
Evaluation Study

**Betty Gray
Early Childhood
Training and
Certification
Scholarship
Program
Evaluation**

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Acknowledgments

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Table of Contents

| | |
|---|----|
| Executive Summary..... | i |
| Introduction | 1 |
| Background..... | 1 |
| Evaluation Study Questions..... | 2 |
| Evaluation Study Methodology..... | 3 |
| Data | 3 |
| Samples..... | 4 |
| Descriptive Measures | 4 |
| Outcome Measures | 6 |
| Findings | 7 |
| Characteristics of Scholarship Recipients, the 2012 Child Care and Education Workforce, and the Populations They Served | 7 |
| Type of Scholarship Received..... | 8 |
| Characteristics of the Scholarship Recipients | 8 |
| The 2012 Child Care and Education Workforce | 10 |
| Populations Being Served..... | 13 |
| Predictors of Increased Professional Development. | 13 |
| Increased Registry Step..... | 13 |
| 2012 Training Hours and 2012 Training Hours in Excess of What is Required | 15 |
| Predictors of Higher Level of Professional Development | 17 |
| Discussion..... | 19 |
| Recommendations | 21 |
| References | 23 |

Executive Summary

As Oregon and the nation have recognized the importance of a child's early years to success in school and life, there has been growing awareness of the need for a trained and educated child care and education workforce (Institute of Medicine and National Research Council, 2012). The knowledge and skills of the workforce are recognized as critical to the quality of experiences provided to young children in early care and education facilities. Attention to the qualifications of the workforce has been incorporated into investments in early childhood including the proposed federal/state *Preschool for All* initiative, Oregon's Race to the Top Early Childhood Challenge grant¹, and Oregon's new Quality Rating and Improvement System (QRIS). Within QRIS, child care and education programs document their level of quality and are assigned a rating of Commitment to Quality (level 2 which is the lowest rating a program can earn) or higher (levels 3 to 5).

The Oregon Community Foundation (the Foundation) has played a critical role in increasing professionalism and in meeting the demand for an educated and degreed child care and education workforce in Oregon. The Foundation's Betty Gray Early Childhood Training and Certification and Betty Gray Community College scholarship programs provide a critical piece of Oregon's efforts to improve early childhood outcomes. At the request of the Foundation, Oregon State University (OSU) is evaluating both the Training and Certification Scholarship Program and the Community College Scholarship Program operating in 16 of Oregon's 17 community colleges. In this paper we report findings of the Betty Gray Early Childhood Training and Certification Scholarship Program evaluation.

The Oregon Community Foundation has funded early childhood scholarships at Portland State University's Center for Career Development in Childhood Care and Education (OCCD) since 2002. In 2003, the Betty Gray Early Childhood Training and Certification (BGECTC) Scholarship Program was launched, building on the previous program. As Oregon's only statewide scholarship program for community-based training and other types of professional development for the child care and education workforce, the program has brought a focus on the need for professionalization and made it possible for members of the workforce to increase their knowledge and skills. The scholarship program provides financial support to reduce barriers to training and education for providers working in home-based child care², center care, Head Start, and before/after school programs. Over the years workforce members have applied for financial assistance for costs associated with a wide range of professional development activities including training, education, credentialing, or accreditation. In annual reports OCCD has reported three primary objectives for the scholarship program:

- Increasing the professional knowledge and skills of eligible providers.
- Encouraging participants to exercise intentionality in planning and pursuing their professional development.
- Collaborating with partners and agencies to more firmly establish the Scholarship Program as an ongoing and effective strategy in the growth of Oregon's professional development system for care and education.

¹ The federal Department of Education, in collaboration with the Administration for Children and Families, offered competitive grants known as Race to the Top Early Learning Challenge grants to states to improve early childhood. Oregon was awarded a grant in 2012.

² Home-based child care providers are typically identified by their regulatory status: a) small home-based providers are known as registered family child care and b) large home-based providers are known as certified family child care.

Program professional development goals have been broad including increasing awareness of the need for professionalism and engaging the workforce in education and training.

The Oregon Community Foundation posed the following questions in its request for the evaluation of the BGECTC Scholarship Program:

1. *What are the characteristics of scholarship recipients and the populations they are serving?*
2. *How do scholarship recipients compare to the entire child care workforce?*
3. *To what extent does the receipt of a scholarship predict an increase in providers' professional development while controlling for provider characteristics?*
4. *To what extent does the receipt of a scholarship predict an increase in provider's professional development for minorities or for those whose primary language is not English?*

OCCD provided data on all persons who received a scholarship from 2002 to the end of the study period (June 2013), as well as data on all members of the 2012 child care and education workforce. This data made it possible for OSU to answer the Foundation questions.

In addition to managing the BGECTC Scholarship Program, OCCD manages two related programs. The Oregon Registry Career Lattice (the Registry) is a statewide program that recognizes the professional development and achievement of people who work in child care and education. Using documented training, credits, credentials, and degrees, OCCD assigns each enrollee a step between 1 and 12 with 12 being the highest. The second program, Education Awards, has been directly targeted to increasing levels of professionalism. An Education Award is a financial incentive that rewards providers for educational achievements and encourages continued professional development. Initial funding for awards came from the American Recovery & Reinvestment Act (federal economic stimulus dollars) and has been continued first with support from The Oregon Community Foundation and currently with Oregon Child Care Contribution Tax Credit dollars.

With the emergence of QRIS the focus in child care and education is shifting to documentation of professionalism through enrollment in the Registry and achievement of ever-higher levels of professionalism. Child care and education facilities cannot earn a QRIS rating without staff having earned steps and earning higher QRIS ratings requires having staff with higher step levels.

Facilitating the increase in steps in the Registry has not been a specific goal of the BGECTC program. Scholarship applicants were not required to enroll in the Registry and earn a step until 2011-2012. Applicants for Education Awards have been required to enroll in the Registry and earn a step.

Findings

The Betty Gray Early Childhood Training and Certification (BGECTC) Scholarship Program served, on average, 700 providers annually. The program has played a critical role in increasing the professionalism of the child care and education workforce as documented by the much greater participation of scholarship recipients in the Registry than of workforce members that have not received a scholarship. Over three-quarters (79%) of scholarship recipients had earned a step in the Registry while less than one in five (16%) nonscholarship recipients in the workforce had earned a step. Among scholarship recipients about half of those with earned steps had achieved step 8 or higher (an associate's degree in early childhood earns a person a step 9).

A policy priority has been that workforce investments benefit children from low-income families and that was the case with the BGECTC Scholarship Program. Sixty percent of scholarship recipients in the 2012 workforce who were working in a center were working in a facility that cared for at least one child whose care was financed with a state subsidy³. This percentage was smaller for those who worked in a large or small home-based care facility (52% and 38%, respectively). Regardless of type of care in which they were employed, scholarship recipients were significantly more likely to be working in facilities with at least one child whose care was financed with a state subsidy than were those in the 2012 workforce who did not receive a scholarship.

About a quarter of scholarship recipients were minorities compared to only 18% of Oregonians over 18 years of age being minorities (U.S. Census, 2011). The program also successfully reached persons whose primary language was other than English. However, these percentages were only slightly higher than those of nonscholarship recipients in the 2012 workforce, showing that the workforce itself was composed of high percentages of minorities and those whose primary language was other than English.

The following section highlights additional study findings. The findings are presented in two sections: a) characteristics of individuals and b) predictors of increased professional development.

