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## Financial Credit Outcomes of IDA Participation: Longitudinal Findings

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### Cover Page Footnote

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# Financial Credit Outcomes of IDA Participation: Longitudinal Findings

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*Financially vulnerable families often struggle with low credit scores. Thus, improved participant credit is often a goal of asset development programs, such as the Individual Development Account (IDA) program, but little is known about the long-term credit outcomes of participation. This article reports the final results of a three-year longitudinal exploratory study of credit outcomes for IDA participants. Using a convenience sample of IDA participants and non-participants (N = 164), data were analyzed using nonparametric and Chi-square for independence tests. Results indicate that participant credit scores improvements are achieved and maintained. Credit score is not a meaningful indicator of program completion, time to completion, or type of asset purchased for participants. Those who completed the IDA program within two years experienced the highest credit gains. Future research with larger samples is needed to further assess the impact of credit scores on program participation and completion.*

*Keywords: longitudinal; credit; asset development; individual development account; credit score*

## INTRODUCTION

Today's economic realities of increasing income and asset inequality, and falling median income means that increasing numbers of families are facing financial struggles (Bricker et al., 2014). A sizable minority of individuals (19%) reported that over the past year, their expenses exceeded their income (FINRA Investor Education Foundation, 2013). In particular, those households living at or below the poverty line are facing substantial declines in real income and average net worth (Bricker et al., 2014), leaving them vulnerable to financial hardship and lower financial well-being through such activities as

high-cost borrowing to meet basic needs. Without assistance, these households are unlikely to gain an improved financial status or wealth through accumulating assets (Bell & Lerman, 2005).

In response to the need, helping professionals, such as financial therapists and social workers, provide assistance to low- and moderate-income households seeking financial knowledge, better financial management, and/or increased income and financial assets (Collins & Birkenmaier, 2013). Helping professionals provide financial education and counseling in myriad community-based settings (e.g., food pantries and community-based service centers) and develop and administer long-term savings and asset building programs to help families gain wealth. One aspect of asset building programs is a focus on building financial credit, both a crucial element to the ability to improve a financial status and to the purchase several types of assets through affordable loan products (Naleppa, 2006; Sanders & Schnabel, 2007).

Low- and moderate-income households struggle with low credit scores (National Council of La Raza, 2014). Possessing strong financial credit, as evidenced by a high credit score, has many implications, such as access to affordable loan products for asset purchase (e.g., homes and automobiles), affordable insurance, and access to employment and housing (Birkenmaier & Curley, 2009). A credit report, on which past credit behavior and legal history regarding finances is recorded and analyzed and a credit score is displayed, is used by a variety of entities as an indication of future behavior, including financial behavior (Loonin, 2010). The credit report, which is a commercially available document, provides an indication of risk of non-repayment to potential lenders, and is crucial both to the financial status of households and the success of asset purchase and long-term ownership. Due to the use of credit reports for a wide variety of decisions, households with low or no credit scores have reduced access to affordable consumer loans and insurance products due to the practice of charging higher interest and fees because of the perceived higher risk of lending. These households also face diminished opportunities for employment and rental housing, as the reports and scores are utilized as the basis to make judgments about future behavior. Thus, strong financial credit is an essential ingredient to the financial status of a household (Birkenmaier & Curley, 2009). Asset building programs include credit as a focal point to assist participants in achieving a strong credit score. However, little is known about the long-term credit outcomes of participation in financial education and asset-building programs. Therefore, the research question for this study is "Does initial credit score provide an indication for participants about IDA completion, time to completion, or type of asset purchased?"

To add to the literature on this topic, this paper reports the final results of a three-year, quasi-experimental longitudinal exploratory study that examined the credit score outcomes of participation in financial education and asset building, called the "Individual Development Account" (IDA) program. Longitudinal research findings about financial and credit outcomes of IDA participation are reviewed. Discussed are participant and non-participant credit score changes over three years, and the association of initial credit score with program completion, time to completion, and type of asset purchased. Program and policy implications are also discussed.

