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Transforming Impossible into Possible (TIP) for Financial Capability: Application of Practice-Based Program Theory and Measures in Intervention Design

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Abstract

Purpose
Financial knowledge often does not translate into financial well-being. This study looks at how knowledge might be converted to well-being for people living in low-income environments, based on a theory called Financial PSS.

Methods
The study tests the validity of the two scales that make up Financial PSS: Perceived Financial Barriers and Financial Hope. Then it examines how these measures along with an intervention measure called TIP are associated with financial capability.

Results
Results validated the Perceived Financial Barrier Scale and Financial Hope Scale. Next, the study found that the Perceived Financial Barriers Scale and the Financial Hope Scale are associated with financial capability, as is the TIP score.

Discussion
The study concludes that Financial PSS as a newly applied practice-based theory should be further tested.

Workforce providers could integrate financial education and empowerment-based F-PSS process models and see a positive impact on their placement and retention outcomes.

Keywords: program theory, psychological self-sufficiency, financial capability, financial hope, perceived financial barriers, social intervention, Transforming Impossible into Possible (TIP)
Transforming Impossible into Possible (TIP) for Financial Capability: Application of Practice-Based Program Theory and Measures in Intervention Design

This basic integrity of how an intervention brings about change is called a program theory, theory of change, change theory, internal logic, logic model, core component, and deep structure (Bauman et al., 1991; Fraser et al., 2009; Funnell & Rogers, 2011; McKleroy et al., 2006; Resnicow, et al., 2000; Rey et al., 2011). While social interventions often stem from practice settings, it is seldom the case that the program theory is clearly defined, presented, and carefully followed (Elliott & Mihalic, 2004). This is the “black box” problem of not knowing what happens “inside” as the “core” process that generates the desired outcome (Fraser & Galinsky, 2010).

This paper explores the validity of a “black box” program theory in a financial capability intervention. Financial capability is generally understood to be a person’s ability to act in ways that promote financial stability and well-being. (Sherraden, 2013). While overall financial capability models include environmental factors such as accessibility, affordability, and appropriateness of financial products such as savings or checking accounts in their conceptualization of capability, actual interventions are often focused solely on financial education (Sherraden, 2013; Shockey & Seiling, 2004). In short, financial knowledge as an input is supposed to lead to financial capability as an output. Unfortunately, such interventions have shown limited efficacy with extremely low-income individuals (Hudson & Bush, 2000).

As described by Fraser et al. (2009), problems should be conceptualized at a variety of levels. The problem identified by the practitioner-researcher in this case was that despite participating in a financial literacy course, participants continued to believe that economic, neighborhood, and social barriers were insurmountable, and thus participants had little hope that they could influence their own or structural situations. A program intervention was developed by identifying a problem theory regarding this lack of efficacy and then addressing some of the identified aspects of the problem. The Transforming Impossible into Possible (TIP) program (Hong, 2015; 2016a; 2016b) is based on a process model that seeks to explore the “black box” between inputs and outputs – in this case financial knowledge to financial capability (Fraser et al., 2009).

The theory within the black box of the TIP intervention is called Financial Psychological Self-Sufficiency (F-PSS; Hong et al., 2022c). Before describing this theoretical model, we would like to recognize that this model addresses individuals in the context of their environment, while not directly targeting environmental change. F-PSS is a practice-based program theory that focuses on individual processes as a bottom-up change approach by which
their collective impact necessitates macrostructural responses in multiple systems (Hong, 2016a; Hong, Choi, & Key, 2018; Hong, Hodge, & Choi, 2015).

An empowerment-based theory in workforce development called Psychological Self-Sufficiency (PSS; Hong, 2013) was applied to a model of financial capability. Financial Psychological Self-Sufficiency (F-PSS) is composed of two components: perceived financial barriers and financial hope. This paper tests the validity of the two scales, Perceived Financial Barriers and Financial Hope, and their relationship to financial capability (see Figure 1).

[Figure 1]

Second, in a community-based collaborative effort, an intervention model called Transforming Impossible into Possible (TIP) (Hong, 2016a; 2016b) was integrated into a financial literacy and capability curriculum called Wealth & Wellness. Funded by the State of Illinois’ WIOA Statewide Workforce Innovation Program in 2018, this curriculum was implemented to increase the capacity of workforce agencies to include both workforce development and financial capability interventions. As illustrated in Figure 2, this paper examines how Financial Psychological Self-Sufficiency (barriers and hope) is associated with financial capability among low-income individuals and WIOA funded staff.

[Figure 2]

To summarize, this study asks three questions: (1) Are the applied conceptual elements of F-PSS, the Perceived Financial Barriers and Financial Hope scales, valid measures to be considered for future use? (2) How are perceived financial barriers and financial hope associated with financial capability? and (3) How is the measure of Transforming Impossible into Possible associated with Financial Psychological Self-Sufficiency and financial capability?

**Literature Review**

**Asset Poverty and Financial Capability**

Employment-based earned income may be essential for low-income families to meet basic needs and get by financially. However, there is growing consensus that to stay out of poverty, families need assets, which allow them to weather a financial crisis and plan for the future (Sherraden et al., 2018). Research finds that asset building increases economic stability, educational attainment, civic engagement, and long-term planning and decreases intergenerational poverty (Parish et al., 2010). Family assets have an impact on children in the household—even if it
is a small amount. A study from the Center for Social Development at Washington University indicated that children with $500 of savings in their own name by the age of 16 were 3 times more likely to attend, and 4 times more likely to complete college than their peers without designated savings (Elliott et al., 2013).

While most poverty measures address income poverty, more Americans are affected by asset poverty (Sherraden, 1991; 2005). For instance, 1 in 7 U.S. households is considered ‘income poor’—with household income falling below the poverty threshold—while 1 in 4 U.S. households is considered ‘asset poor’—not having financial assets to afford to live at the poverty level for 3 months given an interruption in income (CFED, 2013). Further, asset poverty was at 77% among low- to moderate-income U.S. households in 2016, up from 67% in 1998 (Rothwell et al., 2020). Liquid asset poverty—not having sufficient resources to manage through an emergency—and net worth-asset poverty—debts outweighing household assets—are quite prevalent among American households at 36.9% and 15.7% respectively (Holguin, 2015; Sims & Weisman, 2020). About 30% of American households are without a savings account (Brooks & Wiedrich, 2013; Prosperity Now, 2020). According to the Federal Reserve’s (2020) Update on the Economic Well-Being of U.S. Households, as of July 2020, 15% of Americans could not pay their current monthly bills in full, and 30% could not cover a $400 emergency expense completely using cash or its equivalent. The situation becomes far worse when employment disruption is experienced with no unemployment benefits. In this situation, 46% could not fully pay the bills and 59% could not afford a $400 emergency expense using cash.