Characteristics of Scholarship Recipients, the 2012 Child Care and Education Workforce, and the Populations They Served

- Of the 3,178 recipients who received at least one scholarship since the BGECTC program's inception, 64% (2,044) were known to be employed, working in a regulated facility, and working directly with children in 2012 (i.e., part of the 2012 child care workforce). The majority (71%) worked in center care.
- Scholarship recipients in the 2012 workforce received, on average, three scholarships between 2002 and 2013. A large percentage (69.3%) of these scholarships were given for not-for-credit training. Other uses were for credit coursework (15%), and for other purposes such as barrier reduction and activities related to earning a national credential (16%).
- For 37% of the recipients, a high school diploma was the highest level of education reported. Almost half had received an associate's degree (AA or AS) or higher. The percentage of those with an associate's degree or higher was basically the same for scholarship recipients and for 2012 workforce members who did not receive a scholarship (49%).
- Small home-based providers were the least likely of 2012 workforce members to participate in BGECTC (8% versus 13% of those working in large home-based providers and 10% of those employed in centers).
- Small home-based programs were also the least likely members of the 2012 workforce to have enrolled in the Registry and earned a step (17% versus 23% of those who worked in large home-based facilities or centers).

³ Oregon's child care subsidy program is administered by the Department of Human Services. It provides financial assistance to help pay child care costs of employed low-income parents.

Predictors of Increased Professional Development

We created two measures of professional development achievement: a) an increase in an earned step on the Oregon Registry Career Lattice, and b) the number of training hours earned in 2012. We modeled separately how the characteristics of scholarship recipients predicted achievement of each outcome. What predicted a step increase differed in many cases from what predicted a higher number of training hours. Thus we have reported and compared the predictors of each outcome together. All reported predictors were significant unless noted as not being so. For findings on each characteristic, all other characteristics were held constant. The key findings were:

- The number of scholarships received most strongly predicted the number of training hours. Among workforce members who received a scholarship, receiving a higher number of Education Awards was the strongest predictor for an increase in a step. For this same population, Education Awards also predicted a higher number of training hours but less strongly than did receipt of a scholarship.
- The type of training funded by a scholarship affected the outcomes. When compared to paying for a not-for-credit training, paying for a credit course predicted a step increase. It is interesting that paying for credit courses also predicted a smaller number of training hours.
- Being nonwhite significantly and substantially predicted increased hours of 2012 training among scholarship recipients. Similarly, and even more substantially, having a primary language other than English predicted a higher number of 2012 training hours. These characteristics did not significantly predict step increase and for those with a primary language other than English the relationship was negative as well as not significant.
- Scholarship recipients with a higher initial Registry step were less likely to increase a step, but were more likely to increase their 2012 training hours. Being in the Registry for a longer period of time increased the likelihood of earning a higher step.
- All center-based providers were more likely to increase a step than were home-based providers. Similarly, all positions except a center aide were more likely to increase training hours in 2012 when compared to small home-based providers.
- Scholarship recipients with earned degrees were more likely to increase their step than were those with a high school diploma.

Recommendations

The following recommendations flow from the findings of the evaluation study.

Recommendation 1. Clarify goals for the Betty Gray Early Childhood Training and Certification (BGECTC) scholarship program.

Oregon child care and education partners have identified a range of goals for professionalization of the child care and education workforce and current BGECTC policy supports a number of them. The child care and education field is changing, due in no small measure to the contribution that The Oregon Community Foundation has made in increasing professionalism. BGECTC program goals should be reviewed in light of the changes in the field. The finding that scholarship receipt is associated with increased training hours but not with an increase in steps indicates that it may be important to review goals in light of current demands on the workforce associated with QRIS and other quality initiatives. A

broad range of child care and education partners should examine and prioritize the goals on which the BGECTC scholarship program should be focused.

Recommendation 2. Examine BGECTC Scholarship Program policies and practices in light of the need for workforce members to increase steps on the Oregon Registry Career Lattice (the Registry).

Slightly more than three-quarters of scholarship recipients had earned a step but about half of them had earned relatively low steps (a step 8 or less) and low step levels will challenge the ability of child care and education programs to get a QRIS rating above the Commitment to Quality level. Under current scholarship policies the number of scholarships received predicts increased training hours but not step increases. Based on these findings we recommend that the BGECTC Scholarship Program review scholarship program policies and practices to ensure that they encourage recipients to earn and then increase their step. As of 2011-2012 the BGECTC Scholarship Program revised its eligibility rules to require scholarship recipients to enroll in the Registry and be assigned a step. This requirement should be retained in order to encourage earning a step. Additionally, a review of policies and practices would identify those that encourage step increases. For example, consider prioritizing usage of scholarship dollars for credit courses that were found to predict a step increase. Also consider targeting scholarships to persons who have some college but a relatively low step as findings indicate these persons may be more likely to increase a step. Implementation of QRIS has increased the demand for workforce members with higher steps on the Registry. The scholarship program will be likely to have a greater impact on increasing the supply of workforce members with higher steps if BGECTC policies and practices focus on ensuring that recipients earn a step and then work to increase it.

Recommendation 3. Target minorities and those whose primary language is not English.

Findings show that scholarship recipients who are minorities or whose primary language is not English take more hours of training than other scholarship recipients but are less likely to increase steps. If step increase is a goal, clarify the type of training that will increase the likelihood of achieving a step increase and use these findings to guide minorities and those with languages other than English toward training that will support achievement of step increases.

Recommendation 4. Engage small home-based providers in an effort to increase participation of this group in the BGECTC Scholarship Program.

Findings indicate that small home-based providers are less likely to participate in the BGECTC Scholarship Program than are other members of the child care and education workforce. Oregon parents typically use home-based care for children under age three when children are developing rapidly (Weber & Finders, 2013) so these providers play an important role in meeting the needs of children and families. Scholarship recipients in almost all other positions are more likely to increase a step and to have more training hours. The ability of small home-based providers to achieve a quality rating may be hindered by their lower levels of participation in professional development. Convening a group of child care and education leaders, including those working in small home-based child care businesses, may help identify strategies designed specifically for this population.

Early Childhood Training and Certification Scholarship Program Evaluation

Introduction

Background

As Oregon and the nation have recognized the importance of a child's early years to success in school and life, there has been growing awareness of the need for a trained and educated child care and education workforce (Institute of Medicine and National Research Council, 2012). The knowledge and skills of the workforce are recognized as critical to the quality of experiences provided to young children in early care and education facilities. Attention to the qualifications of the workforce has been incorporated into investments in early childhood including the proposed federal/state *Preschool for All* initiative, Oregon's Race to the Top Early Childhood Challenge grant⁴, and Oregon's new Quality Rating and Improvement System (QRIS). Within QRIS, child care and education programs document their level of quality and are assigned a rating of Commitment to Quality (level 2 which is the lowest rating a program can earn) or higher (levels 3 to 5).

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- Encouraging participants to exercise intentionality in planning and pursuing their professional development.
- Collaborating with partners and agencies to more firmly establish the Scholarship Program as an ongoing and effective strategy in the growth of Oregon's professional development system for care and education.

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Evaluation Study Questions

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In addition to managing the BGECTC Scholarship Program, OCCD manages two related programs. The Oregon Registry Career Lattice (the Registry) is a statewide program that recognizes the professional development and achievement of people who work in child care and education. Using documented training, credits, credentials, and degrees, OCCD assigns each enrollee a step between 1 and 12 with 12 being the highest. The second program, Education Awards, has been directly targeted to increasing levels of professionalism. An Education Award is a financial incentive that rewards providers for educational achievements and encourages continued professional development. Initial funding for awards came from the American Recovery & Reinvestment Act (federal economic stimulus dollars) and has been continued first with support from The Oregon Community Foundation and currently with Oregon Child Care Contribution Tax Credit dollars.