## BACKGROUND AND LITERATURE REVIEW

### *Credit Building*

The most commonly used credit scores in the U.S. are derived from information on the credit report, and are calculated through a quantitative scoring model by one of three national Credit Reporting Agencies (CRAs), which are Equifax, TransUnion, and Experian. The three CRAs receive repayment information from businesses and compile the information into credit reports that are sold to businesses and consumers. The system is voluntary and not all creditors report credit information to the CRAs, or to all three CRAs, so the CRAs can process different information on each consumer and have different algorithms, resulting in different scores. Lenders use these scores to assess credit worthiness and influence decisions on whether to grant credit, in addition to the terms of credit. The general range of scores is 300-850, with those scored “null” (or zero) who have no credit, and those with credit below 620 deemed “high risk” (Hendricks, 2005). The score fluctuates, depending on current information. The formula for computing the scores is generally based on bill payment, debt repayment, public records (e.g., tax liens and bankruptcies), amount of available credit utilized, length of credit history, and mix of credit utilized (Loonin, 2010).

Assisting consumers to build financial credit can involve a wide variety of activities. Many consumers are unaware of their report and score, and therefore, building awareness of the credit report and score is the first step (National Council of La Raza, 2014). Those without a credit score can be educated if needed and connected with credit options from formal financial institutions, such as a secured credit card from a bank. Financial management practices that enable them to start building a positive credit history can be suggested. Consumers with low credit scores can be educated about the need to correct any errors on the report, a fairly frequent occurrence, and assisted in correcting errors (Loonin, 2010). Depending on the credit report information, some consumers benefit from education about the advantages of paying debts on time, opening new accounts, and/or lowering debt or available credit used to increase their score. Additional support provided for these activities can include budgeting, credit planning, and communicating and negotiating with creditors and debt collectors to lower the amount owed (U.S. Department of Health & Human Services, 2011). Due to the various ways that credit scores can be improved, a higher credit score does not always reflect an improved financial situation. However, a higher credit score can facilitate access to better financial opportunities through more affordable financing and insurance costs, as well as employment opportunities (Loonin, 2010).

### *Credit Building within IDA Programs*

Credit building work is an important part of asset development programming, such as the IDA program. Assets are financial investments that provide the ability to generate present and future resources. Assets can include income or resources from which to draw upon during economic hardship, and offer the potential to increase the wealth of future generations through inheritance (Lerman & McKernan, 2008). As an asset development

program, the IDA program helps low-income employed families save money, become educated about finances and assets, provide matched savings toward the purchase of an allowable asset, and facilitate access to appropriate financial products and services.

IDA participants often begin with either no credit score, or a low credit score as a result of poor credit history, which may include high debt, too few credit accounts, collections, foreclosures, and bankruptcy. Many IDA participants have experienced financial hardship due to unforeseen events, such as medical situations that have led to medical debt (Carpender, 2008). Clients are well-suited to engage in credit building, as they are highly motivated by the prospect of using the matched savings, financial education, and staff support to purchase a home, automobile, or a small business, or to attend post-secondary education – all assets that will help build wealth. Trained program staff work closely with participants over a period of time and develop helping relationships in the process of assessing participant credit scores at the beginning and throughout the program, providing credit education and assistance to improve their credit scores using the aforementioned credit building activities (Rohe, Gorham, & Quercia, 2005), and facilitating access to affordable financial products, including loan products (Beverly et al., 2008; Mills, Lam, DeMarco, Rodger, & Kaul, 2008; Pinder, Yagely, Peck, & Moore, 2006). Programs sometimes provide additional services like peer support, crisis management, employment support, and mentoring, and referral to credit experts for complex situations (Parker, 2013; Sherraden & Boshara, 2008; U.S. Department of Health & Human Services, 2011). The combination of client motivation and targeted resources provides fertile opportunity to build credit within the IDA program.

### ***Long-Term Credit Outcomes***

Overall, literature about long-term credit history outcomes of asset building programs in general, and IDA participants specifically, is limited, and provides mixed results. For example, in their follow-up study of IDA participants, Loibl, Grinstein-Weiss, Zhan, and Red Bird's (2010) findings included no significant difference of participation regarding self-reported credit card debt. In a three-year, national longitudinal survey of 485 former IDA participants, Mills et al. (2008) found no significant impact on debt (i.e., credit card debt and consumer loans). In another study, those with credit card debt were 4.7 percent more likely to drop out of the program than those without debt due to insufficient financial assumptions and knowledge, discouragement, and lack of automatic savings devices (Schreiner & Sherraden, 2005). However, using data collected at one and one-half and four years after program enrollment, Grinstein-Weiss et al. (2008) found that for baseline renters, IDA participation significantly increased the clearing of debt and homeownership rates. Rohe et al. (2005) found that credit information and assistance was greatly appreciated by the IDA participants in their qualitative study.