Recent data on financial inclusion of Illinois residents provide evidence of system level, institutional barriers to financial opportunities. Prosperity Now’s (2020) Assets & Opportunity Scorecard reported that 23.4% of Illinois households live in asset poverty; 33.5% lack liquid assets to survive three months at the poverty level without income; 12.1% have zero to negative net worth; 41.1% did not keep emergency savings in the past year; 44.5% of residents have subprime credit; and 15.3% of Illinois households are underbanked. Lack of inclusion is exacerbated when combined with the poor credit profiles of most low-income families, which makes borrowing expensive and saving a distant reality. With a growing racial wealth gap, access to safe financial products and services has become imperative for families to build credit and save for the future (Mullany, 2016). In Illinois, 53% of African American households and 27% of Latino households do not have a bank account compared to 15% of their White counterpart. Workers in Illinois without a bank account will spend $574 annually to cash their payroll checks.
Within the context of increasing financial vulnerability at the structural level, low-income individuals face complex financial decision-making challenges in everyday life. Financial decisions affect their well-being and institutional exclusion limits their options (Sherraden, 2013). Credit scores have an impact on people’s ability to own a home, buy a car, have a stable job, and get a secured loan. Financial insecurity and financial stress can affect clients’ psychological and physical health (Taylor et al., 2011) and can lead to reduced worker productivity and increased absenteeism (Kim & Garman, 2003). Financial capability—particularly savings account ownership—plays a significant role in building and accessing one’s own emergency fund to avoid the consequence of a financial crisis (Despard et al., 2020). For instance, if a vehicle breaks down, having access to immediate cash could allow faster return to work and prevent per diem fines, impoundment, and even loss of vehicle.

**Theoretical and Practice Approaches to Financial Capability**

Financial capability and the accumulation of assets have a profound effect on household economic outlook (Birkenmaier et al., 2013). For individuals seeking economic advancement through work, financial capability is essential. Drawing on the works of Amartya Sen (1987) and Martha Nussbaum (2000), Sherraden (2013) contended that capabilities are conditioned by real opportunities and external conditions. In this sense, financial capability comprises both the knowledge (literacy) and financial inclusion (access) with the former representing the individual “ability to act” component and the latter the structural “opportunity to act” component (Sherraden, 2013, p.3). Huang et al. (2015) defined financial capability as a combination of financial knowledge (literacy), access to financial resources including information (access), and financial behavior (functioning). For other scholars, financial capability refers to one’s financial management ability—having knowledge of finances, making good financial decisions, and planning (Allmark & Machaczek, 2015; Kempson et al., 2006).

However, financial capability is often narrowly understood to be synonymous with financial literacy (Sherraden, 2013). Mainly focusing on one’s ability to act, financial education (literacy) programs aim to build clients’ financial knowledge and skills in order to change their financial behavior, ultimately with the desired outcome of clients achieving their financial goals (Shockey & Seiling, 2004). Serido, Shim, and Tang (2013) propose a sequential process model of financial capability that starts with financial knowledge, then self-belief (attitude, perceived behavior control, and financial self-efficacy) and financial behavior that will result in financial well-being. They argue that one must have knowledge before one can achieve self-belief.
Financial capability and asset building programs for low-income individuals and families offered by community-based agencies emphasize various aspects of financial literacy but a great majority focus heavily on teaching the knowledge and skills—e.g., credit education workshops, case management, counseling, and financial literacy programs (Silva et al., 2011). However, Fernandes et al. (2014) reported in their meta-analysis that knowledge-based financial education programs explained only 0.1% of the variance in clients’ financial decision making and behavior. When the authors controlled for clients’ psychological factors, the partial effects of financial education declined significantly (Fernandes et al., 2014). Sherraden (2013) suggested that the ability to act (literacy) part of financial capability includes an individual’s ability to demonstrate “knowledge and skills, attitude, habit, motivation, confidence, self-efficacy, and behavior” (p.4). This individualistic approach to understanding financial capability limits the measures to individual ability to act (literacy). Such measures have included financial attitude and behavior (Hibbert et al., 2004; Joo & Pauwels, 2002), financial knowledge and management skills (Grable & Joo, 2001; Varcoe et al., 2005), financial risk (Hanna & Lindamood, 2004), and the client’s financial commitment (Sharpe et al., 2007).

To holistically integrate Sherraden’s (2013) financial capability framework into financial capability and asset building practice, it would be useful to ungroup the psychological dimensions from knowledge and skills as mere individual attributes—personality traits, tendencies, or qualities. It is important to understand that these internal capabilities are shaped by the “assumptions and understanding about what is possible” within the opportunity structure of the social environment and by the ways in which financial institutions and policies exclude low-income and vulnerable populations (Sherraden, 2013, p. 5). Psychological variables may represent the manifest qualities of how financial opportunity is perceived and internalized within the context of financial inclusion/exclusion and opportunity to act (access) part of financial capability.

However, past studies focusing on the effects of psychological factors on financial behavior have kept the measures, analyses, and findings exclusively within the individual domain rather than the structural and institutional environment. In a study examining motivation and financial literacy, Mandell and Klein (2007) reported that the clients’ perceptions of their desired goals are associated with financial literacy. It has also been reported that self-belief—including financial self-efficacy and positive attitudes—is associated with financial behavior (Joseph et al., 2017; Rothwell et al., 2016). Shephard et al. (2017) stressed the importance of the psychological dimensions of financial capability that include optimism, non-impulsiveness, approach goal orientation and locus of control. While
Riitsalu and van Raaij (2020) found self-control and future time perspective to be associated with financial well-being in a cross-national study of 16 countries, they speculated that economic inequality as the country level variable could affect the local individual level psychological variables.

**Program Theory and TIP Intervention**

Rappaport (1987) suggested that empowerment theory combines "psychological, organizational, and community levels of analysis" to explain what Zimmerman (2000) would argue as "structural inequities as the source of social problems instead of blaming the victims" (Hong, 2021, p. 61). The process of critically reflecting on an oppressive system and taking actions at the individual level to mobilize resources for social change is supported by Paulo Freire’s (2000) praxis of ‘critical consciousness,’ ‘self-efficacy’ and ‘agency’ (Diemer et al., 2015; Gutierrez, 1995). The agent-structure relationship defined in Giddens’ (1991) structuration theory is one where agents and organizations recursively influence each other in their social practices to affect emergence of new structures. Wheeler-Brooks (2009) stressed the importance of combining consciousness-raising and taking actions at the individual level to alter social practices that help maintain an oppressive system.

Psychological Self-Sufficiency (PSS; P.Y.P. Hong, 2013) is an empowerment-based social work theory with Freirian (2000) and structuration (Gidden, 1991) roots. PSS originated from practice-based research in workforce development that uncovered what processes make up client-centered success in welfare-to-work (Hong et al., 2009). Based on a grounded theory analysis, self-sufficiency was redefined as a client-centered process rather than a programmatic outcome—a process of moving forward toward goals with hope actions against context-specific barriers as perceived by individuals (Hong, 2013). It emerged as a counter narrative to the outcome-driven policy and programmatic definitions, measures, inputs and outputs of economic self-sufficiency that disempowers low-income, low-skilled participants who are most vulnerable to the problems (Hong, Sheriff, & Naeger, 2009). In essence, PSS is a goal-directed, forward movement process that one engages in by switching from perceived individual and structural barriers to goal-focused hope actions. It proposes that individuals move from gaining knowledge, to goal-setting, to recognizing one’s strengths, to identifying barriers, to building hope, to taking action, to reaching the goal. This theory was developed keeping in mind the context of people living with extremely low-income and acknowledging that structural barriers are plentiful.