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Evaluation Study Methodology

Data

The evaluation study uses data from the Oregon Registry to answer each of the Foundation questions. The Oregon Registry is maintained by OCCD and uses the data system Oregon Registry Online (ORO). As of calendar year 2012, ORO includes some data on each person who works in a regulated child care facility in Oregon. Training hours required in relationship to facility licensing are captured in ORO. In addition this statewide database stores submitted education and training needed to meet licensing requirements for individuals who enroll in the Oregon Registry Career Lattice (the Registry) and receive a step. ORO is linked on a continual basis through a central repository to the Office of Child Care data system *Child Care Regulatory Information System (CCRIS)*. A unique identification number is assigned to each individual in order for ORO and CCRIS to communicate back and forth. Data in ORO that is obtained through CCRIS includes: data on employment at a regulated facility, facility license number, type of care, position at the facility, and start and end date of employment at the facility as reported in CCRIS. Self-reported employment information is entered directly into ORO for those individuals who do not work in a regulated facility (it is noted that this information is not verified). As noted above, this study uses data on all scholarship recipients and on members of the 2012 child care and education workforce whether they received a scholarship or not.

In addition to maintaining ORO (the database that as of 2012 captures all persons employed in regulated child care facilities), OCCD manages the Oregon Registry Career Lattice (the Registry). Since 1998 the Registry has been documenting professional development of persons in child care and education. Participation in the Registry is voluntary and requires submission of an application and documentation of education and training. OCCD verifies the submitted information. Persons who participate in the Registry are assigned a step representing documented training and education in Oregon's Core Body of Knowledge⁶ in child care and education (steps are from 1 to 12 with 12 denoting the highest level of professional development). The steps can be achieved through three pathways: (1) degree or certificate, (2) college course credit, and (3) community based training. Under certain conditions some persons are assigned a Registry step 1 or 2 but they cannot achieve a step higher than 2 without enrolling in the Registry. A person has to apply to the Registry to gain a step 3 or higher. Persons who have enrolled in the Registry have submitted extensive amounts of data such as degree transcripts and training records and have completed surveys about their views on professionalism. Degrees in the following areas are considered "in the field": early childhood education, child development, human development, elementary education, human ecology, home economics, family and consumer studies, child and family studies, education, and special education-early intervention. For further information about the Registry see <http://www.pdx.edu/occd/oregon-registry-2>. In this study we use only those steps that have been earned by a workforce member based on documented training and education.

For this study we are using ORO data and it is important to note that the Registry data is captured in that database. Whereas all persons in the Registry are in the ORO database, not all persons in the ORO database have a step on the Registry. Data are more complete for persons who have applied to be part of the Registry than they are for persons whose data has been entered only as a part of the licensing process.

⁶ Core knowledge categories include: diversity; families and community systems; health, safety & nutrition; human growth and development; learning environments & curriculum; observation & assessment; personal, professional & leadership development; program management; special needs; and understanding and guiding behavior.

Samples

In July 2013, Oregon State University (OSU) received a data download that included everyone in the ORO data system. As part of this download, OSU received data containing all the individuals who had received a BGECTC scholarship since tracking began in 2002. A sample was created of the 3,178 unique individuals who received a BGECTC scholarship from 2002 through July 2013.

A second sample was created that included the entire 2012 child care workforce. This dataset was created in order to answer the second research question comparing the descriptive characteristics of the 2012 workforce with characteristics of the scholarship recipients. To be included in the 2012 workforce individuals had to be:

- employed in regulated facilities, and
- working directly with children and families, operationalized by employment in the following positions – Aide I, Aide II, Assistant I, Assistant II, Director, Head Teacher, Provider, Teacher, Teacher's Aide, Site Directors/Supervisor,⁷ and
- known to be working in regulated facilities in 2012. This criterion was based on the individual's end date, hire date, and start date information.⁸

The 2012 workforce sample included 20,873 unique individuals.

Using these two samples, we created a third sample that included 2,044 scholarship recipients who met the 2012 child care workforce criteria – those scholarship recipients who were employed in a regulated facility and working directly with children in 2012. Having this third sample made possible comparing scholarship recipients to the entire child care and education workforce since as of 2012 Oregon had a database with some data on every person who worked in a regulated child care and education facility.

Descriptive Measures

The following measures were used to describe the individuals in the above samples.

Scholarship Awards. Several variables were created to describe scholarship awards:

- (1) Total number of scholarship awards received by an individual from 2002 to July 2013. This number does not include scholarships administered through community colleges that are used to help providers attain a college degree.
- (2) Date of the first scholarship award received.
- (3) Date of the most recent scholarship award received.
- (4) Number of scholarship awards received by each individual for each type of scholarship. The seven scholarship types included: *not-for-credit training*, *credit coursework*, *barrier reduction*, *CDA related*, *OR Registry credential*, *accreditation support*, and *conference*. Because conference was not identified as its own category until recent years we combined conference with not-for-credit training. We created a category called other that included: barrier reduction, CDA related, OR Registry credential, and accreditation support. The variables used for analysis included: *not-for-credit training*, *credit coursework*, and *other*.

⁷ Using positions defined by the Office of Child Care for use in licensing, we worked with a group of stakeholders to determine the positions in which individuals primarily work directly with children and thus qualified as being part of the child care workforce.

⁸ End date needed to be greater than 12/31/11; hire date needed to be less than 12/31/12; and start date also needed to be less than 12/31/12. Hire date trumped start date because it is viewed as more accurate.

Demographics. Individuals reported on their ethnicity, gender, age, and primary language on an optional basis, as part of their paperwork for any of the programs managed by OCCD. The ethnicity question asks "what racial/ethnic background best describes you? If you do not identify with any of the choices given, please check the other box and list your preferred choice." The choices included: American Indian/Alaskan Native, Asian, Black or African American, Hispanic/Latino/Spanish, Native Hawaiian or other Pacific Islander, White, and Other. It is important to note that because race and ethnicity were asked in the same question we were not able to accurately identify Hispanic individuals as they can be of any race. We created a variable representing self-reported ethnic minority status: 0="White" and 1="non-White".

The question on "what is your primary language" was an open-ended question, but the data were entered into ORO for the following categories: *English, Spanish, Russian, Vietnamese, Chinese (traditional), and Other*. A variable representing whether or not the provider reported English as one of their primary languages was created. The variable was coded as 0="English listed as a primary language" and 1="English not listed as a primary language".

Level of Education. Level of education came primarily from self-reported data on highest level of education collected on the ORO enrollment form. The categories included: *less than high school; high school diploma; GED; certificate from college, school, or professional association; 2 year college degree; BA/BS; MA/MS; PhD or EdD; other; and unknown*. We also had data on verified degrees starting with associate's college degrees and going through doctorates. If an individual had a verified degree that was higher than the self-reported degree or only had a verified degree and no self-reported degree, the verified degree was used as their highest level of education.

Education Awards. An *Education Award* is a financial incentive that rewards providers for educational achievements and encourages continued professional development. The award is provided to individuals and supervisors who are working at least 20 hours a week with children under the age of 13. The award amount is based on the professional development milestone the provider has achieved. These milestones are identified by a group of steps on the Registry (see Table 1). For example, milestone 1 corresponds to Registry steps 3 through 6 and is associated with an education award of \$100.

Table 1. Linkage Between Milestones, Registry Steps, and Dollar Amount of Education Awards.

| | Registry Step(s) | Education Award |
|-------------|------------------|-----------------|
| Milestone 1 | 3-6 | \$100 |
| Milestone 2 | 7-8.5 | \$250 |
| Milestone 3 | 9+ | \$500 |

In addition to capturing the number of Education Awards received, a variable was created that captured the number of Education Awards received per milestone.

Career Orientation. Individuals were invited to complete a survey of attitudes about professional development at the time of a) new enrollment in the Registry, b) updating their Registry profiles as part of an application for a new step on the Registry, or c) as part of an application for a scholarship or Education Award. As part of the survey of attitudes about professional development individuals were asked, "Do you consider your work in child care and/or education (not necessarily in this same position or setting) to be

short-term or long-term? Would you say..." Response options included: 1=*definitely temporary or short-term*, 2=*probably temporary or short-term*, 3=*probably longer-term*, and 4=*definitely longer-term*.

