

**Advancing Health Equity:  
Community Healthcare Delivery and Financial Inclusion**



**Research Design and Financial Health Measures**

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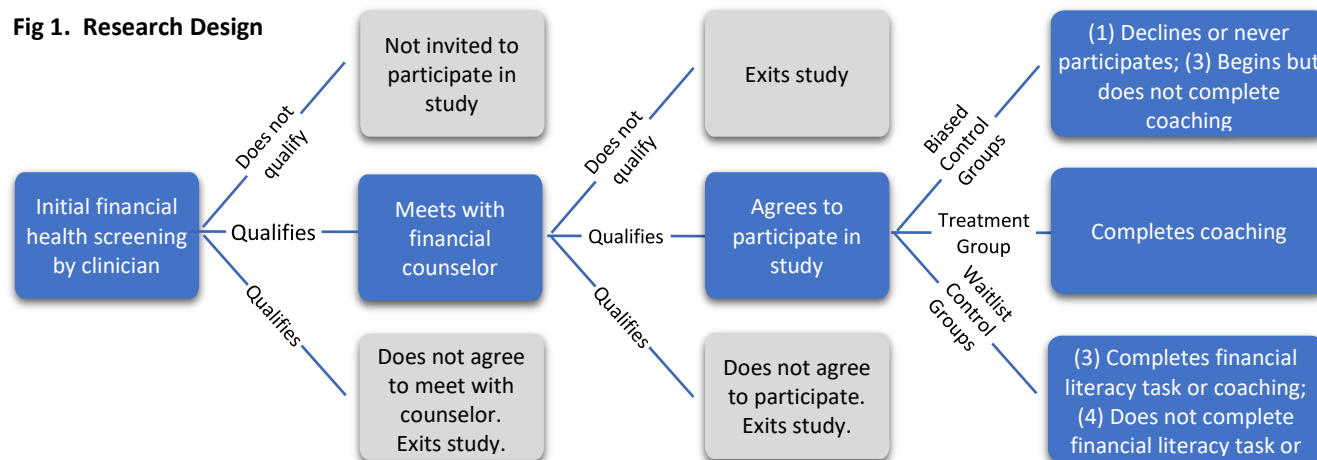
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This section describes the research design and the financial data used to measure and track financial outcomes.

## 1. Research Design

Figure 1 illustrates the screening procedure and the creation of treatment and control groups.



### 1.1. Screening Procedure

Screening for participants to enroll in the study consists of two stages. First, clients visiting the AEH clinic will be screened for physical, mental, and financial health based on responses to the Self Sufficiency Matrix intake form. The social worker will immediately score the matrix, and if a client exceeds the qualification threshold on their financial health score and the financial counselor is available, the client will be asked if they wish to speak with a financial counselor during their visit. If the client agrees, they will receive a warm handoff from the clinician to the counselor. Financial health will be assessed with three questions taken from the InCharge Financial Distress/Financial Well-Being Scale (see Appendix for the full scale), which will be added to the Self Sufficiency Matrix intake form (Prawitz et al., 2006).

#### Financial Health Questions

1. How often do you worry about being able to meet normal monthly living expenses?  
(Always      Often      Sometimes      Never)
2. How frequently do you find yourself just getting by financially and living paycheck to paycheck?  
(Always      Often      Sometimes      Never)
3. How stressed do you feel about your personal finances in general?  
(Overwhelmed      High Stress      Low Stress      No Stress)

Second, with permission from the client, the financial counselor will conduct a more detailed screening of the client's financial health. This second financial health screen, also listed in the Appendix, is the ten-question CFPB Financial Well-Being Scale (Consumer Financial Protection Bureau, 2015). The counselor will also assess whether the client can benefit from financial counseling. Clients that meet both criteria will be invited to participate in the study.

Because we don't know yet how closely the CFPB scale is correlated with the *InCharge* measures of financial stress, we will pre-test these combined scales on a sample of the clinic population to compute their statistical correlation. If the correlations are statistically significant and sufficiently large, we will use the pre-test results to calibrate the qualification thresholds for each scale.

## 1.2. Treatment and Control Groups

Our ultimate objective is to establish a causal relationship between financial coaching and financial and health outcomes. The research design compares a treatment group that receives financial coaching services, with a control group(s) that does not receive (or fully complete) the financial coaching services, which allows for a comparison across the two cohorts.

