

# Head Start and TANF: *Moving forward*

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Building Human Services Research Partnerships: Puerto Rico  
*Head Start and TANF: Moving forward*

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## PROLOGUE



The main purpose of the *Building Human Services Research Partnerships in Puerto Rico* project is to promote effective research and the development of a culture and practice of evidence-based policy making on low-income families and children in Puerto Rico. Under the leadership and support of Inter-Metro, the Project has brought together key stakeholders to develop partnerships in order to advance research and eventually lead to effective policies and programs, particularly Head Start and Public Assistance. The Project's website can be accessed at [www.metro.inter.edu/hsrppr](http://www.metro.inter.edu/hsrppr).

The Project is carried out through a collaborative network, led by a Work Group that promotes awareness of the need for research, spearheads the development of research questions, and guides the studies undertaken by various researchers financially supported by the Project. Key members of the Faculty and Staff at IAUPR-MC, work in partnership with academics from other universities, the Administrators of the Administration for Socioeconomic Development of the Family (ADSEF) and of the Administration for Integral Care and Early Childhood Development (ACUDEN), and top executives from various NGOs and think tanks to formulate questions and guide research.

While there is an ample body of research, very little of it has been performed locally or recently, or specifically about Head Start and Temporary Assistance to Needy Families. There is insufficient information that can validate the policies regulating these two

programs among Puerto Rican children and families, particularly since the onset of the economic crisis of the last ten years.

Why are there so few families participating in the TANF program? Why are there so many eligible children not benefiting from Head Start or Early Head Start? What are the reasons women stay in TANF for such a short time? The lack of answers to these and other questions because of insufficient research leads to the development of stereotypes that contribute to the ongoing oppression and marginalization of the disadvantaged.

Completed Studies are reported in four volumes including this one, as follows:

1. *Puerto Rican children and families: Our starting point*
2. *TANF in Puerto Rico*
3. *Head Start and TANF: Moving forward*
4. *Poverty in Puerto Rico*

The researchers whose work is included in these four volumes are making substantial contributions to the level of knowledge about the poor, their needs and characteristics, the challenges they face, the range of services received, the gaps in service, and the identification of best practices and opportunities for collaboration in the services provided by these programs.

The expectations that we had as members of the work group were surpassed as we analyzed the outcomes of the research, the willingness and openness of government officials to share data and information and to incorporate recommendations offered by the group members, and the interest demonstrated by program providers to identify best practices.

In summary, this project has created new opportunities for young professionals and emerging leaders to participate in research activities and to use the results of these activities in the decision making process.

# STATUS REPORT ON THE USE OF ASSESSMENT TOOLS IN HEAD START PROGRAMS IN PUERTO RICO

*María de los Ángeles Ortiz-Reyes*



## Summary

The *Status report on the use of assessment tools in Head Start programs in Puerto Rico* is the first exploratory look at the assessment measures, processes and tools used by Head Start programs in Puerto Rico in order to gather data regarding student performance and professional development to improve quality of services. It is a part of the Building Human Services Research Partnerships in Puerto Rico (BHSRPPR) program, which promotes effective research and the development of a culture and practice of evidence-based policy making on low-income families and children in Puerto Rico. The research design was based on a mixed methodology approach that included quantitative and qualitative measures through the administration of questionnaires and focus groups with the three main subgroups within the population: program directors, managers/supervisors and teachers. A thorough literature review helped delineate research questions and specific areas of interest within assessment requirements of the Head Start program (focus on assessment processes,

methodology, instruments, technological tools, professional development, technical support, data gathering, academic and programmatic use of student and family data). Questionnaires were implemented as a descriptive approach to compare and explain participant knowledge, attitudes and behaviors (Fink, 2003). Content was validated by a panel of experts according to the research questions. Questionnaires were administered to 196 participants (20 program directors, 126 supervisors and 50 teachers) in a standardized manner at the premises of the Inter American University. Representation from 61 of the 78 municipalities in Puerto Rico was obtained (78%). Data analysis was conducted. Gaps within the findings served as base for focus group guiding questions. Focus groups were conducted with (3) program directors and (11) managers, in order to expand on specific topics and research findings (focus on academic and professional background related to assessment, training, coaching, technical assistance and continuing education, training and use of online assessment tools, use of paper-based formats and electronic tools, synchronicity of the data on different tools, data gathering and use, performance and quality improvement). Sessions were recorded with participant consent, transcribed and translated (*ad verbatim* translation from Spanish). Category and frequency data analysis was conducted. Among the most relevant findings:

- a) Lack of academic programs that fully prepare administrators and teacher on assessment.
- b) Lack of trainers and professional development on assessment aligned to Head Start guidelines.



- c) 40% of assessment training is provided by a private company or local consultant; usually related to specific product or tool.
- d) 57% of classroom coaching is on the literacy domain, 46% on math, 32% on socio-emotional development, 30% on speech development, 24% on social studies, 22% on learning methods, 19% on science, 16% on physical development, 11% on creative arts and 5% on English.
- e) Participants indicated using mostly the Creative Curriculum tools (76%), Child development process assessment (70%) and Child Observation Record (41%) to assess child performance.
- f) 36% of programs indicated using internally created assessment documents.
- g) 62% of participants indicated using both paper based and electronic systems to gather performance data.
- h) Synchronizing data accurately between different program and assessment tools is not possible. This includes demographic and family data that needs to be shared within the program.
- i) 65% indicated using the Gold Teaching Strategies electronic assessment tool, 27% used PROMIS, 8% used Child Plus.
- j) 46% of teachers indicated that performance data was used for professional development purposes.
- k) 73% of teachers reported assessing transition activities for students that exit Head Start; 19% reported assessing child progress for this group.

Findings align with the Continuous Quality Improvement Conceptual Framework (Derrick-Mills et al. 2014) and suggest that assessment processes should be more standardized and understood without immediately changing what has worked according to the realities and needs of the population served by each grantee. Specialized training and technical assistance aligned with Head Start policies is needed in order for managers and supervisors to provide high quality coaching and mentoring. A more formative approach of evaluation and assessment processes should be implemented to benefit teachers.

Amidst the economic crisis in Puerto Rico, major challenges in Head Start are: enrollment, working with families, special education needs, budget, acquiring and maintaining technology, assessment and compliance. Head Start programs in Puerto Rico are looking for ways to transform themselves to better serve their population and achieve their goals. Findings could serve as a baseline from which progress in assessment utilization among programs is quantified, and to prompt a dialogue about best practices that contribute to the implementation of effective, coordinated and high-quality assessment strategies and measures in order to improve services.

## Key words

Head Start program, early childhood, *assessment*, *assessment* measures, *assessment* processes, *assessment* tools, professional development, technical assistance, student performance

## Background of the Study

*The Status report on the use of assessment tools in Head Start programs in Puerto Rico* is a study conducted as part of the program Building Human Services Research Partnership in Puerto Rico (BHSRPPR) established under the auspices of the U.S. Department of Health and Human Services Administration of Children and Families, Office of Planning, Research and Evaluation (OPRE) and the leadership of the Inter American University of Puerto Rico, Metropolitan Campus (IAUPR-MC).

The main purpose of Human Services Research Partnership in Puerto Rico (BHSRPPR) is to promote effective research and the development of a culture and practice of evidence-based policy making on low-income families and children in Puerto Rico. The project brings together key stakeholders from academia, government agencies, nonprofit organizations and providers, philanthropic institutions and the private sector to develop a multi-stakeholder partnership to advance research, focusing on low-income families and children. The project will result in a needs assessment and identification of successful approaches and best practices to improve self-sufficiency among poor families and children in Puerto Rico.<sup>1</sup>

This particular study is the first exploratory look at the *assessment* measures, processes and tools used by Head Start programs in Puerto Rico in order to gather data regarding student performance and professional

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<sup>1</sup> BHSRPPR Project Description <http://www.metro.inter.edu/hsrppr/index.asp>

development to improve quality of services. Findings could serve as a baseline from which progress in assessment utilization among Head Start programs is measured. Results also aim to prompt a dialogue about best practices that contribute to the implementation of effective quality assessment strategies and measures in the Head Start program to improve services.

## Introduction

The Head Start program in Puerto Rico has been providing services to low income children and their families for over 50 years. New federal requirements emphasize the role of assessment in the provision of high quality services. The *Status report on the use of assessment tools in Head Start programs in Puerto Rico* is the first exploratory look at the *assessment* measures, processes and tools used by Head Start and Early Head Start programs in Puerto Rico in order to gather data regarding children performance and teacher professional development to improve the quality of services provided to these families.

The Temporary Assistance for Needy Families program (TANF) and the Head Start program (HS) are the public assistance programs in Puerto Rico that directly impact the development of young Puerto Rican children from low-income families (Barrueco & Davis, 2014). TANF, created in 1996, was “designed to help families in need gain self-sufficiency” (Faulkner, 2014). The program provides support services to develop the necessary skills that strengthen participant capacity to compete, obtain and maintain a job. Support services include counseling, professional development, child care, job experiences and temporary financial assistance to help pay for food, shelter, utilities and other nonmedical expenses for families with one or more dependent children. Children from families in TANF are categorically eligible for the Head Start and Early Head Start services regardless of income.

The Head Start program was created in 1965 as part of the United States (U.S.) government War Against Poverty Program. Its principal objective was to help breaking the cycle of poverty by providing integral services to preschool age children from low income families. Since then, Head Start has been working towards

meeting the emotional, social, health, nutritional and psychological needs of disadvantaged populations, based on empirical information about the effect and impact of poverty on education. All these services are responsive to the needs of the communities which it serves (DHHS, 2015).

In the U.S., Head Start is administered by the Administration of Children and Family (ACF) at the Department of Health and Human Services. It serves more than a million children and their families annually within rural and urban zones in all 50 states, the District of Columbia, and U.S. territories (including Puerto Rico), indigenous communities, immigrant families and seasonal workers.

## **The Head Start program in Puerto Rico**

The Head Start program was implemented in Puerto Rico 50 years ago, at the same time it was implemented in the U.S., and now offers four program options (Center-based, Home-based, Combination and Family Child Care). Comprehensive services include Emergency or Crisis Intervention, Housing Assistance, Mental Health Services, English as a Second Language (ESL) Training, Adult Education, Job Training, Substance Abuse Prevention, Substance Abuse Treatment, Child Abuse and Neglect Services, Domestic Violence Services, Child Support Assistance, Health Education, Assistance to Families of Incarcerated Individuals, Parenting Education, and Relationship or Marriage Education. Out of those services, Health Education, Parenting Education, Housing Assistance, Job Training and Mental Health Services are the most provided to families.

Puerto Rico currently has forty five (45) grantees from the Head Start and Early Head Start programs, as reported by the DHHS Program Search Results. They are administered by a diverse array of municipalities, municipal consortia and nonprofit organizations.

Out of the forty five grantees the Administración para el Cuidado y Desarrollo Integral de la Niñez (ACUDEN), organized under the Puerto Rico Family Department is the biggest, serving 18,014 children and their families through twenty one (21) delegate agencies in 64 out of 78 municipalities in the Island, including Vieques and Culebra (ABC, 2014).

The Head Start program facts for the Fiscal Year 2015 reports that Puerto Rico had a funded enrollment of 36,776 children totaling \$286,890,161 in federal funding. A study conducted by ACUDEN in 2014 found that those 36,776 children receiving services through Head Start and Early Head Start represent only 27% of the total of 135,000 eligible children in Puerto Rico. Of those 36,000 children served, 27% reported having a limitation or special need. This percent doubles the 13% of children with special needs registered in the U.S. Findings highlight possible gaps in diagnosis, progress assessment and monitoring in Head Start (Burgos, 2014). The study also found that even when Puerto Rico is facing a reduction in its population that reflects in a 3% annual decrease in the segment of children under 5 years, the amount of eligible children for Head Start and Early Head Start has only decreased by 1%. In addition, there has been a 6% increase in children 5 years or younger that fall under poverty lines (from 56% in 2005-2009 to 62% between 2009 and 2013). Pervasive poverty levels in Puerto Rico suggest a need for more assistance (Faulkner, 2015). Comprehensive, reliable and sustained assessment could better inform daily operations and program planning in order to maximize funds and increase children and families served.

There has been previous interest to study assessment in Head Start programs in Puerto Rico, (Bestard, 1990; Rosado, 2000), but few formal studies originated in Puerto Rico that address outcome-oriented assessment. The literature review on this topic

revealed research conducted on Puerto Rican family characteristics related to intervention strategies (Bird & Canino, 1982), the impact of Head Start on Latino and Puerto Rican children subgroups in the U.S., (Currie & Thomas, 1999; Zambrana & Cappello, 2003), parent practices and involvement challenges (Fagan, 1998; Figueroa-Moseley et al, 2006; O'Carroll, K., 2012). Recently, some studies have focused on general Head Start program performance, assessment and data use in the U.S. (Derrick-Mills, 2015; U.S. DHHS 2003; U.S. DDHHS, 2015; Zill et al, 2001), but few research points towards specific assessment processes and tools used by the Head Start programs in Puerto Rico (Hollestelle & Koch, 2003; Ramos, 2006; Stile et al, 1984). On the contrary, some studies indicate a lack of information and well-defined assessment outcomes for some of the services provided by Head Start (García & Levin, 2001). Furthermore, Barrueco (2014) indicates as key implications:

*“...accurate assessments are a critical component of diagnostic, programmatic, and research formulations, with considerable consequences for children, families, and the programs serving them. Yet, the majority of assessment research with young Puerto Rican children is outdated and in need of significant attention.”* (p. 22)

*“More investigations examining the effect of early childhood programmatic efforts are needed. Such research should not only focus on the program itself, but should yield an understanding of the staff and program characteristics, practices, and professional development approaches found to improve outcomes.”* (p. 23)

The purpose of this study is to gather representative baseline information about the diverse strategies and tools used by the Head Start and Early Head Start programs in Puerto Rico in order to analyze the status of assessment practices and use of data.



Also, present a current view of staff and program characteristics, practices and professional development, as suggested in the literature. Findings could initiate a reflective dialogue on best practices on a national level that collectively enhances the quality of professional development and coaching offered to teachers and comprehensive services provided to children and their families. Improvements in the reach and quality of services could directly impact self-sufficiency and the empowerment of these families.