The theory draws on hope theory and identity-based motivation frameworks. As defined by Snyder (2000, p. 8), “Hope is the sum of perceived capabilities to produce routes to desired goals, along with the perceived
motivation to use those routes.” In other words, hope is “generally conceptualized as an adaptive psychological resource that helps individuals attain their goals,” (Lee & Gallagher, 2018, p. 288). Embedded in these definitions is the idea that hope is based on expectations that lead to action. Hope mediates behavior in the presence of barriers, leading individuals to believe that they can conceive and execute plans to achieve their goals (Snyder, 2000, p. 11). As Snyder’s model of hope (not shown) shows, hope and goal-directed behavior are mutually reinforcing. Hope leads to goal-directed behavior and goal-directed behavior cycles back to reinforce and sometimes expand perceptions of possibilities (hope), identifications of possibilities, and expectation of future successful action (Snyder, 2000).

Another theoretical framework that informs PSS is Identity-based Motivation. This framework focuses on the relationship between motivation to act and identity. It “suggests that what matters is whether the future me feels relevant to the choices facing current me. If an accessible future me feels irrelevant to the choices facing current me, difficulties taking or imagining taking future-focused action will imply that this is not ‘for me,’ and present-focused action will continue. However, if an accessible future me feels relevant to the choices facing current me, difficulties taking or imagining taking future-focused action will imply that this is ‘for me,’ triggering future-focused action,” (Oyserman & Horowitz, 2022, p. 54).

This framework proposes that people make choices that are congruent with their identity. However, people have multiple identities and context influences which of their identities is salient in the moment. Therefore, the identity that comes to mind will influence the decisions that people make (Fisher et al., 2017). The framework recognizes that identity and motivation are dependent on family, neighborhood, race-ethnicity, past experience, culture, social and economic status, and a host of other factors.

PSS theory originated from the workforce development field but draws from the theoretical frameworks described above. Hope theory describes how people determine possibilities and assess their ability to act. Without hope, action does not take place. The identity-based framework also connects the present to the future. It ties imagined future selves to present identities and allows those identities to affect motivation to act. Studies have also shown that people who experience marginalization in any form will have more difficulty evoking identities that facilitate motivation towards goals (Fisher et al., 2017). This is particularly important to the idea of PSS, as it was developed for workforce interventions for people with low-income and low educational attainment.
Based on requests from community partners to be intentional about strengthening the goal-directed PSS process, an empowerment-based intervention called Transforming Impossible into Possible (TIP) was developed as a bottom-up system change model in workforce development (Hong, 2015; 2016a; 2016b). Founded on PSS as the program theory, TIP is a participant-centered group intervention model with 15 recursively interrelated modules organized by 9 themes. Perceived barriers and hope in PSS are respectively translated into impossible and possible in TIP. Moving from barriers to hope is woven throughout the curriculum as a common norm of how human beings reach their goals. By centering on barriers in individualized transformative journeys, participants perceive the barriers no longer as negative and something to be shameful of, but those that everyone encounters in the presence of goals (Hong et al., 2021). The 9 themes include: (1) Identity and purpose; (2) forgiveness; (3) goal-orientation; (4) barriers; (5) source of strength; (6) hope (love & self-worth; self-perceived capability; future and the possibilities; self-motivation; skills and resources inventory; renewed goal commitment/improvement and pathways); (7) unresolved triggers of stress and anger; (8) gratitude; and (9) social support and compassion (Anderson et al., 2018; Hong, 2016a). TIP’s nonlinear thematic matching of the outer themes—Theme 1-9, Theme 2-8, Theme 3-7, and Theme 4-6—scaffold the inner core PSS process that moves barriers (Theme 4) to hope (Theme 6) using the source of strength as the ‘tipping’ point (P. Hong, Choi, & R. Hong, 2020).

Every session is structured based on praxis—“reflection and action upon the world in order to transform it” (Freire, 2000; 2014, p. 33) with “various mindfulness and kinesthetic activities” that allow “individuals to deftly weave the meanings of their difficulties, identify obscure strengths within and around themselves, and successfully transform their perceived barriers into hope driven actions” (Hong, Choi, & Hong, 2020, p. 588). The PSS process is strengthened in such a way that reflecting on barriers generates the calming effect by letting the subjectively charged emotions be the ‘as is’ condition based on which a cognitive process emerges—recognizing and accepting them as an objective condition that all human beings encounter during their journey of transformation (Hong, 2016a). By normalizing barriers—whether they be structural or individual—as those that everyone experiences in one’s goal-directed journey, a noncognitive forward movement naturally forms to make the goal achievement process a true, intrinsic, and purposeful one (Hong, 2016a; 2016b; Hong et al., 2019). Reflecting on the desired state as being possible, the feeling of worth and capability generates the actions that one can sustain—an authentic self-sufficiency process (Hong et al., 2020c; 2020d; 2022b). By doing or initiating hope actions, more calming sets in during its iterative process of tackling the perceived barriers and taking further hope actions toward goals.
Researchers have also found in TIP content a host of neurobiological activates that strengthen neuroplasticity, executive functioning, and emotional regulation in its neural integration process (Hong & Hong, 2019). TIP intervention and its program theory have found their adaptation in the areas of fatherhood (Hong et al., 2021a), substance use prevention and treatment (Hong et al., 2021b), financial capability and literacy (Hong et al., 2022c); health promotion (Hong, 2021); and youth empowerment (Hong, Hong, & Choi, 2020).

To bridge the gap between the dominance of financial capability that focuses on knowledge and skills and the theoretical significance of addressing structural and institutional inequities and financial exclusion, this study incorporates psychological variables as the client-centered agency component of empowerment and structuration processes. The PSS process as it relates to reaching a financial goal would involve recognizing and assessing the level of structural and individual financial barriers—labor market exclusion and a lack of human capital—and moving forward with financial hope. In other words, perceived barriers would be the critical consciousness raising and goal-directed hope would be the self-efficacy part of the empowerment theory. The process of switching from barriers to hope with actions taken within structurally limiting circumstances pushes the system to react by disrupting the recursive structure in the structuration theory. Using the PSS theory to unify the unit of analysis at the agent level, this study will first develop and validate measures of financial PSS—the perceived financial barrier scale (PFBS) and the financial hope scale (FHS). Then, it will use these scales in path models to test their associations with financial capability.

**Method**

This study is based on survey data collected from individuals in Chicago, Illinois, between February 2017 and April 2018. The study was approved by the institutional review board (IRB) of Loyola University Chicago and the ethics committee of Heartland Alliance, and participants provided informed consent.

**Sample**

Baseline community-based surveys were collected from a convenience sample of 242 asset development program participants before implementing the redesigned *Wealth and Wellness* curriculum. The descriptive statistics, summarized in Table 1, reveal that most participants were low-income women of color—91.03% identified as female and 90.60% as Black. The age range of respondents was 22 to 68 years (Mean= 40.98, SD =10.14). For educational level, about 77.06% of respondents had some college and about 18.18% had completed high school or a GED. About three-quarters (68.89%) of the participants were currently employed. Approximately
64% of the respondents were receiving some type of public benefits. For financial status, 52.00% of the participants were not able to pay all bills with their income, and 24.47% did not have a bank account.