Professionalism Attitudes. Individuals were also asked five questions about professionalism attitudes on the professional development survey. Each question was rated on a four-point scale from 1=*strongly disagree* to 5=*strongly agree*. Items included: "*Child care providers and educators are professionals*", "*Being a child care provider/educator is a professional career*", "*I feel I am a child care/educational professional*", "*I am part of a community of child care/educator professionals*", "*It is important to me to improve my education and/or training in child care/education*". Lipscomb (2012) found the inter-item correlations for these items to be high ($r = .93$ to $.97$, $p < .01$). Scores were aggregated and divided by 5 into a total score for professionalism attitudes.

Desired Capacity and Percentage of Subsidized Children. For all those who worked in the 2012 workforce (whether they received a scholarship or not), we had a license number of their primary employer. Facility data from the 2012 Oregon Market Price Study (MPS) was matched with the license number for those facilities in which workforce members were employed in 2012. If a facility did not charge a price they were not included in the MPS database and thus we did not have either capacity or percentage of subsidized children in that facility. We used workforce facility license number to match with child care subsidy data in order to measure if the person worked in a facility that served low-income children. We then compared scholarship and nonscholarship recipients in the 2012 workforce.

Registry Steps. For this study three descriptive variables were created – *initial step*, *most recent step*, and *days since initial step*. *Initial step* and *most recent step* had a possible range from 0 to 12 with half step increments at steps 7.5, 8.5, and 9.5. *Initial step* measured the step that a provider was initially awarded upon enrollment in the Registry. *Most recent step* was the highest step achieved by the end of the study period (June, 2013). *Days since initial step* measured the number of days from the date of the individual's initial step to the end of the study period (June, 2013).

Outcome Measures

Two outcome measures were used to measure a recipient's professional development – increase in Registry step and training hours.

Increase in Registry Step. We created *step increase*, a measure of the difference between an individual's most recent step and their initial step. Observed *step increases* ranged from 0 to 9 including half step increases.

2012 Training Hours. Two measures were created for 2012 training hours. First, for those who earned training hours in the calendar year 2012, a variable was created that captured the number of training hours earned in that year. Second, using the information on their primary position held in 2012, we created a measure of the number of 2012 training hours earned in excess of hours required for their position. Both of these measures were continuous variables.

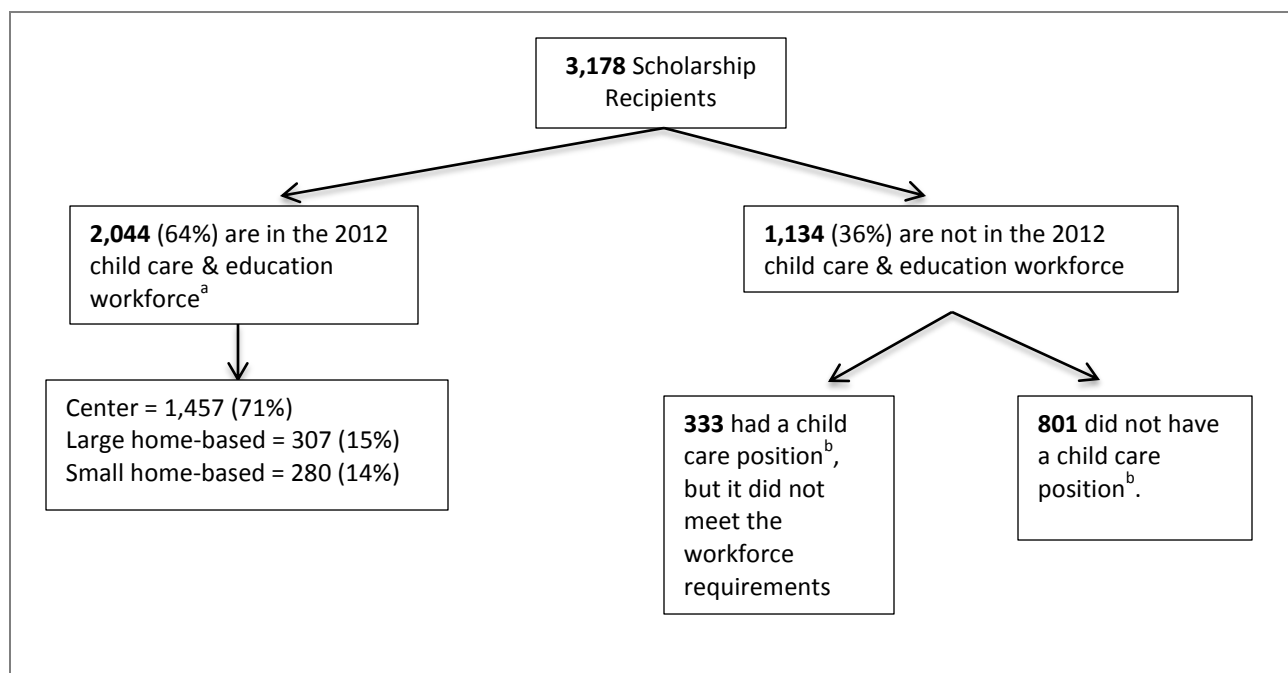
Findings

The following section presents the study findings. The section is presented in two sections: a) characteristics of individuals, and b) predictors of increased professional development.

Characteristics of Scholarship Recipients, the 2012 Child Care and Education Workforce, and the Populations They Served

The Betty Gray Early Childhood Training and Certification (BGECTC) Scholarship Program served, on average, 700 providers annually. Almost 8,000 scholarships were awarded over the 11 years in this study (2002 through June 2013), but, on average, about half of recipients in a given year were persons who had received a prior scholarship. Thus, 3,178 unique individuals had received one or more scholarships over the 11 years. Of these recipients, 2,044 (64%) met the criteria for being in the 2012 child care and education workforce (Figure 1). Over two-thirds of those scholarship recipients in the 2012 workforce (71%) worked in center care, 15% in large home-based care, and 14% in small home-based care. Of the 3,178 unique scholarship recipient, 1,134 (36%) did not meet the criteria for being in the 2012 workforce. Almost 30% of those not in the 2012 workforce (n=333) had a child care position, but it did not meet the 2012 definition of workforce created by child care partners. The remaining 70% (n=801) did not have a child care position in 2012.

Figure 1. Scholarship Recipients Who Received a BGECTC Scholarship from 2002-2013.



^a Child Care and Education Workforce includes the following positions: Aide 1, Aide 2, Assistant 1, Assistant 2, Director, Head Teacher, Provider, Teacher, Teacher's Aide, Site Directors/Supervisor.

^b Positions that are not counted as part of the child care and education workforce include:

1) *Early child care workforce support*: Education Coordinator, Multi-Site Coordinator, Operator, Owner, Substitute Provider, Staff Member, Visitor.

2) *Neither workforce not workforce support*: Administrative support, Consultant, Cook, Driver, Health/Mental Health Worker, Nanny, Other, Trainer, Volunteer, Catholic Service Employee, Daughter, Oregon Zoo Employee, Other Adult, Resource and Referral, Son, Spouse/Partner, Executive Director, Manager, Student.

Type of Scholarship Received. Scholarship recipients in the 2012 workforce received on average three scholarships over the study period (Table 2). A large percentage (69%) of these scholarships were given for not-for-credit training. The remainder were given for credit coursework (15%), and for other activities such as barrier reduction and activities related to earning a CDA (16%). Those not in the 2012 workforce received significantly fewer scholarships (two rather than three). A smaller percentage received scholarships for not-for-credit training compared to those in the workforce, but more received scholarships for credit coursework and other purposes.

