

# The Impact of Habitat Homeownership

A study conducted by graduate students at  
The George Bush School of Government and Public  
Service in partnership with  
The Bryan College Station Habitat for Humanity.



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# Executive Summary

The Bryan/College Station Habitat for Humanity (HFH) is a nonprofit organization that seeks to provide affordable housing for low-income families in the Bryan/College Station area. In the fall of 2017 HFH initiated a three-year partnership with The Bush School of Government & Public

Service at Texas A&M University. This mutually beneficial partnership provides HFH pro-bono, research-driven deliverables they can use to leverage funding and allows second-year Bush School students, in their Capstone class, to gain experience working with a real-world client.

An initial client meeting and a review of the previous years' project findings made it clear that in order to adequately assist HFH in their objectives for the partnership, this year's Capstone students should provide HFH with more quantitative data. To become familiar with the topic, an extensive literature review was conducted, which ultimately led to the formation of the research question: How does HFH home ownership impact personal economics, health, and educational attainment?

In order to answer this research question, a survey was created and mailed to all current Habitat homeowners. The major findings for this research in these areas are:

## Personal Economics

About half of this study's survey respondents reported that their income increased after they moved into their HFH home. Consequently, the homeowners seem to have more financial flexibility such that they were spending more on their housing, health, education, insurance payments and savings.

There is a large discrepancy between HFH homeowners who are eligible for government assistance and those who apply for it. Reasons for eligible homeowners to not apply for such assistance programs could be related to lack of information, administrative hassle, and social stigma.

## Health

Higher number of respondents agreed that their physical and psychological health conditions improved at some level after moving into their HFH home.

Cont...

There are disparities between health improvements of homeowners who have lived in HFH homes for less than five years versus more than five years.

Education:

A majority of survey respondents reported improvements in their children's grades, social engagement, school efforts, and motivation after moving into their current HFH home. Homeowners expressed that there was an increase in the time they spent on helping children with school work after moving into their HFH home.

The following document provides an introduction to the project, the scope of work, the literature review, the research methodology, research findings, discussion of the research, recommendations, and limitations. It is the hope of The Bush School Capstone 2018-2019 that this study will provide a better understanding of the impact the HFH homeownership program has on its homeowners' quality of life through evidence based quantitative analysis and serve as a preliminary roadmap for future research and program improvements.

All the best,

Habitat for Humanity Capstone 2018-2019

# Introduction

## WHO IS CONDUCTING THE RESEARCH?

Second-year students at The George Bush School of Government and Public Service at Texas A&M University, earning their Master of Public Service and Administration (MPSA) degree.

## WHY IS THE PROJECT TAKING PLACE?

As part of the second-year Bush School curriculum, students are required to participate in a capstone project. The capstone project requires students in the MPSA program to work in teams to produce a deliverable for a real-world client.

## WHO IS THE CLIENT?

The Bryan College Station (BCS) Habitat for Humanity (HFH)

## WHAT ARE THE DELIVERABLES?

The deliverables are the research findings contained in this document and three types of fliers HFH can distribute to various stakeholders (eg: government officials, donors, and members of the community).

## WHAT IS THE PURPOSE OF THE PROJECT?

The purpose of this project is to answer the following research question: What effect does HFH homeownership have on: personal economics, health, and educational attainment?

## WHAT IS THE IMPACT OF THE PROJECT?

The impact of the project is to utilize findings and trends about the status of homeowners after moving into a HFH home to improve living conditions and to raise awareness among key stakeholders about HFH and its homeownership program.

## WHO BENEFITS AS A RESULT OF THE PROJECT?

As a result of the completion of this project, the main beneficiaries are current and future HFH homeowners. HFH and its donors will also benefit from the findings and understanding provided by the study regarding the homeowners' living conditions, challenges, and changes.

# Scope Of Work

The capstone team is consulting for HFH. The project will study the effect Habitat homeownership has on the personal economics of beneficiaries and how the relationship affects: the education of the homeowner's children and homeowners families' health. The goal of this project is to provide practical information for HFH so they can expand on previous research to better serve Habitat homeowners in the BCS area.



## PROBLEM DEFINITION

The client expressed concern that the larger Bryan and College Station community has a poor understanding of what HFH does and its impact on the families and communities they serve. The client believes quantitative data is required to effectively communicate the impact of homeownership on donors and the community at large.

Based on discussions with the client, a literature review, and the previous capstone report, the issue is defined as: a lack of systematic and evidence-based understanding of the impact of Habitat homeownership on the quality of life of the homeowners.

The key variables for this project are as follows:

- Homeownership: being a recipient of HFH house
- Personal economics: gross/disposable income, govt assistance, savings, and
- work-leisure ratio
- Education: attendance and performance in school
- Health: physical, mental and psychological health.



## THE PROPOSED RESEARCH QUESTIONS ARE:

How does Habitat homeownership influence personal economics?  
How does Habitat homeownership affect educational attainment and health?

### PROJECT ROADMAP

First, the capstone is going to assess the personal economics of Habitat homeowners and how it has changed before and after owning a house. The assumption is that there is a positive change in the personal economics of homeowners, given that homeownership provides beneficiaries with an improved quality of life and significantly decreases the cost of living. Therefore, the capstone will analyze the relationship between homeownership and personal economics by examining the income to debt ratio, expenses, savings and the labor-leisure ratio.

The hypothesized, positive, relationship between homeownership and personal economics leads to the second model.

The second model analyzes how this relationship will impact the performance of Habitat homeowner's children at school. This model also includes the health of families as a variable.

Model two is based on the assumption that Habitat homeownership enables homeowners to allocate more money to education and health. These variables, in theory, provide homeowners with an enhanced quality of life.

The connection homeownership has with education and health is essential to understanding the underlying reasons for the change in the personal economics of homeowners and their allocation of resources.



# Deliverables Defined

## ***Team Mission Statement***

The mission of the HFH capstone 2018-2019 team is to provide evidence based and practical information for HFH, so they can expand on previous research to better serve Habitat Homeowners in the Bryan and College Station area.

## ***Scope of Work Memo***

Prepare a scope of work memo that details the project activities. Draft memo must be reviewed by faculty and client prior to final submission. Presentation will be made to other teams.

## ***Interim Report***

This report integrates and extends prior documents to provide a comprehensive report of the team's work. Requires a draft reviewed by client and faculty sponsor.

## ***Survey***

The capstone will conduct a two-part survey (pre-test and post-test) that will observe the quantitative and qualitative analysis based on the impacts of Habitat homeownership on personal economics in terms of: income, expenses, assets, and debts.

## ***Final Report***

The final report will include a collective of all the information gathered and the implications on policy, and administration for HFH.

## ***One Page Fact Sheet***

The fact sheet was requested by the client to show the outcomes of the research.



# Schedule

09/14/2018

Initial Client Meeting: The goal of this meeting was to meet the client and receive feedback about shaping research questions.

10/05/2018

Present Scope of Work to Client: The goal of this meeting was to present the scope of work to the client. After discussing the research questions, some minor changes were made to the scope of work.

10/26/2018

Research Design & IRB Applications: The capstone intends to begin application for IRB approval by this date.

11/30/2018

Interim Report Presentation: The goal of this meeting is to discuss relevant findings with the client and ensure their expectations are being met and to further identify any necessary goals.

03/08/2019

Survey Response Deadline

04/30/2019

Final report presented to client and the Habitat for Humanity Board of Directors.

# Team Roles

## Project Managers



- Paola Martinez
- Muriel Pannel
- Joohyung Park
- Gayane Baghdasaryan
- Oluwabukola Makinde
- Kyle Ford
- Shrabya Poudyal
- Faith Feaga

## Data Managers



## Research

## Communications



## Secretary



## Editor & Design



# Project Budget

Item	Unit cost	Frequency	Subtotal	Total	Notes
<b>Transportation</b>	\$0.00	0	\$0.00	\$0.00	Occasional travel to the local office, in Bryan. (Will not be reimbursed for fuel)
<b>Meals</b>	\$100.00	5	\$500.00	\$500.00	Lunch (provided on presentation days and some work days, occasionally)
<b>Data Collection</b>				\$122.50	
Translation	\$100.00	0	\$0.00		Surveys were translated to Spanish by a HFH staffer
Survey Postage	\$0.49	250	\$122.50		Mailed surveys through TAMU system - free postage; return envelopes - paid postage (247 homeowners)
<b>Reports &amp; Printing</b>				\$264.00	
Surveys	\$0.20	0	\$0.00		Bush School printers were used at no additional charge
Letters	\$0.55	30	\$16.50		Thank you letters to survey participants
Interim Reports	\$12.65	0	\$0.00		Printed in B&W at the Bush School
Final Reports	\$16.50	15	\$247.50		Printed in color and bound at Copy Corner
<b>Other</b>				\$320.00	
Survey Incentive	\$10.00	32	\$320.00		Gift cards - sent to every individual household that participated
				<b>\$1,206.50</b>	

# Literature Review

This section of the report explains relevant literature findings regarding

- \* Personal Economics
- \* Health
- \* Safety &
- \* Education



## Introduction

Homeownership is defined as perceived control of living space (Apgar, 2004). Housing affordability is closely related to the quality of life because it determines how much a family can spend on non-housing items such as food, health care, and education. Finding affordable housing is difficult for many low-income households.

While homeownership is primarily seen as a consumption good, it also allows homeowners to build assets and, therefore, accumulate wealth (Dietz, Haurin, 2003; Lyons, Chang and Scherpf, 2006). Moreover, homeownership develops a sense of control and stability among homeowners, allowing them to focus not only on basic needs such as food and clothing, but also to make investments in the education of their children and make choices that support better health (Dietz & Haurin, 2003). Based on this understanding, and the areas of interest for this capstone's clients at HFH, the research questions revolve around the relationship between homeownership and personal economics, education, and health.

Therefore, the purpose of this literature review is to demonstrate how homeownership influences personal economics, education and health.

# Personal Economics



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# Personal Economics

For low-income families, there are typically three dimensions of personal economics that are affected by nonprofit homeownership programs to varying degrees: housing affordability, asset building, and financial literacy. Homeownership programs are less likely to affect housing affordability and income, other things being equal. The development of personal assets does not have a clear impact on homeownership. Finally, financial literacy plays a crucial role in a family's ability to make sound financial decisions and plan for the future. Yet, most low-income families in America are financially illiterate.

## Homeownership and Housing Affordability

As nonprofits provide affordable housing with low-interest rates to low-income households, these programs may help them to mitigate their housing affordability problems. Using the British Household Panel Survey (BHPS) between 1997 and 2003, Bramley (2012) offers evidence that demographic characteristics of homeowners (such as being a single parent, the number of children, age, divorce/separation, sick/disabled, education, and household income) and market conditions (house price and mortgage interest rate) are associated with affordability problems for homeowners. Similarly, Kutty (2005) finds that households near poverty in metropolitan urban and suburban areas are likely to fall into housing-induced poverty which is partly due to relatively high housing prices in those areas. Both studies demonstrate the probability of having affordability problems or housing-induced poverty decreases when renters receive rent subsidies or live in public housing (Bramley, 2012; Kutty, 2005).

While housing assistance programs are likely to mitigate housing affordability problems of low-income households, existing research indicates skepticism about the positive impact of housing assistance programs on income and employment. For example, Susin (2005) finds that households which receive housing assistance, such as public housing, project-based subsidies, and vouchers, had lower income growth than unsubsidized households from 1996-1999. cont...