[Intable 1]

**Intervention**

The data were collected from an anti-poverty organization rooted in Chicago. The organization is recognized as an experienced provider of both asset building and workforce development services to job seekers with multiple barriers to economic and employment stability. As such, it was charged by a state contract to develop and provide technical assistance to workforce development providers that align with the state’s WIOA goals and guiding principles—namely those which aim to align economic and workforce development, integrate service delivery, and improve access and opportunities for all populations. Participants and trainees enrolled in workforce development programs statewide would benefit from services that help them build financial skills and capability alongside job skills. The organization offered 15 total workshops covering the content of the *Wealth and Wellness* curriculum, adult facilitation tools, and components of the TIP program, which focuses on the developmental ‘process’ of individuals that results in achieving financial capability ‘outcomes’ (Hong, 2016a). Lessons were available in English and Spanish and included the following content—(1) Spend & Save for the Future You Want; (2) Make Every Cent Count; (3) Banks, Credit Unions, & More; (4) Credit Scores: What Helps & What Hurts; (5) Get Help with Your Credit Problems; and (6) Save for the Big Things. Some of the *TIP for Financial Capability* curriculum (Hong et al. 2020) that was infused into the redesigned *Wealth and Wellness* curriculum were: Identity and purpose as a saver, financial barrier reflection (both structural and individual), financial hope actions, saving goal mapping, and imagining the future as a saver.

**Measures**

The survey comprised ten pages including ten scales and demographic variables. The Perceived Financial Barrier and Financial Hope Scale were developed by adopting existing definitions of Psychological Self-Sufficiency and its theoretical components. The already validated Employment Hope Scale (EHS; Hong, Choi, & Polanin, 2014; Hong, Polanin, & Pigott, 2012; Hong et al., 2020b) and Perceived Employment Barriers Scale (PEBS; Hong et al., 2014) were adapted to fit the context of financial goal achievement—with employment hope being revised to financial hope and perceived employment barriers to perceived financial barriers. Second, practitioner interviews were conducted to help identify participant- and context-specific barriers to financial inclusion and financial
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capability. A total of forty practitioners who worked with participants were interviewed by three staff members who led asset building programs. Third, for item refinement, a joint team of university researchers and community practitioners had iterative discussions and compared the outcomes of interviews. The team reviewed all questionnaires, revised words unfamiliar to the respondents, and finalized the items. An iterative process of expert feedback helped reduce measurement error and ensure content validity (DeViellis, 2017; Hinkin et al., 1997).

The final survey included the Financial Hope Scale using a Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) and the Perceived Financial Barrier Scale also using a Likert-type scale ranging from 1 (not a barrier) to 5 (strong barrier). The demographic questions (e.g., gender, race, age, education levels, etc.), and other existing scales that assess financial attitudes and behavior (Hibbert et al., 2004), financial self-efficacy (Danes & Haberman, 2007), financial capability (Collins & O’Rourke, 2013), and the Transforming Impossible into Possible (TIP) scale with its items representing the TIP program components. The TIP scale captures the core concepts of the TIP program—“identity and purpose, forgiveness, goal setting, pathways, barrier inventory, strength assessment, self-worth, self-perceived capability, future possibilities, self-motivation, skills/resource awareness, managing stress/anger, social support, compassion, and gratitude” (Hong, 2015, p. 2)—and foundation of personal success.

Analysis

Exploratory Factor Analysis

The sample data was used to conduct scale validations for the two F-PSS components of perceived financial barriers and financial hope. The minimum sample size for conducting a factor analysis varies, and Kline (1994) recommended having at least 100 and De Winter et al. (2009) suggested 50 cases as a reasonable absolute minimum for good quality results. Thus, having 242 cases in this sample was considered adequate for factor analysis.

This study used exploratory factor analysis (EFA). Principal components analysis (PCA) is a basic method of factor extraction in many statistical software packages (Costello & Osborne, 2005). However, PCA does not distinguish between shared and essence variance among factors and does not consider the subsets of the structure caused by latent variables (Osborne et al., 2008). Therefore, this study conducted EFA using the common factor analysis (i.e., principal factor analysis or principal axis factoring) extraction method that is alternatively recommended by many scholars (Costello & Osborne, 2005; Gorsuch, 1990). Specifically, to identify the factor
structure (dimensions) of the Financial Hope Scale (FHS) and Perceived Financial Barrier Scale (PFBS), exploratory factor analysis was conducted using iterated principal axis factor extraction (IPF), which is an extension of principal axis factor analysis. To determine the number of factors, we calculated the eigenvalues with the values greater than 1 indicating stable dimensions. Next, we adopted an oblique solution with Promax rotation to conduct the EFA.

Another issue under consideration was whether the statistical analysis for a sample size would be an issue affecting the precision of statistical estimations in factor analysis (Worthington & Whittaker, 2006). To test sample size adequacy, the Kaiser-Meyer-Olkin measure of sampling adequacy test and Bartlett’s test of sphericity was conducted. Additionally, reliability and validity tests were conducted. To identify internal consistency and reliability, Cronbach’s coefficient alpha was calculated to get reliability evidence for a multi-item scale (Tavakol & Dennick, 2011). The calculated Cronbach’s alpha should be greater than the cut-off acceptable value .70 (Santos, 1999; Tavakol & Dennick, 2011). The evidence of discriminant validity can be gathered by examining the extent to which the measurement uncorrelated with different scales (Hinkin et al., 1997). Stata 15 software was used for all statistical analyses.

Path Analysis

This part of the study examines the relationship between Financial-Psychological Self-Sufficiency (F-PSS) components—perceived financial barriers and financial hope—and financial capability. The main research questions are twofold: (1) How are perceived financial barriers and financial hope associated with financial capability; and (2) How is the level of TIP associated with the relationship between F-PSS and financial capability? It was hypothesized that perceived financial barriers are associated with financial hope and financial hope with financial capability (Model 3). Further, it was hypothesized that TIP is positively associated with F-PSS (the difference score between Financial Hope and Perceived Financial Barriers) as it relates to financial capability (Model 4). The hypothesized models were analyzed using path analysis in Stata 15 and listwise deletion was used to treat missing data. In the path analysis model, the Financial Capability Scale (Collins & O’Rourke, 2013) uses a total score (0 to 8) that sums the scores of each item. The TIP scale is a Likert-type scale ranging from 1 to 7 with 1 indicating ‘disagree strongly’ and 7 indicating ‘agree strongly’. Each variable in the path analysis was calculated as the mean of all items in the scale. We used bootstrapping to calculate the significance of the indirect relationship considering possible non-normality (Hicks & Tingley, 2011; Mehmetoglu, 2018).

Stata 15 software was used for all statistical analyses.
Results

EFA Results

Financial Hope Scale

The principal axis factor extraction (IPF) analysis utilizing oblique rotation resulted in extracting four factors. Variable-loaded factors, percent of variance, and covariance are shown in Table 2. Factor loadings under .30 were replaced by zero. Results showed that 8 items loaded on Factor 1 accounted for 82.46% of the total variance with an eigenvalue of 13.77, and the 6-items in Factor 2 accounted for 8.48% of the variance with an eigenvalue of 1.42. Factor 3 includes 5 items which accounted for 6.20% of the total variance (eigenvalue=1.04) and factor 4 explained 2.86% of variance (eigenvalue = 0.48). Specifically, Items 17-24 met the factor loading criteria to load on Factor 1, Items 11-16 loaded on Factor 2, Items 5-10 met the criteria constituting Factor 3, and Items 1-4 were loaded on Factor 4. Only one item (Item 4) significantly loaded on both factors and was dropped from further analysis. Like the original Employment Hope Scale factors, the Financial Hope Scale factors can be grouped by utilizing skills and resources in goal-orientation (Factor 1), deterministic self-motivation (Factor 2), current and future capability (Factor 3), and self-worth (Factor 4). The Kaiser-Meyer-Olkin result showed strong sampling adequacy at .954 (Kaiser & Rice, 1974). Bartlett’s test of sphericity was statistically significant at $\alpha=.001$ cut-off level ($p<.001$).

