Using Return on Investment to Evaluate Child Welfare Training Programs

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The impact of child abuse and neglect has affected many aspects of society beyond just those in child welfare. In 2010, there were 408,425 children in foster care in the United States (U.S. Department of Health and Human Services, 2011), and at least that many children who were living in the homes of their parents but under the jurisdiction of a Child Protective Services (CPS) agency. Researchers have also conservatively estimated that there are over 52,000 CPS workers in the nation providing services to these children (Barth, Lloyd, Christ, Chapman, & Dickinson, 2008). Based on estimates by Wang & Holton (2007), the annual economic impact of child abuse and neglect amortized for inflation is over $111 billion, of which less than 25 percent is directly related to child welfare expenditures. The other expenditures relate to the impact on the health, judicial, and education systems and to the loss to society in terms of productivity.

Collins (2008) suggested that the field of child welfare is a very difficult area of practice involving many social problems of children and families that require a high level of expertise from child welfare workers. Collins, Kim, and Amodeo (2010) argued that any best child welfare practice has a worker at the core who can demonstrate knowledge of a content area, attitudes that are supportive of the children and families they serve, and skill in the delivery of a specific service. It is because of this needed expertise that training is such a fundamental part of child welfare services. In fact, training is so critical that the Child and Family Services Reviews (CFSRs), a process in which the federal government holds child welfare services agencies responsible, has included training as one of the seven elements related to the outcomes of safety, permanency, and well-being (van Zyl, Antle, & Barbee, 2011).

Public child welfare agencies spend large amounts of resources on training their staff to provide high-quality services (Collins, 2008), which in part is due to the high national annual average turnover rate of 26 percent for child welfare workers (CPS-Human Resource Services [CPS-HRS], 2006). Federal Title IV-E child welfare expenditures for training between 1995 and 2008 averaged $238.6 million annually and accounted for 3.9 percent ($3.3 billion) of the overall $85.1 billion in Title IV-E expenditures (U.S. House of Representatives Ways and Means Committee, 2011). Collins (2008) suggested that the evaluation of such training is important because of the need to ultimately identify the best means of conducting training that leads to best child welfare practices. Salas and Cannon-Bowers (2001) noted that, unfortunately, the evaluation of training is easier said than done. They said that this evaluation is resource intensive, has high costs associated with it, has political implications and, worst of all, could show that the training did not work. In fact, though training is important, there is very little evidence to establish that training has been effective in addressing very complex issues related to child welfare, such as cultural competency, diversity, and antiracism (Johnson, Antle, & Barbee, 2009).

The evaluation of the child welfare training has been historically guided by Donald Kirkpatrick's taxonomy of training developed more than 50 years ago (Antle, Barbee, & van Zyl, 2008; Kirkpatrick & Kirkpatrick, 2006). This taxonomy includes the reactions of workers (level 1) such as those indicated by course evaluations, learning (level 2) typically indicated by pre- and posttests, transfer of learning (level 3) as indicated by case reviews, and organizational impact (level 4) as measures of organizational statistics. More recently, others have suggested a fifth level of evaluation

called the return on investment (ROI) (J. J. Phillips, 1998; J. J. Phillips & Phillips, 2008). Unfortunately, there have been only two research studies on level 4 evaluation in child welfare in the last 40 years (Antle et al., 2008), and none that discusses the concept of ROI in the context of providing specific calculations for a local child welfare jurisdiction.

What ROI? Simply put, J. J. Phillips and Phillips (2008) suggested that a ROI is a metric that provides an immediate indication of the economic payoff of a training program. They also suggested that the ROI methodology involves five steps of cost–benefit analysis: (1) identify program benefits; (2) convert the benefits to some monetary value; (3) calculate the cost of the particular training program; (4) identify, if any, the intangible benefits (for example, savings used to cover a new worker's caseloads); and (5) compare the net cost of the benefits with the cost of the training program.

An approach that alluded to a potential positive ROI has been university–public agency collaborations for child welfare training. These collaborations have been in existence for years to leverage the expertise of university staff to provide education and training to child welfare agencies (Anthony & Austin, 2008). One such collaboration is the Inter-University Consortium (IUC), a partnership between the social work programs at six local universities (that is, California State University at Dominguez Hills, Long Beach, Los Angeles, and Northridge; University of California, Los Angeles; and University of Southern California) and the public agencies in Los Angeles County. The biggest collaboration is between the IUC and the Department of Children and Family Services (DCFS), with the intent to increase the professional skills and expertise of public child welfare staff through education and training. In fact, since fiscal year (FY) 1991–92, the IUC has provided training to over 120,000 staff representing more than 2.3 million staff-training hours on a myriad of issues, including, but not limited to, general child protective services, safety and risk, child development, mental health, and disproportionality. This extensive approach has included the provision of training to all new DCFS child welfare workers since FY 1991–92.

