STABLE, AFFORDABLE HOUSING AND ITS EFFECTS ON HUMAN CAPITAL

(WEALTH, HEALTH, AND EDUCATION)

A Paper
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

By

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In Partial Fulfillment of the Requirements
for the Degree of
MASTER OF ARTS

Major Program:
Community Development

December 2020

Fargo, North Dakota

North Dakota State University
Graduate School

Title

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The Supervisory Committee certifies that this ***disquisition*** complies with North Dakota State University's regulations and meets the accepted standards for the degree of

MASTER OF ARTS

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ABSTRACT

This paper was written with the intent to inform or persuade policymakers and state and local officials on the topic of affordable housing. The guiding question in the below research asks what the effect stable, affordable housing has on three categories of human capital; Health, Wealth, and Education. The introduction reviews the history of housing including housing policy, the housing market, and the housing gap minorities face in America. Following the introduction is a literature review detailing the effects stable, affordable housing, or lack thereof, has on a household financial stability and wealth, physical and mental health, and education. Housing may be used as a catalyst for community change. The conclusion discusses policy recommendations that can affect that change by increasing access to affordable housing, closing the housing gap, and allowing low-income and minority households to build wealth and pursue opportunities for success.

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CHAPTER 1. INTRODUCTION

The supply of affordable, available homes is shrinking and no state in America has an adequate supply of affordable homes for low-income households (NLIHC, 2020). As prices rise faster than incomes, low-income families who are unable to pay higher rents face eviction and forced relocation. Homeownership is decreasing as American households stretch their budget to make ends and young adults report lacking financial resources to enter homeownership (Lee, Kilduff, and Mather, 2020). High rental prices can also prevent a household from being able to save for a down payment on a starter home. For example, in 2018 North Dakota had only 51 available, affordable housing options for every 100 extremely low-income households (households earning at or below 30% of the area median income), and 66% of low-income households (earning at or below 80% of the area median income) are left with mostly cost burdening housing options (NLIHC, 2020). Statewide, there is currently a shortage of 12,941 affordable rental units for low-income and extremely low-income households.

This paper examines the relationship between stable, affordable housing and human capital by looking at wealth and financial stability, physical and mental health, and education. Housing and its effects on health, poverty, and education have been a central policy issue in America since the mid 1800's. The first housing policy, the New York Housing Act of 1879, sought to improve living conditions for New Yorkers because "there can be no question that the three great scourges of mankind - disease, poverty, and crime - are in large measure due to bad housing," observed the New York Commissioner of the Tenement Housing Department in 1879 (Martens, 2009).

Affordable housing is typically defined using the national affordability standard of 30% of the household's annual income for mortgage/rent, insurance, and taxes. The home should also be safe, meet city code requirements, and have suitable space relative to the size of the household. However, Bratt, Stone, and Hartman (2006) suggest that the measurement of 30% of income is too generous and can be a stretch for larger households. This is addressed briefly in section 2.2 but is not used as the standard definition of affordability nationally or for this discussion.

A low-income household is defined by the Department of Housing and Urban Development as a household earning a gross income of 80% or less of the area median income in the community the household resides in, relative to household size (NLIHC, 2020). For example, a 4-person household in North Dakota making $100,778.33 is considered to be earning 100% of the area median income. A low-income 4-person household in North Dakota would be earning $80,622.66 or less annually (nd.gov, 2020). An extremely low-income 4-person household, making 30% or less of the area median income, would be earning $30,233.50 or less annually.

The definition of stable housing was developed using information gathered from existing literature as well as professional knowledge I have obtained while working for Habitat for Humanity. For this discussion, it is defined as housing that is available to the household for as long as they wish to live there, the household does not fear eviction or foreclosure, and the monthly cost of the mortgage/rent stays affordable.

The paper starts with an overview of the housing market to explain how housing filters through income categories. This leads to an overview of the housing gap and housing inequality in America, including how we got there and who it effects. The importance of human capital and how inadequate housing effects a community’s human capital closes the introduction, leading to the guiding question of the paper. Does stable, affordable housing have an effect on human capital?

Following the introduction is a literature review that explores the guiding question in the areas of Wealth and Financial Stability, Mental and Physical Health, and Education. After discussing the findings of the literature review, the paper concludes with research gaps and policy recommendations for affordable and equitable housing in America.

1.1. The Housing Market

The housing market is like any other, driven by supply and demand. Housing prices change based on the amount of supply in proportion to the current demand for housing. New housing is subject to a cycle of values decreasing over time because of wear and tear if not updated, then filtering down to low-income housing. What was once high-income housing may be low-income rentals 100 years after it was built. Houses filter through income categories as they get older and depreciate in value.

There are two main types of housing options, rental housing and owner-occupied housing. An owner-occupied home is a house that is owned by the occupant. The occupant may be making mortgage payments each month or may own the home without any liens. A rental home is a house owned by one person(s) but occupied by another person(s). The occupant pays a monthly fee to the owner and the agreement is generally settled by a contract outlining the amount of time the occupant may reside in the home. Renting is ideal for young households such as university students or those saving for a down payment to purchase a home, highly mobile professionals, and temporary residents. This paper examines both areas of housing as there are many barriers to ownership for low-income households, detailed in the next section, that force low-income households into rental homes.

The housing market directly impacts the affordable housing gap. There are housing options built specifically for high-income households, middle-income households, or low-income households. Each income category experiences a level of demand proportionate to the number of buyers in that income range at any one time. Each home constructed by development companies for the purposes of making a profit is built with the intent of selling to a particular income group. Low-income housing will have less square footage, less amenities, and will generally be in a neighborhood with cheaper property values such as the inner city. High-income housing will be more luxurious with more amenities, space, and is often in suburban areas. Developers invest more money into building moderate- and high-income homes than low-income homes because they make a larger profit from moderate- and high-income households.