Study participants will be offered financial coaching by trained financial counselors from Southern Bancorp Community Partners. The counselors will closely track the financial services provided to the study participants, and they will track and record participant financial outcomes immediately upon enrollment, and at six-month intervals over a two-year period. The *Financial Health Measures* section below describes the financial data to collect.

The **treatment group** consists of the participants that fully complete the coaching services. Ideally, this treatment group can be subdivided into categories based on the type of treatment received. For example, credit score builders will be analyzed separately from asset builders.

The **“biased” control groups** consist of participants who partially complete the coaching services, and those who do not participate at all either because they explicitly decline to participate in the services (but remain in the study) or do not follow through with their expressed commitment to participate. (Those who partially complete services will, for some testing purposes, be used as a treatment group.) However, measured differences in outcomes between the treatment and control groups are biased upward because it compares people in the treatment group who are highly motivated to improve their condition with those who are less motivated.

The **“waitlist” control groups** are the unbiased (or more accurately, less biased) control groups in our study. These groups consist of individuals that are as motivated to participate in financial coaching as those in the treatment group, but they cannot receive the treatment because the counselors are at capacity. After hitting capacity, the counselors will continue to accept new clients into the study and put them on the wait list. Importantly, the counselors must begin to track and record financial data immediately upon putting them on the waitlist, and then track them at six-month intervals. Once the client moves off the waiting list, data tracking proceeds as usual for a two-year period.

Two strategies exist to separate the waitlist group by their inherent motivation. First, financial counselors will require that clients on the waitlist complete two financial education modules chosen by the counselor from the list of modules on Southern's Learning Center website (<https://southernpartners.org/learning-center>). Clients will be instructed to complete the modules within a reasonable timeframe, and the counselors will verify completion and record completion dates. Clients who complete both modules are categorized as highly motivated and most similar to the treatment group. Those who complete one or no modules are categorized as less motivated. The second strategy is to record clients' behavior once they roll off the waiting list. Those who

subsequently participate (fully) in the treatments are categorized as highly motivated. The highly motivated waitlist clients serve as an unbiased control group relative to the treatment group.<sup>1</sup>

## **2. Measures of Financial Health and Wealth**

The Health/Wealth study must track participant measures of financial wealth and health through time. The goal is to measure the differences in the changes (difference-in-difference) in financial outcomes over time between subjects that receive the treatment and those that do not receive the treatment. Financial categories to measure include screening questions, financial coaching treatments, financial coaching outcomes, financial capability, personality traits, behavioral biases, and socio-economic variables.

### **2.1. Screening Questions**

Screening questions that are given to every clinic patient include the three financial health questions embedded in the Arizona Self-Sufficiency-Matrix intake form at the AEH clinic. They also include the ten-question CFPB Financial Well-Being Scale conducted by the financial counselor (see Appendix).

### **2.2. Financial Coaching Treatments**

Financial coaching treatments are the services provided by the financial counselors. They are trained to record their interactions with clients, and we need to integrate their database with the other financial variables. They also have a counseling in-take form that clients must agree to.

### **2.3. Financial Coaching Outcomes**

Our study includes several potential financial coaching treatments. Participants may be offered assistance with goal setting, planning and budgeting, debt management, financial education, credit building, promotion of savings, job assistance, and asset building through Individual Development Accounts. Consequently, we need a wide range of financial measures to capture the outcomes from the treatments. Because several treatments may lead to similar outcomes, it is difficult or impossible to identify measures that cleanly attribute changes in participants' outcomes to a specific treatment. For example, a financial literacy program or a debt management program could lead to better debt management.

The best way to handle the large number of treatments with overlapping outcomes is to categorize our financial measures by desired outcome. The Consumer Financial Protection Bureau (CFPB) has done extensive work in recent years to develop financial measures and to assist program evaluators with tracking measures of financial success. They recommend a core set of five outcome categories to be used by financial empowerment programs, funders, and program evaluators (Consumer Financial Protection Bureau, 2017a). These categories, shown in Table 1, are planning and goal setting; savings; bill payment; credit profile; and financial well-being. The specific measures in each category are left to the discretion of the program designers.

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<sup>1</sup> It may also be possible to conduct a two-stage regression analysis where the first stage predicts the likelihood of client participation, which is used in the second stage to compute unbiased (less biased) estimates. This approach, however, is increasingly perceived as unreliable in the literature because valid instruments are difficult to find.