## Methodology

### *Research design*

The study used a mixed methodology that included quantitative and qualitative measures through the administration of questionnaires (containing closed and open ended questions) and focus groups with the three main subgroups within the population (program directors, managers/supervisors and teachers). A thorough literature review helped delineate research questions and specific areas of interest within assessment requirements of Head Start. Questionnaires were implemented as a descriptive approach to compare and explain participant knowledge, attitudes and behaviors (Fink, 2003). Questionnaires were designed and validated by a panel of experts according to the research questions. An official letter was sent to all Head Start program directors inviting the personnel to participate in the study. Consent forms were explained and signed by participants. Questionnaires were administered to subgroups within the population following a standardized protocol at the premises of the Inter American University, Metropolitan Campus on two instances. Data analysis was conducted. Gaps within the findings served as base for the focus group protocol. Focus groups were conducted at the Inter American University,

mainly with program directors and managers/supervisors, in order to expand on specific topics and research findings. Sessions were recorded with participant consent, transcribed and translated (*ad verbatim* translation from Spanish). Category and frequency data analysis was conducted.

### *Population*

In order to gather the sample for the study, an invitation letter was sent to all Head Start grantees directors in Puerto Rico with the approval of Alejandra Álvarez, Esq. from the Head Start Office in Puerto Rico. The letter explained the main purpose of the study and invited the directors to participate in a meeting, along with nine (9) staff members of their respective grantees or delegate agencies. Specific staff members invited to participate in the questionnaire administration were directors, two (2) managers (or managing directors), three (3) teachers and four (4) area supervisors, one from each of the following areas: Family & Community Alliance, Health & Nutrition, Education and Special Education. The first questionnaire administration took place at the Metropolitan Campus of the Inter American University with the participation of sixteen (16) directors, one hundred seventeen (117) managers/supervisors and thirty seven (37) teachers. Approximately a month later, a second invitation was sent to directors not represented at the first meeting. One (1) director, nine (9) managers/supervisors and thirteen (13) teachers complimented the questionnaires this time. After both questionnaire administrations, the sample of the study was finally composed by seventeen (17) directors; one hundred twenty six (126) managers/supervisors and fifty (50) teachers for a total of one hundred ninety three (193) participants.

In order to expand on some of the data obtained through the questionnaires and to investigate more in depth about some recurring themes, a focus group was convened. The focus group was

also conducted at the Inter American University Metropolitan Campus with the participation of four (4) directors and eleven (11) managers/supervisors. Six (6) of the participants attended the questionnaire administration meeting. The activities of the study included a total of two hundred two (202) participants.

### *Research questions*

The administered questionnaires had the basic structure for all three populations of interest with a few adjustments according to the role of the participant. Categories were (I) General information about the Head Start grantee (licensee), (II) General information about the participant, (III) Information about the Head Start grantee personnel, (IV) Child screening and evaluation instruments, and (V) Head Start service evaluation. Specific questions per category are listed below.

- I. General information about the Head Start Grantee
  1. Name of the Head Start grantee
  2. Delegate agencies
  3. Municipalities served by the delegate agencies
  4. Municipalities served by the grantee
  5. Students served by the grantee. Number of students in your classroom (teachers)
- II. General information about the participant
  1. Gender
  2. Period of time working in the Head Start program
  3. Period of time working in the specific grantee agency/center.
  4. Highest academic level obtained
  5. Educational background/area
  6. Early childhood education certifications

7. Other certifications or licenses
8. Nature of the certification or licenses
9. Membership to professional associations related to early childhood education
10. Name of the professional associations

### III. Information about the Head Start grantee personnel

1. Number of personnel at the grantee or delegate agency
2. Number of teachers
3. Number of teacher assistants
4. Frequency of personnel participation in trainings and technical assistance activities
5. Who offers the trainings and technical assistance? (National Head Start Association, Center for Technical Assistance and Training for Head Start, local and national conferences, local consultants, Head Start program, private companies and organizations, community resources, other)
6. Do teachers have mentors and/or coaches that work with them in the classroom?
7. Frequency of mentoring and/or coaching in the classrooms.
8. Three major domains worked in mentoring and/or coaching sessions.

### IV. Child screening and evaluation instruments

1. Does the grantee or delegate agency conduct a screening process?
2. Which tools are used to conduct the screening process? [Chicago, Ages and Stages Questionnaire (ASQ), Denver II, Portage Guide, Illinois Developmental Test, other]
3. Does the grantee or delegate agency conduct student performance progress evaluations?

4. Which tools are used to conduct the student performance progress evaluations?
5. Which strategies are used to gather student performance progress evaluation data?
6. Is your data base system electronic (automated), manual, or both?
7. Indicate the electronic data base system used.
8. Does your grantee or delegate agency use the Program Information Report (PIR)?
9. Do you or someone else at the agency report evaluation reports to teachers, at the administrative level, to children, parents, Parent Council, federal funding agency or local government agency?
10. Have you used student evaluation results in any other way?
11. Indicate for what purposes has evaluation results analysis been used (materials and equipment purchase, teacher professional development, government reports, modify teaching-learning strategies in the classroom, modify program infrastructure, strategic and operational planning, other)
12. Has your agency made changes to teaching practices as a result of the student progress evaluation process?
13. Mention the changes made.
14. Based on student progress analysis, in which areas has the agency focused? (knowledge and skills in social studies, science, reading-learning, mathematics, English, physical development and health, language development, socio-emotional development, creative arts expression, logic and reasoning, learning methods)

#### V. Head Start service evaluation

1. Which instruments are used by the grantee or delegate agency to measure quality of services? [Classroom Assessment Scoring System (CLASS), Early Childhood

Environment Rating Scale (ECERS), instruments created by the agency, Infant, Toddler Environment Rating Scale, PASITOS, other]

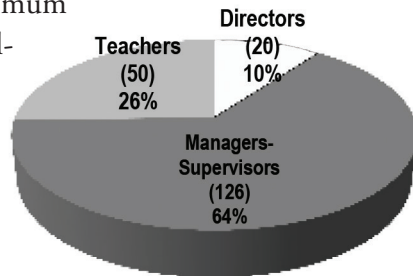
2. What instruments does your agency use to evaluate interactions? (CLASS, instruments created by the agency, other)
3. According to evaluation results, which has been the most important changes made at the agency?
4. If you could change something that would significantly improve services at the agency, what would that be?
5. Which two things do you consider your agency does really well for children and their families?
6. What are the major challenges faced by your agency?
7. How does the agency guarantee follow-up to students that exit the program?
8. Which data is collected from students that exit the program? (transition activities, progress, challenges, no data is collected)
9. Up until which grade your agency gathers this data? (Kindergarten, First Grade, Second Grade, no follow-up is provided)

The Focus Group protocol expanded on most significant findings from the questionnaire results analysis. Questions centered around issues related to (I) Data gathering and use to inform decisions, (II) Assessment tools used (electronic and paper based), (III) Trainings and technical assistance on assessment, (IV) Barriers and limitations, and (V) Opportunities for improvement.

## Findings

### *Research questionnaire*

Questionnaires were administered to a total of 196 participants: 20 program directors (10%), 126 managers/supervisors (64%) and 50 teachers (26%). 61 out of 78 municipalities are represented in the sample (78.2%). The most represented municipalities within the sample were San Juan, Caguas, Las Piedras, Trujillo Alto, Adjuntas, Utuado, Arecibo, Jayuya, Ciales, Hatillo, Aguas Buenas, and Juncos. The south region of Puerto Rico was the least represented. Map 1 shows the overall geographical distribution of the sample in the study. Services were provided by delegate agencies in 32 municipalities (41%). The number of students served by the grantees ranged from a maximum of 16,200 children to 40 children. Amount of personnel per grantee ranged from 800 to 20 (this indicates a balance in the sample). Amount of students per classroom varied from a maximum of 20 to a minimum on 8. Specific sample characteristics are presented.



**FIGURE 1.**

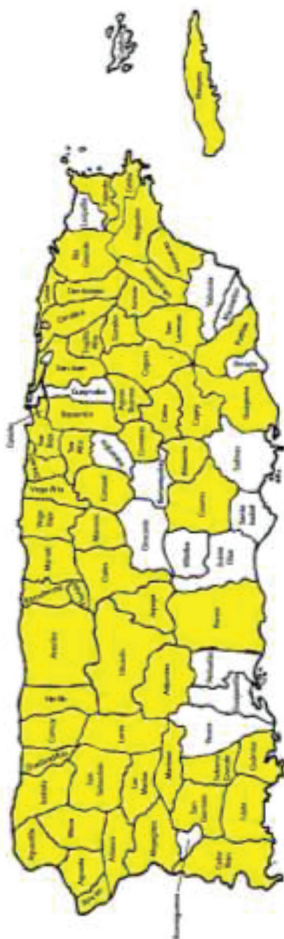
Study sample populations (N=196).

### *Program directors*

Out of 20 program directors, 94% are female and 6% are male. 81% has worked in Head Start for more than 5 years. 50% has been a program director for more than 5 years. 50% has a Master degree, 44% has a BA degree and 6% of directors have a PhD. Academic background included Administration (40%), Psychology and Sociology (25%), Education (25%), Pre School Education (5%), Nutrition and Counseling (5%).

## MAP 1.

Distribution of participants from the sample (N=61).



## MAP 2.

Overall distribution of programs managed by directors in the sample (N=20).





38% of directors have an early childhood related certificate or continuing education in the area. 63% are members of a professional association related to education in early childhood. Map 2 shows the overall distribution of the programs managed by director in the sample. From the sample of 20 directors, 26 municipalities (33.33% of Puerto Rico's map) are served by delegate agencies (ACUDEN) and 32 municipalities (40.03% of Puerto Rico's map) by other grantees (not delegate agencies). Some of the municipalities (9) were represented by both grantees and delegate agencies. There's a total of 49 municipalities (62.82% of Puerto Rico's map) represented in the sample of directors who answered the questionnaires.

### *Program managers and supervisors*

Out of 126 managers and supervisors, 96% are female and 4% are male. 82.9% has worked in Head Start for more than 5 years. 64% has been a manager-supervisor for more than 5 years. 62% has a BA, 35% has a Master degree, 2% has a PhD and 1% has an Associate Degree. Academic background includes: Administration (8%), Psychology and Sociology (4%), Education (56%), Pre School Education (17%), Special Education (14%), Nutrition (8%), Counseling (2%), Health (12%), Nursing (8%), Family (3%), Humanities (3%), Accounting (0.7%). Some managers have two areas of preparation. 33% has an early childhood related certificate of continuing education. 11.5% indicated having a CDA Certification. 21% are members of a professional association related to education in early childhood. Map 3 shows the overall distribution of managers/supervisors from the sample. From the sample, 40 municipalities (51.28% de Puerto Rico) are served by delegate agencies (ACUDEN) and 39 municipalities (50% of Puerto Rico's map) by other grantees (not delegate agencies). 24 municipalities were

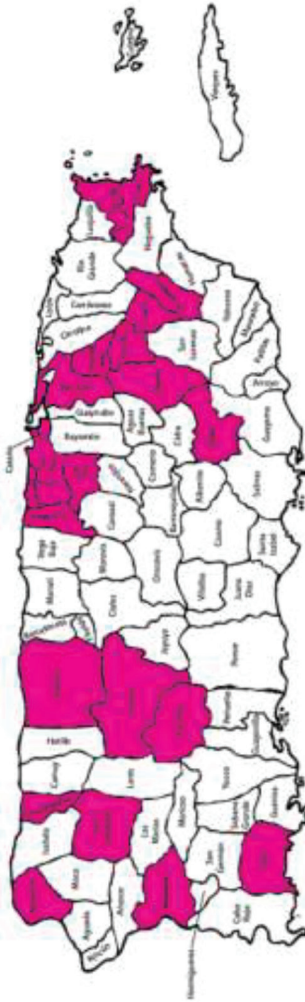
MAP 3.

Overall distribution of managers/supervisors in the sample (N=126).



MAP 4.

Overall distribution of teachers in the sample (N=50).



represented by both grantees and delegate agencies, for a total of 55 municipalities (70.51%) represented in the sample of managers/supervisors.

### *Teachers*

Out of the 50 teachers in the sample, 92% are female and 8% are men. 76% has worked in Head Start for more than 5 years and 38% has also been a teacher for more than 5 years. 78% has a BA, 19% has a Master degree and 3% has a PhD. According to Head Start data, in average, 60% of teachers have a BA, 23% has an Associated Degree and 3% has a CDA. Professional areas of preparation included Pre School and Early Childhood Education (50%), Elemental level education (36%), Special Education (6%), Administration, Leadership and Management (6%), Physical education and Social Sciences (2%). 97% of the teachers in the sample have an early childhood related certificate or continuing education. 50% indicated having a CDA Certification. 35% is a member of a professional association related to education in early childhood. Map 4 shows the overall distribution of teachers from the sample. From the sample of 50 teachers, 22 municipalities are served by the teacher's Head Start Centers. 28.21% of Puerto Rico's map is represented in the sample of teachers who answered the questionnaires.

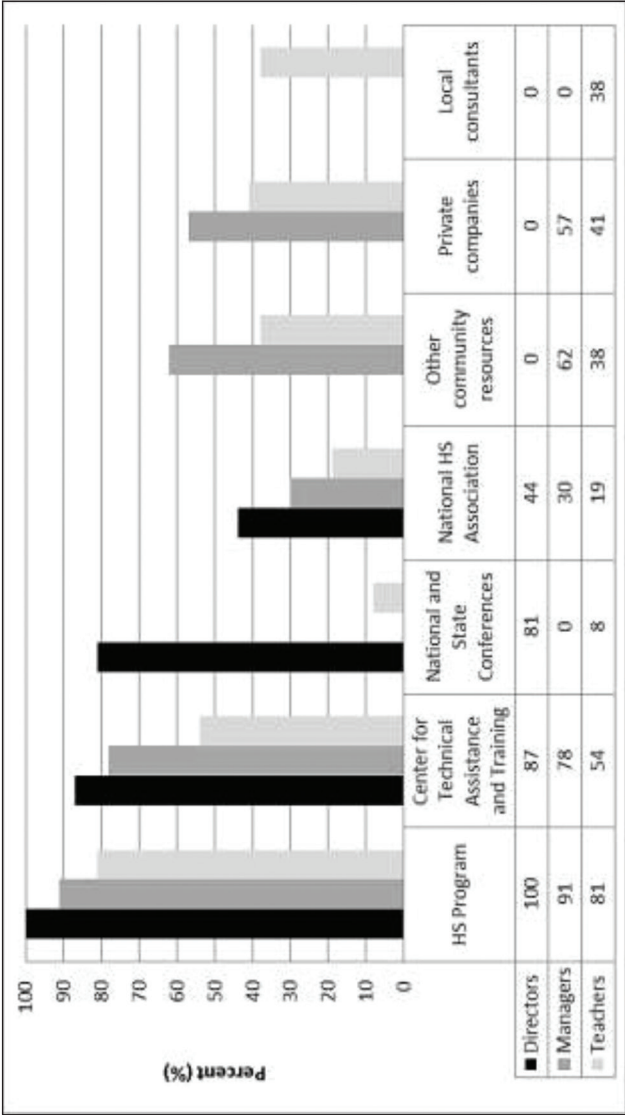
### *Staff professional development and training*

In terms of frequency of staff training, directors responded that 100% of staff received sustained professional development, but the higher ratings for "monthly professional development" were given to Food Handling Personnel (53%) and Health Services Professionals (47%). Managers reported higher ratings for "once every few months" was given to family service workers (32%), teachers (30%) and health services professionals (47%).