Currently, there is one incentive for developers to build affordable housing options. The Low-Income Housing Tax Credit (LIHTC) was introduced in 1987 and provided a set amount of credits to each state relative to its population. State officials then funnel the credits to communities in their state based on the need for affordable housing. The credits are given to developers who construct or rehabilitate affordable housing options to offset the low profit margin. As of 2019, 30% of the US affordable housing market was constructed or rehabbed using LIHTC (ProPublica, 2019). However, over 30 years after the program began, disparate impacts from the allocation of the tax credits have become a concern. Many state officials were found to have concentrated the majority of LIHTC in poorer communities with high minority populations. This results in the majority of affordable housing options being clumped into one low-income neighborhood in a low-opportunity area.

As of July 2019, there were 380,173 available housing units for the 314,903 households in North Dakota, 62% of which are owner-occupied (census.gov), and a shortage of almost 13,000 affordable rental units in the entire state (NLIHC, 2020). The median cost of a home in North Dakota in 2018 was $185,000. The state of North Dakota is largely rural with only three urban city centers, defined as having a population of 50,000 or greater, Bismarck, Grand Forks, and Fargo (usda.gov) housing 33% of the state's population. The residents of these cities pay a median $198,000-$235,000 to purchase a home, exceeding the national average of $205,000 (census.gov). Currently, there are 114 available affordable housing options for every 100 low-income households but only 51 available affordable housing options for every 100 extremely low-income households in North Dakota (NLIHC, 2020).

1.2. The Housing Gap Today

When discussing the history of housing in America, it's important to note that there are many instances of racist policy and practices that led to a wealth gap between white households and minority households, the effects of which are still experienced today by not only minority households, who are more likely to be housing cost burdened (NLIHC, 2020) but low-income households of all racial backgrounds. As a result of discriminatory lending and lack of access to credit, 73% of white households own their homes while only 47% of Latino households and 45% of black households own their homes (Sullivan et al, 2015; Lee, Parrott and Ahn, 2012). The effects of redlining, described below, allowed white homeowners to accrue wealth easier than minorities and pass that wealth from generation to generation. Today, there is a wealth gap of $102,798 for Latino families and $104,033 for black families compared to white families (Sullivan et al 2015).

Housing inequities began in the 30's with the practice of redlining. The formation of the Federal Housing Administration was intended to increase housing options, but the administration's programs benefitted mostly white middle-class households. Redlining allowed banks to deny mortgage loans to black households looking to buy property in white neighborhoods but also stated that disadvantaged (primarily African American) neighborhoods were a bad credit risk (Sullivan et al 2015; Rothstein, 2013) and the Federal Housing Authority subsidized housing development in white neighborhoods but not in black neighborhoods. The IRS gave tax incentives to churches operating in white neighborhoods (Rothstein, 2013) and city policy allowed delayed waste collection and electric and water companies to refuse service in black neighborhoods. This created the illusion that black neighborhoods were deteriorating and poorly maintained because of the black residents' lack of responsibility rather than the city's (Rothstein, 2013) and white, high income households were more likely to move away from these neighborhoods because of fear of declining property value and safety (Owens, 2015). Furthermore, the US Housing Act of 1937 allowed resources for low-income, affordable housing to be constrained and resources for middle- and high-income housing to flow through the market more abundantly with fewer restrictions and regulations (Martens, 2009). This forced low-income housing development to be located in separate communities, segregating classes. The Civil Rights Act of 1968 included the Fair Housing Act which was intended to eliminate unfair housing practices and discrimination based on protected characteristics, including race.

The Department of Housing and Urban Development (HUD) has implemented many policies and initiatives to undo the effects of redlining and racist policy but usually fall short and end up continuing the cycle (Tegeler, Haberle and Gayles, 2013; Owens, 2015). The Section 8 Housing Choice Voucher Program, implemented in the 1970's and still used today, was designed to give participants a choice of where they live. But the parameters often pushed them to low-opportunity areas (Tegeler, Haberle and Gayles, 2013). The Fair Market Rent System often limits voucher holders from moving to high opportunity areas and steers them towards high poverty areas (Tegeler, Haberle and Gayles, 2013). No incentives are offered to Public Housing Authorities (PHA's) to help families move to higher opportunity areas and HUD prioritizes quick utilization of vouchers which many PHA's have interpreted as getting families housed as quickly as possible without regard to location (Tegeler, Haberle and Gayles, 2013). At the same time, The Administrative Fee System disincentivizes PHA's from helping families make opportunity moves. If the process takes a long time and families move out of the PHA's jurisdiction, the PHA loses part of its administrative fee (Tegeler, Haberle and Gayles, 2013). In 2015, only one in four households eligible for HUD housing subsidies were receiving assistance (Ellen and Glied, 2015).

A rising problem in metropolitan areas of the US is new temporary rental apps and services such as Airbnb. Densely populated cities like New York, NY experienced landlords evicting tenants to have space available for tourists and temporary renters who can pay more than long term renters (Monroe, 2014). This problem caused rental markets in cities with already rising prices to jump and displace low-income renters. This is because temporary lodging and housing, two goods traditionally bought on different markets, are now competing (Monroe, 2014).

1.3. Human Capital

A goal of this paper is to study the link between housing and wealth, health, and education, which are components of Human Capital (Emery and Flora, 2006). There are seven categories of the Community Capitals Framework, natural, built, financial, political, social, cultural, and human capital. Each of the seven capitals are essential to successful community development. A community's human capital is its resident base. Human capital encompasses the skills and talents of the residents as well as their desire and ability to lead and participate in community events and development initiatives (Emery and Flora, 2006). Greater financial opportunity for a community's human capital opens the door to greater educational opportunities, and greater financial security and knowledge lead to better mental and physical health. This assertion leads to the guiding question that will be used when analyzing the available literature. Does housing have an effect on specific areas of opportunity for households? How do those effects change as housing situations change?

