequency with Birth Father W5			
Never	89.68	23.33	5.50
Several times per year or less	6.76	31.11	1.83
One to three times monthly	2.14	23.33	28.44
One to three times weekly	1.07	18.89	30.28
Nearly every day	0.36	3.33	33.94

Perceived Quality of Relationship with Birth Father Latent Classes	<u>Class 1</u> Extremely Poor (<i>n</i> = 281)	<u>Class 2</u> Poor (<i>n</i> = 180)	<u>Class 3</u> Good (<i>n</i> = 109)
Variables Used in Latent Class Analysis	%	%	%
Perceived Closeness with Birth Father W1			
Not at all close	84.65	37.58	3.13
Not very close	5.94	24.83	4.17
Somewhat close	6.44	25.50	29.17
Very close	2.97	12.08	63.54
Perceived Closeness with Birth Father W2			
Not at all close	83.42	40.00	2.06
Not very close	7.49	18.00	4.12
Somewhat close	7.49	28.00	32.99
Very close	1.60	14.00	60.82
Perceived Closeness with Birth Father W3			
Not at all close	93.94	33.33	2.97
Not very close	6.06	21.09	3.96
Somewhat close	0.00	36.05	43.56
Very close	0.00	9.52	49.50
Perceived Closeness with Birth Father W4			
Not at all close	92.07	31.01	0.98
Not very close	6.10	25.32	2.94
Somewhat close	0.00	36.08	36.27
Very close	1.83	7.59	59.80
Perceived Closeness with Birth Father W5			
Not at all close	94.02	34.32	4.72
Not very close	1.09	19.53	3.77
Somewhat close	2.72	36.09	32.08
Very close	2.17	10.06	59.43

Appendix C

Economic Hardship Descriptive Statistics by Wave

Economic Hardship Questions (12-month reference period)	Wave 3		Wave 4		Wave 5	
	<u>(N = 591)</u>		<u>(N = 602)</u>		<u>(N = 596)</u>	
	N	%	N	%	N	%
Was there ever a time when you did not buy clothing or shoes that you needed because you did not have enough money?						
No	343	58.04	356	59.14	356	59.73
Yes	213	36.04	227	37.71	226	37.92
Missing	35	5.92	19	3.16	14	2.35
Was there ever a time when you could not pay your rent or mortgage because you did not have enough money?						
No	409	69.20	417	69.27	419	70.30
Yes	147	24.87	166	27.57	162	27.18
Missing	35	5.92	19	3.16	15	2.52
Was there ever a time when you could not pay a utility bill because you did not have enough money? By utility bill, I mean a bill for gas, electricity, or telephone service.						
No	409	69.20	425	70.60	399	66.94
Yes	147	24.87	157	26.08	183	30.70
Missing	35	5.92	20	3.33	14	2.35
Was your telephone service shut off at any time because you did not have enough money to pay your bill?						
No	374	63.28	407	67.61	416	69.80
Yes	182	30.80	176	29.24	166	27.85
Missing	35	5.92	19	3.16	14	2.35
Was your gas or electricity shut off at any time because you did not have enough money to pay your bill?						
No	511	86.46	532	88.37	504	84.56
Yes	46	7.78	51	8.47	78	13.09
Missing	34	5.75	19	3.16	14	2.35

Appendix D

USDA Food Insecurity Scale Constructs and Related Questions by Increasing Severity and Instructions for Scoring and Score Ranges for 2- and 3-level Measures

Question Number	Food Insecurity Construct Descriptions and Related Questions by Increasing Severity (12-month reference period)	Instructions for Dichotomous Scoring	
		Negative Response (Code = 0)	Positive Response (Code = 1)
Anxiety or perception of inadequate food budget or supply in the household			
Q2	You worried whether your food would run out before you got money to buy more.	Never true	Often true; Sometimes true
Q3	The food that you bought just didn't last and you didn't have enough money to buy more.	Never true	Often true; Sometimes true
Perceptions of inadequate quality of food eaten in the household			
Q4	You couldn't afford to eat balanced meals.	Never true	Often true; Sometimes true
Reported instances or consequences reduced food intake			
Q8	Did you (or any of the other adults in your household) cut the size of your meals or skip meals because there was not enough money for food?	No	Yes
Q8a ^a	How often did this happen during the past 12 months?	Only 1 or 2 months; or "no" on Q8	Almost every month; Some months but not every month
Q9	Did you eat less than you felt you should because there wasn't enough money to buy food?	No	Yes
Q10	Were you ever hungry but didn't eat because you couldn't afford enough food?	No	Yes
Q11	Did you lose weight because there wasn't enough food?	No	Yes
Q12	Did you (or any of the other adults in your household) not eat for a whole day because there wasn't enough money for food?	No	Yes
Q12a ^a	How often did this happen during the past 12 months?	Only 1 or 2 months; or "no" on Q12	Almost every month; Some months but not every month