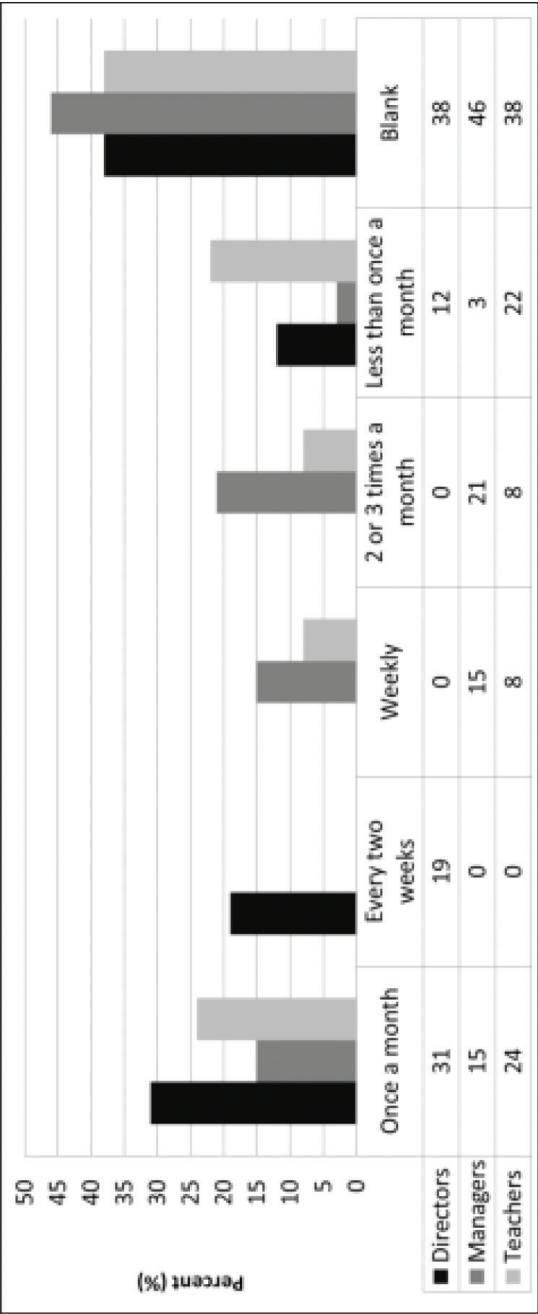
89% of teachers reported participation in professional development and technical assistance; 35% of them received it “once every few months,” 27% “monthly,” 14% “from 2 to 3 times a month” and 14% “once a year.” 10% did not answer. Respondents indicated that trainings were offered (in average) by the Head Start program (90%), by the Center for Technical Assistance and Training (73%), Private companies and organizations (49%), local consultants (38%), other community resources (50%), and the National Head Start Association (44%). 100% of program directors and 8% of teachers indicated national conference as sources of professional development. Figure 2 shows the respondent answers. 61% of managers and supervisors indicated having a coach, while 70% of teachers responded affirmative to this question. All participants indicated that because of recent budget cuts, supervisors and managers are the ones providing coaching to teachers. Managers indicated that they like to assist teachers in the classrooms, but it took more time to comply with other duties. On average, managers and supervisors received coaching from 2 to 3 times a month. Most teachers received coaching “once a month” (24%) and “less than once a month” (22%). 8% received weekly coaching. 38% of teachers did not answer this question. Figure 3, Frequency of mentors or coaches in the classroom, summarizes these findings.

Directors indicated that most common topics for coaching and mentoring are *Learning methodology* (41%) and *Socio-Emotional Development* (35%). Managers and supervisors indicated *Reading-Writing* (44%), *Math* (44%) and *Socio-Emotional Development* (37%) as the most common. Teachers agreed with managers on those three topics and also included *Language development* (30%). Figure 4, Mentoring/coaching domains, summarized these findings.

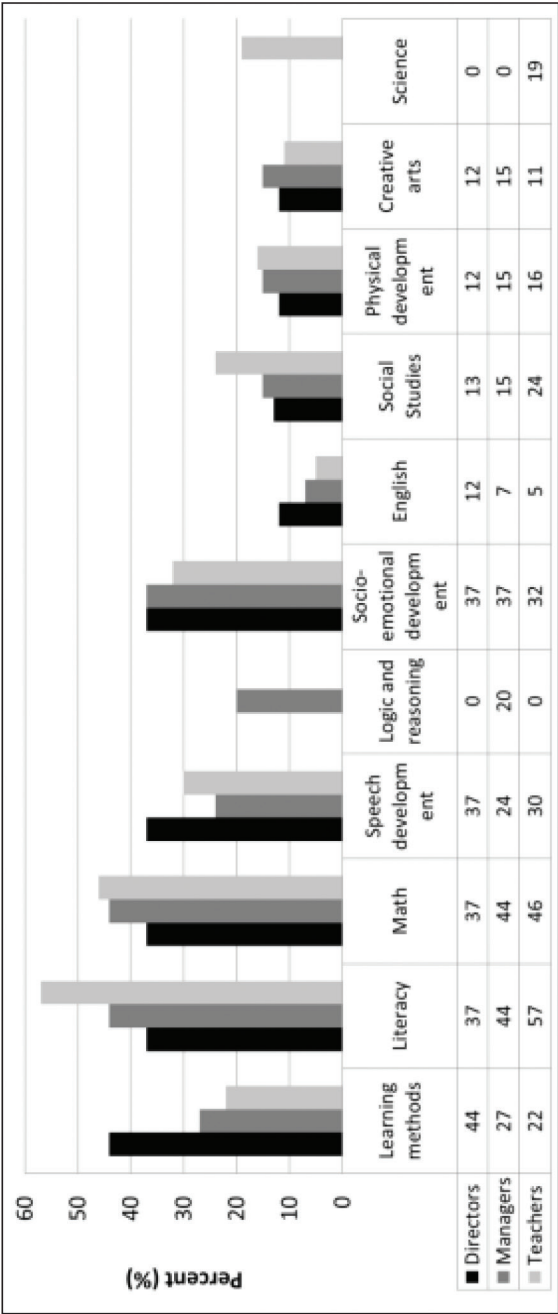
**FIGURE 2.**  
Agencies and organizations that provide professional development and technical assistance.



**FIGURE 3.**  
Frequency of mentors or coaches in the classroom.



**FIGURE 4.**  
Mentoring/coaching domains.



*Use of assessment instruments*

100% of participants indicated the use of assessment tools. “Cuestionario de edades y etapas” (Ages and Stages ASQ) was the most frequently used instrument as reported by 88% of directors, 87% of managers and 81% of teachers. 100% of participants indicated having a child performance evaluation process in their centers. Most frequently used assessment tools were the Creative Curriculum tools (75%), Child Development Process assessment (70%) and the Child Observation Record-COR (48%). Managers added EDEN, check lists, Gold, Parent observations, internally created instruments, interviews, and portfolios. Teachers added Gold and Development guide. Some of the participants included screening processes in their responses. Figure 5, Child performance assessment tools, summarizes results.

In terms of assessment strategies, all participants agree on Daily observation as the most used assessment strategy to gather performance data (97%). Family interviews were indicated as the second most used strategy (83%). Directors and managers favored anecdotic records (43%), while teachers did not select this option. Both managers and teachers favored Portfolios (81%), Interviews with children (52%), Check lists (40%), Recordings of child interactions (35%) and Taping of conversations with children (32%).

*Electronic assessment tools*

In questions regarding the use of manual and digital assessment tools to collect performance data, 69% of directors, 76% of managers/supervisors, and 41% of teachers indicated using **both manual and electronic systems** to gather information. 19% of directors, 13% of managers/supervisors, and 8% of

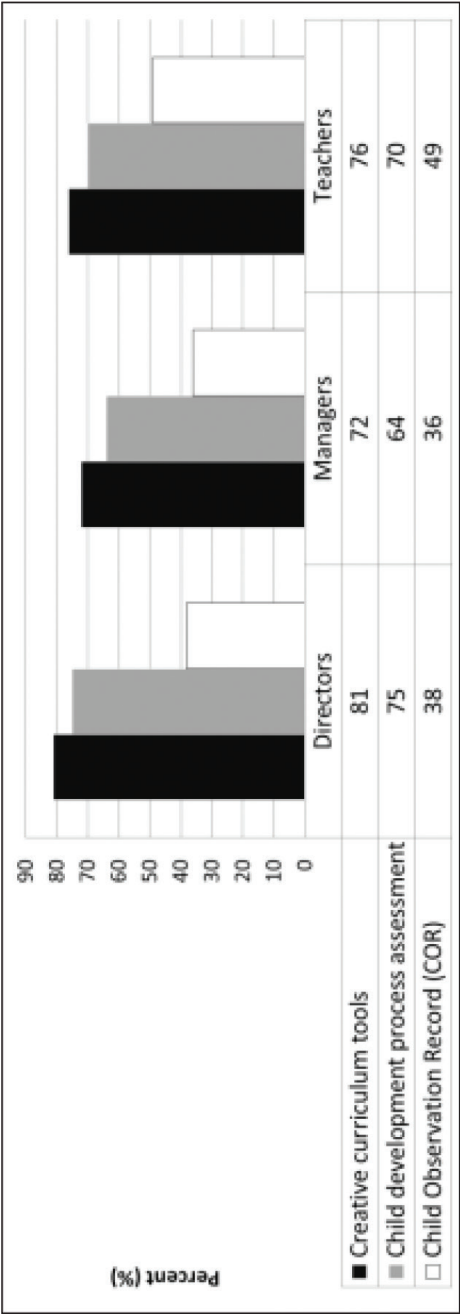


teachers indicated using **only an electronic system** to gather information, while 13% of directors, 10% of managers/supervisors and 51% of teachers indicated using **only a manual system** to gather information. The most frequently used tools were Gold Teaching Strategies (65%), PROMIS (27%), and Child Plus (8%). Other tools mentioned were Locally designed programs, Excel, Childnology, ERSTA, CCPort, Proxis.

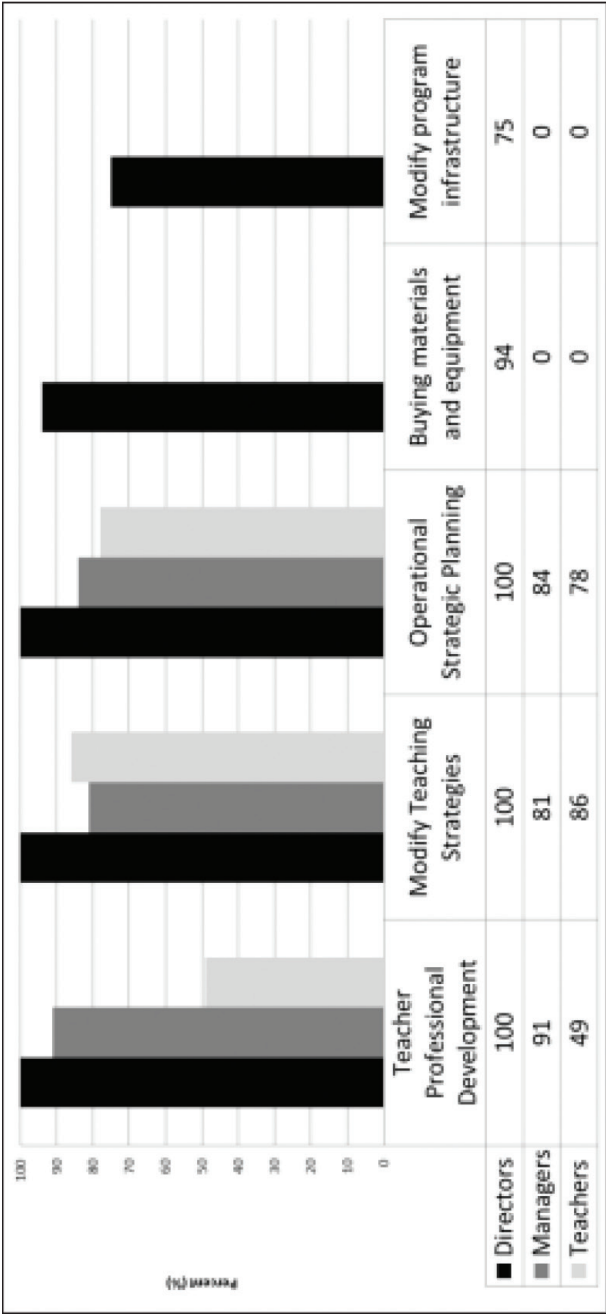
### *Use of data*

To the question “Does your grantee or delegate agency use the Program Information Report (PIR),” 100% of program directors and 95.7% of managers and supervisors responded “yes.” 4.2% of supervisors and 62% of teachers responded “no.” Respondents agreed that program information was reported to administrative personnel (97% of supervisors and 89% of teachers), to parents (96% of supervisors and 89% of teachers), to teachers (96% of supervisors and 78% of teachers) governmental agencies (95% of supervisors, 48% of teachers). 22% of teachers did not respond to this question. 100% of directors indicated using assessment data for teacher professional development and modify teaching strategies. Other uses were Buying materials and equipment (94%), Reporting to government agencies (88%) and Modify program structure (76%). 91% of managers indicated using results for Teacher Professional Development, 83% for Strategic and Operational Planning and 81% to Modify Teaching and Learning. 86% of teachers responded that they used data to Modify Teaching and Learning, 78% for Strategic and Operational Planning and 48% in Professional Development. 97% of teachers did not respond to the question “*Has your agency made changes to teaching practices as a result of the student progress evaluation process?*” Figure 6, Use of the performance data, summarizes the findings on data use.