**Table 1. Core Set of Financial Outcome Categories**

Core Outcome	Example Measures	Description
1. Planning & goal setting	Do you currently have a personal budget, spending plan, or financial plan?	Often first step towards taking control of one's finances and changing behaviors.
	How confident are you in your ability to achieve a financial goal you set for yourself today?	
2. Savings	Increase savings by at least 2 percent of net income (for those who are already saving)	Focus on saving behavior, either automatically, regularly, or both. Relates to being able to plan for future goals and absorb financial shocks.
	Establish and maintain a monthly savings habit for three consecutive months	
3. Bill payment	I pay my bills on time.	Demonstrates money management skills and financial stress
	In the last two months, have you been charged a late fee on a loan or bill?	
4. Credit profile	Credit score	Credit history is relevant to financial and life goals
	Number/percent who improve credit scores	
5. Financial well-being	CFPB Financial Well-Being Scale	Holistic financial state

*Source:* CFPB, 2017, "Tracking success in financial capability and empowerment programs."

I identified numerous outcome measures from a review of the financial coaching literature (Elliehausen et al., 2007; O'Neill et al., 2005; Rankin, 2015; Theodos et al., 2015). I then placed each measure into one of the CFPB core outcome categories. The measures come either from surveys (S) or from data sources (D) such as credit reports. All else equal, measures from databases are preferred because they are likely to be more objective. I list potential measures appropriate for each section. Because we will track participants over time, changes in these measures can also be computed. Feedback and suggestions for other measures are welcome.

#### Category 1: Planning and Goal Setting

Planning and Goal Setting measures are related to identifying a financial goal, completion of a goal, or having a plan in place to achieve goal. These measures naturally correspond with financial counseling treatments, but other treatments may be relevant as well.

**Table 2. Planning and Goal Setting Measures**

Do you currently have a personal budget, spending plan, or financial plan?
Do you presently have a specific financial goal(s) you want to achieve?
How confident are you in your ability to achieve a financial goal you set for yourself today?
Others...

#### Category 2: Savings

Measures of Savings focus on saving behavior. They relate to being able to plan for future goals and absorb financial shocks.

**Table 3. Savings Measures**

Has a savings account
How frequently applicant puts money aside
Retirement account (Y/N)
Number of deposits into savings
Automatic transfer or deposit for future use (Y/N)
Retirements savings balance
Made progress toward increasing nonretirement savings or emergency rainy day funds
Made a lot or some progress toward increasing retirement savings
Set aside emergency funds (Y/N)
Amount in emergency fund

Category 3: Bill Payment

Bill payment measures are associated with paying bills on time and are likely to be highly correlated with financial stress. Many of these measures will be computed from credit reports.

**Table 4. Bill Payment Measures**

Percent of balance past due
Total number of 30-day delinquencies
Balance on items in 30-day delinquency
Total number of 90 to 180-day delinquencies
Balance on items in 90 to 180-day delinquency
Number of items in collections
Balance in collections
Filed for bankruptcy? If so, when?
Number of accounts that have never been delinquent
Curing – number of cured accounts
How often do you pay bills on time?
Recently paid one or more utility bills late?
Ever involved in home foreclosure process? If so, when?
Recently received an overdue notice from a creditor?
Others...

Category 4: Credit Profile

Credit profile measures relate to the person's credit behavior, including as it influences their credit report and credit history. Poor credit profiles inhibit progress towards financial and life goals.

**Table 5. Credit Profile Measures**

Credit score
Number of accounts with positive balances
Total debt (\$)
Aggregate bank card utilization rate as a percent of credit limit
Revolving debt (\$)
Number of revolving accounts
Has a checking account?

Number of credit inquiries in past 6 months
New bank accounts opened in past 12 months? If yes, Type?
Aggregate medical to total expenditures, percent
Have health insurance? If so, aggregate health insurance to total expenditures, percent
Months in credit bureau files
Used any type of alternative financial service (pawn shop, payday loan, rent-to-own, BNPL)
Borrowed money from family or friends
Obtained cash from payday loan
Sold something to pawn shop
Took a credit card advance
Obtained a tax refund anticipation
Made a lot or some progress toward improving credit
Others...

### Category 5: Financial Well-Being

An index of financial well-being serves as a single comprehensive and holistic indicator of financial health. It should be sensitive to a multitude of different financial treatments. This measure will be a prominent intake and outcome measure for our Health/Wealth study that complements other holistic measures such as those in the Self-Sufficiency Matrix.