Earlier results of this study found that the initial credit scores of participants were low (Birkenmaier, Curley, & Kelly, 2011) and credit scores and histories of participants and non-participants significantly differed from each other (Wave 1) (Birkenmaier, Curley, & Kelly, 2012). After one year, participants made gains on their credit scores, as compared to non-participants (Wave 2) (Birkenmaier, Curley, & Kelly, 2014). The median credit scores

of participant groups created through program participation variation after one year (i.e., participants either completed the program and were in the “Completed” group, they were still participating and saving and in the “Still Saving” group, or they had dropped out and were in the “Drop-Outs” group) did not initially differ from each other. Thus, those who completed, were still participating, and had dropped-out after one year of participation had credit scores and history that did not initially differ significantly. During the first year of program participation, those who dropped out experienced a decrease in their credit score (Birkenmaier et al., 2012), but experienced an increase in their score during year two of the study (Birkenmaier et al., 2014). Those who completed the program within two years experienced the highest credit score gains. Similar to previous research findings, initial credit score was associated with program participation (Rothwell & Han, 2010), but not goal achievement, time to completion, or type of asset purchased (Wave 3) (Birkenmaier et al., 2014). Differing from other studies (Loibl et al., 2010), previous waves of data suggested that the IDA participants made credit score gains, as compared to non-participants, and that these gains were sustained after asset purchase.

Given the scant literature on this topic and the importance of credit to asset building efforts, additional longitudinal studies that evaluate the impact of initial credit score on program participation, completion, and asset purchase, as well as participant credit scores during program participation or after asset purchase, would provide programs with evidence to guide their credit score building efforts. This exploratory study contributes to the research about the above topics by analyzing all four waves of data.

## METHODS

A total of 281 clients from three IDA programs in a Midwestern city affiliated with United Way were recruited to participate in the study, and 188 consented, for a response rate of 67%. In each wave of the data, subjects with credit scores of zero were eliminated because a zero score is an extreme value that means that the subject has no credit (the scale for subjects with credit ranges from 300-850). Of the 188 total sample size, 167 had a credit score above zero at Wave 1, therefore 21 cases were eliminated. In later waves, cases with zero credit scores were also eliminated. Therefore, two additional cases were eliminated at Wave 2. One case was eliminated in Wave 3, and none were eliminated in Wave 4. The final sample size was 164 during Waves 3 and 4.

### *Sample*

The sample (N = 164) was obtained through three community-based agencies that offered other programs besides IDAs. These agencies included: (a) a housing counseling agency that provides pre- and post-purchase housing counseling, which recruited 88% of the participants (n = 145); (b) a domestic violence agency that provides family literacy, economic education, and other related programs, which recruited nine percent of the participants (n = 15); and (c) a homeless service provider that provides referrals to area shelters, assistance with rent, and other related services, which recruited two percent of the participants (n = 4). The three recruitment sites collected identical demographic data in one web-based administrative database (i.e., VistaShare Outcome Tracker), taught financial

education that addressed identical core financial education competencies, and permitted similar allowable purchases with IDA funds (i.e., home, home improvement, micro-enterprise, post-secondary education, and vehicle). This sample was compared to a national sample of IDA participants and was found to be more highly educated, have higher income, and was more banked than national IDA samples. However, subjects also utilize higher-cost alternative financial services at similar rates to other low-income families (Birkenmaier et al., 2011).

Between February 2008 and June 2009, community-based agencies screened potential IDA participants and invited those who were eligible to an orientation. Those attending the orientation were asked to participate in the study. Participants gave written permission for researchers to utilize data routinely collected by IDA program staff in the IDA database, as well as for the researchers to access their credit report at baseline (i.e., Wave 1) and annually for three years (i.e., Waves 2-4), and use the data for the study.

Presented here are data from Waves 1-4 (N = 164), which are data gathered at baseline and the subsequent three years. Participants are those who completed financial education, enrolled in the program, opened a bank account, and began saving. Non-participants are those who attended an orientation, but chose to cease their participation prior to any other step in the program; therefore they did not complete financial education, enroll in the program, open a bank account, or save. To measure for differences between types of participants, three sub-groups of participants were created as a result of activity during the course of the program: (a) those who completed the program, purchased an asset, and closed the account (“Completed”); (b) those who opened an account, attended financial education, and began saving, but dropped out without purchasing an asset and closing their account (“Drop-Outs”); and (c) those who opened an account, attended financial education, began saving, and were still saving in the program at Wave 4 (“Still Saving”). While the membership of the participant and non-participant groups were identical between Waves 3 and 4, some changes in the membership of the participant sub-groups occurred between Waves 3 and 4.