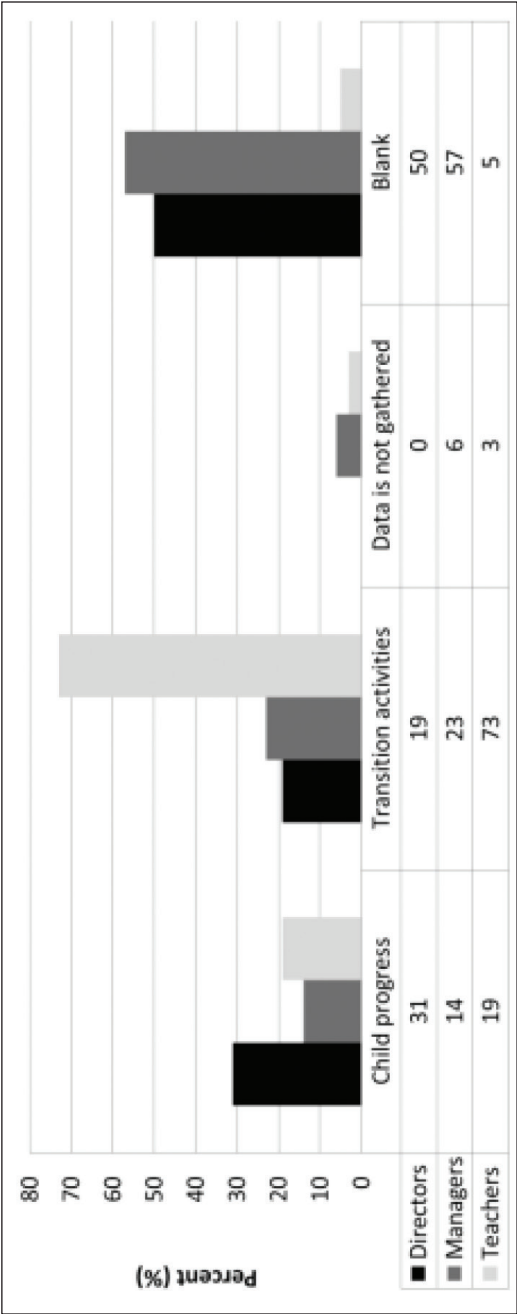
FIGURE 5.  
Child performance assessment tools.



**FIGURE 6.**  
Use of the performance data.



**FIGURE 7.**  
Figure 6 transition follow-up data.



Participants also indicated that the agencies had made changes in their academic focus as a response to assessment findings. Most of those changes were made in the areas of Math Knowledge and Skills, Socio-Emotional Development, Reading and Learning skills and Linguistic Development.

### *Program quality*

100% of directors reported using the Classroom Assessment Scoring System (CLASS) to measure program quality. 35% use instruments created by the agency, 29% use PASITOS; 23% Early Childhood Environment Rating Scale (ECERS), and 11.7% use the Infant, Toddler Environment Rating Scale. Several agencies use more than one instrument to measure this variable. Managers reported using CLASS (88%), instruments created by the agency (37%) and PASITOS (25%), while teachers reported similar instruments; 94.59% use CLASS, 32% use created instruments, 5% PASITOS and use 5% ECERS. 100% use CLASS and instruments created by the agency to assess classroom interactions.

When asked about program changes to improve quality of services, program directors mentioned working with staff-related issues like absences and assessment processes. Most managers also mentioned they would make changes to the assessment and documenting process, having more personnel, changes in professional development and improving communication. Teachers also mentioned changes to assessment and documentation, infrastructure and materials, parent participation and professional development (in that order of priority).

Data on student transition processes are collected in most of the agencies up until the third grade, and the process has improved since the Department of Education requires gathering longitudinal data on student performance. Thus, even when the agencies

might not have dedicated personnel to conduct this data collection, personnel from the Department of Education reaches out to Head Start to share student performance data. Figure 7, Transition follow-up data, summarizes these findings.

When asked about services they provide in which the agency excels, all populations mentioned services to families followed by individualized attention to the child's socio-emotional development. Frequency analysis pointed that all responses included the word "service," implying clear knowledge of the program's mission.

Finally, when asked about the biggest challenges for the Head Start program, all participants mentioned Working with families, Enrollment, Children and teacher absenteeism, Assessment, Budget cuts, Academic progress, Training, Communication and Coordination, and Special Needs Education.

### *Focus groups*

The focus group conducted served to expand on some of the results from the questionnaires. Questions focused on (a) Academic and professional background related to assessment, (b) Training, coaching, technical assistance and continuing education offered on assessment, (c) Training and use of online assessment tools in the program, (d) Use of paper-based formats and electronic tools, (e) Synchronicity of the data on different tools used, (f) Data gathering (personnel, process), use of data, and (g) Overall performance and quality improvement. Table 1 presents the most important results of the analysis.

TABLE 1. Focus Group results per area.	
Professional background and academic formation	<ul style="list-style-type: none"><li>• There are no academic programs that fully prepare teachers and administrators for the challenges faced in Head Start.</li><li>• Some universities offer Early Childhood education programs, but they do not cover 0 to 5 child care and infancy training.</li><li>• Plans for the expansion of Early Head Start require trained teachers in 0-5 child care and infancy. —“You have to be able to change diapers and treat your classroom like a home.”</li><li>• Commitment, program experience and interdisciplinary academic backgrounds make up for lack of specific training in these areas.</li><li>• Teachers face barriers to obtain their Child Development Associate (CDA) credentials. Some programs allocate funds for this purpose.</li></ul>
Training, coaching, technical assistance and continuing education offered on assessment	<ul style="list-style-type: none"><li>• Even when the Head Start offers trainings whenever there is a change in requirements (mostly through ST(GI), program directors rely mostly on training from peers at their programs.</li><li>• It is challenging to translate Head Start materials (written in English) in order to design trainings.</li><li>• Some programs train a few of their personnel in and outside of PR, so they can train others. This strategy has proven cost-effective.</li></ul>
Training and use of online assessment tools in the program (continued on the next page)	<ul style="list-style-type: none"><li>• There is a severe lack of trainers with knowledge of Head Start specific assessment requirements per service area.</li><li>• OCALARH provides very general training that is not aligned with Head Start requirements: —“I would give OCALARH a zero on trainings related to assessment and education. The education component is extremely complex.” —“OCALARH should receive a training on Head Start service areas and our needs. What works in the PRDE doesn't work for us.”</li></ul>

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Training and use of online assessment tools in the program (continued from the previous page)

- Often times programs receive free trainings from OSHA, FEMA and UPR Medical Science Campus, but is not enough to face program strict monitoring.
- Assessment training and technical support is provided by the vendor of the assessment tools used or by very few specialized external consultants.
- Dialogue forums and “Reuniones de Esfuerzo” were mentioned as effective strategies to discuss best practices and create documents for data gathering.

Use of paper-based formats and electronic tools

- Programs use different paper-based formats to gather demographic, child performance, participation and family interaction data, measure satisfaction and quality of service.
- Paper-based assessment formats are designed following guidelines from the online tools.
- Data is then uploaded into systems like Child Plus, Snap Shot, PROMIS or Gold online.
- Synchronizing and updating data between systems is not completely effective.
- Selection of online assessment tools depends on alignment with curriculum and consultant recommendations.
- All participants indicated using both paper-based and electronic tools to gather data.
- All personnel have to enter (and/or scan) their data into the different assessment systems. This creates reliability issues and takes time from daily duties.
- Few programs have funds to dedicate personnel to data entry.
- Some programs have been able to acquire Reporting software, but require more training to take full advantage of its capabilities.
- Almost all participants reported the extreme difficulty of having information online in real time.  
–“Expectations are that all be online and it is not real.”
- Advancements made by using online tools include remotely checking attendance and compliance with EDEN test administration, and having better reporting output in order to inform decisions (graphs, charts, detailed reports by area of service).
- Reporting training should also be available.
- There are financial, logistic and personal barriers to implementing online assessment tools in all programs.

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**Data gathering (personnel, process), use of data**

- All programs use data to make programmatic changes, support teacher performance, child development, monitor child and family participation, allocating funds for trainings and technical assistance (PA 20), evidence program changes and satisfaction with services.
- Differences were found in the formats and strategies to gather and upload valid data into different systems, level of data reliability, frequency of planning processes, and teacher support in the formative use of data.
- Often times, supervisors and directors have to corroborate data before reporting due to incongruences.
- When monitors visit the programs they have to see data that has been uploaded in the system, but also paper-based portfolios and files.
- Gaps between data gathering, processing and uploading prevents administrators from having actualized information available at all times.
- Because funds are tied to child attendance, data related to changes in the population per area, per municipality is extremely important (families moving or leaving PR, changes in eligibility criteria, the decrease of births).
- Follow up is being conducted up to the third grade by coordinating with public schools.
- There are instruments and meetings between Head Start and PRDE teachers to exchange information about performance expectations.
- Some programs have a Transition Coordinator that helps with the process of gathering child information within the PRDE.
- There is a pilot project in San Juan and Mayagüez that incorporates Head Start in the infrastructure of PRDE schools.
- Changes in PRDE assessment requirements have prompted the agency to look for child data in Head Start.

**Coaching, mentoring and technical assistance**

- Managers and supervisors provide coaching and follow-up. This has been an effective change.
- Nevertheless, time has to be carefully structured in order to comply with their role, plus entering reliable program data. Some programs have special days dedicated only to data entry.
- Coaching and technical assistance is also provided by vendors or specialized consultants hired when offices like OCALARH do not have experts in these areas.
- Ongoing technical assistance in assessment and technology is needed.
- There is a lack of specialized resources in these areas.

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Program Evaluation and quality of services

- Programs can have up to three evaluations a year and they could be simultaneous; each process asking for different (and sometimes opposing) protocols.
- Often times monitors (particularly for the Safe Environment component) have experience in federal programs like OSHA or FEMA, not necessarily with Head Start.
- *–“A program could be in jeopardy for a 20 minute inspection, where you are not allowed to talk or give additional information.”*
- There are no resources in PR (including OCALARH) that help with compliance. directors prepare with Head Start protocols and guides on their own.
- Monitory findings do not reach directors on time (30–60 days) in order to make immediate changes.

Suggested changes to the Head Start program

- Strengthen teacher commitment.
- Add personnel for data entry.
- Evaluate budgets to include recurrent and sustained funds for technology equipment, software, and maintenance.
- Inclusion of all personnel in planning processes.
- Highlighting the importance of compliance in all service areas.
- Establish more partnerships with higher education institutions regarding teacher training and practice on Infancy and Early Childhood.
- Offer competitive salaries in positions of difficult recruitment like nutrition specialists.
- Raise awareness on the high quality services Head Start provides.

## Conclusions

Results of both questionnaire administration and focus groups indicate that assessment processes should be more standardized without losing the realities and needs of the population served by each grantee. Specialized training and technical assistance is needed in order for managers and supervisors to provide high quality coaching and mentoring and implementing a more formative approach of evaluation and assessment processes would greatly benefit teachers. There is a need to strengthen collaboration with professional associations to provide professional development experiences that support teacher certification. There is a lack of academic programs that fully prepare administrators and teacher on assessment and a lack of trainers and professional development on assessment aligned to Head Start guidelines. 40% of assessment training is provided by a private company or local consultant; usually related to specific product or tool.

There are some discrepancies between what directors, managers and teachers report to be using to gather child development and performance data. More than half of the teachers indicated that performance data is not used to focus training and professional development. They clearly saw this data as being used to modify teaching strategies.

In terms of data gathering tools, 62% of participants indicated using both paper based and electronic systems to gather performance data. Synchronizing data accurately between different program and assessment tools is not possible. This includes demographic and family data that needs to be shared within the program. Findings align with the Continuous Quality Improvement Conceptual Framework (Derrick-Mills et al. 2014) and suggest that assessment processes should be more standardized and understood without immediately changing what has worked according to the realities and needs of the population

served by each grantee. Specialized training and technical assistance aligned with Head Start policies is needed in order for managers and supervisors to provide high quality coaching and mentoring. A more formative approach of evaluation and assessment processes should be implemented to benefit teachers and families.

## Recommendations

- Program changes require five-year plans with long-term goals and short term objectives with particular strategies and tools to measure progress in significant ways. The different strategies, tools, systems and data use and reporting process should be closely monitored to assess effectiveness. Because program funds are now particularly linked to performance, comprehensive and accessible assessment tools should be implemented that can readily guide program actions towards outcome-oriented accountability.
- Discuss the possibility of implementing a general assessment tool throughout all Head Start and Early Head Start programs in order to have outcome that can be analyzed and shared among programs. Assessment like the Head Start Family and Child Experiences Survey (FACES) for Head Start and Baby FACES for Early Head Start are being studied in the U.S. in order to measure child development and academic readiness over their time as participants in the program. The Head Start program in Puerto Rico could also study the Family-Provider/Teacher Relationship Quality (FPTRQ) Measure recently published under Head Start Research Reports and Projects.
- Establish more partnerships with higher education institutions in order to have teachers conduct their practicum at Head Start programs.
- Take into consideration the cost of online assessment tools, equipment acquisition and maintenance when establishing budget allocations.
- Training institutions have to adjust to Head Start needs and federal requirements.

- Training is needed in program-specific content areas like infancy, early childhood, science and social studies, health, rare health conditions, special education (autism, challenging behavior), evaluation, assessment, management of electronic assessment tools, reporting, among other.
- More institutions should prepare teachers to obtain their Child Development Associate (CDA) credentials.
- Provide attention to underserved municipalities: Rincón, Aguada, Moca, Añasco, Las Marías, Hormigueros, Sabana Grande, Guánica, Yauco, Quebradillas, Camuy, Barranquitas, Comerío, Juncos and Naguabo.
- Promote a culture of growth and sustained professional development in order to have actualized staff that is able to better manage the diverse necessities of children and families.

## Implications for Public Policy

- Implementing systemic online assessment tools requires continuous funding in order to maintain and replace equipment, schedule sustained training and technical assistance.
- The “highly recommended” use of online assessment tools by the federal government implies a near future requirement to do so. Program compliance readiness should be further assessed.
- Because funds are tied to child attendance, data related to socioeconomic and demographic changes in the eligible population per area, per municipality should be gathered and shared continuously.
- It is key to analyze and transform the role of higher education institutions, so that they offer courses that better align with the needs of the population, like the possible expansion of Early Head Start in Puerto Rico.
- Literature shows that Early Head Start grantees may be less confident in their capacity to collect reliable data related to school readiness (Derrick-Mills, 2015). Emphasis should be placed in assessment training for these stages.
- Focus Groups should be expanded to more municipalities and prioritize on teachers, in order to identify specific barriers to effectively assess child progress and in the use of technological assessment tools.
- A longitudinal program monitoring process that incorporates all areas of service should be proposed, instead of the “one time” observation approach used in current federal visits.

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\* The following researchers or collaborators also contributed on this research, on the report, or on both of them: Liz Sepúlveda-Arroyo, Ed.M., and María Scharron, Ed.D.