Mills, et al. (2006) offer evidence that the earnings and employment of low-income households were not affected by their participation in the Housing Choice Voucher program. Newman, Holupka, and Harkness (2009) also demonstrate that employment rates and earnings among women moving into public housing or private assisted housing were not statistically different from those of comparison groups. Given that many public housing programs are operated by nonprofits and basic characteristics of public and nonprofit homeownership programs are likely to be similar, the impact of nonprofit programs on housing affordability and income is likely to be limited.

### Government Assistance

The other way that nonprofits can help low-income households improve their housing affordability and income is to facilitate their participation in government assistance programs. Guo (2010) suggests that assistance from nonprofits might have little to do with public program participation, such as Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), and Medicaid/ Children's Health Insurance Program (CHIP). This is because their target populations are different from those of government assistance programs.

However, direct assistance from nonprofits accounts for their activities quite partially. Given that a large portion of public housing assistance programs are operated by nonprofits (Newman, Holupka & Harkness, 2009), many low-income households receiving assistance are likely to come in direct contact with nonprofits. This means that nonprofits may have sufficient discretion in facilitating increased participation in public assistance programs.



However, there are multiple barriers to participating in public assistance programs. Although there are a variety of specific factors influencing participation decisions, main barriers essentially correspond to a lack of information, administrative hassle, and social stigma. Household factors such as race/ethnicity, employment status, and education level might be closely related to an information deficit (Algert, Reibel & Renvall, 2006). Similarly, employed households tend to believe that they are not eligible (Coe, 1983). Since program design features are determined at the federal and state government levels, factors related to the attitude of street-level bureaucrats toward low-income households in the application process seem to be relevant to nonprofits at the local level. On the other hand, families may feel that accepting government assistance is undesirable due to cultural stigmas (Stuber & Kronebusch, 2004; Nicoll, 2015).

Although there are various ways by which nonprofits can address participation barriers, efforts of nonprofits to mitigate these barriers may be limited partly because of lack of resources and partly because of their inaction. One of the obvious limitations of nonprofits is insufficient resources (Salamon, Hems & Chinnock 2000). Even providing information about programs requires staff, time, and funding to figure out complex program eligibility and get in touch with their clients. Moreover, the additional resources for increasing enrollment in government assistance programs are less likely to be available since that goal might not be their primary one. This perspective of nonprofits may lead to their inaction on those programs.





## Homeownership and Asset Building

Assets are the financial and nonfinancial resources, property, and possessions of economic value that a family owns (Sherraden, Birkenmaier & Collins, 2018). The two most common forms of asset building are homeownership and savings. However, the largest asset a family owns is usually their home. Increasing one's personal assets is directly linked to financial stability due to the increase in capability. Financial capability is an essential factor in determining the success of a family (Greenspan, 2002).

### Long-term Savings' Relationship with Homeownership

Developing a long-term savings account (LSA) is one of the best ways to plan for long-term financial success. It allows families to set financial goals and work towards them. Having an LSA is crucial for the accumulation of wealth, yet only one in three low-income families reported having any savings (Sherraden, Birkenmaier & Collins, 2018). The problem is many families do not completely understand the benefits of an LSA due to the complexity of financial literacy. This results in their decision to rely on government assistance instead. Sherraden, Birkenmaier and Collins (2018) suggest that low-income families were relying on the government to provide assistance because it was easier to use and understand compared to other saving methods. There are a plethora of reasons why low-income families are struggling to implement savings into their resource portfolio, primarily because of their inability to take financial risks and diversify their income.

Low-income families have a less diverse income flow than the vast majority of Americans (Sherraden, Birkenmaier & Collins, 2018). By not being able to plan for the future, low-income families' economic situation will remain constant or decline. This leads to what Sherrade, Birkenmaier and Collins (2018) define as a financial vulnerability, "having a low income, being financially insecure, and being exposed to risks, shocks, and stress" (p. 15). Therefore, low-income families are likely to systematically struggle financially since they are unable to build savings.



The relationship between long-term savings and homeownership is unclear for low-income families. There is little research suggesting that by owning a home, a person's savings increases. In fact, after Lersch and Dewilde (2018) accounted for other factors, there was no correlation between homeownership and contributing to an LSA. Nonetheless, owning a home will still have a significant impact on personal assets.

### Personal Assets' Relationship with Homeownership

Despite major consequences from the 2007 housing market collapse, many Americans still dream of owning their own home. There are numerous benefits to owning a home, and even government policies put in place to encourage individuals to purchase one. However, purchasing a home also comes with some financial risk. Over seven million homes have been foreclosed on in the last decade, which will have financial consequences for years to come (Demarco, 2016). The risks involved may deter low-income families from purchasing a home and results in lifetime rent payments which have no equity.

Owning a home is a major building block in accumulating assets and is usually the largest financial decision an individual makes. It allows people to build credit and eventually sell their home which can lead to capital gains. A home is also one of the largest assets a person can acquire, yet many low-income households have little or no assets of substantial value (Sherraden, Birkenmaier & Collins, 2018). Since low-income families are unable to afford the down payment, they may continue to spend their money on rent payments never building credit or gaining equity. As a result, homeownership rates are declining, while apartment renting is increasing. This will have an enormous financial impact on low-income families who cannot purchase a home due to a lack of savings or poor credit scores.



### The Role of Financial Literacy

Financial literacy is defined as “the individual’s ability to make informed judgments and effective decisions about the use and management of his or her money” (Wolfe, 2013 p. 106). People who are not financially literate are less likely to plan for their future (Lusardi & Mitchell, 2008). Some scholars indicate the, “Current financial crisis began with subprime mortgages that were marketed primarily to those with less income, education and presumably less financial literacy than those who were eligible for prime mortgages” (Wolfe, 2013 p. 106).

Financial illiteracy is prevalent in the United States, regardless of gender, race, ethnicity and education levels. Although women tend to possess the least amount of financial knowledge, research demonstrates men only score slightly higher than women on financial literacy tests (Lusardi & Mitchell, 2007; Lusardi & Mitchell, 2008; Chen & Volpe, 2002; Fonesca, Zamarro & Zissimopoulos, 2012). On average, female participants answer 51% of the questions correctly compared with 57% for male participants” (Chen & Volpe, 2002 p. 296).





### The Role of Financial Literacy Continued...

Moreover, even those who are college educated are not performing exceptionally well on financial literacy examinations (Lusardi & Mitchell, 2008; Chen & Volpe, 2002). Jim Flaherty, the Canadian Minister of Finance, said, “We are graduating people who can design and build complex buildings and bridges, but cannot effectively manage their personal finances.” Given the problem of widespread financial illiteracy, researchers advocate increasing financial programming aimed toward improving outcomes for women, minorities and low-income groups.

Studies have shown there is a positive correlation between homeownership and financial literacy. However, many low-income families do not possess a significant amount of financial knowledge. This can lead to foreclosure or the inability to purchase a home (Gathergood & Weber, 2017). As Greenspan (2002) writes, “educational and training programs may be the most critical service offered by community-based organizations to enhance the ability of lower-income households to accumulate assets” (p. 40). In order to build assets, one has to understand the basics of financial literacy. Greenspan (2002) also noted that “analysts have shown that a comprehensive understanding of basic principles of budgeting and saving, at the start, increases household wealth in later years” (p. 40). This will help families learn how to secure low mortgage rates and prepare for risks associated with homeownership.



# Health



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## Health

This section provides an overview of the association between homeownership and health. The relationship between affordable housing and health has been well documented through extensive research (Kahn & Fazio, 2005; Cutler, Lleras-Muney & Vogl, 2008; Farmer & Ferraro, 2005). Recent studies show that owning a house positively impacts the overall well being of homeowners (National Association of Realtors, 2011; Apgar, 2004). Families who own homes have more self-esteem and/or a perceived sense of control over their lives. Moreover, economic stability, and the quality of housing, both play an important role in promoting health (Apgar, 2004)). Whereas, economic crisis can lead to the increased unemployment rate within lower-income residents, which often translates to increased stress levels

and anxiety disorders (Ng, Agius & Zaman, 2015). In terms of quality housing, substandard housing conditions are believed to induce cognitive and behavioral problems among children (Ferguson, et al., 2013; Coley, et al., 2014; Aaronson, 2000; Mueller & Tighe, 2007). Similarly, insufficient housing quality is associated with higher stress and anxiety among parents, which, in turn, affects parent-children relationships (Evans, 2006; Aaronson, 2000). As a result, housing quality affects health in two important ways. First, it leads to lower performance rates at school, which includes higher dropout rates (Gould, 2009; Ferguson et al., 2013). Second, it causes long-term social isolation and psychological distortions among children (Aaronson, 2000; Mueller & Tighe, 2007).





### Homeownership & Health

Homeownership has a positive influence on the mental health of families (Rohe, Van Zandt & McCarthy, 2002). As more families own homes, their overall quality of health begins to increase (Rohe, Van Zandt & McCarthy, 2002; Apgar, 2004). Since owning a house promotes wealth accumulation, diversification, and investment, as wealth increases, it impacts the families' self-esteem which translates to perceived control over the activities in their lives. While some families demonstrate improved psychological and physiological health as a result of homeownership, however, this is not true in all instances (Burns and Vaccaro, 2015; Rohe, Van Zandt & McCarthy, 2002; Apgar, 2004). To further study this anomaly, researchers began examining the relationship between homeownership

and health. Most studies revealed that externalities such as increased unemployment rates attributed to increased health expenses (Manturuk, 2013; Pollack & Lynch, 2009). Other research indicated families who had significant health problems prior to purchasing a home experienced increased emotional stress due to the additional expenditures associated with homeownership (Jacoby, Sullivan & Warren, 2001). In addition, unemployment and the health status of individuals experiencing financial hardships are components with a significant influence on mental health (Kottke, Abariotes & Spoonheim, 2017). These factors at least partially explain why homeownership does not always improve psychological and physiological health.





### Housing Quality and Health

There is extensive research arguing that housing conditions highly influence the physical and psychological well-being of a family. Research has demonstrated there is a causal relationship between substandard housing conditions to behavioral patterns of children (Ferguson, et al., 2013; Coley, et al., 2014; Aaronson, 2000; Mueller & Tighe, 2007). The findings also illustrate that there is a correlation between housing conditions and psychological stress in parents which results in at distorted relationships between parents and children (Evans, 2006; Gould, 2009; Ferguson, et al., 2013). Health, in terms of housing quality, is influenced by the following: crowding, air quality, and lead poisoning. The following section will discuss how poor housing quality can influence health.

*"There is extensive research arguing that housing conditions highly influence the physical and psychological well-being of a family."*



## Crowding

Crowding is an important determinant of the psychological integrity of a family. Crowding is defined as the ratio of persons to rooms. Ratios greater than 1:1 are considered overcrowded (Leventhal & Newman, 2010). Evans (2006) believed that crowding limits space for children to study which causes too much and often unwanted interactions at home which further leads to social withdrawal of children from normal relationships in their adult lives (Evans, 2006; Gould, 2009; Ferguson, et al., 2013). Due to distorted relationships with parents, children often lack social support in their future and tend to self-isolate. Self-isolation can also lead to negative educational outcomes. In turn, lack of social support and psychological distress is associated with problematic

parent-child relationships caused by crowding (Coley, et al., 2014; Ferguson, et al, 2013). Researchers argue crowding can negatively impact child-parent relationships, often associated with a lack of parental care and monitoring (Ferguson, et al, 2013). This results in children having poor performance in school (Ferguson, et al., 2013). For example, Ferguson, et al. (2013) argue that psychological stress results in punitive parenting mediation relations with 8 to 10-year-olds and is positively correlated with density in low-income families. Insufficient socioeconomic and physiological conditions are partly responsible for interpersonal tensions between parents and 10 to 12-year-old children in crowded homes when controlling for socioeconomic status (Ferguson, et al., 2013).