### ***Measurement***

FICO credit score was used as an outcome variable. This variable was taken directly from subjects’ credit reports, and was calculated by the TransUnion credit bureau. As mentioned previously, FICO credit scores start at 0 (for those with no credit), and have a range for those with credit between 300-850. No scores between 0-299 are issued, thus the scale is not a true continuous measure. Therefore, credit report scores were used as categorical data. Other variables utilized were number of months matched savings account was open, and type of asset purchase (i.e., home purchase and home repair = housing-related; post-secondary education and small business development = non-housing related).

Descriptive statistics were computed on all participants and data obtained from their credit reports in all four waves. To test for associations between Wave 1 participant credit scores and number of months matched savings account was open at Wave 4, group membership (i.e., Completed and Drop-Out) and type of asset purchased, Chi-square tests



were completed. Due to the non-normal distribution of many of the variables, nonparametric tests were used as parametric tests (e.g., t-tests) assume a normal distribution of the data (Pett, 2015). The first nonparametric test, Wilcoxon Signed Rank Tests, is an equivalent of paired sample t-tests. Wilcoxon Tests were conducted to test for significance in credit score differences within groups for participants and non-participants, participant groups (i.e., Completed and Dropouts), and groups based on type of asset purchase (i.e., Completed: Housing-Related and Completed: Non-Housing-Related) from Wave 2 to Wave 4. The second nonparametric test used was the Kruskal-Wallis test. The Kruskal-Wallis test, a nonparametric equivalent of a one-way group ANOVA, was conducted to test for differences between participant groups for overall median credit score change.

## RESULTS

### *Descriptive Data*

Descriptive statistics on the participants (n = 79), non-participants (n = 85), and the participant sub-groups “Completed,” “Drop-outs,” and “Still Saving” are provided in Table 1. Of the 79 participants, 57 (72% of the overall participant sample) closed and completed the program, 16 (20% of the overall participant sample) closed but did not complete the program, and 6 (8% of the overall participant sample) are still saving in the program at Wave 4.

## Financial Credit Outcomes of IDA Participation: Longitudinal Findings

**Table 1**  
**Demographics**

Demographics	Participants n=79, 48%	Non- Participants n=85, 52%	Participant Sub-Groups		
			Completed n=57 (72%)	Still Saving n=6 (8%)	Drop-Outs n=16 (20%)
Age: 31-40	29 (37%)	30 (35%)	20 (35%)	1 (17%)	9 (56%)
41 and older	25 (32%)	30 (34%)	15 (26%)	3 (50%)	5 (32%)
Female	69 (87%)	67 (79%)	49 (86%)	6 (100%)	15 (94%)
Partner status: Single	49 (62%)	47 (55%)	35 (61%)	2 (64%)	13 (87%)
Higher Education	69 (87%)	71 (84%)	50 (86%)	5 (83%)	16(100%)
African American	56 (71%)	62 (73%)	39 (74%)	4 (67%)	13 (81%)
Income/Debt Ratio at Wave 1	18 (24%)	11 (13%)	13 (24%)	1 (17%)	4 (25%)
# of Wave 1 Household Bills Past Due	34 (43%)	43 (49%)	13 (27%)	2 (33%)	8 (56%)
Average Amount Owed	\$1,512	\$567	\$2,052	\$229	\$261
Wave 1 EITC Recipients	27 (34%)	26 (31%)	21 (37%)	0 (0%)	6 (38%)
Mean credit score at Wave 1 (Wave 4)	572 (627)	533 (578)	604 (643)	673 (599)	562 (569)
# and % with Poor Credit Score at Wave 1	44 (56%)	66 (78%)	31 (55%)	1 (17%)	12 (75%)
# and % Achieving Positive Change in Credit Score	56 (71%)	43 (51%)	36 (70%)	2 (33%)	10 (56%)