Table 2. Number and Type of Scholarship Received by Scholarship Recipients In and Not in the 2012 Child Care Workforce.

| | In 2012 Child Care Workforce (N=2,044) | Not in 2012 Child Care Workforce (N=1,134) |
|---|---|---|
| | <i>Mean/Frequency (Std. Dev)</i> | <i>Mean/Frequency (Std. Dev)</i> |
| Number of scholarships received** | 3.16 (3.36) Range: 1-32 | 2.07 (2.05) Range: 1-20 |
| Type of scholarship received (<i>includes all scholarships for each individual under each type</i>) | | |
| Not-for-credit training | 69.3% | 64.0% |
| Credit coursework | 14.7% | 18.9% |
| Other (barrier reduction, CDA related, OR Registry credential, accreditation support) | 15.9% | 17.1% |

**p<.01

Characteristics of the Scholarship Recipients. Table 3 shows that the ages of the scholarship recipients in the 2012 workforce ranged from 19 to 83 years, with an average of 43.2 years (SD = 12.5 years). Participants were 97% female. The majority (74.2%) reported White/Caucasian ethnicity. About a quarter of recipients were minorities and included American Indian (<1%), Asian/Pacific Islander (2.5%), African American (3.7%), Hispanic (16.6%), Native Hawaiian (<1%), and Other (1.5%). This exceeded the state average of only 18% of Oregonians over 18 years of age who were minorities (U.S. Census, 2011). Sixteen percent of scholarship recipients had a primary language other than English. Among that 16%, 12% reported Spanish as their primary language followed by Russian (1%) and less than 1% report either Vietnamese or Chinese (traditional). For 37% of recipients, high school diploma was the highest level of education reported. About half of recipients (49%) had received an associate's degree (AA or AS) or higher. On average, the number of Education Awards recipients received was 1.12. Recipients indicated, on average, probably being in the field long term and their perception of professionalism was high with an average score of 4.45 out of a possible 5.

Scholarship recipients in the 2012 workforce differed significantly from those not in the workforce on age, ethnicity, primary language, level of education, number of Education Awards earned and career orientation. Scholarship recipients in the 2012 workforce were more likely to be older on average (43.2 versus 42.1), to be nonwhite (26% compared to 22%), and have a primary language other than English (16% versus 9%). Scholarship recipients in the 2012 workforce were also more likely to have a high school diploma as their highest level of education (37% versus 18%) and less likely to have earned an associate's degree or above (49% versus 76%). Those not in the 2012 workforce earned slightly fewer Education Awards (1.12 compared to 1.06) and were significantly less likely to consider having a career in the child care and education field.

Table 3. Characteristics of Scholarship Recipients of Those In and Not In the 2012 Child Care Workforce.

| Variable | In 2012 Child Care Workforce (N=2,044) | | Not in 2012 Child Care Workforce (N=1,134) | |
|--|---|----------------------------------|---|----------------------------------|
| | <i>N Missing</i> | <i>Mean/Frequency (Std. Dev)</i> | <i>N Missing</i> | <i>Mean/Frequency (Std. Dev)</i> |
| Age* | 0 | 43.2 (12.50) Range: 19-83 | 132 | 42.1 (12.80) Range: 16-83 |
| Gender | 64 | | 74 | |
| Male | | 3% | | 4% |
| Female | | 97% | | 96% |
| Ethnicity** | 280 | | 202 | |
| American Indian | | <1% | | <1% |
| Asian | | 2.5% | | <1% |
| Black | | 3.7% | | 2.7% |
| Hispanic/Latino/Spanish | | 16.6% | | 15.1% |
| Native Hawaiian | | <1% | | <1% |
| White | | 74.2% | | 78% |
| Other | | 1.5% | | 3.7% |
| Primary Language** | 194 | | 102 | |
| English | | 83.8% | | 90.5% |
| Spanish | | 12.4% | | 8.9% |
| Russian | | 1.0% | | <1% |
| Vietnamese | | <1% | | <1% |
| Chinese (Traditional) | | <1% | | - |
| Other | | 2.2% | | <1% |
| Level of Education** | 485 | | 923 | |
| Less than high school degree | | 3.3% | | 1.4% |
| High school diploma or GED Certificate | | 36.8% | | 18.0% |
| AA/AS | | 10.9% | | 4.7% |
| BA/BS | | 17.8% | | 21.8% |
| Post Graduate (MA/MS, PhD) | | 24.3% | | 39.3% |
| | | 6.9% | | 14.7% |
| Number of Education Awards** | 626 | 1.12 (0.35) 1-4 | 858 | 1.06 (0.23) 1-2 |
| Career orientation** | 775 | 3.80 (0.44) Range: 1-4 | 920 | 3.65 (0.57) Range: 1-4 |
| Professional attitudes | 769 | 4.45 (1.27) Range: 1-5 | 915 | 4.40 (1.27) Range: 1-5 |

*p< .05; **p<.01

The 2012 Child Care and Education Workforce. Examining the entire 2012 child care and education workforce provided context for comparisons of those in the workforce who did and did not receive a scholarship. Receipt of an Education Award and participation in the Registry also indicate engagement in professional development so we examined all three: scholarship receipt, receipt of Education Award, and participation in the Registry. Looking at the entire workforce, 9.8% of the workforce received one or more BGECTC scholarships, almost twice as many received one or more Education Awards (18.4%) and a slightly larger percent were enrolled in the Registry (22.0%) (Table 4). Type of care emerged as an important descriptor of workforce member behavior. It was associated with participation in BGECTC, Education Awards, and the Registry. To further understand participation in these professional development initiatives, we calculated the percentage of the workforce who received these initiatives by each type of care. Overall, almost three-quarters of the 2012 child care and education workforce were employed in centers (72%) with the rest of the workforce employed in large and small home-based facilities (11% and 17%, respectively). In terms of BGECTC, those working in large home-based facilities were the most likely to have received a scholarship (13.4%), while those employed in centers and small home-based facilities were less likely to do so (9.7% and 8% respectively). Both center-based and large home-based (19.1% and 19.7%, respectively) were more likely than small home-based (14.5%) to have received one or more Education Awards. In terms of Registry enrollment, workforce members were more likely to have enrolled in the Registry than to have received a BGECTC scholarship or Education Award. Slightly more than 23% of all those who worked in centers or large home-based facilities had enrolled in the Registry and earned a step while 16.6% of small home-based providers had done so.

Table 4. 2012 Child Care and Education Workforce and Participation in BGECTC, Education Awards, and the Registry by Type of Care.

| | Entire Child Care and Education Workforce (N=20,873) | Type of Care | | |
|---|--|-------------------------|----------------------------|----------------------------|
| | | Center-Based (N=15,069) | Large Home-Based (N=2,295) | Small Home-Based (N=3,509) |
| Percent who were in BGECTC | 9.8% | 9.7% | 13.4% | 8.0% |
| Percent who received one or more Education Awards | 18.4% | 19.1% | 19.7% | 14.5% |
| Percent who were in Oregon Registry Career Lattice (Registry) | 22.0% | 23.1% | 23.3% | 16.6% |

For the remainder of the analyses we divided the 2012 workforce into two groups: scholarship recipients and nonscholarship recipients. Although scholarship recipients employed in the 2012 workforce differed significantly from scholarship recipients who were not in the 2012 workforce, they differed little from those who never received a scholarship. Table 5 shows that scholarship recipients, when compared to those in the 2012 workforce who did not receive a scholarship, were significantly more likely to be older (43 versus 38 years old on average, respectively) and more likely to be female (97% versus 95%, respectively). They did not differ significantly on other characteristics.