## Conditions of a House & Health

Environmental toxins in homes cause serious health hazards affecting the mental and psychological well-being of residents. Poor air quality as a result of mold, pest infestation, and other toxins is a major problem in substandard housing (Mueller & Tighe, 2007). Researchers have also linked asthma to dust mites in old carpeting, low heat, hot water, and crowding (Mueller & Tighe, 2007). Substandard living conditions in poor neighborhoods can cause respiratory and digestive issues. These conditions ultimately lead to poor health or cheat families out of affordable health care.

Additionally, housing quality is linked to illnesses and injuries through cockroach infestation. Cockroach infestation, a universal problem in many homes and buildings, has been linked to asthma as well.



Finally, research on housing quality emphasizes the environmental hazards related to lead poisoning (Evans, 2006; Ferguson, et al., 2013). Studies have discovered lead poisoning during childhood is responsible for lower IQ rates, reading insufficiencies, weak math skills and higher dropout rates (Evans, 2006; Ferguson, et al., 2013). When researchers controlled for socioeconomic status and mental health status, behavioral distortions such as hyperactivity, distractibility, and lower frustration tolerance were discovered in children with lead poisoning (Evans, 2006; Gould, 2009). This, in turn, was found to be associated with juvenile delinquency in elementary school.

*According to one study, “10,000 children between the ages of four and nine are hospitalized for asthma attacks each year because of cockroach infestation at home” (Mueller & Tighe, 2007, p. 4).*



# Education



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# Education

The relationship between education and homeownership is displayed in a child's performance in school. This section will discuss how residential mobility impacts children's educational attainment, the effects of family and home structures on educational performance, and the effects family economics have on children's education.



## The Impact of Residential Mobility on Children's Educational Attainment

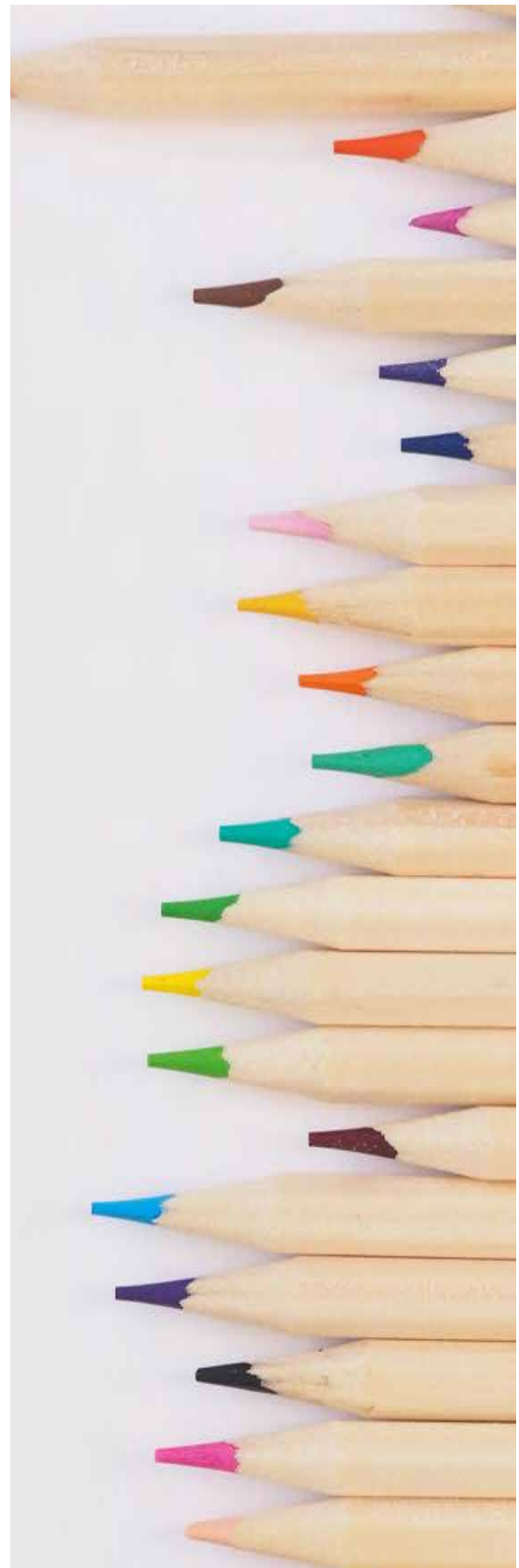
Moving from school to school can have an impact on student performance. According to the National Association of Realtors (2011), "5.2% of homeowners moved from 2008-2009, while 30% of renters moved in the same year." Many families who move frequently, move into lower income neighborhoods which have less funding for public schools, thus negatively impacting the quality of education their child receives (Nam & Huang, 2011). Researchers have discovered there is an empirical relationship between residential mobility and school performance (Rumberger, 2003; Mueller & Tighe, 2007). Research has demonstrated that moving residential areas and school zones have a significant negative impact on school achievement. Empirical studies have also shown that of third graders who attended three or more schools since first grade, 41% had below-average scores in reading compared to those who never changed schools. While 33% of mobile students were below average in math, as opposed to 17% of cont...



children who never left their schools. A stronger significant correlation is found when analyzing the relationships between mobility and drop-out rates (Rumberger, 2003; Mueller & Tighe, 2007). Research has demonstrated that moving residential areas and school zones have a significant negative impact on school achievement. Empirical studies have also shown that of third graders who attended three or more schools since first grade, 41% had had below-average scores in reading compared to those who never changed schools. While 33% of mobile students were below average in math, as opposed to 17% of children who never left their schools. A stronger significant correlation is found when analyzing the relationships between mobility and drop-out rates (Rumberger, 2003; Mueller & Tighe, 2007).

Higher drop-out rates have also been recorded among mobile children. Mueller and Tighe (2007) discovered children who changed schools four or more times by eighth grade were at least four times more likely to drop out, as opposed to those who never switched their schools. At the same time, those who drop out have a lower chance of finding well-paid jobs. According to 2004 estimates, the unemployment rate for high school dropouts was more than double that for high school graduates.

Similarly, Buerkle (1998) examines the relationship between absenteeism, caused by frequent moves, and school performance. Interviews of 100 families with a history of frequent moves revealed parents cont...



were concerned about frequent absenteeism, poor school performance, and behavior of their children caused by stressful relocation. Parents also reported adjustment challenges for their children.

### The Effects of Family and Home Structure on Educational Performance

The academic success of a child is influenced by many factors. Family stability and parental involvement, along with the physical environment of their home, can affect a child's ability to perform well in school. This section will discuss how family structure and home structure influence academic success.

#### Family Structure

The well being of a child is positively correlated with a stable family structure (Henderson & Berla, 1994). Although parental education level, cultural background, and income play a large role in the success of children, there are other ways to positively impact future achievement. For example, if parents encourage learning and voice high expectations for the future, they are promoting attitudes that are keys to achievement. When parents and schools collaborate to help children adjust to the school environment, children of all backgrounds tend to do well. "When schools encourage families to work with their children and provide helpful information and skills, they reinforce a positive cycle of development for both parents and students" (Henderson & Berla, 1994 p. 28). Research demonstrates these types of interventions, whether based at home or school, will have positive impacts on the child's future endeavors.

#### House Structure

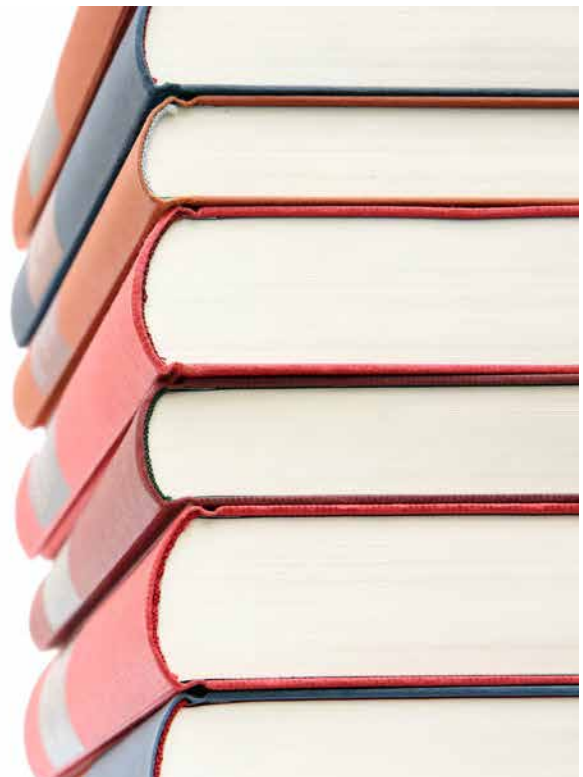
As discussed previously, both substandard housing quality and crowding, that low-income families are likely to experience, have negative impacts on educational attainment. First, excessive exposure to lead has been proved to lead to IQ deficiency and behavioral distortions among grade school children (Evans, 2006; Ferguson, et al., 2013). These findings were supported by teachers who reported more attentional deficit and social isolation as a function of lead exposure (Evans, 2006). Studies also revealed deficits in reaction time, visual-motor integration, attention, and identification of distortions of behavioral patterns (Evans, 2006). Second, crowding is argued to reduce parental monitoring and increase emotional distress among children (Coley et al., 2014; Evans, 2006). These findings are further supported by self and teacher estimation of psychological distress among third and fourth graders. This shows there is a higher rating of distress among children who live in larger, multifamily structures (Evans, 2006).

## How Family Economics Affects Children's Education

An increase in family income can positively impact educational outcomes for children, but it can also positively impact the health and economic outcomes for the families as well. For example, research demonstrates that if the family of a young child was in The Housing Choice Voucher Program, the voucher could reduce the likelihood of children missing school for health, financial, or disciplinary reasons (Owens, 2017).

When it comes to a child's ability to further his or her education, there is a difference when a family has more disposable income. If a family has more income or access to better housing situations, whether that be moving to a better neighborhood or to a better quality house, the impact will not only affect the family, but the neighborhood as a whole. There are two major effects that housing has on education: (1) if families are able to live in one home for an extended period of time, dropout rates decrease, and (2) if families improve the condition of the house in which they live, then academic performance positively improves because better housing conditions allow for study environments that increase learning (Muller & Tighe, 2007).

Parents' liquid assets have a positive association with years of schooling, high school graduation, and college attendance (Nam & Huang, 2008). This is significant because better schooling outcomes indicate children will have more opportunities for future endeavors when they are no longer dependents. Children with parents who have a high level of net worth or liquid assets are more likely to graduate high school and attend college than those without (Nam & Huang, 2011) and therefore have a greater advantage than children of lower net worth families.



