

Research Evidence Use in the Child Welfare System*

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Research Evidence Use in the Child Welfare System

Introduction

In recent years, the field of child welfare has devoted increasing resources to improving research evidence use (REU) based on the assumption that increased REU will lead to more targeted policy and practice decisions, which will in turn improve outcomes for children. However, there has been surprisingly little research that examines whether using research evidence is linked to better outcomes for the clients served by organizations that use more research evidence than others.

In this paper, we present the first set of findings from the *Project on Research Evidence Use in Child Welfare* (the Project). Funded by the W. T. Grant Foundation as part of the Foundation's research evidence use portfolio, the Project has several aims. Empirically, we want to establish the extent to which the individuals who work for child welfare agencies use research evidence when making decisions about how to work with children and families. We focused here on private child welfare agencies by asking the individuals who work for such agencies to answer a series of questions about their research evidence use (REU). We asked those same individuals whether their organizations supported their use of research evidence. We also looked to see whether staff's use of research evidence was associated with characteristics of agencies and improvements in the permanency rate at the agency level. By virtue of a unique data source that links children to the providers that serve them, we were able to look squarely at the connection between evidence use and outcomes.

The paper is organized in four parts. We start with definitions of research evidence and research evidence use. Regarding research evidence, we take a broad view that extends beyond research findings tied to evidence-based interventions. Second, we define research evidence use, adopting the view that research evidence use is a process that begins with acquiring evidence and moves to its application or use. The third part of the paper connects evidence use with characteristics of workers, agencies, and the operating contexts via a theoretical model. Insofar as agency staff use evidence, we want to understand the person-level factors that influence evidence use. At the same time, we know that workers are affected by the context in which they work. Consequently, our model attempts to link organizational characteristics to worker behavior and attitudes. We also recognize that agencies work in an eco-political

context. For example, in some program areas, states have a stated preference for the use of evidence-based interventions, an imperative that could in time influence the rate at which agencies adopt a heightened appreciation for the value of research evidence. Our theoretical model is designed to articulate these relationships so that they can be tested empirically. In the fourth section of the paper, we isolate two research questions embedded in the model and present findings that examine the link between individual characteristics, evidence use, and placement outcomes.

What is Research Evidence?

Within academic and scientific communities, scholars identify various types of research (e.g., basic research, applied research, evaluation, etc.). Although the definitions of different research activities are open to some degree of interpretation, they share common fundamental principles, characterizing research as systematic, objective, and focused on the generation or application of new knowledge (Bloome, 2009; National Institutes of Health, no date; National Science Foundation, no date; Rabin, Brownson, Haire-Joshu, Kreuter, & Weaver, 2008).

Davies and Nutley (2008) reduce these core principles to a framework. They define “*research as a process (explicit, systematic, and open to scrutiny), the outputs of which are research findings. When these findings are used in support of an argument or position, they are being treated as evidence*” (p. 2, emphasis original). In its work, the W.T. Grant Foundation weaves these strands together: research evidence is “empirical findings derived from systematic research methods and analyses.” In establishing the research activities that may lead to such findings, the Foundation casts a relatively wide net, including “descriptive, intervention, evaluation, meta-analytic, and cost-effectiveness studies done by researchers working within or outside policy or practice organizations” (William T. Grant Foundation, 2011). These activities include studies that examine the effectiveness of particular interventions with children and families as well as the analysis of systematically prepared administrative data and reports (Administration for Children and Families, 2012; Barth, 2008; Tseng, 2009).

Although research comes in various forms, it is often the quality of the evidence that defines its potential impact. The quality of research evidence is a reflection of how methodologically rigorous the research is. Social scientists determine that rigor by holding research against standards related to instrument design, sampling, statistical analysis, and other technical

criteria. Knowledge brokers in the field of child welfare promote these standards to some extent; for example, in assessing the evidence-base for child welfare interventions; both the California Evidence-Based Clearinghouse for Child Welfare (no date) and the National Resource Center for Community-Based Child Abuse Prevention (2007) grade interventions based on the strength of the research done to test the efficacy of the interventions. Federal policy guidance takes a similar view, casting evidence-based interventions as those that show measurable improvements in the outcomes they are designed to affect, though falling short of defining standards for measurement or required degrees of improvement (Administration for Children and Families, 2012).

Recent studies also show that policymakers and practitioners of child- and youth-serving agencies hold a range of definitions for research evidence (Palinkas, Finno, Fuentes, Garcia, & Holloway, 2011), that they do not always distinguish research evidence from other forms of evidence (Nelson, Leffler, & Hansen, 2009), and that they use many different types and sources of evidence (research-based and otherwise) when making policy and practice decisions (Asen, Gurke, Solomon, Conners, & Gumm, 2011; Honig & Coburn, 2008; Nelson et al., 2009; Palinkas, Finno, et al., 2011).