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# FINANCIAL CAPABILITY TRAINING AND COACHING FOR HEAD START AND TANF PARTICIPANTS

*Elizabeth Miranda & William Burgos*



## Abstract

The development of financial education is essential for improving economic performance in needy families receiving assistance in Head Start and Temporary Assistance to Needy Families (TANF) programs. Consistent with ACF priorities (Financial Capability Brief, March 2015), the knowledge, skills, capacity and access to financial services are the necessary combination to build and manage financial resources effectively.

A selection was made of two groups from each, Head Start and TANF program. An experimental group from each program received financial education and financial coaching during the period from January to May 2016, while another group, control, did not receive it.

The study took place in the Caguas Region and consisted of pre- and post-tests, seven workshops and follow-up coaching visits to the home. Two groups of 20 participants were selected for each TANF and Head Start programs. The study is based on a training model from

Center for Social Development of the George Warren School of Social Work University of Washington at St. Louis (2014) and incorporates a coaching component. Materials have been translated and adapted to Puerto Rico's cultural context. Research instruments included: Socio-Economic Questionnaire of Characteristics of the Family; Self-report: Knowledge, Skills and Attitudes Towards Financial Capabilities Scale; Pre- and Post-test of Workshops about Financial Capabilities for each of the 7 workshops (adapted to the Puerto Rican culture); Interview Guide for the Coaching Sessions; and a Satisfaction Survey - Formative Evaluation.

The general hypothesis was that Financial Education training and financial coaching will increase the Head Start and TANF female-headed families' abilities to strengthen the family budget, savings and coverage of their financial needs. A *t* test of paired samples was performed to evaluate the impact of the intervention model of workshops in the Experimental group and the Control group for each of the Head Start and TANF participants.

The *t* test revealed a statistically significant difference in knowledge gained among Head Start Experimental Group participants in mean scores of the post-test. The analysis among TANF Experimental group participants equally indicates statistically significant differences in the mean scores of post-test. The findings of the Head Start and TANF Control groups, who did not participate in the intervention model workshops, were in accord with the null hypothesis that no significant differences would emerge between pre- and post-test scores. No significant differences were revealed on the post-test between the Head Start

and TANF control groups. A Oneway ANOVA was performed to determine if there were significant differences between four (4) groups and the dependent variable of knowledge gained after participation in the training workshops where significant differences were revealed by the ANOVA procedure for the experimental groups.

The present study was exploratory in nature in order to evaluate the relationship between financial learning and acquisition of knowledge for better decision making in terms of budgeting, savings and spending. Thus, by increasing knowledge and skills related to financial capabilities, this would strengthen the ability of families to plan a budget, save and manage money and effectively use the income they receive to cover the financial needs of the family. This was the case with the present study. The training workshops utilized were essential for improving knowledge gained concerning financial capabilities in needy families receiving assistance in Head Start and Temporary Assistance to Needy Families (TANF) programs.

## Introduction

The development of financial education is essential for improving economic performance in needy families receiving assistance in Head Start and Temporary Assistance to Needy Families (TANF) programs. Consistent with ACF priorities (Financial Capability Brief, March 2015), the knowledge, skills, capacity and access to financial services are the necessary combination to build and manage financial resources effectively. The results of this research will be useful for programs that work directly with parents who need this knowledge and will allow them to offer support to families in their efforts to meet their financial responsibilities so that their children become resilient, safe, healthy, and economically secure. In this project, Principal Researchers with the collaboration of Research Assistants offered a series of workshops which provided tools that helped the family plan a budget, save and manage money and effectively use the income they receive.

Financial capability is defined as “the capacity, based on knowledge, skills, and access, to manage financial resources effectively.” The family should have knowledge, skills and access to manage financial resources effectively. This is a critical step toward financial security and many people (regardless of socioeconomic background) may lack one or more factors of the financial capability. Financial security is important for both parents and children to thrive and succeed. Financial security refers to having the control of finances day-to-day and month-to-month and having the capacity to absorb a financial shock (Definition adapted from Consumer Financial Protection Bureau). Therefore, many U.S. needy families with young children are at risk of poor health and educational outcomes because they live below the poverty line. On the other hand, research suggests that asset-building efforts with financial education and social-welfare supports provide



positive benefits for child and family well-being (Collins, 2011; Curley & Robertson, 2014; Gale, Harris & Levine, 2012; Silva, Postmus, 2015).

*Research: Head Start and financial education*

An overview of research on financial education and Head Start programs shows that in the United States there are multiple educational projects and research on this topic (Collins, 2011). In the Temporary Assistance for Needy Families (TANF) program, the type of research that has been done is more relate to access to banking products in order to encourage self-sufficiency (Gill, Mills & McKenna, 2015). In Puerto Rico, we did not find specific content on financial capability at Head Start and/or TANF programs.

The Head Start Family Financial Capability: 2013–2014 Annual Report of The Asset Project established that key components of these programs are financial education (Curley & Robertson, 2013-2014). An overview of research related to financial capacity and Head Start Programs in United States suggests that families with lower incomes and lower educational levels score poorer on surveys and tests assessing financial knowledge (Anderson, Zhan, and Scott, 2004; Gale, Harris and Levine, 2012). The report of these authors highlights a mixed-methods approach used to explore the impact of a financial education intervention provided to Head Start families in the St. Louis area. For these authors, recalling financial knowledge is the first step in financial capability. In this research project the intervention combined financial education with a savings incentive and one-on-one coaching to encourage the use of new financial knowledge and skills after class completion. Results from analysis of Year-1 of quantitative data suggest that participants' understanding of core financial concepts increased. Qualitative data show that participating parents

gained valuable insights on available subsidies, making financial goals, and achieving such goals.

Research indicates that financial education interacts with other offered incentives to increase savings among participants in these types of programs (Baker & Dylla, 2007; Clancy, Grinstein-Weiss, and Schreiner, 2001). Curley (2010) finds that both hours of financial education and the presence of peer-mentoring groups have significant effects on saving. In a qualitative study, Parker (2013) examines the effects of savings clubs within IDA programs. His findings show that the clubs provide support for participants but that the personal relationships with the program coordinator keep participants accountable. Many asset-building programs offer financial education, savings clubs, credit counseling, financial coaching, and other components. This report discusses one such effort, the Head Start ASSET (Access, Savings, Support, Education, and Training) Project, and an evaluation of the first year of the project's pilot: the Head Start Family Financial Capability Pilot Project (Curley & Robertson, 2013-2014).

While interest in financial management training programs for low-income persons has grown in recent years, "the specific training needs of low-income consumers have not been well articulated," these authors described needed training content for such audiences, based on review of previous research and the authors' experiences in evaluating the Financial Links for Low-Income People (FLLIP) program (Anderson, Zahn & Scott, 2004). They also illustrate how the choice of financial management training models can seriously impact the subgroups of the low-income population who attend training, as well as the success of programs in recruiting and graduating participants. The implications of these findings have both for financial management curriculum development and the selection of program models.

Other authors observed financial inequities and poverty as undermine the well-being of a significant number of families with young children. Some indicate that despite the social welfare system's efforts to provide supplemental resources for those who are vulnerable, only a small percentage of eligible families receive the program services available to them. Gaps in basic commodities, such as housing, food, transportation, and medical care, exacerbate risk and raise questions about the effective implementation of interventions (Murphey, Cooper, & Forry, 2013).

A research project designed to build financial capability of Wisconsin families in 10 community-based Head Start programs using Money \$mart in addition to 2 financial workshops, 8 monthly newsletters, and individual financial coaching was compared to a comparison group that received no services during 2010-2011. Overall, each of the three services offered through Money \$mart in Head Start program led to improved financial security, relative to receiving no services. The author also concluded that although the link between families' financial security and children's welfare is well established, little research has explored the extent to which such as M\$HS program can improve households' financial capability (Collins, (2011).

Financial education is the key to good decision making including budgeting, money management, and savings. But, lack of financial knowledge traps many families in difficult financial situations. While many resources are available, the lack of coordinated service delivery through the educational system, workplaces, and communities makes it difficult for families to access these resources.

A related research examining the long-term impact of programs on participants' credit scores, found that participants had higher credit scores and more positive credit histories after 3 years of financial education. Participants also experienced a larger positive change in their credit score than did nonparticipants (Birkenmaier, Curley, and Kelly, 2012, Center for Social Development, Washington University in St. Louis).

*Research: TANF and financial education*

Gill, Mills and McKenna (2015), proposes interventions to assist Temporary Assistance for Needy Families developing financial capabilities. This study proposes interventions to assist Temporary Assistance for Needy Families (TANF) recipients in developing financial capabilities and long-term saving behaviors. The proposed mechanism connects TANF participants, during the intake process and by default, to a low-fee or no-fee TANF bank account. Low- and moderate-income (LMI) families, especially those receiving public assistance benefits, face significant barriers to accessing and sustaining bank accounts at conventional financial institutions. The premise of the proposed bank account is that when individuals who receive public assistance have access to mainstream financial products, they are more likely to make financial choices and develop behaviors that lead to long term savings and financial stability. In this intervention, the bank account was paired with financial education and financial coaching, skill building and saving directives. It has a critical combination of financial knowledge (financial education) and financial inclusion (a bank account). Preliminary findings indicate that providing financial capability services in combination with other programs may have a positive impact on those programs' outcomes. In New York City, adult and youth participants in two employment-related programs that received financial counseling and standard program services had higher job placement rates than participants that only received the standard services (New York City Department of Consumers Affairs, 2014).

Additionally, after one year, the adult participants that had received financial counseling had higher wages than those that had not. Inspired by the Center for Working Families model developed by the Annie E. Casey Foundation, several community

colleges across the nation have offered employment and career advancement services, access to income and work supports, and financial coaching and education to students. Data from 2010 indicates that students at Des Moines Community College that received these services had a higher retention rate: 84 percent enrolled in a subsequent term compared to a college-wide retention rate of 70 percent (Working Families Success Network, 2013).

Young children in families with limited resources are in disadvantage and fall behind in the development of conceptual knowledge. They have had limited experience with labeling, classification and generalization, because their environment has not encouraged the development of research skills. They have not acquired the information processing and problem solving skills (Karnes et al, 1977). Their parents are also likely to have poor processing of information and problem-solving skills. This puts parents at a distinct disadvantage in the highly competitive market of today and perpetuates the cycle of poverty, abuse and neglect, low literacy, low education and the inability to manage financial resources.

A longitudinal-experimental study conducted in the United States and Puerto Rico by the *Center on Violence against Women and Children* related violence and the implementation of an educational curriculum revealed changes in financial behavior in relationship to victims of abuse (Postmus, 2014; Silva-Martínez, 2015). The study explored at all levels the relationship between money management and financial abuse. Financial abuse is a common tactic of abusers and it may emerge in diverse tactics depending on the socioeconomic status of the couple. The abuser uses their position to control planning and access of all financial records and makes all the decisions about money. The objective is to keep the victim dependent upon the offender. Victims may

be prohibited from having access to household money or from obtaining employment. Oppressive accountability may be demanded of victims who are given access to funds for purchasing basic necessities; many victims have necessities withheld. Victims are often prevented from opening bank accounts or obtaining credit. Offenders may attempt to cause an employed victim to lose his or her job through harassing behavior at the victim's place of work. Victims report being forced to sign false tax returns or participate in other illegal financial operations. Victims also can be convinced that they are unable to manage their finances, or face imprisonment for his involvement in a fraud, if they tell someone.

## Objectives

To offer a series of workshops which provide tools that can help needy families plan a budget, save and manage money and effectively use the income they receive. Promoting financial capability is important to help families improve their financial well-being and meet the economic goals of the programs for families and children. The present study used 7 workshops developed by the Center for Social Development of the George Warren School of Social Work University of Washington at St. Louis (2014) in the implementation of workshops and coaching sessions about financial education (Karnes et al, 1977). The workshops were adapted to the educational level of the families within the Puerto Rican cultural context. The population of participants was drawn from Head Start and TANF programs in the Caguas Region of Puerto Rico. The Principal question of the present study concerns: What are the outcomes of financial literacy training and financial coaching for the strength of family budget, savings and coverage of their economic needs?

## Hypothesis

The general hypothesis is presented in the following and the subsequent research hypothesis follows.

- Financial Education training and financial coaching has a positive effect on Head Start and TANF female-headed families abilities to strengthen the family budget, savings and coverage of their financial needs.
  - \* H1: Post-test scores will be significantly higher ( $p < .05$ ) than pre-test scores on financial capabilities knowledge test in the Head Start and TANF experimental group participants.
  - \* Ho: No significant differences will exist ( $p > .05$ ) between pre- and post-knowledge test on financial capabilities of the Head Start and TANF control group participants.
  - \* H2: The workshops on financial management are effective in increasing learning of financial matters in the experimental groups ( $p < .05$ ).

## Method

The research methodology consists of a mixed model, with the use of quantitative and qualitative data. This research article will emphasize more the quantitative aspects of the study while presenting some preliminary insights into the qualitative data. The research uses a quasi-experimental design, with two experimental groups, who received the treatment variable of workshops to increase knowledge of financial capabilities, and two control groups, who did not receive the workshops.

One experimental group consisted of female-headed households whose children were attending the Head Start program in the Caguas Region of Puerto Rico. The other experimental group consisted also of female-headed households who were participants of the TANF program in the Caguas Region. These groups were provided with seven (7) workshops based on a training model from the George Warren Brown School of Social Work at the Washington University in St. Louis, Missouri (Center for Social Development, 2014). The purpose of the workshops was to increase knowledge and skills in financial capabilities in order to help the family to plan a budget, save and manage money and effectively use the income they receive to cover the financial needs of the family.

Two control groups were also included in the quasi-experimental design with the participation of female-headed households similar in socio-demographic characteristics to the experimental group. These groups similar to the Head Start and TANF experimental groups were not partake of the financial capabilities workshops. The research questions of interest here was that the manipulation of the treatment variable was significantly different among experimental groups versus control group membership, in increasing knowledge and skills related to financial capabilities in order to strengthen the ability of families to plan a budget, save and manage money and effectively use the income they receive to cover the financial needs of the family.

Two groups from each program were developed; one group (experimental) from each program received the workshops on financial literacy and financial coaching during the period of February to May 2016, while the other (control) did not receive the training. The sample was drawn from voluntary participation of subjects from Head Start program from *Fundación para Hogar Propio de Caguas* and the families participating from the TANF program were also from the same Caguas geographical area, participants that were serviced by the Puerto Rican Department of Family.



### *Participants*

Participants in the study were recruited from the Head Start and TANF centers in the Caguas region. Participants were female-headed household mothers in said programs within the different program centers in the region of Caguas. In coordination with the administrative staff of each program, lists were created of possible participants for both the experimental and control groups in Head Start and TANF.