# Literature Conclusion

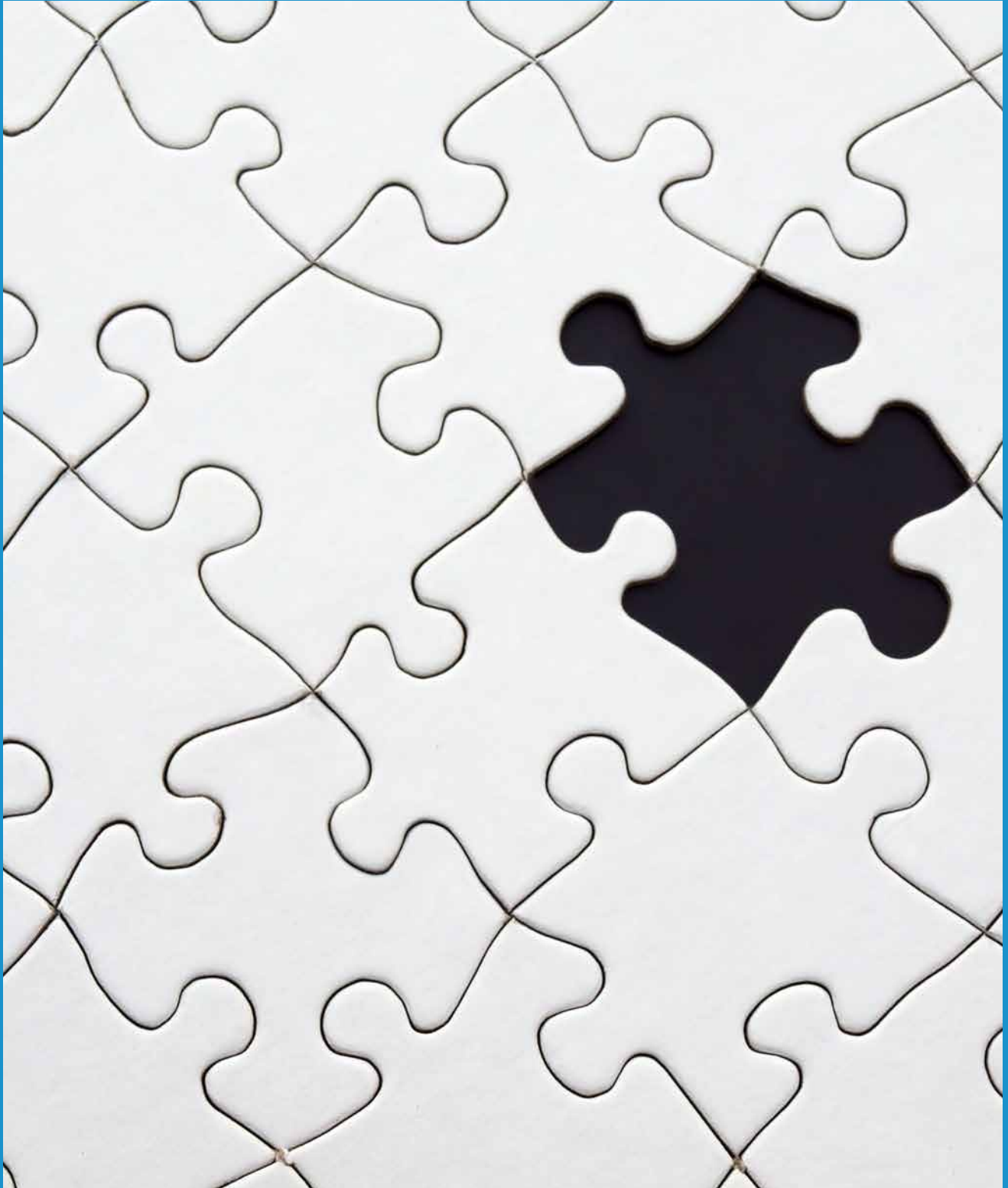
*"The literature review presented here has sought to explain the existing information and research on the aforementioned relationships."*

The literature illustrates that homeownership has a multifaceted relationship with the variables. This relationship is complex as demonstrated in the analysis provided. For example, personal economics can influence the ability to afford a home. In terms of health, homeownership has a positive influence on health due to a variety of variables, such as economic occurrences and pre-existing health conditions. Additionally, inadequate housing conditions, along with crowding, have direct and indirect health implications further affecting children educational attainment, overall life-satisfaction, and psychological well-being of a family. Finally, homeownership positively impacts children's educational performance as it provides stability, structure, and improved educational outcomes.





# Methodology



HABITAT FOR HUMANITY

## Study Data & Methods

The research objective of this project was to explore the impact of the BCS Habitat for Humanity homeowners program on three key areas: personal economics, health status, and children's educational status. Based on our hypothesis assuming a positive relationship between homeownership and personal economics, health, and education, this research utilized a quantitative method survey design to analyze whether or not there is any evidence supporting these assumptions.

The research team used a pre-test, post-test experimental design to examine the impacts of Habitat homeownership on personal economics in terms of income, expenses, assets, and debts. Pretest information collected detailed the demographic and economic information homeowners provided when the HFH homeowners applied to the program. Surveys were designed and distributed to HFH homeowners to collect data on the current status of personal economics, health, and education of the homeowners. Surveys were collected for 2 months - February 15 to April 8, 2019. These two data sets allowed the team to compare homeowners economic status before and after receiving a home.

The survey administered to gather post-test information was divided into four sections, with questions related to changes in personal economic (income, expenses, savings), health conditions, children's

educational attainment, and demographics.

Demographic questions were also included to control for number of years lived in HFH homes, marital status, and number of children in each household.

Race/ethnicity and age indicators were also included to

obtain an overall picture of demographic composition of the HFH beneficiaries and corroborate the findings from HFH applications that Hispanics and African Americans were the highest recipients of the homeownership program.

The survey was 22 questions in total and was sent to 247 HFH homeowners in the Bryan/College Station area. The questions for personal economics measure any changes in income, savings, and expenses associated with owning a Habitat home. In terms of income, annual salary ranges (similar to US Census format) were provided to facilitate the response rate and provide flexibility in reporting personal income information. While assessing the data for health and education, rating scales on the opposite sides of "Agree or Disagree" and "Improved or cont..



Worsened” were consolidated to allow for easy interpretation and to track for any changes in the overall health conditions and educational attainment of children of homeowners since moving into a HFH home.

In addition, data was obtained from HFH regarding the information on personal economics filed by homeowners at the initial stage of their application process. This information was used to examine the differences and/or similarities with the survey information collected and is graphically represented in the results/findings. The American Community Survey (ACS), conducted by the U.S Census Bureau, was utilized to extract aggregate data on the annual income and demographics of the Bryan/College Station area. This is significant because the research sample size resides in the same area.



### Personal Economics

The personal economics aspect of the survey sought to understand variations in household income, working hours, and various expenses after they moved into a Habitat home. Corresponding to income categories in Census data, the research team asked Habitat homeowners about their annual income (past 12 months) and if their income increased or decreased following the move into their home. To determine how many households use some type of government assistance program to supplement their income, the research team asked respondents which programs they participated in and whether their benefits increased or decreased. In addition, the team measured changes in respondents working hours after they moved into a Habitat home. Also examined was how homeowners allocated their income. They were asked about how much their savings, housing insurance payment, and education and health expenses changed. Finally, the team asked about the management of their assets by asking about savings accounts, retirement plans, and investments in the stock market.

## Health

The health aspect of the survey was evaluated using a 5-point Likert scale which attempted to show the levels of improvement (or otherwise) in the overall health quality of HFH household members. This included tracking the physical, psychological, and mental health outcomes of respondents after moving into their Habitat homes. One qualitative question was included to further investigate the mental health conditions of respondents. The intention of this qualitative question was to track the impact of HFH homeownership on mental health since the literature review indicated a strong relationship between owning a home and improved mental health.

## Education

In terms of education, the questions sought to understand the impact of HFH homeownership on homeowner's children's educational attainment, school performance, and parental engagement in children's education after moving into a HFH home. A similar 5-point Likert scale was utilized to track the levels of improvement or worsening in children's grades, attendance, social engagement, efforts in school-related tasks, and motivation in school. The same matrix also gathered changes in time spent by parents helping children with school work and engaging in their extracurricular activities after the move. Additionally, information regarding the change of schools after moving into their HFH home was collected through questions intended to understand parents' perspective on the quality of education provided in the new schools and if they observed any differences.



# FINDINGS & DISCUSSION

## Personal Economics

The literature on housing assistance programs indicates that its effects on earnings, employment, and government assistance are likely to be limited. Although the results cannot demonstrate those causal effects, survey respondents reported some positive outcomes. About half of the respondents reported that their income increased after they moved into their Habitat home. Consequently, they seem to have more financial flexibility. Therefore, they seem to spend more on their housing, health, education, and savings. Nevertheless, the results suggest that their economic conditions could be improved by actively participating in government assistance programs and learning to effectively manage their assets through financial literacy training.

## Annual Monthly Income

Figure 1 shows the distributions of Habitat homeowners' annual income. When they applied to the Habitat program (left), about 90% of homeowners' annual income ranged between \$10,000 and \$34,999. While about 71% of respondents' annual income lies in that range, the distribution of survey respondents' annual income (right) seems to be polarized: the proportion of households in the lowest income category (less than \$10,000) and the higher income category (\$35,000 or more) increased 9.3%p and 10.2%p, respectively. Nevertheless, annual income for HFH homeowners remains low when compared to the majority of the population in the Bryan and College Station area.

[Figure 1] Distributions of Habitat Homeowners' Annual Income (before taxes)

[See next page]





	Application		Survey		Bryan	CS
Categories	N	(%)	N	(%)	(%)	(%)
Less than \$10,000	1	0.4	3	9.7	10.6	16.3
\$10,000 to \$24,999	152	60.6	14	45.2	17.1	20.0
\$25,000 to \$34,999	75	29.9	8	25.8	12.1	9.6
\$35,000 or more	23	9.2	6	19.4	60.2	54.1
Total	251	100	31	100	100	100

In accordance with the results of Habitat homeowners' annual income, about half of respondents answered that their monthly household income increased after they participated in the Habitat program (Figure 2). On the other hand, about 22 percent of respondents replied that their monthly household income decreased after they participated in the Habitat program. This result seems to support income polarization among Habitat homeowners.

Figure 2 Changes in Monthly Household Income among Survey Respondents



With respect to the amount of their monthly income changes, the increase in their monthly income mostly ranges between \$1 and \$999 (Figure 3, left). Given that monthly income for Habitat homeowners is low, these increases seem to be large. Among 15 respondents whose household income increased, 6 respondents suggested that their working hours increased after they moved to their Habitat home (40%). On the other hand, the proportion of households whose working hours increased is much smaller among households who reported that their income stayed the same or decreased. (12.5% and 0%, respectively). Although reasons why their working hours increased was not included in the survey, one possibility is that moving into a Habitat home might provide better access to jobs. However, some respondents indicated that their monthly income significantly decreased from \$4,000 to \$7,999 after they moved to their Habitat home (Figure 3, right). This result may be attributed to some respondents entering into retirement.



[Figure 3] The Amount of Changes in Monthly Household Income among Survey Respondents



\* 2 missing responses were excluded.

As participation in the HFH homeownership program is likely to affect households who moved to their Habitat home recently, we examined changes in their monthly income, considering the number of years they lived in their current home. As a result, 62.5% of households who have lived in their home for less than 5 years (5 of 8) reported an increase in their income, while 40.9% indicated their income increased if they had been living in the home for more than 5 years (9 of 22). In particular, all households who lived in the home for less than 3 years (4) reported an increase in their income. Due to the small sample size and other intervening factors, this result does not demonstrate that HFH homeownership has a positive economic impact on clients. It does, however, suggest, a positive effect during the early years of homeownership.