Participants (n = 79) are predominately 31-40 years old (37%), female (87%), single (62%), and have enrolled in higher education (87%). They are also predominately African-American (71%), with a mean number of 1.4 children. Over half of the participants (56%) have poor credit at Wave 1 (i.e., below a 620 credit score), but only about one-third (34%) have household bills past due. Non-participants (n = 85) are also predominately 31-40 years old (35%), female (79%), single (55%), and 84% have enrolled in higher education. Similar to participants, the non-participants are African-American (73%), with a mean number of 1.6 children. The majority of the non-participants have poor credit (78%), and about half have past due bills (49%). The participant groups (i.e., Completed, Drop-Outs, and Still Saving) had similar profiles. Due to small numbers, the "Still Saving" group was dropped from further analysis. There were no significant differences between the participants from the three agencies. The survey respondents had similar demographics to the participant and non-participant groups. Figures 1-4 provide a visual overview of Wave 1 and Wave 4 credit scores, including zero (null) scores.

Financial Credit Outcomes of IDA Participation: Longitudinal Findings

Figure 1. Non-participants Wave 1 credit scores

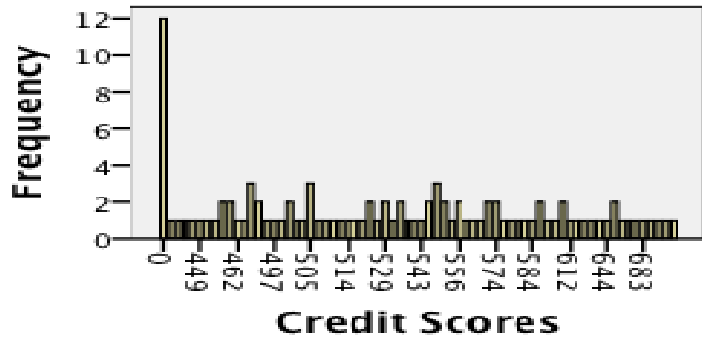


Figure 2. Non-participants Wave 4 credit scores

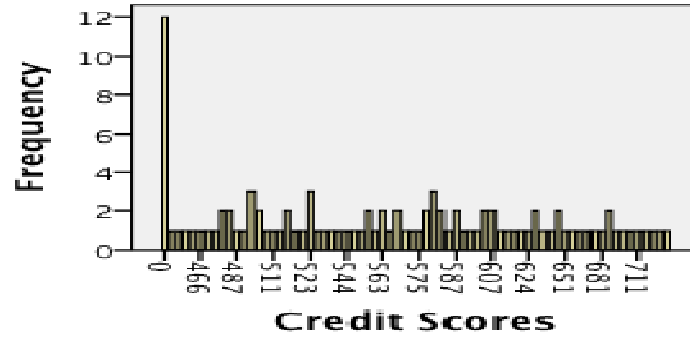


Figure 3. Participants Wave 1 credit scores

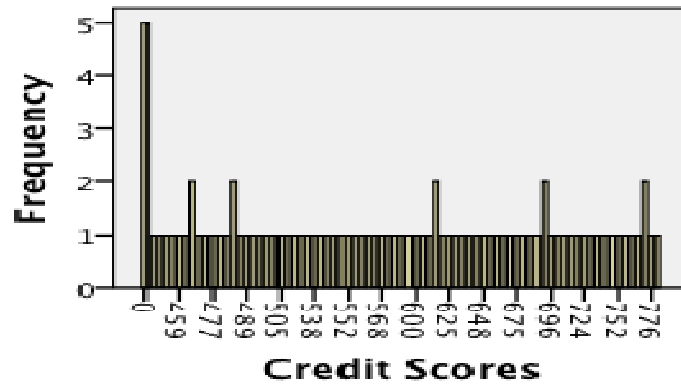
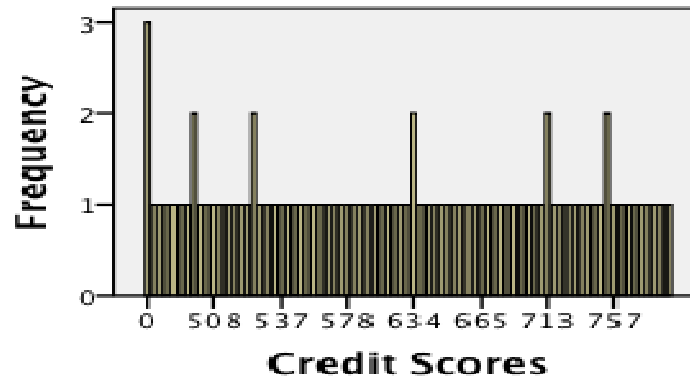