The CFPB Financial Well-Being Scale (Consumer Financial Protection Bureau, 2015) is a survey-based measure that emphasizes holistic outcomes and is backed by rigorous research. The CFPB defines *financial well-being* as “a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and is able to make choices that allow enjoyment of life” (Consumer Financial Protection Bureau, 2017b). Table 6 lists the ten questions in the survey, which are used to compute the scale. Note that an abbreviated five-question survey is also available (Consumer Financial Protection Bureau, 2019).

**Table 6. CFPB Financial Well-Being Scale Measures**

I could handle a major unexpected expense.
I am securing my financial future.
Because of my money situation, I feel like I will never have the things I want in life.
I can enjoy life because of the way I’m managing my money.
I am just getting by financially.
I am concerned that the money I have or will save won’t last.
Giving a gift for a wedding, birthday or other occasion would put a strain on my finances for the month.
I have money left over at the end of the month.
I am behind with my finances.
My finances control my life.

## 2.4. Financial Capability

The CFPB (Consumer Financial Protection Bureau, 2018a) proposes a pathway to financial well-being where an increase in financial capability leads to more productive financial behavior, which improves one's financial situation and, ultimately, financial well-being (Exhibit 1). In this framework, *financial capability* is defined as the capacity, based on knowledge, skills, and access, to manage financial resources prudently and effectively. *Financial knowledge* is the set of financial information that the individual understands based on education or experience. A business school graduate, for example, is more likely than others to know how to calculate bond prices and understand compound interest. *Financial skills* are the action components of financial capability needed to put the financial knowledge to use to influence financial behavior. Knowing how to do something is essential for putting the financial knowledge to use.

The CFPB asserts that financial education can boost financial capability and well-being. To understand the effect that financial coaching has on the study participants, we need to measure changes in financial capability. (Knoll & Houts, 2012) developed a Financial Knowledge Scale (FKS) composed of 20 questions to assess a person's financial knowledge across multiple topics such as debt management, retirement savings, housing, and risk diversification. They subsequently developed a 10-question scale that also accounts for respondent guessing (Houts & Knoll, 2020).

Similarly, the CFPB (Consumer Financial Protection Bureau, 2018) developed a 10-question financial skills index. This index is designed to assess the respondent's ability to find, process, and act on information.

## 2.5. Demographic and Socio-Economic Measures

Finally, we need to include demographic and socio-economic information to serve as outcome measures and/or control variables. I will leave demographic measures for others to contribute, but I list here important economic measures. Many of these measures may be included in the intake forms of the clinic and counselors.

**Table 7. Economic Measures**

Gross income (participant and household)
Employment status: full-time; part-time; unemployed; not currently seeking employment
Number of months in current job
Number of working automobiles
Current assets (\$) and list of assets
Others...



## Appendix: Financial Well-Being Scales

### 1. CFPB Financial Well-Being Scale (Consumer Financial Protection Bureau, 2015)



#### CFPB FINANCIAL WELL-BEING SCALE Questionnaire

NAME OR NUMBER

#### Part 1: How well does this statement describe you or your situation?

This statement describes me	Completely	Very well	Somewhat	Very little	Not at all
1. I could handle a major unexpected expense	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am securing my financial future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Because of my money situation, I feel like I will never have the things I want in life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I can enjoy life because of the way I'm managing my money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am just getting by financially	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I am concerned that the money I have or will save won't last	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Part 2: How often does this statement apply to you?

This statement applies to me	Always	Often	Sometimes	Rarely	Never
7. Giving a gift for a wedding, birthday or other occasion would put a strain on my finances for the month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I have money left over at the end of the month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I am behind with my finances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. My finances control my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### Part 3: Tell us about yourself.

11. How old are you?  18-61  62+
12. How did you take the questionnaire?  I read the questions  Someone read the questions to me

#### Score ranges

VERY LOW 0-29	LOW 30-37	MEDIUM LOW 38-49	MEDIUM HIGH 50-57	HIGH 58-67	VERY HIGH 68-100
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## 2. InCharge Financial Distress/Financial Well-Being Scale (Prawitz et al., 2006)

### InCharge Financial Distress/Financial Well-Being Scale©

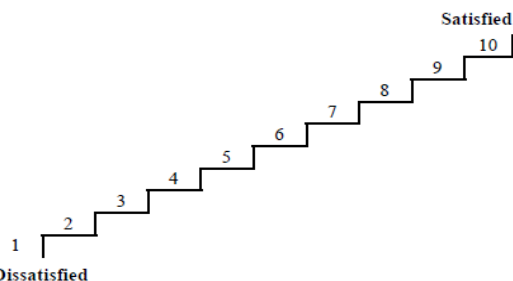
Previous

**Directions:** Circle or check the responses that are **most appropriate** for your situation.

1. What do you feel is the **level** of your **financial stress today?**

1	2	3	4	5	6	7	8	9	10
Overwhelming Stress		High Stress		Low Stress		No Stress at All			

2. On the stair steps below, mark (with a circle) how **satisfied** you are with your **present financial situation**. The “1” at the bottom of the steps represents complete dissatisfaction. The “10” at the top of the stair steps represents complete satisfaction. The more dissatisfied you are, the lower the number you should circle.