In addition, we calculated Cronbach’s alpha to estimate internal consistency of the final 23 items and subscales. The Financial Hope Scale revealed high internal consistency ($\alpha =.967$). The subscales also revealed high internal consistency: Factor 1 ($\alpha =.947$), Factor 2 ($\alpha =.945$), Factor 3 ($\alpha =.858$), and Factor 4 ($\alpha =.888$). These results confirmed the reliable latent factor structure and utility of these subfactors. To test for construct validity, we estimated the correlation coefficient between the Financial Hope Scale and the self-efficacy scale (Chen, et al., 2001) which are theoretically related to each other. The results revealed a positive moderate relationship between the two scales ($r=.33$, $p<.001$). Discriminant validity was also tested with a correlation coefficient between the Financial Hope Scale and the unrelated measures of housing type. The financial hope scale was unrelated to race ($r=.01$, $p>.10$) and housing type ($r=.01$, $p>.10$).

Perceived Financial Barrier Scale
The IPF analysis results revealed a five-factor structure that eliminated three items from the original 27 items (Table 4). The factors correlated significantly and supported the use of the oblique Promax rotation procedure. Factor 1 included nine items (Items 1, 7, 9, 10, 13, 20, 21, 23, 24) and captured the ‘personal activation and inclusion barrier’ dimension of perceived financial barriers. Factor 2 comprised four items (Items 14, 19, 26, 27) with the theme of ‘money management barrier’ and Factor 3 had four items (Items 3-5, 8) with clusters of ‘knowledge barrier.’ Factor 4 included three items (Items 2, 6, 12) that describe ‘labor market barrier’ and Factor 5 had four items (Items 11, 15-17) that make up ‘financial institution barrier.’ Confirming a reliable latent factor structure of the Perceived Financial Barrier Scale, we found high internal consistency in the final 24 items ($\alpha = .931$) and subscales—Factor 1 ($\alpha = .883$), Factor 2 ($\alpha = .787$), Factor 3 ($\alpha = .893$), Factor 4 ($\alpha = .787$), and Factor 5 ($\alpha = .782$) (Table 5). For testing discriminant validity, we calculated the correlation coefficient between Perceived Financial Barriers and the unrelated measure of age. The financial barrier scale was unrelated to age ($r = .01, p > .10$). The Kaiser-Meyer-Olkin result of .906 indicated adequate sample size (Kaiser & Rice, 1974) and Bartlett’s test of sphericity was statistically significant ($p < .001$) to satisfy data requirements.

[Tables 4 and 5]

Path Analyses Results

Model 1: Perceived Financial Barriers Scale, Financial Hope Scale, and Financial Capability.

The results indicated that the financial barriers scale was indirectly related (through hope) to financial capability while financial hope is directly related to financial capability. Specifically, perceived financial barriers were negatively associated with financial hope ($\beta = -.19, p < .01, CI: -.327, -.051$). That is, as individuals perceive more financial barriers, their level of financial hope tends to decrease. The path coefficient from financial hope to financial capability was significant ($\beta = .89, p < .001, 95\% CI: .641, 1.155$) while controlling for the path from financial barrier to financial capability ($\beta = -.27, p < .1, 95\% CI: -.545, .002$). This suggested that individuals with more hope in their financial situation tend to have higher levels of financial capability. To test the indirect relationship of financial barriers with financial capability, bootstrapping was used as an alternative to the Sobel test. The total effect size of financial barrier on financial capability was -.44 (95\% CI: -.866, -.017). The indirect effect of financial barrier on financial capability through financial hope was significant (indirect effect size = -.17, 95\% CI: -.339, -.001). The analysis also indicates that financial hope partially mediates the relationship between financial barriers and financial capability, suggesting that financial hope is one of the mechanisms by which financial barriers
affect financial capability. The relationships tested in the Model 1 explained 19% of the variance in financial capability.

![Figure 3](image)

**Model 2: TIP, Financial Capability, and F-PSS**

The results revealed that TIP had a significant impact on financial capability both indirectly through F-PSS and directly. Financial Psychological Self-Sufficiency (F-PSS) was calculated by subtracting the perceived financial barrier scale score from the financial hope scale score. The results revealed that the path coefficients from TIP to F-PSS ($\beta = .66$, $p<.001$, 95% CI: .490, .835) and from TIP to financial capability F-PSS to financial capability ($\beta = .46$, $p<.001$, 95% CI: .274, .653) were statistically significant. Thus, TIP had both direct and indirect relationships (through F-PSS) with financial capability ($\beta = .45$, $p<.01$, 95% CI: .172, .729). Bootstrapping results indicated that the total effect size of TIP on financial capability was .76 (95% CI: .469, 1.047), and the indirect effect of TIP on financial capability through F-PSS was significant (indirect effect = .31, 95% CI: .119, .495). In summary, the results suggested that individuals with higher levels of TIP tend to exhibit higher levels of financial psychological self-sufficiency (F-PSS), which, in turn, contributed to higher levels of financial capability. The relationships proposed in the Model 2 explained 20% of the variance in financial capability.

![Figure 4](image)

**Limitations**

There are several limitations to this study. First, this study uses cross-sectional data and therefore can only show the relationships between the theoretical and TIP intervention components and not causal relationships. In other words, this study lays the foundation for further evaluations of the intervention and does not speak to the effects of any intervention. Second, the study was conducted in the City of Chicago, and results may not be consistent in other geographic areas in the U.S. Third, further research should be done to investigate whether results hold for samples with different demographic characteristics. Fourth, the focus group was conducted with only staff who are part of the asset development team. While this is certainly one stakeholder group who understands the participants, investigating barriers directly with the participants would have made the data more insightful. Fifth, the sample size was small, and the results cannot be generalized to all low-income workers in the State of Illinois. A confirmatory factor analysis should be conducted in future studies to test whether the factor structure found in
exploratory factor analysis is consistent in different groups. Finally, the study did not include demographic variables in the path analyses, and larger studies should do so.

**Discussion and Applications to Practice**

This study collected data in the context of WIOA state policy implementation in Illinois, USA. An intrinsically motivating human-centric model called Transforming Impossible into Possible (TIP) was integrated into a financial literacy and capability curriculum called *Wealth & Wellness*. This curriculum was recognized and certified by the Illinois Department of Financial & Professional Regulation, and it is the only financial literacy and capability curriculum recognized by the state. In 2018, the WIOA Statewide Workforce Innovation Program funded the integration of TIP into financial capability and asset building interventions of workforce agencies in Illinois to fill the gap in the practice world.