1.4. Guiding Question

I write this as a professional in the housing industry, working as an executive officer for an American Habitat for Humanity affiliate located in the Red River Valley of North Dakota. Habitat for Humanity's program is designed to help program recipients pull themselves out of poverty by assisting them in securing stable, affordable housing. I noticed that many Habitat for Humanity applicants cite medical bills for existing medical conditions, and lack of financial capital (perhaps because of a lack of higher education valued in the employment sector today) as reasons why they are unable to enter into homeownership on their own. In my work and studies, lack of stable, affordable housing for low-income households has appeared to correlate with negative impacts on financial stability, education, and physical and mental health. With human capital being an essential element to community success, the greater the opportunity for community residents to be successful, the greater benefit it will have on the community. The below literature review explores the effects stable, affordable housing, or lack thereof, has on each category; Wealth and Financial Stability, Physical and Mental Health, and Education.

This guiding question developed not because it is refuted that stable, affordable housing impacts human capital, but because there seems to be a lack of incentive for developers to build affordable housing and build it in high opportunity neighborhoods with high rates of homeownership (the benefits of these neighborhoods are explained in Chapter 2). The Department of Housing and Urban Development implemented the Low-Income Housing Tax

Credit (LIHTC) for developers building affordable housing, but this incentive has not produced the desired effect. According to Tegeler, Haberle and Gayles (2013), the program failed to define or enforce discrimination guidelines and eligible neighborhood requirements for builders. The information in this paper can be used to understand the need for and importance of stable, affordable housing and develop housing policy that is fair and effective for households of all demographics and income levels.

CHAPTER 2. LITERATURE REVIEW

The three components of human capital this paper examines in relation to stable, affordable housing were chosen as areas of needs that must be met in order to support successful human capital in a given community. Without financial stability and the opportunity to build wealth, households cannot fully participate in their community's economy or make ends meet. Risking physical or mental health in substandard housing keeps households from reaching economic potential and may impair the ability to contribute to a community's social capital. Lack of education and opportunities for higher education also keeps households from reaching their economic potential and effects financial stability, wealth accruement, and ability to properly care for their mental or physical health. This literature review explores each category as it relates to stable, affordable housing and the effects lack of adequate housing has on each category.

2.1. Wealth and Financial Stability

Across the majority of literature reviewed, it was noted by many authors and researchers that housing is the single greatest expense for most American households. 38 million US households struggle with housing costs (Aspen Institute, 2020). 1 in 3 US households rent rather than own, and renters are twice as likely to be cost burned by housing expenses. Over 12% (16 million) of households pay 50% or more of their income on housing costs and over 1.4 million children experience homelessness (Aspen Institute, 2020). Low-income households spend a higher percentage of their income on housing than middle- or high-income households and the majority of minority households cannot afford to spend 30% or more of their income on housing (Lee, Parrott and Ahn, 2012). In 2011, 87.8% of low-income households were cost burdened by their housing expenses with many paying more than 50% of their income to rent or mortgage (Ellen and Glied, 2015). In 2020, 66% of low-income households in North Dakota are cost burdened by housing expenses. Unaffordable housing leaves little opportunity for households to invest, save for their future, and build wealth.

Homeownership provides access to wealth for long term homeowners as their property values appreciate. The national average yearly increase in home values is $6,800 (Killewald and Bryan, 2016). And the median return on investment in the US housing market is $14,000 (Wang et al., 2019). However, homes located in poverty neighborhoods are less likely to appreciate in value. In 2017, the average worth of a homeowner in America was $231,000 and only $5,000 for renters (Wang et al., 2019) because monthly rent payments do not build equity for the tenant. Housing wealth can be passed down to the household's children for education and home buying opportunities.

Wealth is defined as a household's total income and assets less any debts, also referred to as net worth. Wealth allows for financial security and greater opportunities for a household's future and its children's future. 60% of wealth held by the American middle class is in the form of home equity (Shapiro, 2006). The practice of redlining in the 30's and 40's unequally distributed homeownership opportunities between minority households and white households. The ability for white households to enter homeownership in the 40's and then continue to pass down wealth accrued through home equity from generation to generation gives white households an economic advantage today, even though housing discrimination is outlawed and less common. Before the civil rights movement, minorities had limited access to wealth and even today, there are still barriers to wealth accumulation for minorities. Making wealth harder to access for minorities now ensures future inequality as white households pass their wealth to their children while minority households cannot. The worth of the average white household is $73,000 more than that of the average black household (Shapiro, 2006). That breaks down to just one dime in wealth for a black household, for every dollar in wealth a white household has. Because of the ability to pass wealth from generation to generation, white households can afford to enter homeownership at a younger age than minorities. Nearly half of white homeowners report receiving significant financial help from family while 90% of black homeowners report financing their home all on their own (Shapiro, 2006).

Low-income households struggle to transition to homeownership because of lack of funds for a down payment or closing costs, or credit barriers such as a low credit score. The higher the household income, the more likely they are to enter into homeownership. Wealth is calculated as a household's assets less its debts. In US households with wealth over $500, for every $5,000 in wealth they accrue, their chances of entering into homeownership increase by 2.9% (Di and Liu, 2007). Low-income households that participate in programs that provide a path to homeownership are more likely to pull themselves out of poverty. Homeownership forces households to save money by amortizing principle mortgage payments, this is done by dividing the total cost of the purchase amount, including annual interest, over the course of the loan period. For example a $200,000 home with a 3% interest rate and 30-year repayment period would result in a $843.21 monthly payment with an increasing portion of the payment going towards the principle of the loan the longer they own the home. The principle portion of the payment results in savings in the form of equity. The longer the household owns the home, the more equity it builds. Homeownership also saves the household money by generally reducing housing costs associated with inadequate rental housing such as increased heating costs for dilapidated windows and doors, increased water costs for running toilets and inadequate plumbing, and remediation supplies for small cases of mold and mildew; high rent costs; and homeowners receive tax benefits. This savings in reduced housing expenses when transitioning to homeownership is just under $2,100 per year (Killewald and Bryan, 2016). Grinstien-Weiss et al. (2011) studied homeowners and renters with similar socio-economic statuses over a three-year period and found that homeowners' net worth increased by $12,000 compared to renters. They even found that low- and middle-income households in owner-occupied housing can better withstand an economic downturn than renters because of greater financial security.