3. How do you feel about your **current financial situation?**

1	2	3	4	5	6	7	8	9	10
Feel Overwhelmed		Sometimes Feel Worried		Not Worried		Feel Comfortable			

4. How often do you worry about being **able to meet** normal monthly living expenses?

1	2	3	4	5	6	7	8	9	10
Worry All the Time		Sometimes Worry		Rarely Worry		Never Worry			

5. How confident are you that you could find the money to pay for a **financial emergency** that costs about **\$1,000?**

1	2	3	4	5	6	7	8	9	10
No Confidence		Little Confidence		Some Confidence		High Confidence			

6. How often does this happen to you? You want to go out to eat, go to a movie or do something else and **don't go because you can't afford to?**

1	2	3	4	5	6	7	8	9	10
All the time		Sometimes		Rarely		Never			

7. How frequently do you find yourself just getting by financially and living **paycheck to paycheck?**

1	2	3	4	5	6	7	8	9	10
All the time		Sometimes		Rarely		Never			

8. How **stressed** do you feel about your personal finances **in general?**

1	2	3	4	5	6	7	8	9	10
Overwhelming Stress		High Stress		Low Stress		No Stress at All			

3. *The Financial Knowledge Scale: New Analyses, Findings, and Development of a Short Form (2020) The Journal of Consumer Affairs*, by Carrie R. Houts and Melissa A. Z. Knoll

Below are the 10 items that make up the Financial Knowledge Scale (FKS) short-form version. Correct responses are in bold font.

### 10-Item FKS

1. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?
  - 1.1. More than today.
  - 1.2. Exactly the same as today.
  - 1.3. Less than today.**
2. If the interest rates rise, what should happen to bond prices?
  - 2.1. They should rise.
  - 2.2. They should fall.**
  - 2.3. They should stay the same.
3. Considering a long time period (for example 10 or 20 years), which asset described below normally gives the highest return?
  - 3.1. Savings accounts.
  - 3.2. Bonds.
  - 3.3. Stocks.**
4. Normally, which asset described below displays the highest fluctuations over time?
  - 4.1. Savings accounts.
  - 4.2. Bonds.
  - 4.3. Stocks.**
5. When an investor spreads his or her money among different assets, does the risk of losing a lot of money increase, decrease, or stay the same?
  - 5.1. Increase.
  - 5.2. Decrease.**
  - 5.3. Stay the same.
6. Do you think the following statement is true or false? "If you were to invest \$1000 in a stock mutual fund, it would be possible to have less than \$1000 when you withdraw your money."
  - 6.1. True.**
  - 6.2. False.

7. Do you think the following statement is true or false? “‘Whole life’ insurance has a savings feature while ‘term’ insurance does not.”
- 7.1. True.**  
7.2. False.
8. Do you think the following statement is true or false? “A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.”
- 8.1. True.**  
8.2. False.
9. Do you think the following statement is true or false? “Housing prices in the United States can never go down.”
- 9.1. True.  
**9.2. False.**
10. Suppose you owe \$3,000 on your credit card. You pay a minimum payment of \$30 each month. At an Annual Percentage Rate of 12% (or 1% per month), how many years would it take to eliminate your credit card debt if you made no additional new charges?
- 10.1. Less than 5 years.  
10.2. Between 5 and 10 years.  
10.3. Between 10 and 15 years.  
**10.4. Never, you will continue to be in debt.**

#### 4. CFPB Financial Skills Five-Question Scale

**How well does this statement describe you or your situation?**

Completely    Very well    Somewhat    Very little    Not at all

1. I know how to make complex financial decisions
2. I know how to get myself to follow through on my financial intentions
3. I know how to make myself save

**How often does this statement apply to you?**

Always    Often    Sometimes    Rarely    Never

4. I know when I do not have enough information to make a good decision involving my money
5. I struggle to understand financial information

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