Although scholarship recipients did not differ significantly on other characteristics, a slightly higher percentage of scholarship recipients in the 2012 workforce were nonwhite (26% versus 25%) and spoke a language other than English (16% versus 15%) compared to nonscholarship recipients in the workforce. The percentage of those with an associate's degree (AA or AS) or higher was basically the same for scholarship and nonscholarship recipients (49%).

Table 5. Comparison of Characteristics of Scholarship and Nonscholarship Recipients in the 2012 Child Care Workforce.

| Variable | Scholarship Recipients in 2012 Child Care Workforce (N=2,044) | | Nonscholarship Recipients in the 2012 Workforce (N=18,829) | |
|-----------------------------|---|--------------------------------------|--|--------------------------------------|
| | <i>N Missing</i> | <i>Mean/Frequency (Std. Dev)</i> | <i>N Missing</i> | <i>Mean/Frequency (Std. Dev)</i> |
| Age** | 0 | 43.2 (12.49) Range: 19-83 | 53 | 37.92 (13.59) Range: 18-91 |
| Gender** | 64 | | 8204 | |
| Male | | 3% | | 5.1% |
| Female | | 97% | | 94.9% |
| Ethnicity | 280 | | 9310 | |
| American Indian | | <1% | | 1.7% |
| Asian | | 2.5% | | 4.3% |
| Black | | 3.7% | | 2.4% |
| Hispanic/ Latino/Spanish | | 16.6% | | 13.7% |
| Native Hawaiian | | <1% | | <1% |
| White | | 74.2% | | 75.5% |
| Other | | 1.5% | | 1.7% |
| Primary Language | 194 | | 8192 | |
| English | | 83.8% | | 84.8% |
| Spanish | | 12.4% | | 9.3% |
| Russian | | 1.0% | | 2.0% |
| Vietnamese | | <1% | | 1.2% |
| Chinese (Traditional) | | <1% | | <1% |
| Other | | 2.2% | | 1.9% |
| Level of Education | 485 | | 8591 | |
| Less than a HS diploma | | 3.3% | | 4.2% |
| HS diploma or GED | | 36.8% | | 39.7% |
| Certificate from college | | 10.9% | | 7.3% |
| AA/AS | | 17.8% | | 12.2% |
| BA/BS | | 24.3% | | 27.9% |
| Post Graduate | | 6.9% | | 8.8% |

**p<.01

Populations Being Served. An important policy question is the extent to which professional development investments improve the care and education of low-income children. Oregon’s child care subsidy program targets very low-income children and thus provides an indicator of the extent to which those who received scholarships were working with low-income children.

Sixty percent of scholarship recipients in the 2012 workforce who were working in a center were working in a facility that cared for at least one child whose care was subsidized by the child care subsidy program (Table 6). The percentage was smaller for those who worked in a large or small home-based care (52% and 38%, respectively). However, scholarship recipients were significantly more likely to be working in facilities of all types with at least one child on subsidy than those in the 2012 workforce who did not receive a scholarship.

Table 6. Percentage of Individuals Who Worked in a Facility with at Least One Child on Subsidy: Comparison Between Scholarship and Nonscholarship Recipients in the 2012 Child Care Workforce.

| | Percentage Working in Facility Serving Subsidy Child(ren) |
|---|---|
| Center*^a | |
| Scholarship recipients in 2012 child care and education workforce (N=2,044) | 60.2% |
| Nonscholarship recipients in the 2012 workforce (N=18,829) | 56.9% |
| Large Home-Based Care*^b | |
| Scholarship recipients in 2012 Child care and education workforce (N=2,044) | 51.7% |
| Nonscholarship recipients in the 2012 workforce (N=18,829) | 45.2% |
| Small Home-Based Care*^c | |
| Scholarship recipients in 2012 child care and education workforce (N=2,044) | 38.1% |
| Nonscholarship recipients in the 2012 workforce (N=18,829) | 30.6% |

*p< .05

^a N for Scholarship Recipients (1,457 w 354 missing); N for Nonscholarship Recipients (13,611 w 4,181 missing)

^b N for Scholarship Recipients (307 w 46 missing); N for Nonscholarship Recipients (1,989 w 455 missing)

^c N for Scholarship Recipients (280 w 41 missing); N for Nonscholarship Recipients (3,229 w 1,059 missing)

Predictors of Increased Professional Development

We created two measures of professional development achievement: a) an increase in an earned step on the Oregon Registry Career Lattice, and b) the number of training hours earned in 2012. We begin this section with descriptive characteristics of both outcome measures and then we model separately how the characteristics of scholarship recipients predicted achievement of each outcome.

Increased Registry Step. The top part of Table 7 provides a breakdown of the step data for scholarship and nonscholarship recipients in the 2012 workforce by those who:

- did not have any step data,
- received an automatic step 1 or 2 when they submitted their training to ORO and met the requirements for either step, and
- submitted a direct Registry application and were verified as having a step 1 or higher.

We distinguished those who received an automatic step from those whose step was verified because those with an automatic step did not enroll in the Registry or document their education and training and could not receive a step above 2. Those with a verified step were deliberate in filling out an application, documented education and training, and could gain a step higher than 2. Results showed that scholarship recipients were far more likely than nonscholarship recipients in the workforce to have earned a verified step on the Registry (79% versus 16%).

Table 7. Comparison of Oregon Registry Career Lattice Advancement for Scholarship and Nonscholarship Recipients in the 2012 Workforce.

| | Scholarship Recipients in the 2012 Workforce (N=2,044) | | Nonscholarship Recipients in the 2012 Workforce (N=18,829) | |
|------------------------|--|-------------|--|-------------|
| | # | % | # | % |
| No step | 103 | 5% | 6,174 | 33% |
| Automatic step 1 & 2 | 328 | 16% | 9,667 | 51% |
| Verified step 1 and up | 1,613 | 79% | 2,988 | 16% |
| Total | 2,044 | 100% | 18,829 | 100% |

| | Scholarship Recipients in the 2012 workforce | Nonscholarship Recipients in the 2012 Workforce |
|---|--|---|
| # who had a verified step 1 or higher | 1,613 (79%) | 2,988 (16%) |
| % of those with step who did not increase their step | 1,195 (74%) | 2,693 (90%) |
| % of those with a step who did increase their step | 418 (26%) | 295 (10%) |
| Average and median of initial step** | Average=7.67 Median=7.0 | Average=9.11 Median=11.0 |
| Average and median of step at the end of the study period** | Average=8.37 Median=8.0 | Average=9.38 Median=11.0 |
| Average of step increase** | Average=0.55 | Average=0.21 |

**p<.01

In the lower part of Table 7 we look specifically at these individuals who earned a verified step. A larger percentage of scholarship recipients in the 2012 workforce increased their step than those who did not receive a scholarship (26% versus 10%). Half of scholarship recipients had a step 8 or less at the end of the study period compared to half of nonscholarship recipients who had a step 11 or less.⁹ However, given that only 16% of nonscholarship recipients in the 2012 workforce had an earned step, we could not know what the average step of nonscholarship recipients would be had they enrolled in the Registry in substantial numbers. The average step increase was higher for scholarship recipients (0.55) in comparison to those in the workforce who did not receive a scholarship (0.21).

⁹ We also looked at the average initial step and step at the end of the study period when including both the scholarship recipients who were automatically assigned a step with those who had a verified step. The average initial step was 5.34 and the average step at the end of the study period was 7.28.

2012 Training Hours and 2012 Training Hours in Excess of What was Required. Similar to Table 7, the upper part of Table 8 provides a breakdown of earned 2012 training hours for scholarship and nonscholarship recipients in the 2012 workforce by those who:

- did not have any training data reported,¹⁰
- had zero training hours required for their primary position in 2012, and
- were required for their primary position in 2012 to earn training hours greater than zero and had training hours reported.