Measure levels	Scoring instructions	Score range and label		
2	Sum positive responses.	0 – 2		3 – 8 ^b
		Food secure		Food insecure
3	Sum positive responses.	0 – 2	3 – 5	6 – 8 ^b
		Food secure	Food insecure without hunger	Food insecure with hunger

Note. Adapted from Bickel et al. (2000), Exhibits 2-2 and 3-1.

^a Questions Q8a and Q12a were not asked consistently across survey waves and were dropped from the scale scoring.

^b When using the full USDA Food Security scale, the upper range would be 10.

Appendix E

USDA Food Insecurity Descriptive Statistics by Wave

Food Insecurity Questions (12-month reference period)	Wave 3 (N = 591)		Wave 4 (N = 602)		Wave 5 (N = 596)	
	N	%	N	%	N	%
You worried whether your food would run out before you got money to buy more.						
Never true	369	62.44	353	58.64	360	60.40
Sometimes true	141	23.86	168	27.91	179	30.03
Often true	47	7.95	61	10.13	42	7.05
Missing	34	5.75	20	3.33	15	2.52
The food that you bought just didn't last and you didn't have enough money to buy more.						
Never true	385	65.14	373	61.96	383	64.26
Sometimes true	133	22.50	169	28.07	157	26.34
Often true	39	6.60	40	6.64	41	6.88
Missing	34	5.75	20	3.33	15	2.52
You couldn't afford to eat balanced meals.						
Never true	421	71.24	421	69.93	456	76.51
Sometimes true	79	13.37	116	19.27	88	14.77
Often true	57	9.64	44	7.31	37	6.21
Missing	34	5.75	21	3.49	15	2.52
Did you (or any of the other adults in your household) cut the size of your meals or skip meals because there was not enough money for food?						
No	456	77.16	477	79.24	492	82.55
Yes	101	17.09	105	17.44	89	14.92
Missing	34	5.75	20	3.33	15	2.52
Did you eat less than you felt you should because there wasn't enough money to buy food?						
No	450	76.14	483	80.23	480	80.54
Yes	107	18.10	99	16.45	101	16.95
Missing	34	5.75	20	3.33	15	2.52
Were you ever hungry but didn't eat because you couldn't afford enough food?						
No	466	78.85	497	82.56	497	83.39
Yes	91	15.40	86	14.29	85	14.26
Missing	34	5.75	19	3.16	14	2.35
Did you lose weight because there wasn't enough food?						
No	505	85.45	526	87.38	536	89.93
Yes	50	8.46	52	8.64	42	7.05
Missing	36	6.09	24	3.99	18	3.02

Food Insecurity Questions (12-month reference period)	Wave 3		Wave 4		Wave 5	
	<i>(N = 591)</i>		<i>(N = 602)</i>		<i>(N = 596)</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Did you (or any of the other adults in your household) not eat for a whole day because there wasn't enough money for food?						
No	498	84.26	537	89.20	552	92.62
Yes	59	9.98	46	7.64	29	4.87
Missing	34	5.75	19	3.16	15	2.52

Appendix F

Analytic versus Excluded Sample Comparisons for Housing Trajectories

Variables	Analytic Sample		Excluded Sample		Difference
	<i>n</i>	%	<i>n</i>	%	<i>p</i> -value
Race and ethnicity					0.293
Black	220	72.61	83	27.39	
Latinx	33	71.74	13	28.26	
White	139	79.89	35	20.11	
Other	29	70.73	12	29.27	
Gender					0.111
Male	171	71.25	69	28.75	
Female	250	77.16	74	22.84	
Foster Care Variables at W1					
State of residence while in foster care					0.134
Iowa and Wisconsin	165	78.20	46	21.80	
Illinois	256	72.52	97	27.48	
Number of:	M	sd	M	sd	
Foster care placements (range: 1-42)	5.61	5.91	5.55	4.90	0.918
Times ran away from placement (0-21)	2.64	5.60	3.29	6.12	0.247
	<i>n</i>	%	<i>n</i>	%	
Foster care placement type					0.095
Foster home, relative(s)	128	72.32	49	27.68	
Foster home, non-relative	166	79.05	44	20.95	
Independent living	31	73.81	11	26.19	
Group care/residential					
treatment/institution	62	65.96	32	34.04	
Other	34	82.93	7	17.07	
Employment experience					0.301
None	67	70.53	28	29.47	
Past	190	73.36	69	26.64	
Current	164	78.10	46	21.90	
Highest education level by W5					* 0.034
Some high school	44	67.69	21	32.31	
High school or GED	172	80.75	41	19.25	
Postsecondary	205	82.00	45	18.00	
Any children W1-5					0.366
No	139	77.22	41	22.78	
Yes	282	80.57	68	19.43	
Lived in subsidized housing W3-5					0.142
No	326	78.55	89	21.45	
Yes	95	84.82	17	15.18	