The current research will be the first to estimate ROI in the context of training for new child welfare workers in Los Angeles County. The research used preliminary information from historical archives of the IUC to estimate the current ROI for DCFS. The hypothesis is that there has been a strong ROI for DCFS because of the IUC training for new workers.

METHOD

Historical administrative data from the first year of the IUC training academies (FY 1991–92) were matched with those child welfare workers who were still working with DCFS in October 2010. On the basis of the percentage of workers who were still here, an annualized rate of worker turnover was calculated.

To calculate an ROI, one must convert any data to some monetary value to compare program costs (J. J. Phillips, 1998). The overall cost to replace a worker is approximately 115 percent of a worker's average salary (CPS-HRS, 2006). An average salary was calculated on the basis of publicly available information for child welfare workers who are called children's social workers (CSWs) in Los Angeles County. The American Public Human Services Association (APHSA) (2005) estimated that the national average time to fill a vacant position was approximately 10 weeks. Each newly hired CSW must spend time in an academy for new hires. Newly hired CSWs have no caseloads during the academy and partial caseloads for some time after the academy. If, for example, a CSW is without a caseload for one year (52 weeks), DCFS needs another experienced CSW to cover the new hire's caseload. If two newly hired CSWs are without a caseload for half a year (26 weeks), this is the equivalent of needing one experienced CSW to cover their caseloads for one year. The seemingly intangible cost of an uncovered caseload was calculated.

A subsequent aspect to the ROI is tabulation of the costs of the actual training (J. J. Phillips, 1998). These costs can include the salary of the trainer and of the employees who take the training. Information on the net county costs (NCC) (that is, actual dollar costs to Los Angeles County) are publicly available (DCFS, 2009), and the cost of training for academy workers was then calculated.

P. P. Phillips and Phillips (2004) suggested that the final step of the process is to calculate the ROI. First, a benefits-to-program cost ratio

(BCR) was calculated based on the formula:

$$\text{BCR percentage} = (\text{costs of benefits} - \text{program costs}) \times 100.$$

Then, the net monetary value of ROI (basically, the net gain after program costs are subtracted) was calculated based on the formula:

$$\text{ROI percentage} = [(\text{costs of benefits} - \text{program costs})/\text{program costs}] \times 100.$$

RESULTS

There were 141 newly hired workers in FY 1991–92, and 63 (45 percent) of the newly hired workers were still here after 18 years. This represents an annualized turnover rate of less than 5 percent. A conservative estimate then suggests an approximate 20 percent difference compared with the national average of 25 percent (rounded down for ease of conservative calculations). This means that for every 100 workers nationally, only 75 will be here after one year; the IUC average suggests that 95 workers will still be here after one year.

There is a way to conservatively calculate the cost savings in child welfare expenditures (see Table 1). The average number of DCFS newly hired workers in a year is 250 (about half are master's level). The difference of 20 percent suggests a "savings" of 50 workers (20 percent of 250 workers). The average newly hired worker makes an annual base salary of $41,800 with $4,100 benefits, for a total of $45,900 (Chief Executive Office [CEO], 2011a). It costs about $52,785 (that is, 115 percent of salary) to replace a worker in Los Angeles County.

Table 1: Calculation of Cost Savings for Newly Trained Workers					
Categories of Costs and Savings	%	(A) Number of Weeks (Unless Otherwise Noted)	(B) Number of Equivalent Workers (A/52)	(C) Savings per Worker	(D) Total Savings (B×C)
Average national worker turnover	25				
New worker turnover at DCFS of first-year IUC trainees	5				
Difference between national average and DCFS worker turnover	20				
Average number of new workers at DCFS annually		250			
Equivalent number of workers saved based on an IUC worker turnover difference of 20 percent			50		
Subtotal of annual savings as a difference between the national turnover rate for child welfare workers (25%) versus the IUC worker turnover rate (5%)			50	$52,785	$2,639,250
Savings of uncovered caseloads for graduate-level workers					
APHSA estimate to replace worker		10			
Academy time		7			
Post academy time		4			
Total weeks uncovered per worker		21			
Total weeks multiplied by number of graduate-level workers: 25		525			
Savings of uncovered caseloads for non-graduate-level degree workers					
APHSA estimate to replace worker		10			
Academy time		11			
Post academy time		13			
Total weeks uncovered per worker		34			
Total weeks multiplied by number of graduate-level workers: 25		850			
Subtotal of savings for uncovered caseloads of newly hired workers		1,325	26	$52,785	$1,372,410
Total savings					$4,011,660

Notes: DCFS = Department of Children and Family Services; IUC = Inter-University Consortium; APHSA = American Public Human Services Association.

One can then estimate uncovered caseloads on the basis of negotiated caseloads for new workers (CEO, 2011b). Workers with master's degrees in the social services field have no cases for seven weeks during the academy and the equivalent of four weeks in the first two months following the academy, for a total of 11 weeks. Thus, for each graduate-level worker who needs to be trained, there is an equivalent of 21 weeks of uncovered work (the APHSA's estimate of 10 weeks to replace vacant position plus the 11 weeks for uncovered caseload). If you multiply 21 weeks by 25 workers with graduate degrees, it would be the equivalent of 525 weeks uncovered.