Figure 4: Participants Wave 4 credit scores



### ***Participant Wave 1 Credit Score Associations***

Chi-square for independence tests were conducted to test for associations between Wave 1 credit score (0 = credit score below 620, 1 = credit score 620 and above) and: (a) the credit score of the participants group at Wave 4; (b) number of months matched savings account was open; and (c) type of asset purchased. Results of the Chi-Square for independence test showed for participants: (a) no significant association between the credit score of Wave 4 participant groups and Wave 1 credit score; (b) no significant association for participant groups between Wave 1 credit score and number of months matched savings account was open at Wave 4, or Wave 4 credit score and number of months open; and (c) no significant association between Wave 1 credit score and type of purchased asset (i.e., Housing-Related or Non-Housing-Related).

### ***Credit Score Differences over Time***

Wilcoxon Signed Rank Tests, a nonparametric equivalent of paired sample t-tests, were conducted to test for significance in credit score median differences between each of the waves for participants and non-participants, and within each participant group. Results of the Wilcoxon Signed Rank Test (Table 2) indicated that the Participant group had significant increases in their median credit score between Waves 1 and 3, as well as Waves 1 and 4, with the strongest effect between Waves 1 and 3 (.40, which is a medium effect size). Participants also had a significant increase between Waves 2 and 3. Non-participants had statistically significant increases between Waves 2 and 3 along with Waves 3 and 4, with small effect sizes. The Participant group experienced a larger increase in their median credit score than the Non-participant group.

As for the participant groups (i.e., Completed and Drop-Outs), the Completed group experienced their largest increase within the first year (Waves 1 and 2), which was significant with a medium effect size (.38). They experienced significant increases in their median credit scores in Waves 1 and 3, as well as 1 and 4, with a medium effect size for changes that occurred between Waves 1 and 4 (.56). Those who dropped out of the program (i.e., the Drop-Outs) experienced a significant increase in their credit score between Waves 2 and 3 with a medium effect size (.59), and an overall credit score decrease between Waves 1 and 4.

Median credit score changes for the Completed group who used their savings for housing-related purposes (i.e., home purchase and home repair) mirrored the pattern of the credit score median changes for the overall Completed groups. However, the Completed group members who made non-housing-related purchases had a significant decrease in median credit score in both Wave 2 and 3, and then a significant increase in Wave 4.

## Financial Credit Outcomes of IDA Participation: Longitudinal Findings

**Table 2**  
**Wilcoxon Signed Rank Test results**

Wave	Participants (n=79)			Non-Participants (n = 85)			Participants: Completed (n=57)			Participants: Drop Outs (n=16)			Completed: Housing Related (n=33)			Completed: Non- Housing Related (n=23)		
	MD (pts)	z	r	MD (pts)	z	r	MD (pts)	z	r	MD (pts)	z	r	MD (pts)	z	r	MD (pts)	z	r
1-2	5	-1.78	0.14	-8	-0.35	0.03	19	-2.84*	0.27	-41.0	-1.40	0.25	31	-2.62*	0.31	-9	-1.51	0.22
1-3	32	-3.55**	0.28	4	-0.56	0.04	28	-0.78**	0.35	-21.5	-0.49	0.09	38	-3.36*	0.40	-6	-2.30*	0.34
1-4 (total)	30	-3.05*	0.24	21	-2.03*	0.16	26	-4.04**	0.38	-10.5	-0.16	0.03	31	-3.01*	0.35	20	-2.91**	0.43
2-3	27	-2.39*	0.19	12	-2.05*	0.16	9	-1.67	0.16	19.5	-2.35*	0.42	7	-1.23	0.14	-3	-1.13	0.17
2-4	25	-1.15	0.09	29	-2.88*	0.22	7	-1.08	0.10	30	-1.66	0.29	0	-0.63	0.07	29	-1.12	0.17
3-4	-2	-0.11	0.01	17	-1.56*	0.12	-2	-0.58	0.05	11	-0.26	0.05	-7	-0.30	0.04	26	-0.49	0.07

Note: \*\*  $p \leq .01$ , \*  $p \leq .05$

Kruskal-Wallis tests, a nonparametric equivalent of a one-way Group ANOVA, were conducted to test for differences between participant groups for overall median credit score change. Results of the Kruskal-Wallis Test, displayed in Table 3, indicated that there was a significant difference across participant groups (e.g., Completed and Drop-Outs) for overall credit score change between Waves 1 and 4. The differences in median score between Waves 1 and 4 were: Completed = 26 points and Drop-Outs = 11 points. Post-hoc Mann-Whitney U tests demonstrated significant differences in overall credit score median change between Completed and Drop-Outs groups with a small effect size (.24). The median effect size difference for Completed and Dropouts were statistically significant at all waves, except for Wave 1 (Wave 2 = .36, Wave 3 = .32, and Wave 4 = .31).