Appendix G

Analytic versus Excluded Sample Comparisons for Eviction

Variables	Analytic Sample		Excluded Sample		Difference
	<i>n</i>	%	<i>n</i>	%	<i>p</i> -value
Race and ethnicity					* 0.043
Black	230	58.38	164	41.62	
Latinx	34	55.74	27	44.26	
White	140	69.65	61	30.35	
Other	32	60.38	21	39.62	
Gender					* <0.001
Male	186	54.71	154	45.29	
Female	250	67.75	119	32.25	
Foster Care Variables at W1					
State of residence while in foster care					* 0.009
Iowa and Wisconsin	170	68.00	80	32.00	
Illinois	266	57.95	193	42.05	
Number of:	M	sd	M	sd	
Foster care placements (range: 1-42)	5.61	0.28	6.16	0.35	0.24
Times ran away from placement (0-21)	2.70	0.27	3.25	0.37	0.226
	<i>n</i>	%	<i>n</i>	%	
Foster care placement type					* 0.014
Foster home, relative(s)	133	61.01	85	38.99	
Foster home, non-relative	170	66.41	86	33.59	
Independent living	33	55.93	26	44.07	
Group care/res. treatment/institution	64	50.79	62	49.21	
Other	36	73.47	13	26.53	
Employment experience					0.155
None	72	58.54	51	41.46	
Past	200	59.17	138	40.83	
Current	164	66.40	83	33.60	
Highest education level by W5					* 0.003
Some high school	49	59.76	33	40.24	
High school or GED	181	76.37	56	23.63	
Postsecondary	206	77.74	59	22.26	
Any children W1-5					0.096
No	147	73.50	53	26.50	
Yes	289	74.68	98	25.32	
Homeless W3-5					* 0.046
No	313	77.67	90	22.33	
Yes	123	69.89	53	30.11	
Lived in subsidized housing W3-5					0.093
No	339	73.38	123	26.62	
Yes	97	80.83	23	19.17	

Appendix H

Correlation Matrix of Predictor Variables

Variables	State	Race and ethnicity	Sex	# Foster care placements	# Times ran away	Foster care placement type
State in foster care	1					
Race and ethnicity	0.33	1				
Sex	0.10	0.11	1			
# Foster care placements W1	0.13	0.24	-0.03	1		
# Times ran away from foster care W1	0.15	0.19	0.01	0.40	1	
Foster care placement type W1	0.18	0.18	0.16	0.33	0.32	1
Employment experience W1	0.18	0.09	0.09	0.23	0.23	0.17
Highest education level by W5	0.25	0.12	0.10	0.30	0.24	0.18
Any children W1-5	0.13	0.13	0.21	0.02	0.04	0.20
Homeless W3-5	0.03	0.03	0.05	0.24	0.19	0.16
Subsidized housing W3-5	0.02	0.11	0.20	0.08	0.00	0.10
Occupancy type W3	0.18	0.17	0.15	0.27	0.17	0.17
Occupancy type W4	0.08	0.19	0.19	0.25	0.19	0.12
Occupancy type W5	0.08	0.24	0.16	0.21	0.11	0.11
PQoR with birth mother	0.03	0.12	0.05	0.28	0.22	0.14
PQoR with birth father	0.05	0.06	0.01	0.24	0.19	0.16
Economic hardship W3	0.06	0.08	0.23	0.09	0.04	0.05
Economic hardship W4	0.06	0.19	0.19	0.04	0.04	0.11
Economic hardship W5	0.11	0.15	0.12	0.10	0.06	0.10
Food insecurity W3	0.04	0.11	0.17	0.28	0.27	0.11
Food insecurity W4	0.04	0.05	0.14	0.27	0.24	0.13
Food insecurity W5	0.05	0.04	0.06	0.34	0.25	0.09
Income W3	0.20	0.18	0.16	0.27	0.25	0.15
Income W4	0.14	0.16	0.18	0.26	0.29	0.15
Income W5	0.17	0.12	0.13	0.23	0.23	0.13