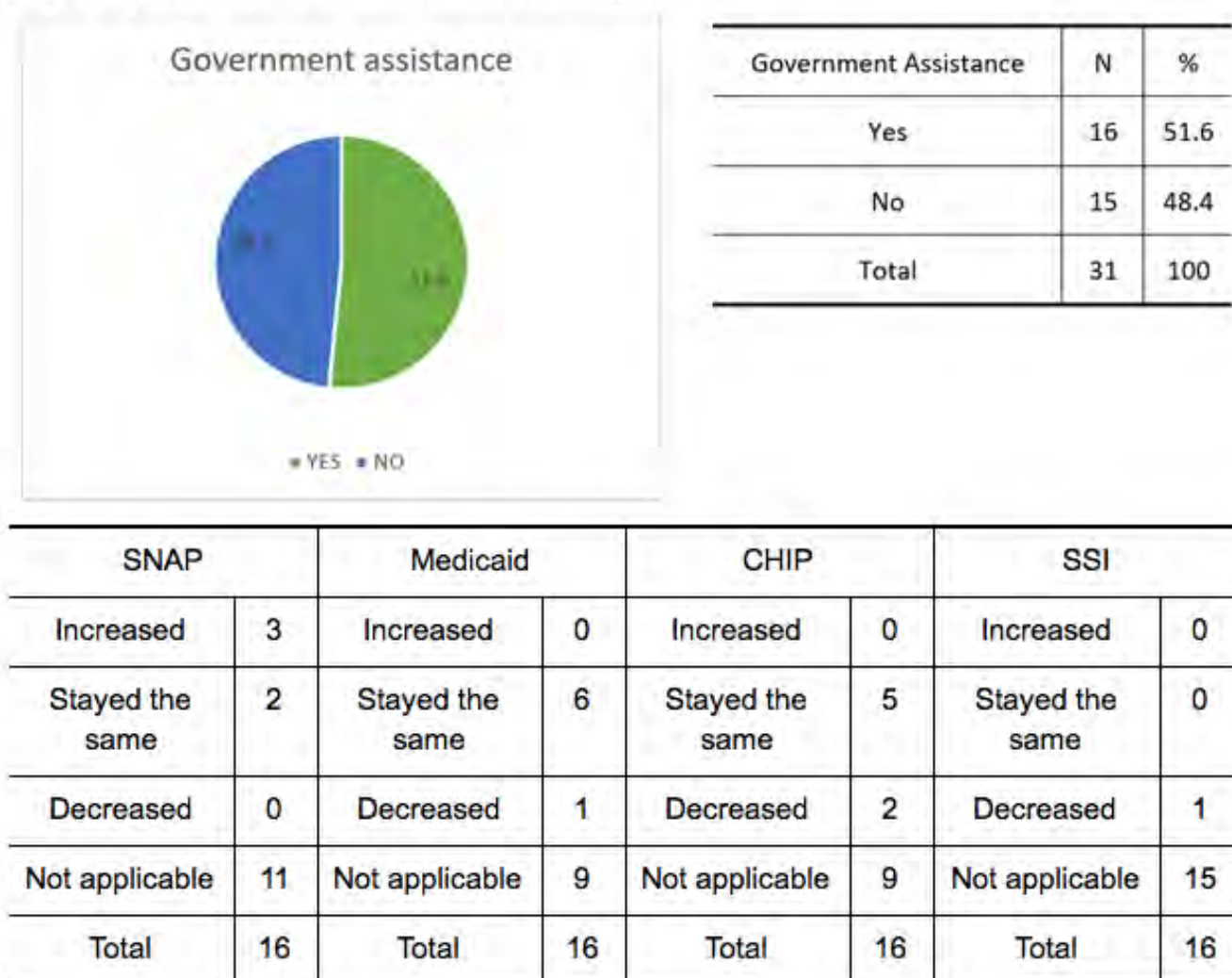
### Government Assistance

Figure 4 shows that about half of respondents are receiving government assistance such as SNAP, Medicaid, and CHIP. Among the types of government assistance, supplemental security income (SSI) is used less frequently because people 65 and older are the only ones eligible for this program.

Figure 4 can be viewed on the following page.



[Figure 4] Use of Government Assistance Programs



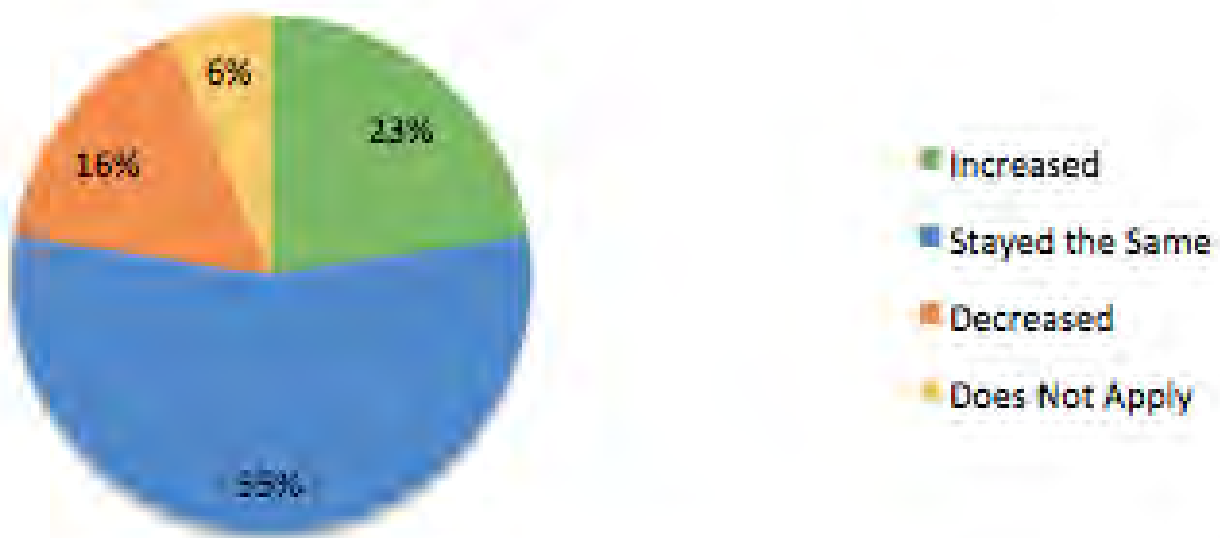
As most Habitat households seem to be from low-income families, the research team examined their eligibility for SNAP by comparing respondents' monthly income to the maximum monthly income limits of SNAP. The results show 27 households (93%) are eligible for SNAP. However, only five households are receiving SNAP benefits (18.5%). Although this result is not exact because SNAP requires applicants to work at least 20 hours a week, the large discrepancy between the proportion of SNAP users and eligible households suggests that government assistance programs are not frequently used by HFH homeowners and the reasons is less likely that they are ineligible for these benefits. For Medicaid and CHIP, 22 households (71%) are eligible for those programs based on 138% of the federal poverty level. Although 15 households (68%) are receiving Medicaid or CHIP, more local HFH families could receive these benefits.

### Working Hours

Based on the findings, the majority of Habitat homeowners experienced no change to a slight increase in the number of hours worked per household. Figure 5 shows that the majority of respondents reported no change in the number of hours worked (55%) with 23% reporting an increase and 22% reporting a decrease. Of those that reported an increase, three respondents reported less than five hours, one respondent reported between 5-10 hours, and three respondents reported more than 10 hours. For those that reported a decrease, two respondents reported a decrease of fewer than 5 hours and two respondents reported more than 10 hours.

Please see next page.

## Household Working Hours





## Housing Payments

Monthly household payments were analyzed using survey data and application data. By using two different sources of data (survey data being self-reported and application data being actuals), it allowed the research team to test the accuracy of the survey. The application data provided the applicant's rent/mortgage payments before owning their home and their current mortgage payments. When measuring a change in the payment amount, the application data was binary being more or less than the previous amount. Therefore, all changes that did not meet a ten percent threshold change were defined as "Stayed the Same" in order to accurately compare with the survey. The results indicated that the survey accurately represents the actual data with regards to monthly housing payments.

Moving into a Habitat home has little to no influence on monthly household payments for most Habitat homeowners. The benefits of Habitat mortgages may be more accurately quantified when compared to private sector mortgage rates. Since monthly household payments have a significant influence on disposable income, the question was designed to analyze how Habitat homeowner's monthly income has changed since moving into their home. The results from the survey suggest that over half of Habitat homeowners experienced a slight increase in rent/mortgage payments than before (as

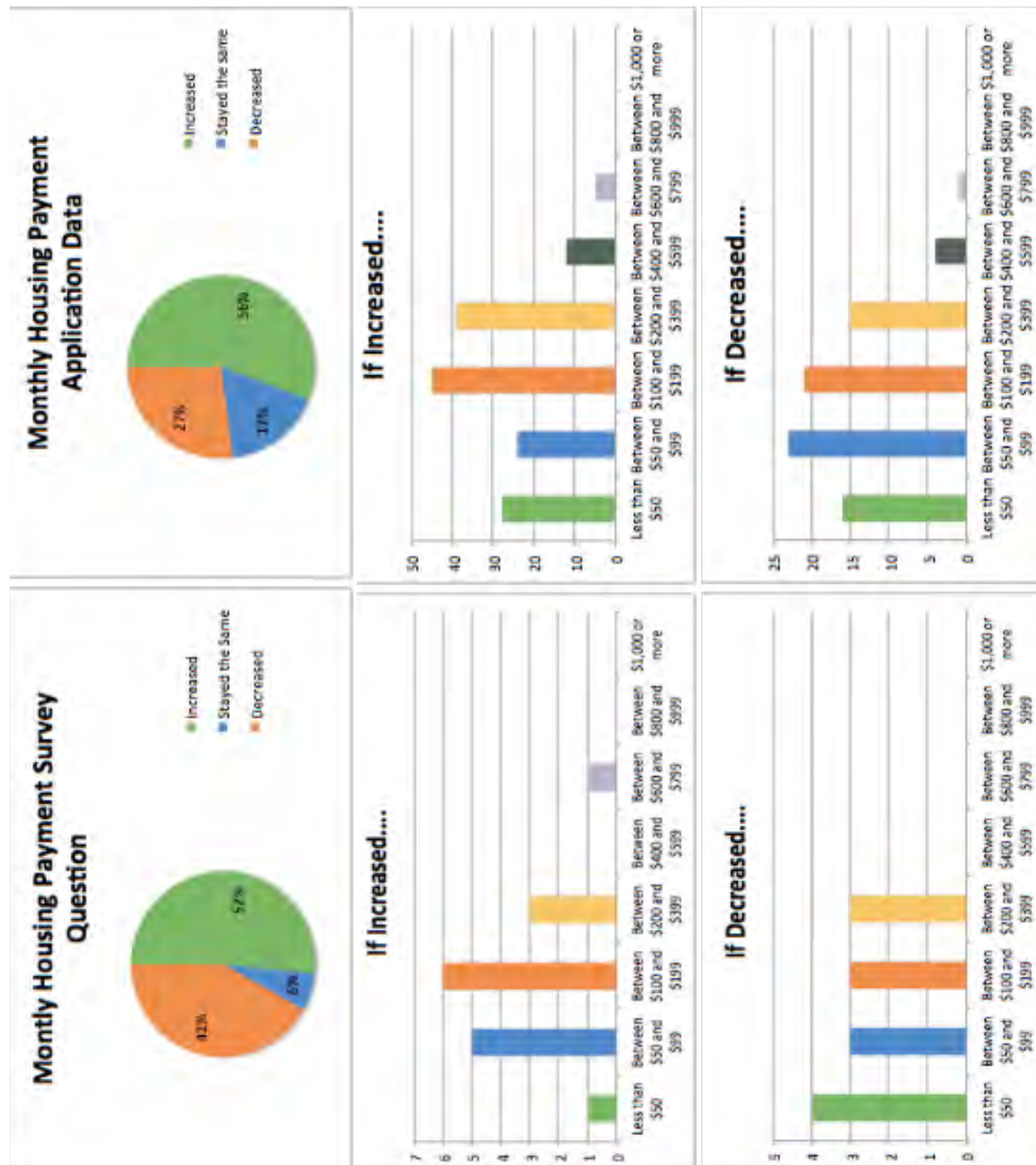
shown in figure 6). Of those that increased, the majority was between \$50 - \$199 and of those that decreased, the majority was between \$1 - \$199. When compared to the application data, the results were similar. According to the application data, 56% of applicants who received a Habitat home experienced an increase in monthly household payments.