**Table 3**  
**Results of Post-Hoc Tests for Kruskal-Wallis**

Groups	Wave 4 -1		Wave 1		Wave 2		Wave 3		Wave 4	
	Credit Score Change		Credit Score		Credit Score		Credit Score		Credit Score	
	z	r	z	r	z	r	z	r	z	r
Completed vs. Drop-Outs	-2.05*	.23	-1.43	.17	-3.08*	.36	2.76**	.32	-2.63**	.31

Note: \*\*  $p \leq .01$ , \*  $p \leq .05$

## DISCUSSION

This longitudinal study provides insight into the long-term credit outcomes of an asset building program, the IDA program, and whether original median credit score is associated with successful completion of the program, the time-in-program, and type of asset purchased. Comparing the Participant and Non-Participant groups, the study finds advantages to participation on credit scores. Participants had higher credit scores at year three, and experienced a larger positive change in their score than non-participants. Participants' increase in median credit scores between year one-two and slight insignificant decrease at year three indicates a significant positive change that levels off two years after they began the program. While these two groups were recruited from the same population (i.e., the working poor), had similar demographics, and experienced increases in their credit score, they differed from the outset, and experienced significantly different credit score outcomes.

The finding of participant gains in the first two years is consistent with the practice of creating IDA participant action plans to actively work on raising credit scores within two years of program enrollment, and the goal to maintain gains afterwards. Participants may also experience a small decrease in credit score after asset purchase due to new expenses associated with the asset purchase (i.e., house furnishings for a new house). Asset purchase may also cause a temporary decrease in score depending on the number and timing of inquiries on the credit report from prospective creditors, which would temporarily decrease the credit score, and payment regularity on the new debt associated with the

asset. In addition, literature on financial education suggests that the effects of financial education diminish over time, and refreshers are needed (Mandell & Klein, 2009).

Examining the two participant groups Completed and Drop-Outs, several observations are noted. Perhaps most importantly, the credit score for the Completed and Drop-Outs groups were not different initially, yet they differed significantly at years one-three. The largest increase in credit score for the Completed group occurred within the first year. Like the Participant group, this group experienced a slight decline in credit score between years two-three, suggesting that credit score gains are most likely experienced in the early years during and after program participation, but they were able to maintain their credit score gains. The Drop-Outs experienced a decrease in credit score within the first year, and had a slight increase between years one-two and two-three, but never reached the original median credit score. The Drop-Outs group's pattern is consistent with prior findings that financial hardship leads to drop-out status (Manturuk, Dorrance, & Riley, 2012; Rothwell, Bhaiji, & Blumenthal, 2013). The Drop-Outs may have experienced similar challenges to those experienced by the non-participants, such as expenses associated with children in the household, negative net worth, and non-vehicle ownership (Rothwell & Han, 2010), or aspects of the program such as match rates, time caps, and the use of automatic transfer (Schreiner & Sherraden, 2005). Median credit score gains were experienced by purchasers of all types of assets, with the Completed: Home-Related group's median credit score gaining the most overall, but declining slightly at year three.

These results also indicate that while initial median credit score and history elements provide a strong indication about IDA program participation, they do not provide evidence that initial median credit score provides an indication for participants about IDA completion, time to completion, or type of asset purchased. Taken as a whole, IDA participants had positive movement in their credit scores, with the biggest movement occurring in the first two years for those who complete the program. Additionally, credit score gains were maintained, and do not appear to be negatively affected in the long run by participation, asset purchase, or type of asset purchased.

### ***Implications for Practice***

In addition to previous study findings (Birkenmaier et al., 2011, 2012, 2014), these findings have implications for financial therapists and other helping professionals involved in asset and credit building programs, particularly IDA programs (Archuleta et al., 2012). First, results indicate no difference in credit score changes over three years among the various purchase types. IDA program staff can continue to encourage their participants' free choice of asset purchase goal with some assurance that purchasers of all types of assets experience credit score gains. Additionally, initial credit score does not affect the number of months an IDA account is open. Again, programs can continue to be designed with maximum choice about number of months in-program without concern about the affect time may have on credit score.