The financial benefits of homeownership are a great incentive for households to create a goal of one day owning a home, whether that means saving for a down payment, pursuing programs that increase access to homeownership for low-income households, or both. However, Boehm and Schlottmann (2008) found that minority households still face challenges in accessing this type of investment, even though they need it the most. Boehm and Scholttmann observed 5000 households in median- or low-income brackets from 1984-1992 as they entered into homeownership or continued renting, to determine the role homeownership plays in wealth accumulation. They found that Minority households in owner-occupied housing rely more on their housing asset for wealth than white households. This is because on average, white households see annual increases of $1000-$2000 in non-housing wealth where minority households' annual non-housing wealth increases are $0 on average. Boehm and Schlottmann also discovered what they call the housing hierarchy, discussed later in this section, that enables homeowners to capitalize on their accrued home equity by selling their home and purchasing a more expensive home. Thus, allowing the household to continue building wealth as property values increase and they move up the housing hierarchy.

In addition to challenges faced by low-income minority households because of lack of funds, they are also 7% less likely to enter homeownership than similarly economically situated white households because of greater wealth requirements for minority loan applicants (Di and

Liu, 2007). Black homebuyers are 60% more likely than white homebuyers to be denied credit for purchasing a home and when approved, face a higher interest rate, costing black homebuyers about $12,000 more for a similarly priced 30 year mortgage held by a white homebuyer (Shapiro, 2006). Further, the wealth benefits of homeownership are 20% ($2,000) lower for black homeowners and, black and Hispanic households are more likely to exit homeownership and return to renting (Killewald and Bryan, 2016; Boehm and Schlottmann, 2008).

Greater access to affordable housing reduces reliance on government assistance programs, improves education and job prospects, improves employment stability, and improves financial stability so households are better able to pay other bills and spend money at local businesses (Aspen Institute, 2020). Homeowners experience lower rates of unemployment, public assistance use, and poverty compared to similarly economically situated renters. Net worth and liquid assets are higher among homeowners as homeownership yields greater financial benefit (Grinstien-Weiss et al., 2011).

Children in owner-occupied housing tend to complete higher levels of education providing greater economic opportunity (Retsinas and Belsky, 2002). The likelihood of a child owning a home is greater if they grew up in owner-occupied housing. Children who grew up in rental housing or other housing situations are less likely to enter homeownership because they do not perceive homeownership as beneficial because of lack of experience with homeownership (Retsinas and Belsky, 2002). Low-income households who attempt to improve their housing situation by using public assistance, in any form, produce children who earn more income as adults than low-income households not receiving public housing assistance (Andersson et al., 2018). For low-income households receiving housing assistance, they were more likely to find better employment opportunities and/or increased earnings and own a home in the future compared to low-income households not receiving housing assistance (Verma, Riccio, and Azurdia, 2003).

Homeownership also has indirect benefits to wealth growth. For example, the equity a household has in its home can be leveraged to pursue income generating capital such as small business loans or student loans for educational and skill advancement (Di and Liu, 2007). Also, homeownership reduces rates of divorce and married households enjoy higher levels of wealth on average (Killewald and Bryan, 2016).

Bratt, Stone, and Hartman (2006) go one step further in the affordability discussion to suggest that the national affordability standard of 30% of a household’s income does not account for household size and thus, may be unaffordable to larger households. They argue that although a family may not fall into the cost-burdened category, they may still be “Shelter Poor” because after paying the monthly housing expenses, there is not enough disposable income leftover to cover other necessary expenses. When comparing a married couple with no children to a family of four with the same income and housing costs, the couple without children will have more funds leftover after paying housing expenses and other necessary costs for material items such as a down payment for a new car, high end clothing, or just for saving. The family of four will need to purchase more food than the couple without kids and will have other expenses for children such as clothing, childcare, toys, diapers, school supplies, etc.

Boehm and Schlottmann (2008) study what they call, the housing hierarchy. This is explained as an opportunity for households to continue to build wealth as they move from one owned home to another. The idea is that after entering homeownership for the first time and seeing an increase in the property value, households cash in on their investment by selling the home for a profit and use their increase in wealth to purchase a higher value home. What they found was that as households work their way up the housing hierarchy, wealth increases as well, and the return on investment is larger each time. However, low-income households, especially minorities, are less likely to be able to move up the hierarchy even after attaining homeownership for the first time.

It is important to note (and this will be a theme in each section of this chapter), that across the literature, there is a question of whether housing is the cause of, in this case, greater wealth or whether having greater wealth makes a household more likely to own their residence. Homeownership is an investment that requires money up front for a down payment, insurance, closing costs, and other possible fees for purchasing a property. This can be hard to achieve for low-income households with little savings. However, with persistent savings, housing assistance, or other programs such as Habitat for Humanity, low-income households that are able to enter into homeownership, experience financial benefit.

2.2. Physical and Mental Health

Low-income families experience higher rates of housing instability and are 2.2 times more likely to live in substandard housing (Krieger and Higgins, 2002) which can cause psychological distress in adults and socioemotional problems in children (Evans, 2003). And lack of safe affordable housing options may lead parents to settle for units with unsafe qualities such as toxins that alter brain chemistry or improper fire detection. There is a correlation between undesirable living conditions and negative health outcomes for children and adults (Ellen and Glied, 2015). However, much of the literature questions whether negative health is a product of inadequate housing or whether household with pre-existing medical conditions and predisposition to health issues may be choosing unhealthy housing because of its affordability, allowing the household to save for medical expenses. This section will expand on the physical and mental effects of unstable housing and inadequate affordable housing.