For example, Nelson and colleagues (2009) found that education policymakers “define evidence broadly as local research, local data, personal experience, information from personal communications, gut instinct or intuition, and the experience of others, in addition to research evidence” and that they “did not draw a distinction between research evidence and general evidence derived from these other sources” (p. iv). Palinkas et al. (2011) found that child-serving agency leaders held numerous definitions for evidence-based practice, which included “practices that have been studied” but also those that “come with extensive training manuals or curricula” and those that “have been around for a long time.”

In our study, we adopted the view that research evidence is evidence that was gathered with a purpose in mind and according to generally accepted methods, defined as falling within a (social) science rubric. Research evidence is generated from processes that are explicit, systematic, and open to scrutiny. Research evidence and the studies that produce research evidence are diverse in method and subject matter. Research evidence includes, but is not limited to, findings pertaining to the use and effectiveness of evidence-based interventions.

What is research evidence use?

Current scholarship on the study of research evidence use outlines three main components of REU: the acquisition of research evidence, the processing of research evidence, and the application of research evidence (Honig & Coburn, 2008; Palinkas, et al., 2011; Tseng, 2012). Users of research evidence will exhibit one or more of these behaviors. We adopted these three components of REU as we conceptualized the *Project on Research Evidence Use in Child Welfare*.

The first behavior, *acquisition*, pertains to the manner in which users access research evidence. According to Weiss (1979), access can happen by one of two problem-solving routes. In the first route, “the research antedates the policy problem and is drawn on need. Policy makers faced with a decision may go out and search for information from pre-existent research to delimit the scope of the question or identify a promising policy response” (p.427). In the second, research is “the purposeful commissioning of social science research to fill the knowledge gap” (p. 428). Investigating the acquisition of research evidence involves examining the sources users turn to for research evidence and the social and infrastructural networks by which they connect to it. As such, we add to the definition of acquisition by including efforts to *generate* research evidence. As Weiss’s second avenue for REU makes clear, before evidence can be acquired by anyone, it must be produced. Particularly in the field of child welfare, there are moments when the answer to one’s question does not appear in an existing report. The act of generating evidence, then, speaks to one’s ability to articulate a pressing research question and get the answer to it – whether that question is about the prevalence of a perceived problem, the causes of that problem, the interventions available to solve the problem, or the effectiveness of an implemented solution (Carnegie Foundation for the Advancement of Teaching, no date; Courtney, Needell, & Wulczyn, 2004; Wulczyn, Alpert, Orlebeke, & Haight, 2014).

Processing pertains to the manner in which users sort, evaluate, and interpret research evidence and then incorporate research evidence into their decision making alongside complementary and competing influences. It is rare that research evidence is the sole factor in decision-making. Often, professionals balance research evidence with other relevant information and priorities born out of their professional orientations, political and financial considerations, personal experience, and personal judgment (e.g., Weiss, 1979). Palinkas and colleagues (2014), for

example, point to the influence of local needs and client characteristics when evaluating the generalizability and relevance of research.

Application pertains to the thing that a user does with research evidence. The application of research evidence manifests in the consequences – actions, decisions, and changes in thinking – that come about in light of research evidence. One could argue that it is the application of research evidence that constitutes its actual or ultimate use (Walter, Nutley, Percy-Smith, McNeish, & Frost, 2004). Davies and Nutley (2008) describe these applications as the “impacts” of research evidence use – not in terms of the ultimate impacts on child and youth outcomes (this occurs, or does not occur, later in the evidence use process), but rather in terms of consequences for the policies and practices that shape those outcomes.