Table 8. Comparison of 2012 Training Hours and 2012 Training Hours in Excess of What is Required by Scholarship and Nonscholarship Recipients in the 2012 Workforce.

| | Scholarship Recipients in the 2012 Workforce (N=2,044) | Nonscholarship Recipients in the 2012 Workforce (N=18,829) |
|--|--|--|
| | 2012 Training Hours | 2012 Training Hours |
| No training data reported | n=347 (17%) | n=7,377 (39%) |
| Zero training hours required | n=108 (5%) | N=2,155 (11%) |
| Training data reported and required training hours greater than zero | n=1,589 (78%) | N=9,297 (49%) |

| | Scholarship Recipients in the 2012 Workforce | Nonscholarship Recipients in the 2012 Workforce |
|---|---|--|
| Does not exceed required training hours** | 27.5% | 38.5% |
| Meets required training hours exactly | 2.8% | 4.5% |
| Exceeds required training hours** | 69.7% (exceed by an avg. of 15.1 hrs; median=10) | 56.9% (exceed by an avg. of 11.5 hrs; median=7.0) |
| 2012 Training Hours** | Average=23.0 Median=19.8 | Average=17.1 Median=15.0 |

**p<.01

¹⁰ There are various reasons why an individual may not have any training hours in 2012: (1) For new centers, staff are not required to have training hours to open. For new large home-based care, only the provider needs the safety set training not any assistants. (2) Training hours will be prorated if an individual moves from an Aide to a teacher position. (3) Training hours are prorated for staff who were not employed at the facility for the full licensing period. (4) Training hours for a small home-based provider are prorated if they move. (5) Providers who close their business and reopen are required to show 2 hours of training per 6 months that their license was in effect prior to closing her business. (6) Some training is not recorded such as training under 1 hour. (7) The 8 hours required for small home-based provider is taken over a 2-year period because the license is a 2 year license. (8) A large home-based provider who moves is given a new licensing start/end date at the certification of the new address and the provider is not required to show training at the start of this new certification period.

The majority of scholarship recipients (78%) had reported training hours and almost half (49%) of nonscholarship recipients had reported 2012 training hours. Of these individuals, a significantly larger percentage of scholarship recipients exceeded their required training hours than did those who did not receive a scholarship (69.7% versus 56.9%) (Bottom of Table 8). Scholarship recipients exceeded their training hours by an average of 15 hours; nonscholarship recipients by an average of 11.5 hours. When looking at the number of 2012 training hours earned, those with a scholarship averaged a significantly higher number of training hours than did those who did not receive a scholarship (23.0 versus 17.1).

It was also of interest to understand how policy relevant groups (racial/ethnic minorities and those whose primary language was not English) differed by step increase and earned 2012 training hours. Table 9 shows that scholarship recipients who were white had higher, but not significantly higher, step increases than did nonwhites (.60 vs .48). Similarly those whose primary language was English had higher, but not significantly higher, step increases than did those whose primary language was not English (.57 versus .48). Conversely, those who were non-white and those who had a primary language other than English were found to have earned significantly more hours of training than other scholarship recipients. Significant differences were also found for exceeding required training hours. Non-white and non-English speaking scholarship recipients exceeded 2012 required training hours significantly more than did other recipients (18.2 and 19.1 hours, respectively, compared to around 14 hours for white and primary English speaking recipients).

Table 9. Oregon Registry Career Lattice Advancement and 2012 Training Hours Breakdown by Policy Relevant Scholarship Recipients in the 2012 Child Care Workforce (N=2,044).

| Variable | Ethnicity Mean (Std. Dev) Range | | Primary Language Mean (Std. Dev) Range | |
|---|--|--|---|--|
| | White (n = 1328) | Non-White (n = 436) | English (n = 1550) | Non-English (n = 300) |
| Initial registry step | 7.88* (3.91) 1-14 | 7.14 (3.46) 1-14 | 7.88** (3.85) 1-14 | 6.59 (3.21) 1-14 |
| Registry step at the end of the study period (July, 2013) | 8.63** (3.65) 1-14 | 7.77 (3.34) 1-14 | 8.61** (3.59) 1-14 | 7.25 (3.27) 1-14 |
| Step increase | 0.60 (1.22) 0-8 | 0.48 (1.15) 0-9 | 0.57 (1.21) 0-9 | 0.48 (1.11) 0-8 |
| 2012 training hours | 22.11 (16.75) 0-202 Median=19.0 | 26.26** (17.99) 1-106 Median=22.5 | 22.14 (16.61) 0-202 Median=19.0 | 27.14** (19.16) 2-106 Median=23.0 |
| Exceeds 2012 required training hours | 14.0 (16.4) .50-187 Median=9.5 | 18.2** (17.0) .25-98 Median=13 | 14.3 (16.1) .25-187 Median=10 | 19.1** (18.4) .50-98 Median=12.8 |

* p < .05; ** p < .01; Comparison between white and non-white and English and non-English.

Predictors of Higher Level of Professional Development. As noted earlier we created two measures of professional development achievement for scholarship recipients: a) an increase in an earned step on the Registry and b) the number of training hours earned in 2012. We used multiple regression analysis to model how the characteristics of scholarship recipients predicted achievement of each outcome separately (Table 10). What predicted a step increase differed in many cases from what predicted a higher number of training hours. Thus we report and compare the predictors of each outcome together. For findings on each characteristic, all other characteristics were held constant. The key findings are:

- Receiving a higher number of scholarships significantly predicted increased training hours, but did not significantly predict increased steps on the Registry.
- Among workforce members who received a scholarship, receiving a higher number of Education Awards received was the strongest predictor for an increase in a step. For this same population, the number of Education Awards also predicted a higher number of training hours, but less strongly than did receipt of a scholarship.
- The type of training funded by a scholarship affected outcomes. When compared to paying for a not-for-credit training, paying for a credit course significantly predicted a step increase. It is interesting that paying for credit courses also predicted a significantly smaller number of training hours.
- Being nonwhite significantly and substantially predicted increased hours of training among scholarship recipients. Similarly, and even more substantially, having a primary language other than English predicted a higher number of 2012 training hours. These characteristics did not significantly predict step increase and for those with a primary language other than English the relationship was negative as well as not significant.
- Scholarship recipients with a higher initial Registry step were significantly less likely to increase a step but were more likely to increase their 2012 training hours. Being in the Registry for a longer period of time (days since initial step) significantly increased the likelihood of earning a higher step.
- All center-based providers were significantly more likely to increase a step than were home-based providers. Similarly, all positions except a center aide were significantly more likely to increase training hours in 2012 when compared to small home-based providers.
- Scholarship recipients with earned degrees were significantly more likely to increase their step than were those with a high school diploma. Although only significant for those with a bachelor's degree, these same higher levels of education predicted fewer hours of 2012 training.
- Although being older significantly increased the likelihood of earning more training hours, it significantly decreased the likelihood of increasing a step.
- Living in a nonmetropolitan community predicted a higher number of 2012 training hours but did not appear to be associated with step increases.