Figure 6 can be viewed on the following pages





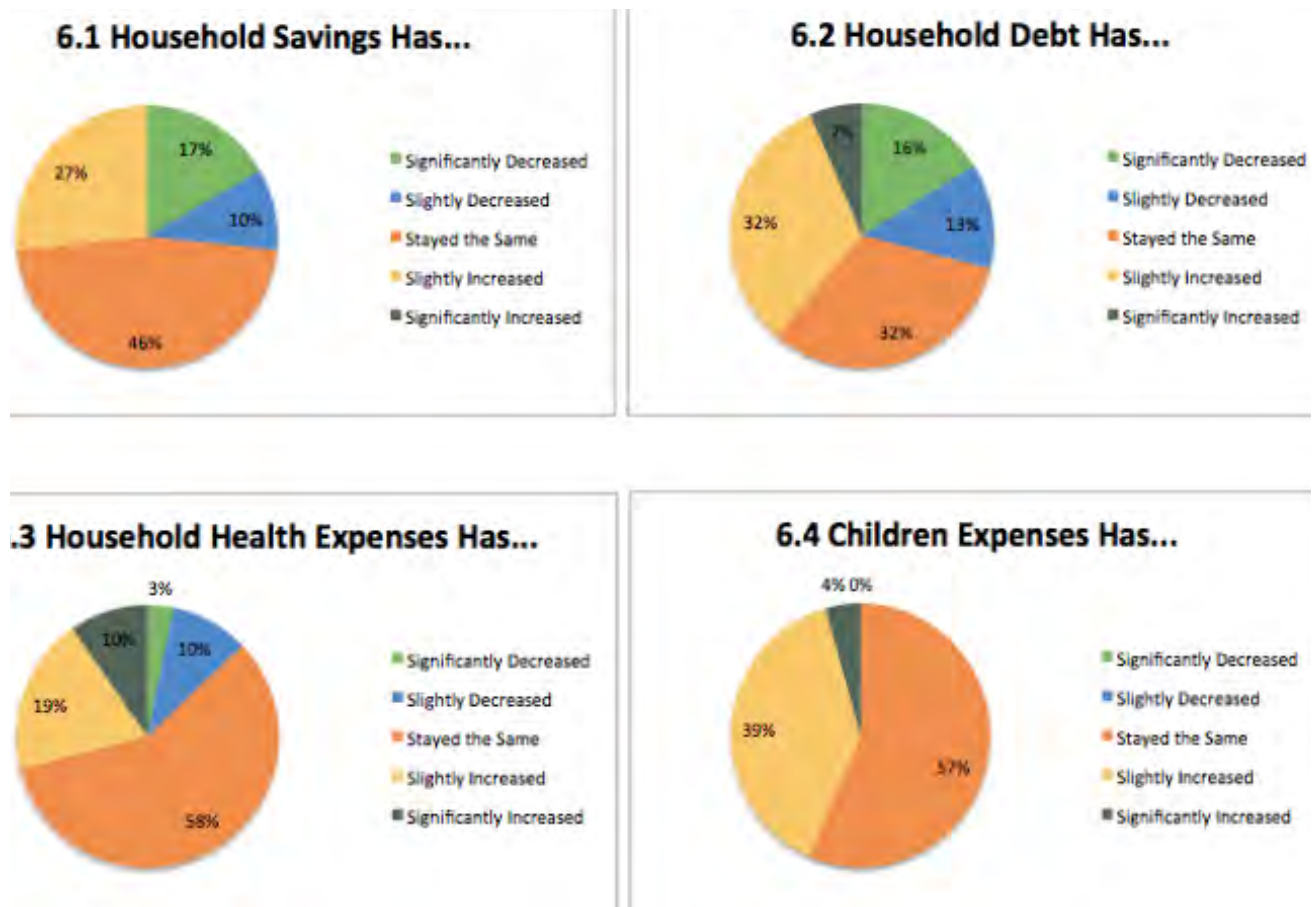
[Figure 6] Monthly Housing Payments



## Various Expenses

Figures 6.1- 6.6 presents that most respondents reported an increase in monthly expenses with little change in savings. The largest increases in expenses are household health expenses, children expenses, and insurance payments. Since many respondents did not own a home before the program, an increase in insurance payments is reasonable. An increase in children's health expenses complements the results found in Figure 2. As income increases, families are spending more on their health, children, and insurance payments.

[Figure 6.1-6.6] Various Expenses



Figures continued on following page...

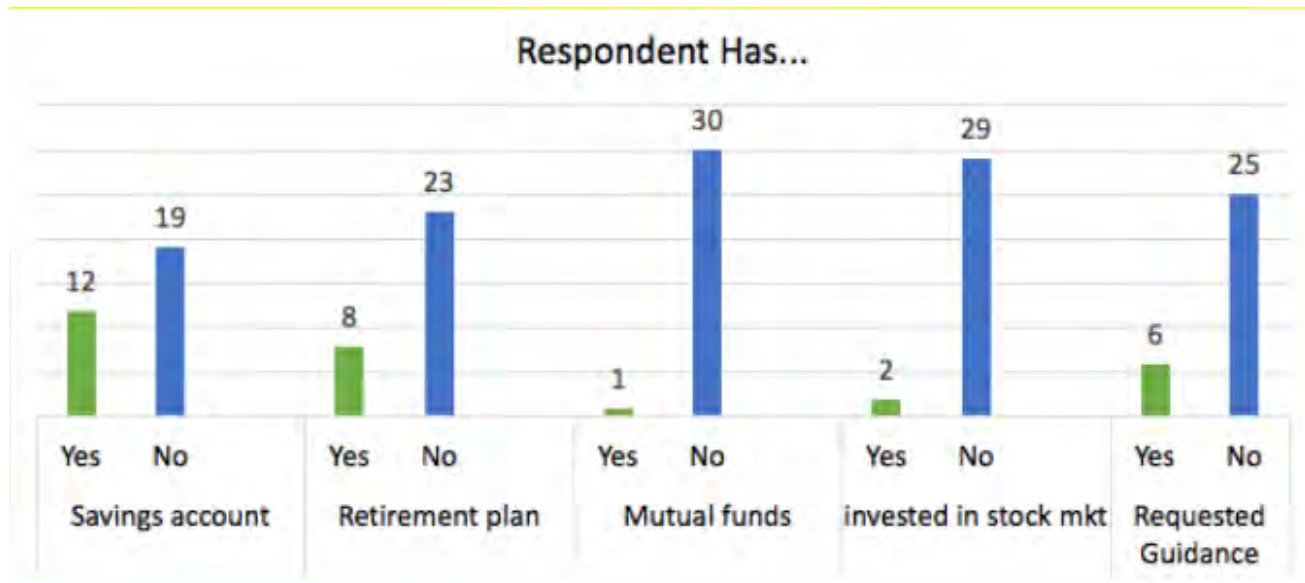
Figures cont...



Answer Choice	Saving	Debt	Health	Children's Expenses	Insurance	Ability to Manage Finances
Significantly Decreased	5	5	1	0	0	1
Slightly Decreased	3	4	3	1	0	3
Stayed the Same	14	10	18	19	14	20
Slightly Increased	8	10	6	8	13	3
Significantly Increased	0	2	3	1	3	4

### Asset Building

The following questions were asked to help provide a more accurate depiction of the current financial standing of the survey respondents. These questions were influenced by the literature review on financial literacy conducted in the fall of 2018. Many of the respondents indicated that they did not have mutual funds and had never invested in the stock market. A larger portion of the respondents said they did have a savings account and a retirement plan. Only six of the respondents indicated that they would like additional financial guidance.



### Discussion

The results of the survey indicate that disposable income slightly increased for homeowner recipients. However, an increase in total income is countered with an increase in mortgage and insurance payments decreasing the potential for total disposable income. The increase in disposable income leads to greater financial flexibility. Homeowners then divert the extra income to health and children expenses. Respondents reported a 29% increase in household health expenses (13% reported a decrease) and a 42% increase in children's expenses (0% reported a decrease). Therefore, after moving into their home, Habitat homeowners experience a slight increase in disposable income to which they allocate towards household health and children expenses.

When controlling for the number of years the respondent has lived in their new home, there was a significant decrease in household income for those who recently moved. HFH should consider paying more attention to households whose income has cont...



into one of their homes in order to better understand any immediate negative effects moving can have for a financial unstable family.

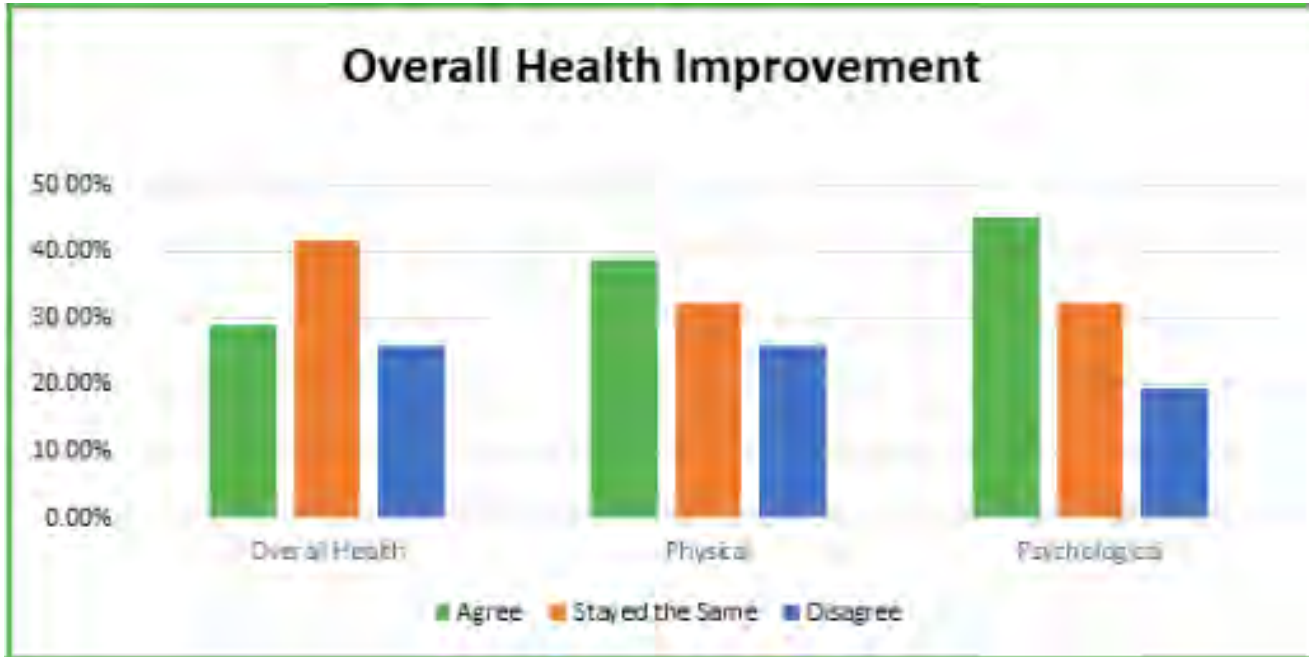
The results regarding government assistance suggest that a large proportion of the households seem to be eligible for SNAP, Medicaid, and CHIP, based on their income and employment status. Although the research team cannot identify whether their working hours are greater than 20 hours, which tend to be a basic requirement of many programs, the large discrepancy between their usage and eligibility indicates that many Habitat households can increase their disposable income by participating in government assistance programs. As stated previously, low-income households are likely to face various barriers of participation in government assistance programs such as lack of information, administrative hassles, and social stigma. Thus, HFH can aide in the homeowners receiving this benefit by informing them about their eligibility and assisting with the administrative process.