The strongest participant credit score gains occurred in the first two years, suggesting that related program staff resources are effectively invested during this period.



The influence of the program on credit score may dissipate over time, similar to the effects of financial education (Mandell & Klein, 2009). Likewise, results suggest that the credit scores of those participants who completed the program increased the most within the first two years and were significantly different than the Drop-Outs, supporting previous findings (Grinstein-Weiss et al., 2008). While this study does not purport to explain the process of differentiating these groups, results indicate that programs may wish to specifically focus on the first year of IDA participation for credit score building programming. Programs may want to conduct an in-depth assessment of financial management behaviors at program enrollment, seek to build on the positive aspects of the behaviors (Rothwell & Sultana, 2013), and follow-up with those that complete to ensure that they are maintaining or increasing their credit score after the asset has been purchased.

Financial therapists and other administrators in programs may want to carefully examine their policies that result in participant dropout. The results indicate that those who dropped out experienced a drop in their credit score within the first year and an increase in their second and third year, suggesting possible short-term financial hardship from which some recovery was later experienced. This finding is consistent with previous literature that suggests that participants struggle with the lack of flexibility with savings requirements (Rothwell et al., 2013). Providing for a “time-out” of the savings requirement due to unexpected events may allow participants to weather a challenging financial situation, resume savings later, and prevent drop-out. Drop-outs may benefit from an increase in case management and/or credit score building products/services, such as a credit builder loan or secured credit card, to complete the program.

### ***Policy and Research Implications***

These results give support to the hypothesis that IDA programming has positive long-term association on credit scores and history. The results also support the idea that asset development policy should continue to promote financial education, efforts to facilitate and encourage participants to engage in strategies to improve their credit score, and assist in the acquisition of appropriate loan products so the credit score improvements can be sustained (Grinstein-Weiss, Chowa, & Casalotti, 2010; Hastings, Madrian, & Skimmyhorn, 2012; Zhan, Anderson, & Scott, 2006). Additionally, asset building policy could expand support for post-purchase maintenance efforts. Research with nationally representative samples is needed, especially during the first year. Further research with a larger sample size is also needed to learn more about the drop-outs and those in the program for a long time to determine whether program elements could be altered to promote credit score building and program completion, and prevent drop-outs.

### ***Study Limitations***

There are noteworthy limitations to the study and the ability to generalize to the national IDA population. These results emerge from a quasi-experimental design, and are therefore merely suggestive of the credit history and scores of IDA participants and non-participants. Because only descriptive statistics were calculated, independent variables, such as education, race, and ethnicity, could account for at least some of the differences

noted in Wave 4 credit scores. Due to the small sample size, effect sizes may appear smaller than in a larger sample. The sample does not represent the national IDA population or a random draw of all low-income households, and therefore could suffer from selection bias. There may be observable and unobservable underlying factors influencing credit scores and other outcomes given the lack of a random sample. Credit score information is cross-sectional and may not be an accurate description of the lifetime credit scores of IDA participants. Several threats to internal validity, including subject selection and maturation, experimental mortality and persistence, were present in this study. The small sample size of the participant sub-groups may result in non-significant findings between the groups. While asset and debt levels remained lower for vulnerable families between 2005/06 and 2008/09 in the United States (Hendy, McKernan, & Woo, 2012, March), we do not know the residual effects of the Great Recession on subjects in this study, such as a tighter credit market and higher unemployment (Chan, 2010, April 17). Lastly, caution must be used when interpreting the results due to the complexity of credit scoring and the myriad of ways that credit scores can be improved without actually improving financial status.

### **CONCLUSION**

Positive credit history and a strong credit score are increasingly viewed as stand-alone financial assets that reap benefits beyond the central role played in building tangible assets. This study provides insights for financial therapists and other helping professionals who assist clients in improving credit, a critical aspect of financial status. Specifically, the results indicate that program participation positively impacts credit score, with the first two years as the most critical. Financial therapists, other program staff, and policymakers may wish to pilot program innovations with credit score building as a focus of their work to promote sustained program participation. Further research about the important aspects of the credit score building process and their effects participants will assist policymakers in fine-tuning efforts to provide long-term benefits regarding participant credit score.

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## Financial Credit Outcomes of IDA Participation: Longitudinal Findings

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