A practice-informed Psychological Self-Sufficiency (PSS) theory was applied to examine the process that leads to financial capability. PSS was adapted and reconceptualized as an empowerment process of reflecting on the structural and individual barriers and making forward progress with financial goal-directed hope actions (Hong, 2013, 2016a). The barrier component of PSS makes it participant-centered by *meeting the clients where they are at* and the hope component keeps the focus on the goal to keep the needle moving forward as a process (Hong et al., 2019). Reflecting on the context- and population-specific structural and individual barriers allows actions to develop that are transformative in nature to create system change (Hong, 2016a) and also highlights barriers for practitioners and policymakers.

Validation of the Perceived Financial Barriers Scale and Financial Hope Scale were conducted to investigate whether these measures could be used in the application of the theoretical model that describes the process by which perceived barriers are converted into goal-directed hope to reach financial capability. The exploratory factor analysis result indicated that the Financial Hope Scale comprises four factors—utilizing skills and resources in goal-orientation (Factor 1), deterministic self-motivation (Factor 2), current and future capability (Factor 3), and self-worth (Factor 4). The Perceived Financial Barriers Scale includes five factors—personal activation and inclusion barrier (Factor 1), money management barrier (Factor 2), knowledge barrier (Factor 3), labor market barrier (Factor 4), and financial institution barrier (Factor 5). It is important to note that Factors 1, 4, and 5 reflect structural barriers and Factors 2 and 3 are individual barriers. Consciousness-raising about structural barriers is integral to F-PSS as the first step towards meaningful action and structural change.
The path analysis results confirmed the relationships between the measures, with Model 1 showing the indirect relationship of perceived financial barriers through financial hope with financial. Model 2 found that TIP is both directly and indirectly (through F-PSS) related to financial capability. Validation of these measures and their associations in financial capacity and asset building practice lays the groundwork for establishing benchmarks for measuring the impact of the F-PSS process on WIOA outcomes and evaluating—the TIP intervention further.

Currently, within the field of workforce development, the provision of financial education lags behind other skill-building opportunities. Many workers manage money in a way that meets their day-to-day needs but does not proactively address immediate financial challenges or help to achieve long-term financial goals, such as building an emergency savings account, saving for retirement, or building future wealth. Data indicates the scale of this kind of reactionary financial management: for example, about 40% of young workers between 20-39 cash out their retirement plans when they switch jobs. This indicates young workers’ immediate need for access to cash but is a practice that is likely to contribute to economic instability later in life (Rubin & Collins, 2014).

From a behavioral economics perspective, De Meza, Irlenbusch, and Reyniers (2008) contended that improving knowledge and skills in financial capability does not necessarily lead to better outcomes. Rather, intrinsic psychological attributes determine people’s choice of what knowledge to take in and what to do with it. Non-cognitive skills are suggested to affect economic decision-making (Borghans et al., 2008; Hershey, & Mowen, 2000)—i.e., confidence or self-efficacy (Kramer, 2016; OECD, 2013), future orientation (Howlett et al., 2008), internally inconsistent and conflicting personalities, different mental accounts, and impatience (Nyhus & Webbley, 2006). In keeping with the PSS theory, financial distress and hope affect financial control (Prawitz et al., 2012). Psychological barriers (Kempson et al., 2004) and a sense of hope for the future (Buckland, 2010, p. 360) contribute to financial capability.

While these are all important factors contributing to financial capability, findings about psychological attributes should not be taken to blame the victims of financial exclusion—many of whom are low-income workers. Simply switching on psychological characteristics will not improve the systemic and institutional inequities that constrain financial capability to begin with. Rather than assuming economic agents as exercising rational choice based on full information to reach optimal decisions, it is important to recognize rationality as being constrained by structural factors (Simon, 1957; Wheeler, 2018).
Psychological Self-Sufficiency (PSS) theory fills this gap by not allowing positive psychological attributes to be interpreted independently of structural conditions. PSS connects cognitive processes to the context of structural and individual barriers to strengthen financial capability and outcomes. PSS can be viewed as a core bridge practice theory to understand the individualized ‘financial capability process’ toward a manageable financial capability outcome—both at the ability and access levels. The capability process found in the bottom-up, inside-out PSS theory may seem individualistic on the surface (how one moves from perceived barriers to hope) (Hong, 2013), but it taps into the structuration processes of client-oriented and system-oriented social work practice (Kivistö & Hautala, 2020). System reaction and accommodation to individual empowerment will result in lasting financial inclusion that provides and win-win solution for all actors. Through reflection on barriers, critical consciousness raising empowers individuals to challenge institutional restrictions and lack of access (McGirr & Sullivan, 2017). Reflection on the barriers and committing to hopeful actions to change the system is central in PSS theory. (Moreau, 1990).

The findings suggest that TIP may be the key element that fills the gap in knowledge and skill centric financial capability and asset building practice. TIP was recognized by Mathematica Policy Research as one of the top five evidence-informed, promising social-emotional practice models for low-income populations in a U.S. Department of Health and Human Services report (Anderson et al., 2018). It was also tested for its efficacy in improving PSS in a randomized controlled trial policy experiment in South Korea (Hong, Choi, & Hong, 2020) and the content was found to have neurobiologically strengthening effects (Hong & Hong, 2019). The cognitive approach to learning for behavioral change is being met with the challenge of not having the “why” behind motivation, commitment, and sustainable change toward positive outcomes. TIP allows one to intentionally focus on PSS as the main theory of change in delivering financial capability and asset building outcomes. By systematic infusion of the TIP model into Wealth & Wellness, the financial education training reflected not only subject matter expertise but also adult learning concepts and innovative practices in adult workforce development. Further, this study laid the groundwork for measuring Financial—Psychological Self-Sufficiency in workforce development to purposely build a financial capability culture around employment and retention support. As mentioned earlier, the PSS process as it relates to reaching a financial goal would involve recognizing and assessing the level of structural and individual financial barriers—labor market exclusion and a lack of human capital—and moving forward with financial hope. In other words, perceived barriers would be the critical consciousness raising and goal-directed hope would be the self-efficacy part of the empowerment theory.
Investment in professional development of workforce staff via financial capability knowledge and skills raises the standard for employment and training services. Implementation of an evidence-informed, empowerment-based financial capability and asset building model has the potential to transform one-on-one workforce services into trusted financial partnerships that equip workers with tools for future success. These capabilities are highly transferable and will advance the quality of education, training, and counseling throughout the field of economic advancement. The Illinois Department of Commerce and Economic Opportunity can extend the impact of its WIOA-funded programming by empowering its providers to devote time and resources to the long-term economic success of their participants. By helping participants to better understand and navigate their financial circumstances as they make career transitions, staff can help prevent the type of financial crises or mistakes that would otherwise derail a participant’s progress.