2.2.1. Physical Health

The negative side effects of unhealthy housing are a central concern to policy makers. Many regulations have created healthier living conditions for households in the past 150 years such as banning the use of lead paint or asbestos insulation and flooring, creating standard bedroom sizes, requiring proper plumbing, windows, fire detection and occupancy limits, and proper heating and ventilation (HVAC) systems. The policies and codes have reduced the chances of passing along infectious diseases, injury or accidental death, and other physical health hazards. But houses built before some or all of these policies were enacted risk occupants' safety if not properly cared for and updated as city building codes change. These older, unremedied houses will go down in value the longer they sit un-updated, becoming low-income housing as the price goes down. This poses a greater risk to low-income households as healthy housing may be out of their price range.

Inner-city households are more likely to be exposed to housing related neurotoxicants and pests such as cockroaches or mice and rats (Breysse et al., 2004). 17% of low-income children have blood lead levels higher than normal because of the greater risk of exposure to lead based paint (Breysse et al., 2004). Lead poisoning can negatively affect the brain, and neurodevelopment in children by changing synapse formation. Lead may also disrupt the child's ability to self-regulate behavior such as controlling emotional responses and focusing on tasks (Breysse et al., 2004; Ellen and Glied, 2015; Evans, 2003; Krieger and Higgins, 2002). Allergens such as pesticides, mold, mildew, and dust can increase the chances of developing or exacerbate existing asthma in children (Breysse et al., 2004; Ellen and Glied, 2015; Morrow, 2015; Krieger and Higgins, 2002).

Pests such as bugs and rodents are harmful to health for many reasons (Breysee et al. 2004; Bonnefoy, 2007; Krieger and Higgins, 2002). They can potentially carry disease and parasites that can be transmitted to the members of the household. They carry in dust and dirt that can exacerbate asthma or respiratory illnesses. Poisonous or harmful bugs can cause skin irritation, illness, or allergic reactions. Pests can also contaminate food and water supply with their excrement or fluids. Pests are found more frequently in low-income housing because of dilapidation such as improper drainage systems, leaking roofs, windows that do not shut correctly, and poor ventilation systems (Bonnefoy, 2007).

Accidental falls are the leading type of residential injury in children, an estimated 3 million children visit the emergency department per year due to accident falls (Breysse et al., 2004). The primary cause of residential falls are lack of safety and city code requirements in residential buildings such as lack of grab bars on stairs, window guards, structural defects, or insufficient lighting (Breysse et al., 2004). Accidental residential injuries occur more frequently in low-income households because of substandard conditions and lack of resources to make repairs (Krieger and Higgins, 2002). Housing options affordable to low-income households may lack routine safety and city building code inspections (Krieger and Higgins, 2002), therefore these households must choose between healthy housing and affordable housing (Breysse et al., 2004; Morrow, 2015).

In addition to settling for unhealthy housing, cost burned households, those paying more than 30% of their income for monthly housing expenses, have less money available to spend on nutritious food and comprehensive healthcare (Ellen and Glied, 2015). Homeless and unstably housed households also face higher healthcare costs because of the negative health effects of living in substandard housing or homelessness (Bailey, 2020). One link that Bailey (2020) found was that highly mobile households face increased risk of disease, lack of security seeking shelter in unsafe places, and psychological distress that may lead to substance abuse resulting in the need for expensive emergency care.

Substandard housing tends to clump together (ProPublica, 2019). Entire neighborhoods can be dilapidated low-income housing, pushing less advantaged socioeconomic households to one area. The lack of resources allocated to these neighborhoods also effects households health simply because of the location of the housing unit. Disadvantaged neighborhoods with high concentrations of low-income occupants often lack proper outdoor space for recreation or walkability, lack of shopping and dining options with nutritious food and abundant fast food options, result in higher rates of obesity and related health problems (Bonnefoy, 2007; Morrow, 2015, Ellen and Glied, 2015; Krieger and Higgins, 2002).

2.2.2. Mental Health

Americans spend more time in their home than any other setting, children spend 80%-90% of their time indoors (Breysse et al., 2004, Evans et al., 2000, Evans, 2003) and apartment and multi-family dwellings restrict families' ability to play outside the housing unit even more (Evans et al., 2000). This also limits the household's ability to make social connections with neighbors resulting in feelings of social isolation and loneliness. Young mothers and their children in particular, suffer higher rates of psychological distress when living in high rise buildings, with low-income households experiencing psychological distress at higher rates than other income brackets (Evans, 2003). Parental depression, psychological distress and other mental health problems can have negative impacts on children as well, including behavioral problems, poor social development, and other mental health issues (Bailey, 2020). Haurin, Parcel, and Haurin (2001) examined the link between homeownership and a child's success later in life. Part of the study accounted for cognitive and emotional development in the household's children. They found that stable homeownership increases cognitive function by 23% and emotional support by 13% in children and decreases behavioral problems by 3%.

As with physical health, exposure to chemicals such as manganese, lead, and other heavy metals have consequences for mental health. These chemicals inhibit brain development in children and can cause anxiety and depression in adults (Breysse et al., 2004, Evans, 2003). Households aware of their exposure to unsafe chemicals that lack the resources or landlord support to fix the problem reported distress and feelings of helplessness.

Unstably housed households facing displacement report feelings of anxiety and depression increasing. 37% of the American homeless population is displaced families (Samuels et al., 2015). Rates of depression, substance use, and other mental illness were higher among homeless single mothers compared to housed single mothers, when controlled for other characteristics (Samuels et al., 2015). In Samuels et al.'s 2015 study, at baseline the homeless mothers studied were experiencing mental illness symptoms at a rate of between 73% to 77%. After relocating to stable housing, the rate of mental illness decreased to between 38% to 43% among the group studied.