Appendix H

Correlation Matrix of Predictor Variables (continued)

Variables	Employment experience	Highest education level	Any children	Homeless	Subsidized housing	Occupancy type W3
State in foster care						
Race and ethnicity						
Sex						
# Foster care placements W1						
# Times ran away from foster care W1						
Foster care placement type W1						
Employment experience W1	1					
Highest education level by W5	0.14	1				
Any children W1-5	0.02	0.11	1			
Homeless W3-5	0.11	0.08	0.01	1		
Subsidized housing W3-5	0.04	0.04	0.10	0.15	1	
Occupancy type W3	0.12	0.07	0.18	0.05	0.17	1
Occupancy type W4	0.05	0.13	0.15	0.10	0.14	0.29
Occupancy type W5	0.07	0.10	0.17	0.18	0.06	0.29
PQoR with birth mother	0.09	0.11	0.11	0.18	0.10	0.03
PQoR with birth father	0.07	0.05	0.06	0.02	0.08	0.08
Economic hardship W3	0.12	0.12	0.15	0.13	0.24	0.15
Economic hardship W4	0.14	0.09	0.13	0.24	0.13	0.09
Economic hardship W5	0.07	0.17	0.13	0.23	0.10	0.10
Food insecurity W3	0.07	0.06	0.09	0.24	0.10	0.09
Food insecurity W4	0.07	0.06	0.11	0.27	0.13	0.08
Food insecurity W5	0.04	0.12	0.05	0.27	0.09	0.07
Income W3	0.19	0.19	0.09	0.19	0.17	0.19
Income W4	0.20	0.23	0.08	0.21	0.21	0.14
Income W5	0.20	0.24	0.13	0.23	0.15	0.14

Appendix H

Correlation Matrix of Predictor Variables (continued)

Variables	Occupancy type W4	Occupancy type W5	PQoR with birth mother	PQoR with birth father	Economic hardship W3	Economic hardship W4
State in foster care						
Race and ethnicity						
Sex						
# Foster care placements W1						
# Times ran away from foster care W1						
Foster care placement type W1						
Employment experience W1						
Highest education level by W5						
Any children W1-5						
Homeless W3-5						
Subsidized housing W3-5						
Occupancy type W3						
Occupancy type W4	1					
Occupancy type W5	0.48	1				
PQoR with birth mother	0.06	0.09	1			
PQoR with birth father	0.06	0.08	0.13	1		
Economic hardship W3	0.07	0.11	0.09	0.12	1	
Economic hardship W4	0.08	0.19	0.08	0.21	0.43	1
Economic hardship W5	0.08	0.22	0.06	0.11	0.37	0.40
Food insecurity W3	0.10	0.10	0.13	0.08	0.53	0.21
Food insecurity W4	0.08	0.10	0.09	0.06	0.34	0.52
Food insecurity W5	0.10	0.18	0.06	0.07	0.25	0.28
Income W3	0.22	0.20	0.11	0.10	0.10	0.17
Income W4	0.31	0.26	0.12	0.06	0.12	0.23
Income W5	0.23	0.28	0.17	0.13	0.09	0.15

Appendix H

Correlation Matrix of Predictor Variables (continued)

Variables	Economic hardship W5	Food insecurity W3	Food insecurity W4	Food insecurity W5	Income W3	Income W4	Income W5
State in foster care							
Race and ethnicity							
Sex							
# Foster care placements W1							
# Times ran away from foster care W1							
Foster care placement type W1							
Employment experience W1							
Highest education level by W5							
Any children W1-5							
Homeless W3-5							
Subsidized housing W3-5							
Occupancy type W3							
Occupancy type W4							
Occupancy type W5							
PQoR with birth mother							
PQoR with birth father							
Economic hardship W3							
Economic hardship W4							
Economic hardship W5	1						
Food insecurity W3	0.24	1					
Food insecurity W4	0.32	0.26	1				
Food insecurity W5	0.49	0.19	0.26	1			
Income W3	0.10	0.12	0.12	0.11	1		
Income W4	0.14	0.13	0.11	0.15	0.31	1	
Income W5	0.18	0.08	0.11	0.18	0.26	0.31	1

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