The results of the survey demonstrate that very few participants would like more financial literacy training while the majority indicated that they would not like any further programming. The literature suggests that economic preparedness necessitates that an individual/family have the assets in their financial portfolio respondents said they did not have. Presently, HFH provides some financial literacy programming during the onboarding process to receive a new home. However, this programming is typically provided by an outside source and is not consistently provided by the same organization. Therefore, HFH clients are not receiving consistent financial literacy programming.

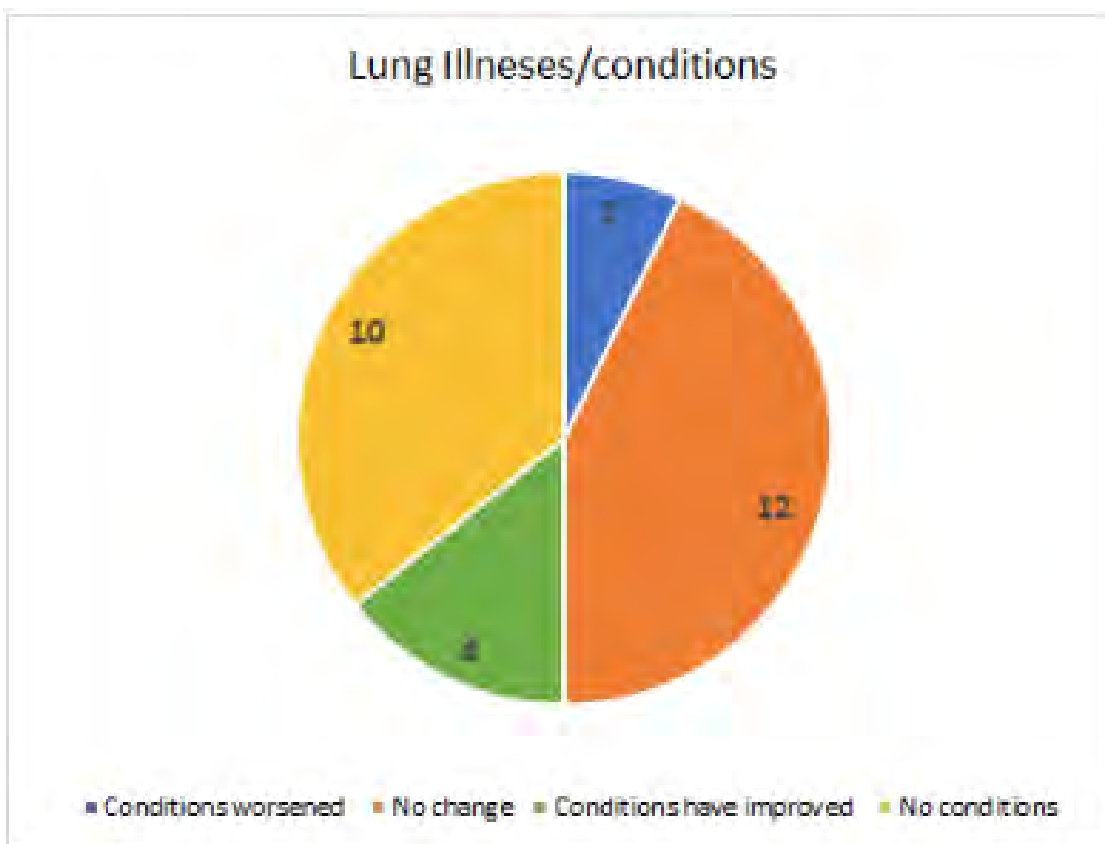


# FINDINGS & DISCUSSION

## Health

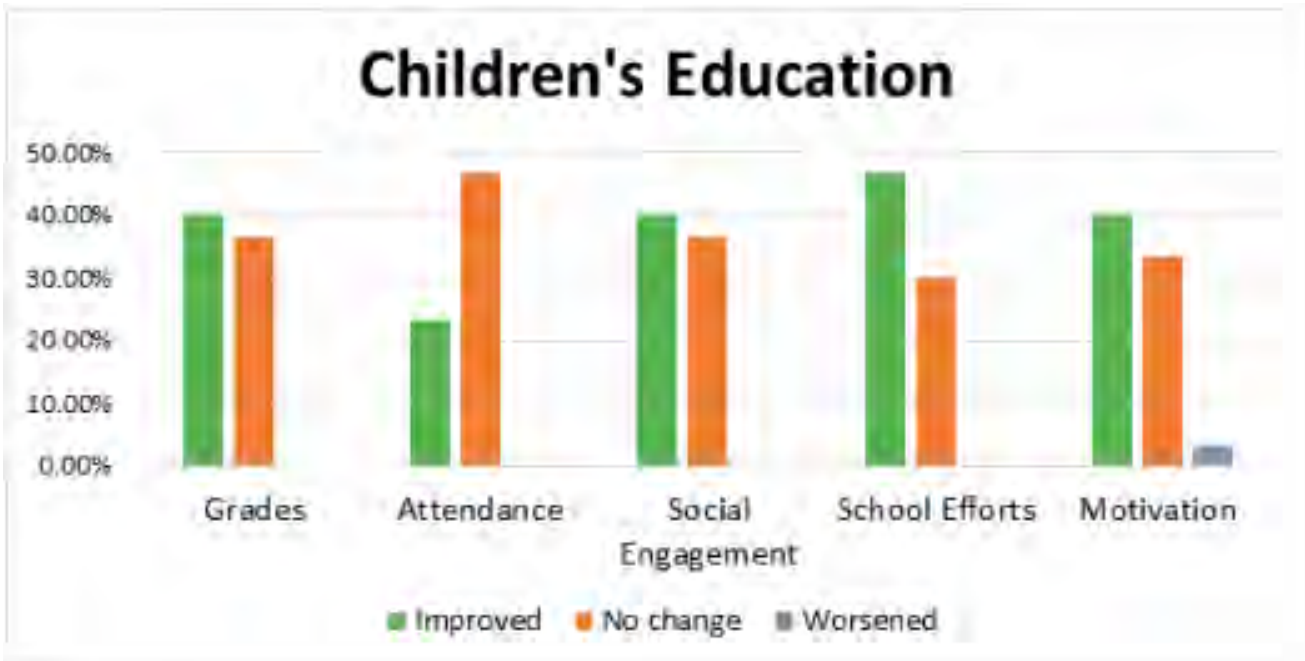


The majority of respondents agreed that their health conditions improved or stayed the same in three categories: overall health, physical, and psychological statuses. In terms of overall health, most respondents (42%) said that it stayed the same as shown in the above graph. However, when measuring physical and psychological health outcomes separately, the majority agreed (either slightly or significantly) that they experienced improvement in their well-being. A significant improvement is associated with psychological well-being when the vast majority of homeowners (around 45%) reported improvement, and only a small proportion of respondents said that there was no improvement in their psychological health (instead of worsened). It should be noted that when asked whether or not respondents have had a pre-existing health condition, and if that condition worsened or improved, a significant majority (42%) said that there was no change in their health condition or there was no condition (70%).



In addition, more respondents reported improvement in the existing conditions (lung illnesses, the mental health of anyone living in the home), and only a few respondents said that these conditions worsened (30% and 14% versus 10% and 7%). As to whether or not the number of visits to a doctor increased, stayed the same, or decreased, the majority of respondents (approximately 54%) indicated that their number of visits to a doctor stayed the same, while 30% said they go visited often. A minority of respondents said the number of visits decreased (approximately 14%).

## Education



Over 95% of respondents in the survey said their children's education either improved (significantly or slightly) or stayed the same. The categories that were measured to gauge the education status were the children's grades, attendance, social engagement, efforts towards the school-related task, and their motivation. The majority of respondents reported that they saw improvements in their children's grades, social engagement, school efforts, and motivation after moving into their current HFH home. Attendance was reported by most to have stayed the same after the move. About 3% of respondents reported that their children's motivation had worsened after the move.

## Time spent with parents on

### Help with School Work



### Engagement in child's ECA





### Education cont...

Another area that the respondents self-reported related to education was the time they, as parents or guardians, spent with their children on school-related tasks and their engagement in their children's extracurricular activities. A majority (57%) of the respondents said there was an increase in the time they spent on helping children with school work after moving into HFH home. A small percentage (4%) of respondents reported that there was a decrease in the time spent, while the rest stated that there was no change.

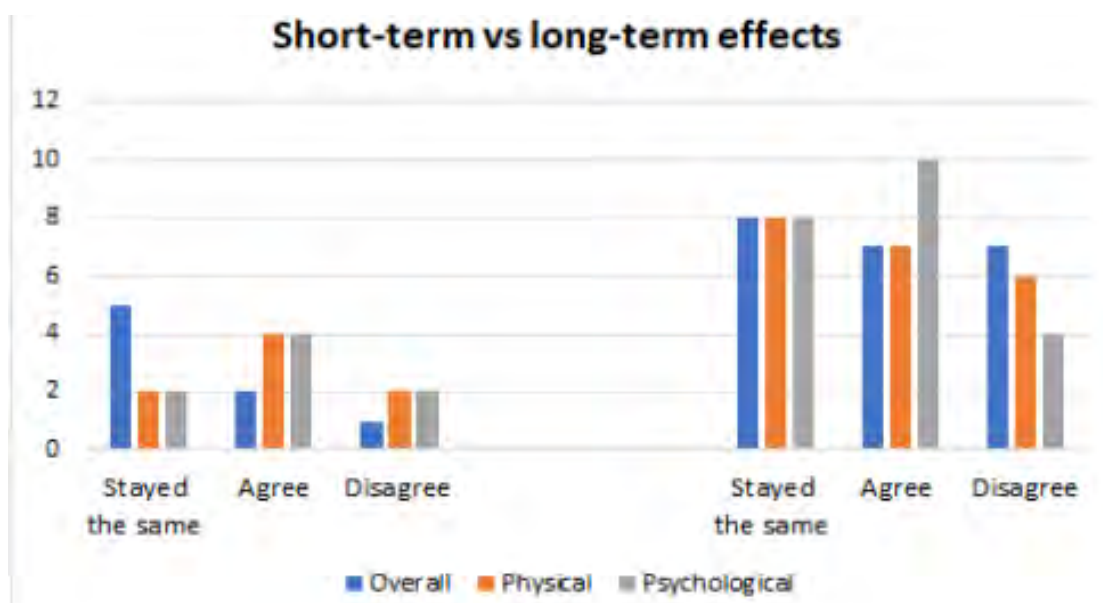
In terms of the time spent engaging in children's extracurricular activities, an almost equal number of respondents reported that their engagement in this aspect had either increased or remained the same. Therefore, there was no significant majority in this category. Five percent of respondents reported a decrease in time spent engaging in children's extracurricular activities. In terms of school changes, seven respondents reported that their child had changed schools after moving into an HFH home for reasons other than changes in grade advancement. Five out of these seven respondents expressed that they viewed the new school to be of better quality and two respondents witnessed no changes in the quality of education received.

### Discussion of Health and Education Findings

Existing research does not show a direct positive relationship between housing assistance programs and disposable income; however, the survey findings indicate that there is an increase in spending on health and education after moving into a HFH home. While the results do not prove a causal relation between homeownership and spending, survey questions measuring changes in these two areas show significant improvements. These improvements can be attributed to the potential increase in spending on health or education driven by increased self-esteem and a sense of financial stability associated with owning a house (Greenspan, 2002). In addition to increased spending, these improvements can be explained by other factors such as living in a better neighborhood, quality of house, residential stability, improved self-esteem and safety also reflected in the literature review (Mueller & Tighe, 2007; Nam & Huang, 2011; National Association of Realtors, 2011; Apgar, 2004).