Financial capability improves job outcomes such as retention, securing permanent employment, and career mobility. Whether providers are engaging trainees for a short time for placement and soft skills training, or longer-term intensive services, such as case management, it would be important to deliver a training curriculum that is adaptable across various program models. By combining employment and financial capability training for participants, the workforce system is building confidence, a future orientation for goal setting, and tangible processes that motivate retention. Moreover, this provides the opportunity to engage employers and financial institutions to collaboratively build a financial inclusion system for all (Sherraden et al., 2015) as part of “purposeful institutional” and social domains (Sherraden & Barr, 2004, p. 289). Workforce providers could adopt a financial inclusion culture by integrating financial education and empowerment-based F-PSS process models and see a positive impact on their placement and retention outcomes.
References


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https://doi.org/https://doi.org/10.1177/1049731509358424


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### Table 1

**Demographic characteristics of the sample (N = 242)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>21</td>
<td>8.97</td>
</tr>
<tr>
<td>Female</td>
<td>213</td>
<td>91.03</td>
</tr>
<tr>
<td>Age in years, Mean (SD)</td>
<td></td>
<td>40.98(10.14)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>209</td>
<td>90.60</td>
</tr>
<tr>
<td>Non-African American</td>
<td>25</td>
<td>10.68</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>162</td>
<td>70.13</td>
</tr>
<tr>
<td>Married</td>
<td>13</td>
<td>5.63</td>
</tr>
<tr>
<td>Divorced or widowed</td>
<td>56</td>
<td>24.24</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>11</td>
<td>4.76</td>
</tr>
<tr>
<td>High school / GED</td>
<td>42</td>
<td>18.18</td>
</tr>
<tr>
<td>Some college and above</td>
<td>178</td>
<td>77.06</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>155</td>
<td>68.89</td>
</tr>
<tr>
<td>Not employed</td>
<td>70</td>
<td>31.11</td>
</tr>
<tr>
<td>Household annual income, Mean (SD)</td>
<td></td>
<td>$20,068 ($23,866)</td>
</tr>
<tr>
<td>Having a banking account</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>179</td>
<td>75.53</td>
</tr>
<tr>
<td>No</td>
<td>58</td>
<td>24.47</td>
</tr>
</tbody>
</table>
### Table 2

**Exploratory Factor Analysis Result (FHS)**

<table>
<thead>
<tr>
<th>Financial Hope Scale</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thinking about my financial goals, I feel confident about myself.</td>
<td>0.188</td>
<td>0.006</td>
<td>0.241</td>
<td>0.447</td>
</tr>
<tr>
<td>2. I am good enough to save for future</td>
<td>0.131</td>
<td>-0.053</td>
<td>0.100</td>
<td>0.700</td>
</tr>
<tr>
<td>3. When it comes to money, I respect myself</td>
<td>-0.077</td>
<td>0.055</td>
<td>0.465</td>
<td>0.493</td>
</tr>
<tr>
<td>4. I am worthy of achieving financial success</td>
<td>-0.033</td>
<td>0.431</td>
<td>-0.039</td>
<td>0.603</td>
</tr>
<tr>
<td>5. I am capable of managing my budget</td>
<td>-0.027</td>
<td>0.055</td>
<td>0.518</td>
<td>0.408</td>
</tr>
<tr>
<td>6. I have the strength to overcome any obstacle when it comes to financial problems</td>
<td>-0.038</td>
<td>0.230</td>
<td>0.529</td>
<td>0.246</td>
</tr>
<tr>
<td>7. I can save in any circumstance</td>
<td>0.052</td>
<td>0.004</td>
<td>0.881</td>
<td>-0.136</td>
</tr>
<tr>
<td>8. I am good at managing my money if I set my mind to it</td>
<td>0.224</td>
<td>0.093</td>
<td>0.474</td>
<td>0.145</td>
</tr>
<tr>
<td>9. I feel positive about my financial future</td>
<td>0.342</td>
<td>0.069</td>
<td>0.377</td>
<td>0.167</td>
</tr>
<tr>
<td>10. I don’t worry about falling behind in my future bills</td>
<td>0.130</td>
<td>-0.107</td>
<td>0.538</td>
<td>0.068</td>
</tr>
<tr>
<td>11. I will build financial assets for my future.</td>
<td>0.118</td>
<td>0.749</td>
<td>-0.027</td>
<td>0.103</td>
</tr>
<tr>
<td>12. I will be in a better position in my financial status than where I am now.</td>
<td>0.101</td>
<td>0.851</td>
<td>-0.064</td>
<td>0.015</td>
</tr>
<tr>
<td>13. I can tell myself to take steps toward my financial goals.</td>
<td>0.141</td>
<td>0.870</td>
<td>-0.042</td>
<td>-0.009</td>
</tr>
<tr>
<td>14. I am committed to my financial goals.</td>
<td>-0.032</td>
<td>0.735</td>
<td>0.242</td>
<td>0.019</td>
</tr>
<tr>
<td>15. I feel energized when I think about my future financial achievements.</td>
<td>0.278</td>
<td>0.579</td>
<td>0.224</td>
<td>-0.168</td>
</tr>
<tr>
<td>16. I am willing to give my best effort to reach my financial goals.</td>
<td>0.206</td>
<td>0.646</td>
<td>-0.039</td>
<td>0.076</td>
</tr>
<tr>
<td>17. I am aware of the skills I need to manage my household budget.</td>
<td>0.568</td>
<td>0.117</td>
<td>0.087</td>
<td>0.070</td>
</tr>
<tr>
<td>18. I am aware of the resources that are available to help me reach my financial goals</td>
<td>0.756</td>
<td>0.018</td>
<td>0.066</td>
<td>0.003</td>
</tr>
<tr>
<td>19. I can use the skills I have to move toward my financial goals.</td>
<td>0.804</td>
<td>0.026</td>
<td>0.082</td>
<td>0.035</td>
</tr>
<tr>
<td>20. I can use the resources that are available to help me reach my financial goals.</td>
<td>0.732</td>
<td>0.180</td>
<td>-0.087</td>
<td>0.090</td>
</tr>
<tr>
<td>21. I am on the road toward financial success.</td>
<td>0.813</td>
<td>0.065</td>
<td>0.080</td>
<td>-0.050</td>
</tr>
<tr>
<td>22. I am in the process of reaching my goals.</td>
<td>0.745</td>
<td>0.072</td>
<td>0.136</td>
<td>-0.042</td>
</tr>
<tr>
<td>23. Even if I cannot achieve my financial goals right away, I will find a way to get there.</td>
<td>0.532</td>
<td>0.242</td>
<td>-0.040</td>
<td>0.194</td>
</tr>
<tr>
<td>24. My current path will allow me to reach my long-term financial goals.</td>
<td>0.691</td>
<td>0.132</td>
<td>-0.016</td>
<td>0.070</td>
</tr>
</tbody>
</table>

Eigenvalue  
|            | 13.765  | 1.420  | 1.038  | 0.478  |

% Variance Explained  
|            | 82.46   | 8.48   | 6.20   | 2.86   |

α  
|            | 0.947   | 0.945  | 0.858  | 0.888  |
Table 3

Descriptive and bivariate statistics for the study variables (FHS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>4.04</td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>4.23</td>
<td>0.99</td>
<td>0.801*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>3.49</td>
<td>1.08</td>
<td>0.712*</td>
<td>0.678*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td>3.83</td>
<td>1.08</td>
<td>0.676*</td>
<td>0.704*</td>
<td>0.796*</td>
<td></td>
</tr>
</tbody>
</table>

Notes: * $p < .001$
Table 4

Exploratory Factor Analysis Result (PFBS)