Table 10. Effect of Provider Characteristics on Step Increases and 2012 Training Hours for Scholarship Recipients in the 2012 Child Care Workforce (N=2,044).

| Variable | Step Increase (n=1,389) | 2012 Training Hours (n=1,216) |
|--------------------------------------|--------------------------------|----------------------------------|
| | Standardized Estimates | Standardized Estimates |
| Intercept | 0** | 0 |
| Days since initial step | 0.485** | not included |
| Age (continuous) | -0.038* | 0.052* |
| Gender (1=female) | -0.018 | -0.009 |
| Ethnicity (1=nonwhite) | 0.018 | 0.077* |
| Primary language (1=non-English) | -0.016 | 0.100** |
| Aide at a center | 0.064** | 0.036 |
| Director at a center | 0.052* | 0.124** |
| Teacher at a center | 0.103** | 0.174** |
| Assistant at large home-based care | 0.063** | 0.088** |
| Provider at large home-based care | 0.034 | 0.125** |
| Provider of small home-based care | omitted variable | omitted variable |
| Initial step (continuous) | -0.716** | 0.083* |
| Number of scholarships | -0.002 | 0.220** |
| Scholarship type – not-for-credit | omitted variable | omitted variable |
| Scholarship type – credit coursework | 0.044** | -0.081** |
| Scholarship type - other | 0.023 | -0.045 |
| Number of Education Awards | 0.302** | 0.103** |
| Less than HS diploma | -0.027 | -0.005 |
| HS diploma/GED | omitted variable | omitted variable |
| Certificate from college | 0.024 | 0.018 |
| AA/AS | 0.084** | -0.047 |
| BA/BS | 0.221** | -0.099** |
| Post Graduate Degree | 0.179** | -0.041 |
| Nonmetro | 0.021 | 0.078** |
| | <i>Adj-R² = .64</i> | <i>Adj-R² = .10</i> |

* p < .05; ** p < .01

Discussion

The Betty Gray Early Childhood Training and Certification (BGECTC) Scholarship Program serves, on average, 700 providers annually. The program plays a critical role in increasing the professionalism of the child care and education workforce as is documented by the much greater participation of scholarship recipients in the Registry than of workforce members that have not received a scholarship. Over three-quarters (79%) of scholarship recipients have earned a step in the Registry while less than one in five (16%) nonscholarship recipients in the workforce have earned a step. Among scholarship recipients, about half with earned steps have achieved step 8 or higher (an associate's degree in early childhood earns a person a step 9).

A policy priority is that workforce investments benefit children from low-income families and that is the case with the BGECTC Scholarship Program. Almost sixty percent of scholarship recipients in the workforce who are working in a center are working in a facility that cares for at least one child whose care is financed with a state subsidy¹¹. This percentage is smaller for those who work in a large or small home-based care facility (52% and 38%, respectively). Regardless of type of care in which they are employed, scholarship recipients are significantly more likely to be working in facilities with at least one child whose care is financed with a state subsidy than are those in the workforce who do not receive a scholarship.

About a quarter of scholarship recipients are minorities compared to only 18% of Oregonians over 18 years of age being minorities (U.S. Census, 2011). The program also successfully reaches persons whose primary language is other than English. However, these percentages are only slightly higher than those of nonscholarship recipients in the workforce, showing that the workforce itself is composed of high percentages of minorities and those whose primary language is other than English.

Findings indicate that strategies that support step increases often differ from those that predict higher levels of training hours. For example, for-credit coursework is significantly less likely to influence a higher number of training hours, but does predict increases in steps. Under BGECTC Scholarship Program policies in place during this study period, the number of scholarships received does not predict increases in steps although it does predict a higher number of training hours.

The amount of dollars associated with an Education Award depends on the step achieved. A person can earn additional awards only by increasing a step. The number of Education Awards earned significantly and substantially predicts a step increase as well as higher numbers of training hours. It may be that a financial reward tied directly to the desired behavior (step increase) is effective at supporting that behavior. It is worth noting that the Oregon Community Foundation made possible the continuation of the Education Awards program and funded it until such time as a public funding source was identified.

The difficulty of increasing a step increases as a person moves up the Registry. Therefore it is not surprising that having a higher initial step negatively predicts a step increase. Persons who enter at lower steps are more likely to achieve a step increase. At the same time, persons with an associate's degree or higher are more likely to increase a step. Half of scholarship recipients enter at a step 7 or lower. It may be that those most likely to move forward are those with some college as well as lower steps.

¹¹ Oregon's child care subsidy program is administered by the Department of Human Services. It provides financial assistance to help pay child care costs of employed low-income parents.

Small home-based child care providers present a special case. Of the three types of child care they are the least likely to participate in BGECTC, Education Awards, or enroll in the Registry. Compared to persons in all other positions regardless of type of care, they are the least likely to increase a step. They are also less likely to earn higher training hours than those in any position other than center aides. It is worth noting that there is no training hour requirement for center aides and the requirement for small home-based child care providers is substantially lower than for other positions. These findings raise issues about the likelihood that many small home-based providers will be able to achieve a QRIS rating above that of a Commitment to Quality.

This study has limitations. First, our measure of training hours was reliable only for 2012, yet we were measuring step increases that occurred since the scholarship program began in 2002. Thus, we could not accurately assess the relationship between training hours and step increase. Second, although our model for predicting step increases captures 64% of the variance, the model for predicting higher number of training hours explains only 10% of the variance. While the model includes those individual and community characteristics that the literature would indicate as likely to predict differences in training hours, we do not know if the low adjusted R-square is due to the absence of another key predictor(s) we could not measure.

Recommendations

The following recommendations flow from the findings of the evaluation study.

Recommendation 1. Clarify goals for the BGECTC Scholarship Program.

Oregon child care and education partners have identified a range of goals for professionalization of the child care and education workforce and current BGECTC policy supports a number of them. The child care and education field is changing, due in no small measure to the contribution that The Oregon Community Foundation has made in increasing professionalism. BGECTC program goals should be reviewed in light of the changes in the field. The finding that scholarship receipt is associated with increased training hours but not with an increase in steps indicates that it may be important to review goals in light of current demands on the workforce associated with QRIS and other quality initiatives. A broad range of child care and education partners should examine and prioritize the goals on which the BGECTC scholarship program should be focused.

Recommendation 2. Examine BGECTC Scholarship Program policies and practices in light of the need for workforce members to increase steps on the Oregon Registry Career Lattice.

Slightly more than three-quarters of scholarship recipients had earned a step but about half of them had earned relatively low steps (a step 8 or less) and low step levels will challenge the ability of child care and education programs to get a QRIS rating above the Commitment to Quality level. Under current scholarship policies the number of scholarships received predicts increased training hours but not step increases. Based on these findings we recommend that the BGECTC Scholarship Program review scholarship program policies and practices to ensure that they encourage recipients to earn and then increase their step. As of 2011-2012 the BGECTC Scholarship Program revised its eligibility rules to require scholarship recipients to enroll in the Registry and be assigned a step. This requirement should be retained in order to encourage earning a step. Additionally, a review of policies and practices would identify those that encourage step increases. For example, consider prioritizing usage of scholarship dollars for credit courses which were found to predict a step increase. Also consider targeting scholarships to persons who have more than a high school education but a relatively low step as findings indicate these persons were more likely to increase a step. Implementation of QRIS has increased the demand for workforce members with higher steps on the Registry. The scholarship program will be likely to have a greater impact on increasing the supply of workforce members with higher steps if BGECTC policies and practices focus on ensuring that recipients earn a step and then work to increase it.

Recommendation 3. Target minorities, especially those whose primary language is not English.

Findings show that scholarship recipients who are minorities or whose primary language is not English take more hours of training than other scholarship recipients but are less likely to increase steps. If step increase is a goal, clarify the type of training that will increase the likelihood of achieving a step increase and use these findings to guide minorities and those with languages other than English toward training that will support achievement of step increases.

Recommendation 4. Engage small home-based providers in an effort to increase participation of this group in the BGECTC Scholarship Program.

Findings indicate that small home-based providers are less likely to participate in the BGECTC Scholarship Program than are other members of the child care and education workforce. Oregon parents typically use home-based care for children under age three when children are developing rapidly (Weber & Finders, 2013). These providers play an important role in meeting the needs of children. Scholarship recipients in almost all other positions are more likely to increase a step and to have more training hours. The ability of small home-based providers to achieve a quality rating may be hindered by their lower levels of participation in professional development. Convening a group of child care and education leaders, including those working in small home-based child care businesses, may help identify strategies specifically designed for this population.

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