From the list provided and reviewed by the project researchers, the experimental group of each program was invited to an orientation meeting. In said meeting, held in different location, information was provided to each of the experimental groups in order to solicit their assistance and consent to participate in the workshops. The information was in relation to the voluntary nature of the participation, assistance in seven workshops, the nature of the individual workshops, and their participation in the data collection process. Participants would be provided with a \$10.00 stipend to cover transportation costs and were asked to sign the Informed Consent form in order to participate.

This was an exploratory study on the relationship between financial learning and acquisition of knowledge for better decision making in terms of budgeting, savings and spending. The study is considered a quasi-experimental design with four groups, where researchers were not able to randomly assign participants to this training program versus the control or comparison group. The participation in the workshops for all project participants, whether in the experimental or control group, was voluntary, limiting the generalization of the findings.

Several meetings were held with the administrative staff from both programs, Head Start and TANF, during the middle of January and the beginning of February of 2016, to identify possible participants for the research project who were female and head of

the household, characteristic of Head Start and TANF families in Puerto Rico. Lists of females headed households were created for the experimental and control groups for Head Start and TANF participants. The identification of possible participants provided for a start-up date of February 4<sup>th</sup> for Head Start participants and February 10<sup>th</sup> for TANF participants.

### *Description of instruments*

The following Instruments were developed and used in the project: Socio-Economic Questionnaire of Characteristics of the Family; Self-report: Knowledge, Skills and Attitudes Towards Financial Capabilities Scale; Pre- and Post-test of Workshops about Financial Capabilities; Interview Guide for the Coaching Sessions, and a Satisfaction Survey - Formative Evaluation of the workshops. The analysis consisted of descriptive statistics for socioeconomic characteristics of family and knowledge and skills about financial literacy and inferential statistics in regards to the pre- and post- of modules.

The workshops provided information and tools that can help the family plan budget, save and manage money and effectively use the income they receive. Promoting financial capability is important to help families improve their financial well-being and meet the goals of the economic program for families and children. In addition, financial coaching will make possible an individualized follow up about on how the families are applying their financial management skills acquired in the workshops.

The Center for Social Development (2014) of the George Warren Brown School of Social Work, University of Washington at St. Louis conceptualized Financial Capability and Asset Building (FCAB) objectives as: 1) to advance FCAB in social work education, practice and research; and 2) strengthen networks FCAB academics, educators, professional associations and financiers in the field of Social Work.

The first three instruments were administered to all participants during the first day of workshop activity. The Interview Guide for the Coaching sessions was administered to only the participants of the experimental groups. The Self-report: Knowledge, Skills, and Attitudes Towards Financial Capabilities Scale, and the Pre-and Post-test of Workshops about Financial Capabilities were administered to all participants at the start of the intervention of workshops and at the closure of the workshop period; this usually took one more week for the control group participants.

A description of each of the measures used is presented in the next section.

- ***Socio-Economic Questionnaire of Characteristics of the Family***

During the orientation meeting for all project participants, all received a self administered instrument to assess their socio-economic characteristics. The questionnaire, of mostly open-ended questions, collected data that included: gender, age, highest academic level achieved other studies, government benefits received, and existence of medical conditions in the family.

- ***Self-report: Knowledge, Skills and Attitudes Towards Financial Capabilities Scale***

Self-report of knowledge, skills and attitudes of the financial behavior of project participants, utilizing a form print scale where 4 is always, 3 is almost always, 2 is sometimes, and 1 is never. The questionnaire consists of 30 items while measured participants' financial management behaviors in several domains: consumption, savings, budget management, cash management, and spending behavior.

- ***Pre- and Post-test of Workshops about Financial Capabilities***

The pre- and post-test knowledge test consist of 42 items. The questions were aligned to the 7 workshops as follows: “Financial Portrait of the average Puerto Rican,” which consisted of ten (10) true/false questions which responded to workshop content; “focus on Household Finances,” consisting of six (6) items, five (5) were of a true/false nature and one (1) was multiple choice, and were consistent with content materials; “Earnings and Job Benefits,” comprise of five (5) items of a true/false nature aimed at assessing knowledge of families in terms of earnings and job benefits, where the items were congruent with the workshops objectives. Module 4 content of knowledge relative to how to “Secure Financial Records” and included a multiple type question with multiple responses, while the other part was a three questions true/false test, for a total of four (4) questions that was congruent with the workshops content. The objective of workshop 5 was to appreciate the “Financial values, Goals and Decisions” needed for a strong financial attitude towards the management of the household budget. The first part of the pre- post-test is a multiple choice question with one correct answer and part two is a four point true/false test. Observation of both documents concludes that items and workshop content about “Cash Management” which consists of eight (8) test items and accentuates cash management in families. The test is made up of 5 true/false items and 3 multiple choice items with only one correct response. Visual assessment of items indicates correspondence between items and the workshops as reported by the External Consultant. Workshop 7 concerned itself with “Budgeting and spending plans,” which

emphasizes the best practices of budgeting and spending plans in needy families. As observed by the external consultant on “Financial Capabilities,” all items were in accord to the workshops objectives. In summary, a Face Validity analysis concludes that the workshops are well prepared with realistic objectiveness and applicable evaluation.

The consistency of the instrument was tested with the use of Cronbach’s alpha and Cronbach’s alpha based on standardized items. The measure of internal consistency by means of Cronbach’s alpha determines if all areas within the items will correlate with each other, wherein the greater alpha coefficient, which ranges from 0 to 1, the greater the reliability of the instrument. The reliability analysis for the Pre- and Post-test (42 items) was carried out with the four participating groups, Head Start Experimental (N=19), TANF Experimental (N=15), Head Start Control (N=14), TANF Control (N=12). The overall reliability of the Pre- and Post-Test achieved alpha coefficients among the groups between .643 to .876; the standardized alpha coefficients revealed alphas between .581 to .741. According to Hudson (2012), reliability coefficients generally at .60 or greater are considered acceptable for research purposes.

- ***Interview Guide for the Coaching Sessions***

The qualitative interview instrument was concerned with assessing issues that limited the participants in their ability to develop their capability to put into practice adequate financial management skills and providing feedback to enhance sound financial capabilities skills, as well as, behavioral changes to maintain a positive management for the future. The instrument contains eleven (11) open-ended questions and a section at the beginning that assess

socioeconomic data. The questions aid assessing the family's ability to adequately manage the household budget and general spending, with queries related to financial goals in the future, confidence to achieve these goals, the general feeling (state of mind) in preparing the household budget, strengths and weaknesses of this process, how emergencies are dealt with and how the budget is affected, saving patterns in relation to meeting household needs, among other questions. Each of the questions proves valuable information useful for future coaching and the establishment of future goals and objectives in order to maintain a healthy capacity to manage budgeting and spending.

- ***Satisfaction Survey - Formative Evaluation of the Workshops***

At the completion of each of the workshops, participants from both experimental groups were asked to evaluate their satisfaction with each of the workshops utilizing a four (4) point Likert Scale where 4 was "Excellent," 3 was "Good," 2 was "Regular," and 1 was deemed as "Deficient." The aspects evaluated were: clarity of the established objectives of the workshops, subject matter development, group participation, management of time, materials and audiovisual resources, and the importance of the subject matter for you.

## **Procedures**

### *Intervention model*

The research study applied a quasi-experimental design for both Head Start and TANF female-head of household families. Two groups from each program were recruited to participate in the project. One group from each program (Head Start and TANF)

identified as the experimental group received the financial literacy workshops, composed of seven (7) workshops, and financial coaching during the period from February to May 2016 (40 participants), while the other group, established as the control group, did not receive the training or coaching experience. The workshops provided information and tools that can help the family to plan their budget, save and manage money and effectively use the income they receive. Promoting financial capability is important to help needy families improve their financial well-being.

During the last week of January and the first week of February 2016, 20-25 candidates were selected by project staff and agency personnel for the experimental and control groups. The experimental groups of both programs were asked to participate in an orientation meeting. All the participants were voluntary and willing to participate in the project—once Consent Informed was explained to them. The orientation meetings produce an initial group of 23 candidates for the Head Start experimental group and 11 candidates for the TANF experimental group. Sixteen (16) of the original 23 participants completed all workshops activities for the Head Start group and five (5) of the original 11 participants completed the TANF group. Ten (10) candidates from Comerío were subsequently recruited to complete the workshops in the TANF experimental group, for a total of 15 TANF participants completing the workshops. Nineteen (19) participants were recruited from the Head Start list to serve as the control group of which fourteen (14) completed all research activities; fifteen (15) participants were recruited from the TANF lists to participate as control group, wherein twelve (12) completed all research activities. The nature of the participation was voluntary for both groups.

During the months of December 2015, January and February 2016, Principal Researchers with the collaboration of Research Assistants developed and prepared the seven (7) learning modules-workshops. The learning modules were implemented in the

Head Start group commencing on the 4<sup>th</sup> of February and completing on the 7<sup>th</sup> of April 2016. The first TANF group started on the 10<sup>th</sup> of February and completed all workshops activities on the 19<sup>th</sup> of April 2016. A second TANF group from Comerío was subsequently recruited to complete the workshops in the TANF experimental group from the 8<sup>th</sup> to the 19<sup>th</sup> of April, for a total of 15 participants, who completed the workshops.

Finally a Satisfaction Formative Evaluation was carried out in each of the seven workshops for both Head Start and TANF participants. At the completion of each of the workshops, participants from both groups were asked to evaluate their satisfaction with each of the workshops utilizing a four (4) point Likert Scale where 4 was “Excellent” and 1 was “Deficient.” Participants in the Head Start and TANF experimental groups evaluated the workshops with an overall mean of 3.97 and 3.92, respectively, indicative of an “excellent” satisfaction in terms of the clarity of the established objectives of the workshops, the subject matter development, group participation, the management of time, use of materials and audiovisual resources and the importance of the subject matter for them.

### *Observations during the workshops activity*

The research assistants could observe how each participant responded naturally to the social environmental, which provided the opportunity to interact with the rest of the participants in the workshops. Also, upon implementing the workshops, their social behaviors skills were observed within the group setting. The participants, in general, showed interest in the topics to be discussed as well as feeling comfortable with the different activities carried out within the first workshop. Head Start participants seemed focused on the accomplishment of tasks, showing satisfaction and ease during the process. They were cooperative



and very empathic towards each other during the course of the workshops. The workshops concerning the actual status of affairs of the Puerto Rican population facilitated the ventilation of the current situations in Puerto Rico and as how these affect financial situation as female heads of households. On the other hand, TANF participants were more reserved in their expressions and discussions in terms of the first workshop, although, they were able to bring examples of their daily lives in relation to the actual conditions in Puerto Rico.

During the workshops, expressions of positive affirmation and coping with adversities were developed, under the theme of positive attitudes and knowledge acquisition of financial topics the participants could apply according to their needs and specific situations. The participants demonstrated a positive and energetic attitude towards the Research Assistants' within their roles of guide and service providers. There was an increase in awareness of the importance of how managing revenues, expenses, and planning a family budget are important. Head Start participants were cooperative, interested and their participation was active during the cycle of workshops offered. One observed a great disposition towards the gaining of knowledge and skills of financial topics that were important for the family budget. The participants demonstrated enthusiasm towards the learning process in order to achieve a personal transformation in their lives and the lives of their family members.

### *TANF participants*

The TANF participants were integrated in workshops activities and in the discussions and the creation of collages for long-term financial goals. They showed a great positive disposition and ready to listen, learn, and seek alternatives in order to allow them to respond positively to the acquisition of new skills to effectively deal

with internal and external factors that have affected their emotional well-being due to the financial situations in the home (revenues, and savings among others). In general, participants were enthusiastic and attempted to transform their financial situations through the acquisition of knowledge and financial training provided in the workshops by the Research Assistants. It should be noted that participation of the TANF participants was lower in comparison to the participants in Head Start.

At the conclusion of the training workshops and financial “coaching” sessions, participants assessed the skills and tools acquired as a result of participation in the modules. All participants expressed that they had acquired knowledge that could put in practice, either in the application of the exercises on the family budget, using provided budget sheets, expenses, and cash management. Each provided anecdotes of great satisfaction and developing new skills to meet the challenges of daily life in the financial area. Also, participants requested the continuation of the sessions since they considered their effectiveness and impact in such a short time (8 weeks). Similarly, it was observed that group cohesion and group integration was an essential part of the success and acceptance of the financial training workshops.

## Results

### *Socio-Economic Characteristics of Participants*

The total sample in the study consisted of 57 participants as seen graphically in the following exhibit. The socioeconomic data (see Figure 1) reveals that all participants are female-headed households whose average age fluctuates around 29.8 years, have between 3 and 4 children and generally possess a High School diploma (58%).

In terms of Benefits received from the government, while there is a variety of them included, such as Food Stamps, Government Health Plan, TANF, and WIC among others, the data reveals that all participants (100%) receive Food Stamps and that the great majority (82%) also received the Government sponsored Health Plan. In relation to this, there are slightly more Head Start participants (84%) as compared to TANF participants (80%) who use this benefits.

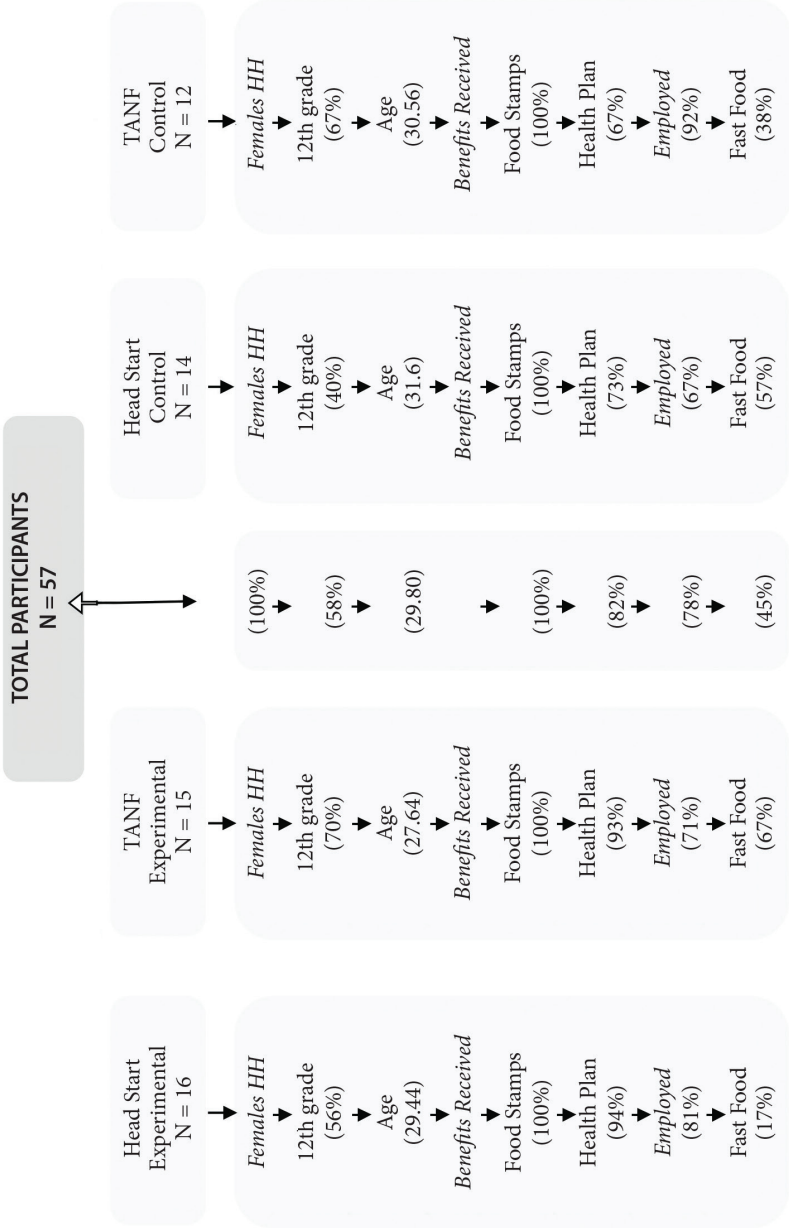
In general, 78% of participants are employed in service oriented jobs with a slightly higher percentage in TANF participants (82%) as compared to Head Start participants (74%). The vast majority (45%) work in the Fast Food industry. The socioeconomic data illustrates that the different participants groups are generally homogenous (See Figure 1).