Workers who do not have graduate degrees have no caseloads for 11 weeks in the academy, the equivalent of no caseloads for five weeks for the first two months after the academy, and the equivalent of eight weeks with no caseloads for the rest of their first year, for a total of 24 weeks. For each nongraduate degree worker who needs to be replaced, it is an equivalent of 34 weeks of uncovered work (10 weeks to replace vacant position, 24 weeks for uncovered caseload). If you multiply 35 weeks by 25 non-graduate-level workers, it would be the equivalent of 850 weeks of uncovered caseloads.

Adding 525 weeks of uncovered work for graduate-level new workers and 850 weeks for non-graduate-level new workers equals 1,325 weeks. Dividing 1,325 weeks by 52 weeks gives an estimate of 26 experienced workers who need to cover caseloads for new workers.

Adding the 26 experienced workers to the original 50 workers equals 76 CSWs "saved" in costs by the IUC model of retention. Multiplying 76 workers by $52,785 equals $4,011,660 in just retention savings. Given that the cost of academy training to the Los Angeles County is approximately half the overall NCC or about $311,562, the BCR percentage ($4,011,660 divided by $311,562) is 1,288 percent. The ROI percentage ([$4,011,660 minus $311,562] divided by $311,562) is 1,188 percent, suggesting that for every $1 of NCC there is a net savings of $11.88.

Wang and Holton (2007) noted that less than 25 percent of the overall economic impact of child maltreatment is directly related to child welfare expenditures, and so the total economic savings can be calculated by dividing the child welfare savings by 0.25. Thus, dividing the $4,011,660 in child welfare savings by 0.25 translates to $16,046,640

in overall economic impact savings. The overall economic savings BCR percentage ($16,046,640 divided by $311,562) is 5,150 percent. The overall economic savings ROI percentage ([$16,046,640 minus $311,562] divided by $311,562) is 5,050 percent. In other words, for every $1.00 of NCC, there has been a net savings of $50.50 in terms of overall economic impact.

DISCUSSION

The analysis suggests that there has been a significant ROI for DCFS training. In fact, there is almost a 12:1 ratio in terms of child welfare savings and more than a 50:1 ratio in the overall economic savings based on IUC programs.

J. J. Phillips (1998) cautioned that agencies have to be able to distinguish whether or not the ROI calculated is truly due to training, which is a limitation of this study. In essence, is all of the net return of $11.88 in child welfare expenditures for every $1.00 spent on training due to training? He suggested that there are a number of ways to increase the accuracy and credibility of the ROI calculation: using control groups; looking at trend lines; using experts who are line workers, supervisors, and managers to provide their estimates. These ways can potentially reduce the challenge of achieving agency buy-in to ROI. One can also bring in child welfare researchers to look at the variances and partial correlations (statistical methods of isolating the contribution of training to the net benefits) of the independent variables (for example, demographic factors, training factors) on the dependent variable of net benefits.

Aside from the limitation that the total ROI savings may or may not be directly due to training, there are two other major limitations. First, there is only preliminary long-term data of one year's worth of information. Unfortunately, most studies on child welfare worker retention have only looked at a period of less than 10 years (Antle et al., 2008). Second, this study looked at only two areas of cost savings—difference in worker turnover rate and coverage of caseloads, leading to a potential underestimation of savings. For example, a study by the National Council on Crime and Delinquency (2006) analyzed 12 California counties and found differences between counties with higher average worker turnover rates (26 percent) and those counties with lower average turnover rates (9 percent). High-turnover counties had twice the number of emergency response investigations

over 60 days (standard is under 30 days) than low-turnover counties. Second, substantiated reabuse and reneglect allegations were 250 percent greater for high-turnover counties in the first three months of care, 80 percent greater in the first six months of care, and 50 percent greater in the first 12 months of care than for the low-turnover counties.

The irony of the provision of training is that the trainings about evidence-based practices (EBPs) are offered without adequate empirical evidence of the effectiveness of the trainings themselves (Collins, 2008). Furthermore, at times, there are a number of different EBPs that an agency wants to implement concurrently, forcing multiple "mandated" trainings to staff in a short amount of time without an evaluative process. Those involved in training efforts are increasingly required to show some form of effectiveness of, or justification for the training (Collins, 2008), especially because training programs are often the first to be targeted for elimination in times of economic crisis and the first to be blamed for potential negative child welfare outcomes.

The ROI calculation is not the only calculation that could be used, but it can provide one important metric for an evaluation of training programs. This study has shown that in at least one jurisdiction the ROI is quite substantial. Future studies should build in more parameters to determine the link between ROI and each level of training evaluation. **SW**

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