Households that struggle to find housing may move in with other households and crowd two or three families into a single-family home (Morrow, 2015). In 2018, over 14% of children in America were living in overcrowded conditions (kidsdata.org), defined as more than 1 persons per room (HUD, 2007). This includes bedrooms, bathrooms, living and common areas such as family rooms, dining rooms, kitchens, storage rooms, and enclosed porches. Overcrowding in the home and excessive noise from the neighborhood environment can cause increased aggression, stress, social isolation, and helplessness (Aiello, Nicosia, and Thompson, 1979; Evans, 2003;

Ellen and Glied, 2015; Krieger and Higgins, 2002). Aiello, Nicosia, and Thompson (1979) specifically studied the effects of overcrowding in children by comparing body temperature and emotional state after spending 30 minutes in either crowded or uncrowded spaces. When controlled for age, gender, race, and ability level, they found that the children, particularly males, that were in the crowded spaces reported higher levels of annoyance, frustration, and anger after just a 30-minute experience.

Households living in apartment buildings or multi-family units have less control over their residential environment as they share recreational, entrance, and common areas with neighbors. Increased noise from neighbors and visitors, lack of privacy, and inadequate sense of ownership resulting in feelings of detachment from the home can cause or exacerbate psychiatric or emotional disorders (Evans, 2003; Bonnefoy, 2007). And apartment buildings with units that open out onto exposed walkways with outdoor staircases have the largest effect on mental health than any other home type. Overall lack of control over one's living environment teaches helplessness (Evans, 2003).

In low- and moderate-income households moving from poor quality housing to better quality housing, not only did the psychological well-being and physical health of the household members improve (Evans et al., 2000; Dunn 1999, Krieger and Higgins, 2002, Bailey, 2020), but social relations and children's school performance improved as well. Housing quality is a significant predictor of psychological distress and physical wellness, and as housing quality increases, symptoms of psychological distress and physical ailments decrease (Evans et al., 2000, Krieger and Higgins, 2002, Bailey, 2020).

2.3. Education

The effect housing has on education is multi-faceted. This section is broken into three subsections, Homeownership; Public Assistance, Rental Housing, and Mobility; and Neighborhood Characteristics. Each subsection has a different effect on education with homeownership having the largest impact on education. It is important to note that the casual relationship between housing and education is hard to determine. There is evidence that as housing situations improve, educational attainment improves. But there is also evidence that the higher the education of the household, the more likely they will be able to enter into homeownership and choose to take on the financial responsibility of investing in a home.

Homeownership provides neighborhood stability for children (Gyourko and Linneman, 1997). Homeowners stay in their home for an average of 13 years while renters only stay in their home for an average of 2.5 years (Kutty, 2008). Residential stability allows children to continue education in one school district. Continuity and the ability to make and maintain social connections with classmates is better for educational outcomes (Whelan, 2017). The stability homeownership provides also allows parents to be more involved in their kids' academics, leading to greater academic achievement (Aaronson 1999) because the parents do not need to worry about moving, finding new housing options, working extra hours to make ends meet, or experiencing high levels of housing related stress. Homeowners also feel a greater responsibility to their neighborhoods and will invest more in community programs, opportunities, and businesses in their area (Whelan, 2017).

Unaffordable housing hinders the household's ability to pay for education expenses, extra-curricular activities, post-secondary education, and tutoring if needed (Kutty, 2008). Stress from high housing costs including the need to work more hours rather than supporting children's schooling (helping with homework, enforcing a homework schedule, attending parent teacher conferences, setting expectations for school performance) also impacts children's educational outcomes negatively (Kutty, 2008).

Children in owner-occupied housing receive better math and reading scores, are more likely to graduate from high school, and have better jobs (Whelan, 2017). When controlling for socio-economic variables, Haurin, Parcel, and Haurin, (2001a) found that children in owner-occupied housing preform 9% better in math skills than children of renters, reading skills are increased by 7%, and are 3% less likely to develop behavioral or cognitive problems that can hinder school performance. In addition, Harkness and Newman (2003) found that children of homeowners are 13% more likely to graduate from high school and 6% more likely to attend post-secondary education institutions than children of renters. Galster et al. (2007) further found that the more years a child lived in owner-occupied housing, the greater the chance they will graduate from high school, obtain a college degree, and own their own home, specifically 5% more likely to obtain a college degree and 2% more likely to own a home. Low-income homeowners experience the most benefit from homeownership because the financial discipline required to enter into homeownership with limited resources is indicative of value for and investment in human capital, including education (Whelan, 2017).

As mentioned earlier in this section, education may affect likelihood of homeownership rather than homeownership affecting the likelihood of attaining a higher education (Gyourko and Linneman, 1997). Homeownership is associated with better decision-making and parenting styles that influence greater educational attainment in children (Whelan, 2017). There is a significant correlation between parental homeownership and later educational and homeownership attainment of children. However, this correlation may be due to higher levels of education in the parents resulting in the ability to enter into homeownership rather than homeownership affecting education (Galster et al., 2007).

Households that own their homes can utilize the equity to pay for their children to attend college (Conley, 2001; Harkness and Newman, 2003; Whelan, 2017). For every $10,000 in equity earned by homeowners, the likelihood of their children attending college increases by .7 percentage points (Whelan, 2017). Overall, homeowners are wealthier than renters and can afford better education opportunities for their children and have a greater interest in investing in their community and its education institutions (Aaronson, 1999).

While homeowners benefit from increases in the housing market, it can be a detriment to renters because of rising rental costs (Whelan, 2017) and unaffordability is the main cause of mobility (Kutty, 2008). High rates of mobility reduce children’s chances of high school graduation, especially when moving across state lines (Aaronson 1999). Highly mobile children are more likely to change schools which means changing teachers, curricula, and classmates. This effects education because low-income households usually move from one underfunded school to another (Crowley, 2003). The more times a child moves during the school year, the more class they miss and do not learn prerequisites with which to build on for future lessons (Crowley, 2003).