*Self-report: Knowledge, Skills, and Attitudes towards  
Financial Capabilities Scale*

The Scale of Financial Behavior assessed the financial behavior in regards to knowledge, skills, and attitudes of project participants

The aspects in the scale were measured on a four point Likert scale, where in 4 = always, 3 = almost, 2 = sometimes, and 1 = never. In general, the data illustrates that aspects of financial behaviors that are favorable, such as “paying their bills on time” are perceived with a total mean of 3.37, between almost always and always, with a tendency towards almost always, which is a favorable financial behavior. This appears to be the case for the following items, all practices that are deemed favorable towards an adequate management of budget and spending: “like to save a little money (3.26),” “it worries me to have a lot of debts (3.34),” and “I always check how much I owe in my debts (3.11).”

FIGURE 1.



<div>TABLE 1.</div> <div>Means and standard deviations of research participants of the scale of financial behavior of the participants and their family.</div>					
FINANCIAL CAPABILITY	TOTAL GROUP N=57 MEAN (SD)	HSE N=16 MEAN (SD)	TOTAL TANFE N=15 MEAN (SD)	HSC N=14 MEAN (SD)	TANFC N=12 MEAN (SD)
1. I pay my electric, water, phone, and internet bills on time.	3.37 .843	3.25 (.931)	3.20 (.941)	3.62 .650	3.50 (.798)
2. I buy groceries, if I have money.	3.80 .491	3.87 (.342)	4.00 (.000)	3.69 .630	3.55 (.699)
3. It is important to know how to make a budget.	3.79 .495	3.94 (.250)	3.87 (.352)	3.70 .675	3.58 (.669)
4. I like to save a little money.	3.26 .788	3.13 (.806)	3.36 (.745)	3.25 .866	3.36 (.809)
5. I skip the payment of some monthly bills in order to pay other accounts, even though it has surcharges.	1.85 .970	1.94 (.063)	2.00 (1.000)	1.69 .855	1.70 (.675)
6. It worries me to have many debts.	3.34 .996	3.00 (1.195)	3.73 (.593)	3.36 1.082	3.25 (.965)
7. We eat out two or three times a week as a family.	1.80 .585	1.67 (.617)	1.73 (.458)	1.86 .535	2.00 (.739)
8. The moneys I receive cover all our family's necessities.	2.11 .966	2.13 (.806)	1.93 (.997)	2.21 1.122	2.17 (1.030)

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9.	My children request articles that I cannot buy.	1.96 .808	2.00 (.894)	2.36 (.929)	1.75 .452	1.64 (.674)
10.	I feel at ease when I can pay my bills.	3.80 .562	3.75 (.775)	3.79 (.426)	3.71 .611	4.00 (.000)
11.	I buy what I need without thinking about its cost.	1.95 1.008	2.00 (1.000)	1.80 (.862)	2.14 1.027	1.82 (1.250)
12.	My family does not understand the expenses that we have.	1.91 1.093	1.86 (1.292)	1.93 (1.163)	1.86 1.099	2.00 (.853)
13.	I buy articles that later are not used.	1.46 .602	1.56 (.512)	1.53 (.834)	1.36 .496	1.36 (.505)
14.	I'm usually broke before receiving my quarterly or monthly income.	2.35 1.044	2.44 (1.094)	2.47 (1.187)	2.21 1.051	2.25 (.866)
15.	I postpone payments until I get additional money.	1.77 .756	1.62 (.719)	1.73 (.884)	1.79 .893	2.00 (.426)
16.	I have arguments with family members due to financial issues. (Expenses or wished purchases.)	1.77 .887	1.94 (.774)	1.87 (1.187)	1.47 .514	1.83 (.937)
17.	I can borrow money without having to go to the bank.	1.60 .678	1.81 (.834)	1.60 (.632)	1.43 .646	1.50 (.522)
18.	I use the credit cards for the monthly expenses.	1.04 .186	1.13 (.343)	1.00 (.000)	1.00 .000	1.00 (.000)
19.	I have loans from financial companies.	1.28 .811	1.53 (1.060)	1.40 (1.056)	1.08 .277	1.00 (.000)
20.	I prefer to have cash in hand than to have a savings account in the bank.	2.38 1.023	2.71 (1.069)	2.40 (.986)	2.36 1.008	1.90 (.994)

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*Continued from the previous page.*

21. All my accounts are up-to-date.	3.07 1.050	2.81 (.981)	2.87 (1.187)	3.21 .975	3.50 (1.000)
22. I have savings for emergencies.	2.39 1.156	2.07 (.997)	2.00 (1.195)	2.50 1.019	3.18 (1.168)
23. I borrow money from family and friends to pay my bills.	1.71 .653	1.69 (.479)	1.71 (.726)	1.79 .893	1.67 (.492)
24. I feel confident in the handling of the credit cards, checks, loans, and they are up-to-date.	1.73 1.065	1.64 (.929)	2.00 (1.342)	1.67 1.006	1.60 (1.075)
25. I have requested a Credit Bureau report within the last year.	1.49 .987	1.67 (1.234)	1.71 (1.069)	1.42 .900	1.00 (.000)
26. I always check how much my debts are.	3.11 1.090	3.50 (.894)	2.93 (1.033)	2.79 1.251	3.18 (1.168)
27. I buy merchandise or groceries that are on sale.	3.50 .809	3.53 (.834)	3.67 (.617)	3.36 .929	3.42 (.900)
28. I borrow money from moneylenders.	1.13 .478	1.31 (.793)	1.07 (.267)	1.08 .277	1.00 (.000)
29. I save money by using the "society system".	1.35 .779	1.60 (.986)	1.07 (.267)	1.09 .302	1.67 (1.118)
30. I devise different activities to generate income.	1.75 .969	1.94 (1.124)	1.80 (.941)	1.29 .469	2.00 (1.128)

Along the same lines, the great majority of participants, independent of group membership in the present study, demonstrated high regard for activities that enhance healthy financial stability. As such, participants in general “feel at ease when they pay their bills (3.80),” “they buy groceries when they have the money in order to meet the needs of the family (3.80),” for them “it is important to know how to make a household budget (3.79),” and tend to “buy merchandise or groceries that are on sale (3.50).”

Finally, the vast majority also “never” participate in activities that are detrimental to their financial stability. In regards to this, the participants, in general, refrain from “using credit cards for monthly expenses (1.04%),” “borrow money from moneylenders (1.13%),” “have loans from financial companies (1.28%),” and “buy articles that later are not used (1.46%).” The evidence suggests that participants are aware of practices that enhance or limit financial stability, revealing once again the homogeneity among groups.

A Univariate ANOVA was performed to determine if there were any significant differences between the eight groups and the dependent variable, mean sum on the “Scale of Financial Behavior of the Participants and their Family.” No significant differences were revealed by the ANOVA procedure. In summary, participants groups, independent of the nature of the role in the study, Experimental versus Control, were homogeneous; even when the instrument was administered at the beginning and at the end of the project.

### *Test of the Hypothesis: Pre- Post-test among Study Groups*

A *t* test of paired samples was performed to evaluate the impact of the intervention model of workshops in the Experimental group and the Control group for each of the Head Start and TANF participants. The *t* test analysis was focused in ascertaining whether there were significant differences in knowledge gain in the Head Start and TANF Experimental groups between pre- and post-test at time one (1), The beginning of the workshops, versus



time two (2) at the end of the workshops, as well as, after each of the seven (7) workshops.

It was hypothesized that there would be significant differences in knowledge gained after participating in the seven workshops for the Head Start and TANF Experimental groups, such that the intervention model of workshops would be instrumental in increased knowledge. On the other hand, and in reference to the Head Start and TANF control groups, who did not receive the treatment variable of workshops that no significant difference in knowledge would result between the pre- and post-test.

Table 2 illustrates a statistically significant difference in knowledge gained among Head Start Experimental Group participants in mean scores of the post-test ( $M=80.92$ ,  $SD=6.358$ ) and the pre-test ( $M=62.94$ ,  $SD=7.344$ ,  $t(15)=10.866$ ,  $p=.001$ ). The analysis among TANF Experimental group participants equally indicates statistically significant differences in the mean scores of post-test ( $M=80.73$ ,  $SD=18.46$ ) and the pre-test ( $M=51.20$ ,  $SD=7.833$ ,  $t(14)=6.722$ ,  $p=.001$ ). The difference in mean scores among the Head Start Experimental group was 18.125 and 29.533 in the TANF Experimental group.

Table 3 presents the findings of the Head Start and TANF Control groups, who did not participate in the intervention model workshops and subsequently it was hypothesized that no significant differences would prevail between pre- and post-test. The analysis of the statistics for the Head Start Control groups reveals the absence of a statistically significant difference in the mean scores of post-test ( $M=62.36$ ,  $SD=8.482$ ), and the pre-test ( $M=59.36$ ,  $SD=9.834$ ,  $t(13)=1.729$ ,  $p=.107$ ). The analysis in knowledge gained and the TANF control group equally indicates no statically significant differences in the mean scores of the post-test ( $M=65.00$ ,  $SD=7.722$ ) and the pre-test ( $M=60.75$ ,  $SD=7.557$ ,  $t(11)=1.370$ ,  $P=.198$ ). The difference in means among the Head Start Control group was 3.000 and for the TANF Control group was 4.250.

**TABLE 2.**  
Pre- Post- t test in knowledge gained in Head Start and TANF experimental group (n=31).

Pre- and Post- Knowledge Test by Group	N	Mean	SD	Correlation	Significance	t	gl	Sig	Difference in Means
<b>HEAD START Experimental</b>									
Head Start Pre-knowledge test	16	62.94	7.344						
Head Start Post-knowledge test	16	80.92	6.358	.534	.03	10.866	15	.001	18.125
<b>TANF Experimental</b>									
TANF Pre-knowledge test	15	51.20	7.833						
TANF Post-knowledge test	15	80.73	18.463358	.390	.151	6.722	14	.001	29.533

**TABLE 3.**  
Pre- Post- t test in knowledge gained in Head Start and TANF control group (n=26).

Pre- and Post- Knowledge Test by Group	N	Mean	SD	Correlation	Significance	t	gl	Sig	Difference in Means
<b>HEAD START Control</b>									
Head Start	14	59.36	9.834						
Pre-knowledge test				.758	.002	1.729	13	.107	3.000
Head Start	14	62.36	8.482						
Post-knowledge test									
<b>TANF Control</b>									
TANF Pre-knowledge test	12	60.75	7.557						
TANF Post-knowledge test	12	65.00	7.722	.011	.973	1.370	11	.198	4.250

**TABLE 4.**  
Oneway ANOVA summary table between group effects of the four (4) groups and the dependent variable of knowledge gained (n=57).

TEST OF HOMOGENEITY OF VARIANCES					
	Levene Statistic	df1	df2	Sig.	
Pre-	8.946	3	53	.000	
Post-	.059	3	53	.981	
ANOVA Dependent Variable: Pre- Post- Knowledge Test					
	Sum of Squares	df	Mean Square	f	Sig.
Pre- Between Groups	1167.909	3	389.303	2.840	.047
Within Groups	7264.302	53	137.062		
Total	8432.211	56			
Post- Between Groups	4258.845	3	1419.615	23.086	.000
Within Groups	3259.085	53	61.492		
Total	7517.930	56			

**TABLE 5.**  
Multiple comparisons and Scheffe post hoc test between group effects of the four (4) groups and the dependent variable of knowledge gained (n=57).

	N	MEAN	Std. Deviation	Std. Error		95% Confidence Interval for Mean
						Lower BoundUpper Bound
Pre HSE	16	62.81	6.358	1.590		59.4266.20
Pre TFE	15	51.20	18.463	4.767		40.9861.42
Pre HSC	14	59.36	9.834	2.628		53.6865.04
Pre TFC	12	60.75	7.557	2.182		55.9565.55
Total	57	58.47	12.271	1.625		55.2261.73
Post HSE	16	80.94	7.344	1.836		77.0284.85
Post TFE	15	80.73	7.833	2.022		76.4085.07
Post HSC	14	62.36	8.482	2.267		57.4667.25
Post TFC	12	65.00	7.722	2.229		60.0969.91
Total	57	72.96	11.587	1.535		69.8976.04
Dependent Variable	(I) Group	(J) Group	Mean Difference (I - J)	Std. Error	Sig.	95% Confidence Interval for Mean
						Lower BoundUpper Bound
Scheffe	HSE <sup>1</sup>	TFE	.204	2.818	1.000	-7.938.34
		HSC	18.580	2.870	.000	10.2926.87
		TFC	15.938	2.995	.000	7.2924.58
	TFE <sup>2</sup>	HSE	-.204	2.818	1.000	-8.347.93
		HSC	18.376	2.914	.000	9.9626.79
		TFC	15.733	3.037	.000	6.9624.50
	HSC <sup>3</sup>	HSE	-18.580	2.870	.000	-26.87-10.29
		TFE	-18.376	2.914	.000	-26.79-9.96
		TFC	-2.643	3.085	.865	-11.556.26
	TFC <sup>4</sup>	HSE	-15.938	2.995	.000	-24.58-7.29
		TFE	-15.733	3.037	.000	-24.50-6.96
		HSC	2.643	3.085	.865	-6.2611.55

<sup>1</sup> HSE = Head Start Experimental Group    <sup>2</sup> TFE = TANF Experimental Group    <sup>3</sup> HSC = Head Start Control Group    <sup>4</sup> TFC = TANF Control Group

*Oneway ANOVA*

An Oneway ANOVA was performed to determine if there were significant differences between four (4) groups and the dependent variable of knowledge gained after participation in the training workshops. Significant differences were revealed by the ANOVA procedure.