<table>
<thead>
<tr>
<th>Perceived Financial Barriers Scale</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of high school diploma/GED</td>
<td>0.331</td>
<td>-0.215</td>
<td>0.226</td>
<td>0.089</td>
<td>0.208</td>
</tr>
<tr>
<td>2. A work-limiting health condition (illness / injury)</td>
<td>0.092</td>
<td>-0.108</td>
<td>0.107</td>
<td><strong>0.790</strong></td>
<td>-0.067</td>
</tr>
<tr>
<td>3. Growing up, no one taught me how to save money for a rainy day</td>
<td>0.063</td>
<td>0.172</td>
<td><strong>0.689</strong></td>
<td>0.066</td>
<td>-0.168</td>
</tr>
<tr>
<td>4. Lack of financial education</td>
<td>0.088</td>
<td>0.218</td>
<td><strong>0.673</strong></td>
<td>-0.033</td>
<td>-0.079</td>
</tr>
<tr>
<td>5. Limited experience with saving money</td>
<td>-0.045</td>
<td>0.040</td>
<td><strong>0.802</strong></td>
<td>0.072</td>
<td>0.052</td>
</tr>
<tr>
<td>6. Not having a job</td>
<td>-0.021</td>
<td>0.078</td>
<td>0.140</td>
<td><strong>0.486</strong></td>
<td>0.095</td>
</tr>
<tr>
<td>7. Racial discrimination</td>
<td><strong>0.311</strong></td>
<td>0.251</td>
<td>-0.173</td>
<td>0.243</td>
<td>0.079</td>
</tr>
<tr>
<td>8. Not knowing how to save</td>
<td>-0.016</td>
<td>0.129</td>
<td><strong>0.758</strong></td>
<td>-0.026</td>
<td>0.142</td>
</tr>
<tr>
<td>9. Lack of stable housing</td>
<td><strong>0.490</strong></td>
<td>0.185</td>
<td>0.116</td>
<td>0.022</td>
<td>0.028</td>
</tr>
<tr>
<td>10. Drug / alcohol addiction</td>
<td><strong>0.705</strong></td>
<td>0.058</td>
<td>-0.024</td>
<td>-0.005</td>
<td>0.152</td>
</tr>
<tr>
<td>11. Lack of belief that saving will change my future</td>
<td>0.186</td>
<td>0.055</td>
<td>0.300</td>
<td>0.024</td>
<td><strong>0.338</strong></td>
</tr>
<tr>
<td>12. Physical disabilities</td>
<td>0.078</td>
<td>-0.019</td>
<td>-0.088</td>
<td><strong>0.707</strong></td>
<td>0.141</td>
</tr>
<tr>
<td>13. Mental illness</td>
<td><strong>0.693</strong></td>
<td>0.157</td>
<td>-0.199</td>
<td>0.139</td>
<td>0.020</td>
</tr>
<tr>
<td>14. Debt or credit issues</td>
<td>-0.045</td>
<td><strong>0.511</strong></td>
<td>0.131</td>
<td>0.016</td>
<td>0.022</td>
</tr>
<tr>
<td>15. Distrust of banks / financial institutions</td>
<td>0.089</td>
<td>0.122</td>
<td>0.127</td>
<td>0.008</td>
<td><strong>0.533</strong></td>
</tr>
<tr>
<td>16. Not enough banks in my community</td>
<td>0.080</td>
<td>-0.049</td>
<td>-0.039</td>
<td>0.016</td>
<td><strong>0.716</strong></td>
</tr>
<tr>
<td>17. Banks not welcoming people like me</td>
<td>0.222</td>
<td>0.113</td>
<td>-0.122</td>
<td>-0.018</td>
<td><strong>0.596</strong></td>
</tr>
<tr>
<td>18. Not having money to take care of basic needs</td>
<td>-0.133</td>
<td><strong>0.449</strong></td>
<td>0.045</td>
<td>0.161</td>
<td><strong>0.315</strong></td>
</tr>
<tr>
<td>19. Being a single earner</td>
<td>-0.101</td>
<td><strong>0.541</strong></td>
<td>0.075</td>
<td>0.051</td>
<td>-0.021</td>
</tr>
<tr>
<td>20. Not being able to speak English very well</td>
<td><strong>0.874</strong></td>
<td>-0.249</td>
<td>0.162</td>
<td>-0.070</td>
<td>0.005</td>
</tr>
<tr>
<td>21. Not being able to read or write very well</td>
<td><strong>0.884</strong></td>
<td>-0.167</td>
<td>0.032</td>
<td>0.005</td>
<td>0.110</td>
</tr>
<tr>
<td>22. Problems with keeping a job</td>
<td><strong>0.430</strong></td>
<td>0.092</td>
<td>0.086</td>
<td><strong>0.447</strong></td>
<td>-0.159</td>
</tr>
<tr>
<td>23. Lack of confidence</td>
<td><strong>0.462</strong></td>
<td>0.157</td>
<td>0.244</td>
<td>-0.001</td>
<td>0.019</td>
</tr>
<tr>
<td>24. Not having a bank account</td>
<td><strong>0.356</strong></td>
<td>0.006</td>
<td>0.106</td>
<td>0.097</td>
<td>0.166</td>
</tr>
<tr>
<td>25. Lack of coping skills for daily struggles</td>
<td><strong>0.571</strong></td>
<td><strong>0.471</strong></td>
<td>-0.100</td>
<td>0.047</td>
<td>-0.074</td>
</tr>
<tr>
<td>26. Not having a budget</td>
<td>-0.017</td>
<td><strong>0.716</strong></td>
<td>0.153</td>
<td>-0.104</td>
<td>0.050</td>
</tr>
<tr>
<td>27. Not having a financial goal</td>
<td>0.098</td>
<td><strong>0.639</strong></td>
<td>0.209</td>
<td>-0.088</td>
<td>-0.014</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>10.186</td>
<td>2.231</td>
<td>0.958</td>
<td>0.885</td>
<td>0.722</td>
</tr>
<tr>
<td>% Variance Explained</td>
<td>64.86</td>
<td>14.20</td>
<td>6.10</td>
<td>5.64</td>
<td>4.60</td>
</tr>
<tr>
<td>$\alpha$</td>
<td>.883</td>
<td>.787</td>
<td>.893</td>
<td>.787</td>
<td>.782</td>
</tr>
</tbody>
</table>
Table 5

Descriptive and bivariate statistics (PFBS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>1.67</td>
<td>0.86</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>2.80</td>
<td>1.08</td>
<td>0.511*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>2.57</td>
<td>1.26</td>
<td>0.492*</td>
<td>0.596*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td>1.94</td>
<td>1.10</td>
<td>0.701*</td>
<td>0.411*</td>
<td>0.390*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Factor 5</td>
<td>1.79</td>
<td>0.98</td>
<td>0.669*</td>
<td>0.473*</td>
<td>0.440*</td>
<td>0.512*</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: * p < .001
Figure 1
Path analysis model 1: Direct and indirect effects of perceived financial barriers and financial hope on financial capability
Figure 2
Path analysis model 2: Direct and indirect effects of TIP and Financial-PSS on financial capability
Figure 3
Path analysis model 1 results: Direct and indirect effects of perceived financial barriers and financial hope to financial capability

* $ p < .05, ** p < .01, *** p < .001$

CD=.06, AIC=775.151, BIC=796.179, $ R^2 = .19$

Note: Standardized coefficients shown in figure; beta coefficients reported in narrative.
Figure 4
Path analysis model 2 results: Direct and indirect effects of TIP and financial PSS on financial capability

*TIP

7.48***

Financial PSS
(F-PSS)

4.75***

3.15**

Financial Capability

Note: Standardized coefficients shown in figure; beta coefficients reported in narrative.