As established in the previous sections of this chapter, rental housing affordable to low-income households may come with safety and health risks. Poor quality housing negatively effects high school graduation and health issues caused or exacerbated by unsafe and unhealthy housing affect attendance at school and ability to pay attention in class because of the child’s preoccupation with health issues or family stress (Kutty, 2008). To keep housing costs affordable, some housing units are filled with more than one household and overcrowded.

Overcrowding is a detriment to physical and mental health which can lead to lower levels of academic success. Children in overcrowded households do not have a quiet place of their own to study and do not get enough sleep, making it difficult to focus in class (Conley, 2001; Kutty, 2008). Overcrowding negatively correlates with high school graduation and reading scores, and can hinder cognitive development in children (Kutty, 2008). In addition to overcrowding, low-income households in inner city neighborhoods risk living in a district with underfunded schools because of the high rate of rentals in the area (Conley, 2001). Children from low-income households are also less likely to participate in after school or summer activities that advance social connections beneficial to academic performance (Rothstein, 2013).

Schwartz, Stiefel and Chalico (2007) followed students in New York City school districts from 1^{st} through 8^{th} grade. Approximately 50% of the students studied changed schools because of residential moves, the majority of which were black or Hispanic households. They found that students with high mobility rates received lower reading scores and the more frequent the student switched schools, the lower the reading scores. The more schools the student attends, the lower their overall academic performance by the 8^{th} grade.

Chetty, Hendren, and Katz (2016) compared eligible households who received HUD section 8 housing vouchers to improve their housing situation to eligible households who did not receive section 8 housing vouchers. They found that the voucher recipients produced children that were 2.5% more likely to attend college as a young adult. The controlled groups were more likely to attend a better-quality post-secondary school, measured by tuition costs, by an almost $700 margin. The younger the child was when moving to improved housing using the HUD voucher, the more likely they were to attend college immediately following high school graduation whereas older children in the control group were more likely to wait a year or more before enrolling, if enrolling at all.

Harkness and Newman (2003) believe neighborhood (census tract) characteristics are more indicative of higher educational attainment than is housing type. For example, educational resources in the neighborhood such as libraries and museums have an indirect positive effect on children's education (Kutty, 2008). The benefit of improved social capital, the connections made between community members and organizations that form to develop social connection, in neighborhoods with a high homeownership rate also indirectly benefits children's educational outcomes (Harkness and Newman, 2003). Neighborhood stability increases the chances of households (parents and children) making stronger social connections with neighbors which is connected to greater educational attainment for children because of social capital bonding and the choices others around the children are making (i.e. if they are educated, if they value education, if they send their kids to post-secondary schools) (Galster et al., 2007). Living in a neighborhood with the majority of residents attaining high levels of education serve as role models for children and set an example of academic achievement (Kutty, 2008).

Children in disadvantaged neighborhoods tend to be less successful in school than their middle-class peers because of lack of health care access, undereducated parents, and inadequate housing causing them to move more frequently (Rothstein, 2013). Children in neighborhoods with higher poverty rates tend to have poorer performance in math and reading skills. Conversely, low-income children living in high opportunity neighborhoods were less likely to experience the negative effects of family poverty compared to low-income residents in low opportunity neighborhoods (Brandeis University, 2014). Children in high opportunity neighborhoods are also more likely to attend preschool and graduate from high school than children in low opportunity neighborhoods (Brandeis University, 2014). High opportunity neighborhoods with abundant job opportunities are safer because residents do not have to resort to illegal activities to generate income (Kutty, 2008).

Neighborhoods with high homeownership rates are more likely to have better funded schools. Schools are funded through the property taxes in the school's district. Taxes are assessed by calculating a set percentage of the property's overall value. The percentage varies between communities. Neighborhoods with high numbers of rental units have lower property value and therefore, are assessed lower taxes. This is because rental units are often neglected because of the lack of emotional investment in the home by both tenants and landlords, or because they are located in a part of the community undesirable to homebuyers such as the inner city with limited outdoor space. Because of the emotional investment the majority of residents have in high homeownership neighborhoods that compel them to care for and maintain their property, the higher the tax assessed value, which allows more funding for schools (Harkness and Newman, 2003). Schools with a high number of disadvantaged students have a hard time working with each student to overcome personal barriers to learning. Teachers have a harder time challenging their students or working one on one to evaluate strengths and weaknesses. Even with the best resources, racially and economically segregated schools have a hard time overcoming their failures because of the student's living conditions (Rothstein, 2013).

CHAPTER 3. CONCLUSION AND POLICY RECOMMENDATIONS

3.1. Conclusion

All categories of human capital increase substantially as housing security rises. Households receiving public housing assistance have a greater positive correlation than households in slum housing, homeowner's have a greater positive correlation than households renting or receiving public housing assistance, and homeowner's with more equity in their home have greater positive correlations than homeowner's with less equity in their home.

It is important to note a challenge observed in many of the reviewed literature is that households cannot be randomly assigned to housing therefore, the question of causation cannot be completely answered. Are barriers to financial stability, healthy housing, and educational attainment the cause of the housing available to the household or is their limited income, predisposition to health problems, and lower educational achievement the cause for their poor housing situation? In my professional opinion, the question of causation is abstract. I believe there are instances where the household's financial, health, or education challenges effects their ability to secure stable, affordable housing, but there are also instances where a household's housing is effecting their wealth, health, and/or education. Regardless, improving a household's ability to find and obtain stable, affordable housing will still benefit each of the three categories of human capital.