Levene's test of equal variances indicates homogeneity of variances among groups in the post-test,  $F(3, 53) = .059, p = .981$ , while not homogeneous in the pre-test, perhaps because of outliers  $F(3, 53) = 8.946, p = .000$ . The variability in mean scores in the pre- versus the post- scores in the TANF Experimental group resulted in significant differences and unequal variances. Table 2 (2) indicates significant differences between groups in the Pre-test and Post-test.

The Scheffe post hoc test was conducted to compare all group combinations and identify any significant different pairs. (See tables.) Results reveal that the Head Start Experimental group significantly differs in the post knowledge scores from the Head Start Control and TANF Control groups. In a similar fashion, the results indicate that the TANF Experimental group significantly differs in the post knowledge scores from the Head Start Control and TANF Control groups.

*Findings of coaching sessions*

A total of nine participants requested an interview after completion of the workshops: Six from TANF and three from Head Start. The participants are between 28-33 years. Four of them had a partner at home who was not necessarily the father of her children. None was working at the time of the interviews, although two of them were two studying. There are a total of 22 children between the ages of 3-15 years old, 10 male and 12 female in these nine families.

Several topics were covered as reflected in the following:

**A. Financial Goals of the participants**

1. Pay off debts—Two of the participants need to pay debts (furniture stores, student loans).
2. Save money—Three of the participants have savings ranging between \$20.00 and \$500.00.
3. Get a job or build a business—Four of the participants.
4. Finish building your home—Two participants are interested in improving their housing.

**B. Confidence in their abilities to achieve their financial goals**

1. Plan to make their own business—Three of the participants present their plan to develop their businesses. They have specific plans for their projects as places to establish fast food or gardening. Some others are going to give follow up to their job application.
2. Savings—Four participants have a plan to achieve savings and mention: reducing meals outside the home, talk with your children to explain reasons for economic rules, children sell chocolates and do home tasks with neighbors.
3. Continue studying a technical degree—A participant has one year left to finish her nursing studies.

**C. How they feel about making a budget, income and expenditure plan to achieve their goals**

1. Leading a budget—Four participants indicate that they are carrying a budget, but it is difficult because there are always expenses that cannot control.
2. Workshops are a useful way to work every day with the little income they have tooled. Five participants mentioned they learned a lot about how to do to control their desires of shopping.

**D. Plans for an unexpected expense: health emergency**

1. Two participants have savings from \$200 to \$599.
2. Three participants have between \$20.00 to \$40.00 monthly savings.
3. Four participants have no savings for an unexpected event.
4. All participants have relatives that help them if there is a disease that needs money to deal with it.

**E. Survival of monthly needs with their income**

1. Their family lends money to meet needs of children, especially when parents do not get parent's pension—Two participants.
2. Their current partner solves economically or makes home repairs or buy needed home accessories—Two participants.
3. Ex-husband solves emergency situations with children—Only one participant.

**F. Expenses of last month, if they were less than the total income**

1. Three participants squared their budget regardless of their income.
2. Six participants had more expenses than income explaining that the ending of school year always brings more spends for school needs.

**G. Use of knowledge offered in the workshops**

Most significant topics:

1. How to make a Budget.
2. Recognize the difference between need and desire to have or buy something.



3. Evaluate the items before buying and using discounts when buying.

#### **H. Additional information you want**

1. Six participants want to know how to re-establish their damaged credit. They have had different situations that has hurt them their ability to borrow.
2. Some of them mentioned how hard is to develop a business, so it requires the government to facilitate permissions for operation.

### **Discussion**

The present study concerned itself with the following question: What are the outcomes of financial literacy training and financial coaching for the strength of family budget, savings and coverage of their economic needs? A selection was made of two groups from each, Head Start program from the *Fundación para el Hogar Propio* and TANF program of the Department of the Family, both from Caguas Region of Puerto Rico. An experimental group from each program received financial education and financial coaching during the period from January to May 2016, while another group, control, did not receive it. This study is based on the assumptions that a combination of knowledge, skills, capacity and access to financial services is needed for the development of effective management of financial resources among needy female-headed households in Puerto Rico who are participants in the Head Start and Temporary Assistance to Needy Families (TANF) programs and that financial education will improve economic performance of these needy female headed families of Head Start and TANF. This approach is consistent with policies from the Administration of Children and Families (ACF) publication (see Financial Capability Brief, March 2015).

The research methodology consisted of one experimental group of female-headed households whose children were attending the Head Start program in the Caguas Region of Puerto Rico and another, also of female-headed households who were participants of the TANF program in the Caguas Region. These groups were offered a series of workshops which provided tools that can help needy families plan a budget, save and manage money and effectively use the income they receive and used seven (7) workshops which use as reference those developed by the Center of Social Development (2014) of the George Warren Brown School of Social Work of the Washington University in Saint Louis, Missouri. (<http://csd.wustl.edu/Pages/default.aspx>). In the implementation of workshops and coaching sessions about financial education, the workshops were adapted to the educational level of the families within the Puerto Rican cultural context. Two control groups were also included in the quasi-experimental design with the participation of female-headed households similar in socio-demographic characteristics of the experimental group. These groups similar to the Head Start and TANF experimental groups were not provided with the financial capabilities workshops. The research questions of interest here was that the participation in the intervention workshops would significantly increase the knowledge and skills related to financial capabilities in order to strengthen the ability of families to plan a budget, save and manage money and effectively use the income they receive to cover the financial needs of the family in the experimental group.

The general hypothesis indicated that financial education training and financial coaching has a positive effect on Head Start and TANF female-headed families' abilities to strengthen the family budget, savings and coverage of their financial needs. As such, the research hypothesis stated that "in comparison to the participants in the two control groups, Head Start

and TANF (female-headed households who did not receive the intervention workshops), participants who participated in the intervention workshops would score higher in the post-test.”

In terms of the demographic information of the research participants, the total sample consisted of 57 participants female who were the head of their households which their average age was around 29.8 years. Most of them have completed High School and have between 3 and 4 children. In terms of Benefits received from the government, all the participants receive Food Stamps and that the great majority also received the Government sponsored Health Plan, which is generally descriptive of needy families in Puerto Rico. The majority of participants are employed in service oriented jobs with a slightly higher percentage in TANF as contrasted with Head Start participants. The majority are employed in the Fast Food industry. In general, the results illustrates that the different participants groups are generally homogenous. According to Nieves-Rosa and Thomas-Breitfeld (2002), in Puerto Rico more than half (56%) of those who are employed are working in jobs that pay the minimum wage or less. Thus, a large proportion of both TANF participants and TANF former participants are not working. Those who are working have been primarily employed in the secondary labor market, which is characterized by low wages, irregular work hours (including working at night), and no benefits – jobs that are difficult for single mothers with children and which do not enhance possibilities for moving out of poverty. The socioeconomic conditions in Puerto Rico on 2016 are not so different when the legislative development for the reauthorization of TANF program was held in 2002.

*“Financial behavior* is defined as engagement in financial activities, and it involves choices that one makes about one’s financial situation. These choices are based on the individual’s knowledge base, attitudes, and available financial services” (Curley &

Robertson, (2014), p 11). The Scale of Financial Behavior in the present study assessed the financial behavior in regards to knowledge, skills, and attitudes of project participants with a four point Likert scale where 4 was always and 1 never.

The results reveal that aspects of financial behaviors were perceived as favorable among participants and considered to be generally adequate in terms of the participants' management of budget and spending habits. The vast majority of participants, independent of group membership in the present study, demonstrated high regard for activities that enhance healthy financial stability and also responded as "never" participate in activities that are detrimental to their financial stability. The evidence generally suggests that participants are aware of practices that enhance or limit financial stability. All the groups were homogeneous in their responses to financial behavior. A Univariate ANOVA was performed to determine if there were any significant differences between the groups (control and experimental) and the dependent variable, mean sum on the "Scale of Financial Behavior of the Participants and their Family." The results of the ANOVA procedure did not reveal any significant differences. Several authors has stated that in financial management training programs for low-income persons has grown in recent years, "the specific training needs of low-income consumers have not been well articulated," these authors described needed training content for such audiences, based on review of previous research and the authors' experiences in evaluating the Financial Links for Low-Income People (FLLIP) program (Anderson, Zahn & Scott, 2004).

Using a *t* test of paired samples and Analysis of Variance in comparing the experimental groups, Head Start and TANF, scored significantly higher in the post-test (Hypothesis 1 – Table 2). In terms of the two control groups, Head Start and TANF, who did not participate in the intervention model workshops, the paired *t* test did

not render any significant differences in the post-test scores. (Hypothesis 2 – Table 3). A ONEWAY ANOVA performed to determine if there were significant differences between four (4) experimental groups and the dependent variable of knowledge gained after participation in the training workshops revealed significant differences among the study groups. Results reveal that the Head Start Experimental group scored significantly higher in the post knowledge scores than the Head Start Control and TANF Control groups. In a similar fashion, the results indicate that the TANF Experimental group significantly higher in the post knowledge scores than the Head Start Control and TANF Control groups. These findings are consistent with the Head Start Family Financial Capability: 2013-2014 Annual Report of The Asset Project (Curley & Robertson, 2013-2014) which provided Head Start families in the St. Louis area in this research project a combined financial education with a savings incentive and one-on-one coaching to encourage intervention in the use of new financial knowledge and skills. The results after one year of the quantitative data suggest that participants' understanding of core financial concepts increased. Research indicates that financial education interacts with other offered incentives to increase savings among participants in these types of programs (Baker & Dylla, 2007; Clancy, Grinstein-Weiss, & Schreiner, 2001). Curley (2010) finds that both hours of financial education and the presence of peer-mentoring groups have significant effects on saving. In a qualitative study, Parker (2013) examines the effects of savings clubs within IDA programs. His findings show that the clubs provide support for participants but that the personal relationships with the program coordinator keep participants accountable. Many asset-building programs offer financial education, savings clubs, credit counselling, financial coaching, and other components. This report discusses one such effort, the Head Start ASSET (Access, Savings, Support, Education, and Training) Project, and an evaluation of the first year of

the project's pilot: the Head Start Family Financial Capability Pilot Project (Curley & Robertson, 2014).

The financial coaching interviews reveal that participants have financial goals: mainly to pay off debts, saving or to increase their income by several viable means. They are interested in having a business or increase their income by diverse activities. Participants are using various strategies to control their spending, including teaching their children about financial issues. Despite this, the money is not enough to meet all the economic demands on them. They have plans to get more revenues. Researcher stimulates them to continue with their plans.

They have very little savings, therefore relatives, especially parents; resolve them many emergency expenses, especially in health. They have debts or economic backwardness in them, so they want to know how to improve their credit. Some of them have left unpaid bills and their credit is affected. Most of them want to receive information to repair their credit. Participants are enthusiastic in their goals and researcher observes trust in their abilities to do it. A study conducted by the New York Department of Consumer Affairs (2014) identified a model where an account was paired with financial education and financial coaching, skill building and saving directives. A critical combination of financial knowledge providing financial capability services in combination with other programs may have a positive impact on these programs' outcomes as evidence by the aforementioned study. Therefore, one of the recommendations of this research project is to combine several strategies to strengthen their financial goals.

### *Limitations and future research*

The nature of the research topic and research design is relatively new in Puerto Rico and especially in working with needy family participants in Head Start and in the TANF programs.

This was an exploratory study from the researchers' perspective on the relationship between financial learning and acquisition of knowledge for better decision making in terms of budgeting, savings and spending. The evaluation strategy was to compare participants at the end of the program against their own baseline data as well as to the sample that participated in the control group. Due to this strategy which does not use random assignment, it is considered a quasi-experimental design with four groups. Thus we were not able to randomly assign participants to this training program versus the control or comparison group. One of the limitations of the study relative to external validity is the lack of randomization and the relatively low sample size. The recruitment of participants for the project, both in the experimental and in the control groups was especially difficult, due to time constraints and availability of subjects. In relation to this, differences in the cultural nuances between the Head Start (privately run) and the TANF agency (government) presented greater difficulties for the participations of subjects in the TANF groups. The participation in the workshops for all project participants, whether in the experimental or control group, was voluntary, limiting the generalization of the findings. In regards to future research, further research is needed with a larger randomized sample of Head Start and TANF participants to verify whether these findings have continued significance and can be generalized to the larger population.

Future research could consider extending the observation of financial capability for its long-term effectiveness. Future research should increase hours of financial education with a combination of strategies to buildup skills for financial capacity for example: the presence of peer mentoring, incentives as savings clubs, a monthly newsletter and workshops coaching for credit repair and indolent program personnel with a closer relationship with participants.

## Conclusions

The ACF Office of Community Services (OCS) has worked with the Corporation for Enterprise Development (March 2015) to create Building Financial Capability: A Planning Guide for Integrated Services. This guide provides organizations with a process and a set of tools to develop a plan for integrating financial capability services into their existing programs and/or services.

The Executive Summary of Building Financial Capabilities: A Planning Guide for Integrated Services (Corporation for Enterprise Development, March 2015) states the following:

*Low-income individuals and families experience a great deal of financial hardship that impacts virtually every dimension of their lives. This chronic financial instability not only imposes high degrees of day-to-day stress but may also limit the ability to save and invest, constraining prospects for a more secure future. Across the country, organizations work to help low-income families achieve economic stability and mobility through a variety of programs, such as job training, small business development, affordable housing, energy assistance, health care, and early childhood education and care. But even with a wide array of available, high-quality social services, individuals with limited financial capability—defined as the capacity, based on knowledge, skills, and access, to manage financial resources effectively—struggle to succeed in such programs and to translate any progress into lasting economic change. (p. 6)*

The present study was exploratory in nature in order to evaluate more scientifically the relationship between financial learning and acquisition of knowledge for better decision making in terms of budgeting, savings and spending. Thus, increasing knowledge and skills related to financial capabilities would strengthen the ability of families to plan a budget, save and



manage money, and effectively use the income they receive to cover the financial needs of the family. This was the case with the present study. The training workshops utilized were essential for improving economic performance in needy families receiving assistance in Head Start and Temporary Assistance to Needy Families (TANF) programs.

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