As for education, the findings showed that the respondents reported improvements in their children's grades, social engagement, efforts towards the school-related task, and their motivation in school after moving to a HFH home. The number of time parents spent with children helping with their school work also increased and a small number of respondents reported that they perceived changing schools as a positive aspect regarding the quality of education. The literature review suggests that these findings can be attributed to improved housing conditions. This can be related to reduced crowding leading to less stress, availability of study spaces at home, better neighborhood interactions, and improved parent-child relationships (Mueller & Tighe, 2007). The literature review also indicated reduced residential mobility as another significant determinant for boosting educational performance which can be a factor attributed to this finding (Nam & Huang, 2011; Mueller & Tighe, 2007).

Regarding health, the majority of respondents reported improvement in their health conditions, especially in terms of psychological well-being. Interestingly, a significant number of respondents said that their doctor visits had increased since they moved to their HFH homes, which is consistent with what we found that is people spend more on health with increased income (Figure 7). This means that when income increases, people tend to visit the doctor more often. Similar to education, improvement in housing structure and neighborhood can be used to explain these findings.



These findings were further analyzed based on the number of years respondents had lived in their current HFH homes by breaking into three categories: less than five years, more than five years and more than ten years. While there were improvements reported in overall health status for all three categories, the analysis by three ranges shows disparities between health improvements of homeowners who have lived in HFH homes for less than five years versus more than five years.

The above graph shows that the majority of the first group (living in HFH home less than five years) reported health improvements compared to those who stated it stayed the same or there were no improvements. In comparison, the equal number of the other group (living in HFH home more than five years) reported that their health either improved or stayed the same. In terms of those who stated that there were no improvements, the trend remains the same which can be attributed to the disproportionate number of respondents in each category (the second group was two times more than the first group).

Accordingly, it is essential to have a better representation of both groups to track any disparities between the two groups. This can be a matter of interest given that homeowners who have lived in their HFH home for a shorter term can possibly report biased positive outcomes based on their immediate impression of the new home or location compared to their last home, especially if housing structure, neighborhood, and safety has changed.

Overall, even though these results are not significant enough to point to causation, they are mostly consistent and reflect the literature review. These results indicate important positive trends revealed by this analysis which should be further investigated with the use of more precise measures of health and education outcomes.

## Limitations

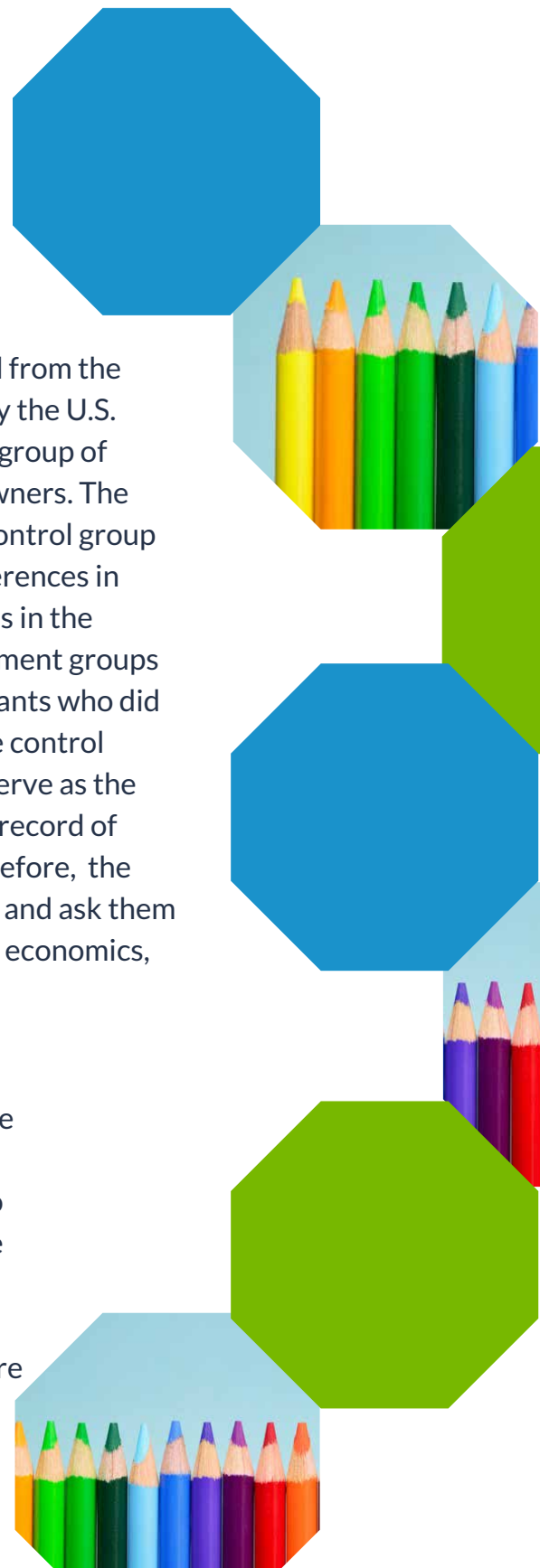
The capstone research team has identified 4 limitations to the study: (1) absence of ideal control group, (2) small sample size, (3) incomplete data and (4) self-reporting biases. Each of these 4 limitations are discussed in more detail.

### The absence of an ideal control group.

Data related to personal economics was collected from the American Community Survey (ACS), conducted by the U.S. Census Bureau, in order to provide a comparison group of homeowners in Bryan, Texas, to the HFH homeowners. The ACS data was not ideal for a control group. This control group prevented the research team from using the Differences in Differences (DID) method to compare the changes in the outcome variables between the control and treatment groups before and after the HFH program. Ideally, applicants who did not get into the program would be assigned to the control group. Those who are HFH homeowners would serve as the treatment group. However, HFH does not keep a record of applicants who did not get into the program. Therefore, the research team could not identify these applicants and ask them questions regarding the changes in their personal economics, health and education status.

### The Survey Sample Size was Small.

247 surveys were sent to HFH homeowners in the B/CS area and only 31 responses were received. The capstone research team made every effort to increase the sample size. Multiple measures were taken to ensure HFH homeowners had every accessibility to the survey. The surveys were available online and in the paper. The surveys were translated to Spanish. Additionally, a \$10 gift certificate for completing the survey was used as an incentive to encourage survey participation.





### Paper Surveys Cause Incomplete Data Collection.

Homeowners were given the option to fill out the survey either online or on paper. A majority chose to submit the paper survey. With the online survey, the research team was able to require that all questions receive answers. However, there was no possibility to make all the questions required in the paper survey. Therefore many paper surveys were incomplete or filled out incorrectly.

### Self Reporting Bias

Finally, the survey was structured in a way that required the homeowners to reflect on their experiences. Meaning, their recollection may be inaccurate, biased, or both. For instance, their current feelings about the homeownership program or their home could have been reflected in their responses. Respondents not using or having documents to supplement their responses also contributed to the self reporting bias.



# Recommendations & Conclusion



HABITAT FOR HUMANITY

# RECOMMENDATIONS

The capstone research team has identified four recommendations that will help improve future analysis to better understand the impact of HFH on homeowners' personal economics, health, and educational attainment of their children. The recommendations are 1) expand future research methodology, 2) examine the change in job accessibility, 3) increase participation in government assistance programs by offering information on and assistance in applying for these programs, and 4) include comprehensive financial literacy programming during HFH onboarding process.



## Recommendations

- 1) Expand future research methodology
- 2) Examine the change in job accessibility
- 3) Increase participation in government assistance programs by offering information on and assistance in applying for these programs, and
- 4) Include comprehensive financial literacy programming during HFH onboarding process.

### Expand Future Research Methodology

Given the limitations of surveys in terms of response rate and lack of control over the accuracy of information, for future research, the team recommends using focus groups to increase participation from homeowners. The data obtained through qualitative interviews with Habitat homeowners can be utilized to collect better quality data, explain in more depth the impact of HFH homeownership, and be used to explain quantitative findings acquired from existing research. In addition, given noticeable disparities in all three outcome variables (personal economics, health, and education) between HFH homeowners who lived in their houses for less than 5 years and more than 5 years, the research team suggests using this criterion when dividing the homeowners into focus groups. In terms of health and education, more precise measures can be used to help participants report their status on these outcomes and address the issue of self-reported bias. This may include questions such as the number of times Habitat homeowners visit a doctor monthly before and after the move.

### Examine the Change in Job Accessibility

The survey results indicate that the majority of households who have lived in their Habitat home less than 5 years reported an increase in their income. However, this result seemed to be partially driven by an increase in the number of hours they worked. As a result, the research team speculates that there might be a short-term positive effect of the HFH program by which homeowners can have better access to relatively higher paying jobs than before. Based on these results it would be valuable to examine the impact of the HFH program on accessibility to higher paying jobs.

### Government assistance program participation

The responses regarding income and employment status indicate that some HFH homeowners might benefit from government assistance programs, particularly SNAP. Because the working hour requirement (mostly 20 hours) does not seem to be uncommon, the team believes that the results regarding their eligibility for those programs can be quite accurate. Nevertheless, the group is unsure about why homeowners are reluctant to participate in government assistance programs.

Given that other income sources are less controllable by HFH, helping homeowners participate in government assistance programs may be beneficial to increase their income. Thus, HFH and future researchers should examine the reasons for nonparticipation and find ways to facilitate their participation. There can be several potential ways to achieve this such as informing homeowners about their eligibility for various programs, assisting in the application processes, and collaborating with local government authorities ([www.yourtexasbenefits.com](http://www.yourtexasbenefits.com)).

### Comprehensive financial literacy program

The team recommends conducting a comprehensive financial literacy program for homeowners during the onboarding process. This recommendation is based on the findings related to personal economics provided by survey respondents. Many of the respondents indicated that they did not want further financial literacy programming, but do not have financial portfolios that indicate that they were financially literate based on existing definitions and categories of financial literacy. The research team can only speculate as to why the respondents did not want more programming.

The team recommends adjusting and expanding the financial literacy programming that occurs during onboarding. Based on existing research that advocates for increasing financial training and programs aimed toward improving outcomes for women, there is value in focusing the HFH financial literacy program towards homeowners including their spouses or dependents (Lusardi & Mitchell, 2008). This could help ensure future Habitat homeowners are equipped to make informed monetary decisions once they receive their home. The adjustments to the onboarding process could include increasing the incentive to participate, providing information on the long term benefits of being financially literate, and incorporating more comprehensive pieces of training that incorporate spending on things like health and education.



# CONCLUSION

Even though the nature of this study did not allow the team to find any causal relationship between homeownership and personal economics, health, and education, the results of the study reveal a positive correlation between these variables. In terms of the relationship between personal economics and homeownership, the study found an overall increase in homeowners' income which further translated into increased expenses for health and education. This result is consistent with analysis on the relationship between homeownership and health/education which shows that the majority of respondents reported an overall improvement in their health status (physical and psychological).

Similarly, there is an overall improvement in educational outcomes for children in four out of five categories analyzed in this study: children's grades, social engagement, motivation, and school efforts. Besides financial incentives that could potentially have a positive impact on health and education, homeownership itself could have contributed to these outcomes as indicated in the study's discussions. In order to further investigate potential correlations and provide more robust evidences, the following recommendations have been suggested.



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