A household has the ability to increase its wealth through homeownership with the forced savings of mortgage amortization and equity (Killewald and Bryan, 2016; Grinstien-Weiss et al., 2011). The equity earned in a home can be used for other investments such as education, business ventures, or just a security blanket. Renters that are able to find affordable, adequate housing options are better able to save money for a down payment on a future home or for their education. Whereas cost burdened households struggle to afford the monthly rent/mortgage and have very little money left over for savings or investment.

Households that compromise safety and condition of housing for an affordable price are likely to suffer adverse health effects such as asthma, lead poisoning, or mental health issues like depression and anxiety (Breysse et al., 2004; Ellen and Glied, 2015; Morrow, 2015; Krieger and Higgins, 2002). Housing instability can exacerbate mental health issues and expose the household to unsafe conditions such as homelessness. Affordable homeownership provides stability which has shown to reduce mental health issues (Samuels et al., 2015) and allow households to mitigate unsafe hazards without barriers. The financial benefit of homeownership may also allow households to fund medical care better than cost burdened renters.

Housing stability also effects education. Stable housing ensures continued attendance in the same school district for a child (Kutty, 2008). Frequent moves reduce the child's ability to focus in school and learn prerequisites with which to build on for future lessons (Kutty, 2008). Neighborhood stability allows children to make social connections that benefit a child's emotional and cognitive development resulting in greater success in school (Whelan, 2017). Neighborhoods with high homeownership rates also have well-funded schools because of the higher property value (Conley, 2001). This allows the district to provide supplies and learning materials that enhance the child's education. Children of homeowners are also more likely to go onto post-secondary education (Harkness and Newman, 2003).

All three categories examined are related. Wealth and financial stability allow households to fund college education for their children or pay medical expenses without worry. Education allows a household to find better job opportunities and build wealth. Well educated households are able to make more informed health decisions and nutritional food choices. Households with greater wealth can afford nutritional foods and preventative healthcare. All three categories of human capital are essential for successful community members. Because of the benefits housing has on all three categories of human capital, it can be leveraged as a catalyst for change or development. The following federal policy recommendations outline starting points for improving housing affordability and homeownership access for all households, but especially for low-income minority households.

3.2. Policy Recommendations

Housing affordability should be a right for all Americans (Bratt, Stone, and Hartman, 2006). Neighborhood revitalization should include low-income housing units, including affordable properties for sale. Current and past policies that have tried to revitalize low-income neighborhoods resulted in gentrification and rising prices in the housing market, forcing out the income group the revitalization was intended to help (Ellen and Glied, 2015). Schools are funded mainly through the property taxes paid in the district the school is located in. Because of this, schools in neighborhoods with low property values and low homeownership rates are often underfunded. Perhaps the biggest change proposed in this paper is that school funding come from elsewhere, somewhere stable, such as a government bureau.

Lastly, greater access to proper home buyer education is important for successful homeowners. Currently, there are many ways to obtain a HUD approved home buyer education but it is not required by all lenders and is not easily accessible. Home buyer education teaches households how to protect their investment, the cost of buying and owning a home, how to care for and maintain a home, and how make informed decisions when buying and borrowing money. All Habitat for Humanity affiliates in America require partner families to complete a HUD approved homebuyer education before purchasing their Habitat home. This provides great results as many Habitat homeowners are inexperienced with homebuying and homeownership. In my Habitat affiliate's history of 31 years, only two homeowners have gone through foreclosure and none have reported the need for major home repairs that they cannot fix themselves. In other words, less than 1% of our affiliate's partner families have been unsuccessful in the Habitat for Humanity program. This is in part because the homebuyer education adequately prepares households for homeownership.

The following list details recommended policies that will improve housing affordability and stability for households of all income levels nationally.

- State housing finance agencies should regulate the renting and sale of revitalized housing units to ensure middle-and high-income households looking for cheap and decent housing in a new neighborhood do not push out the intended beneficiaries.
- Reorienting the Low-Income Housing Tax Credt (LIHTC) program to include specific building instructions and neighborhood requirements for developers to evenly distribute low-income housing options through all neighborhoods.
- Breysse et al. (2004). Suggests that rather than treating side effects of unhealthy housing, policy should eliminate safety loopholes for builders and landlords and educate homebuyers and renters about safety precautions and prevention.
- The Department of Housing and Urban Development or the Department of Education, or both, can allocate funds to each state for public school funding. Additional grant opportunities are also recommended for schools. In addition, property tax revenue can still be used for schools but rather than staying in the neighborhood, property taxes should be distributed evenly amongst school districts in the county to ensure equal education opportunities for all children regardless of race or income.

- Increased incentives for lenders offering low interest rates to low-income home buyers with a small or no down payment required will make financing a home more accessible to low-income households.
- Although there are many responsible lending laws for banks and other lenders, stricter lending laws and banishment of subprime lending will reduce the instance of cost burdened homeowners (Shapiro, 2006; Grinstien-Weiss et al., 2011).
- In addition, it is recommended that renters receive stronger protections against eviction to promote housing stability. The department of Housing and Urban Development has the ability to mobilize neighborhoods through state housing finance agencies, local housing authorities, and local governments, to form renters unions which it can fund through grants and provide information and resources to.
- It is recommended that policy require home buyer education before receiving a mortgage and require the education to be free with flexible options for completing the course (in person, online, or a combination).
- Boehm and Schlottmann (2008) also suggest policy or programs that allow or encourage incentives for households that move up the housing hierarchy after so many years of homeownership in the same house, to promote wealth accruement.

I further recommend continuing research on this topic by studying the question of causation more closely. This can be done by taking on an international scope by analyzing the housing market, healthcare, education, and financial status of households in countries with policies that differ from America's. It is also recommended that future research analyze the possible benefits middle- and high-income households may experience as a result of neighborhood integration and neighborhoods with mixed income classes. It is unfair that income status is indicative of the household’s (and children’s) future success. Further research on the topic may quell the “Not in My Backyard” push back affordable housing developers face when attempting to build housing options for low-income households in high opportunity areas.

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