A Framework for Studying Research Evidence Use

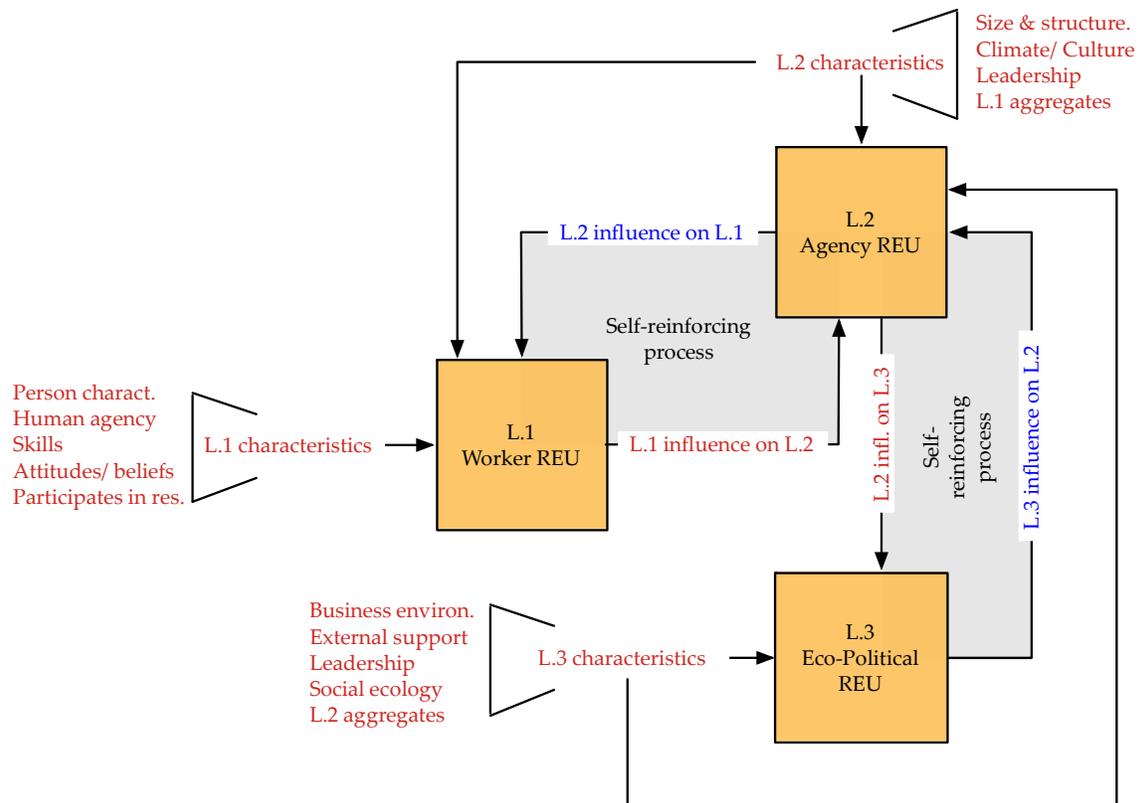
Theoretically speaking, we are interested in understanding the person, agency, and eco-political factors that influence research evidence use. We are specifically interested in whether leadership and a supportive agency culture and climate influence research evidence use at the worker level and whether, in turn, worker level evidence use promotes the formation of supportive contexts. In the event we isolate feedback effects within the interplay between an agency’s workforce, the culture of the organization, research evidence use, and child outcomes, we will have started down a path that will ultimately promote evidence use as a means of improving outcomes (Damschroder et al., 2009; Glasgow & Emmons, 2007; Rosenblatt & Tseng, 2010; Tseng & Seidman, 2007) and vice versa.

Our conceptual model, found in Figure 1, addresses these concerns. The basic model has three levels, which are described as:

1. **Person-level** research evidence use [L.1] - these are the people in the organization, at different operational levels, who use research evidence (or not) to support their decision-making.
2. **Agency-level** research evidence use [L.2] - these are agencies that use research evidence to support organizational decision-making. Agencies can also be described (simultaneously) by the aggregation of RE users within the agency (i.e., person-level REU).
3. **Eco-political** research evidence use [L.3] - Research evidence is used within the eco-political context to support decision-making. The eco-political context can also be described (simultaneously) by the aggregation of REU found within the eco-political context.

At each level, the process of research evidence use is effectively the same: acquire, process, and apply. With respect to application, our primary though not exclusive focus is on the problem solving model of research evidence use (Weiss, 1979) that asks how research evidence is used when making decisions at clinical (L.1), administrative (L.2), and regulatory levels (L.3).

Figure 1:
Multilevel Model Connecting Person Level Research Evidence Use to Agency and Eco-political Context



At each level (the worker, the agency, and the eco-political context), we postulated that REU was affected by characteristics measured at that level. For example, the literature on individual level REU suggests that role, education, and one's sense of their own control over processes within the organization (human agency), among other attributes, affect individual level REU (Estabrooks, Floyd, Scott-Findlay, O'Leary, & Gushta, 2003; Moynihan & Pandey, 2010; Parahoo, 2000). One would expect, therefore, to find higher levels of self-reported REU among individuals with these characteristics.

At the agency-level, REU is affected by organizational context measured as size, culture, and leadership, among other attributes (Aarons, Hurlburt, & Horwitz, 2011; Aarons & Sommerfeld, 2012; Wang, Saldana, Brown, & Chamberlain, 2010). These are conceptualized as either barriers or facilitators and both can be present within a given context. Similarly, we expect elements of the eco-political context - urbanicity, system size, poverty rates - to affect REU measured at the eco-political level. Again, one would expect higher levels of REU in those agencies and within those eco-political contexts characterized by the attributes that affect REU. The study was designed to test the strength of those relationships.

The dynamic model of REU also suggests that REU at one level within the system influences REU at other levels of the system bi-directionally (self-reinforcing processes). That is, high REU organizations will have more individual level RE users and vice versa. Importantly, the relationship between person-level factors (e.g., education) and REU will be stronger in organizations that use research evidence because the context is one in which REU is recognized and supported. In other words, there is a syntonic relationship between the person and the context in which they work.

Consistent with Rogers' (2003) diffusion of innovation theory, our model also envisions L.1 effects on L.2 REU. In organizations with high levels of REU at the person-level, the routine use and demands of staff level REU will shape organization-level REU, as part of the organization's efforts to support staff. In functional form, for example, the proportion of L.1 research users will influence the use of research evidence at the organizational level.

Similarly, the model envisions L.2 effects on L.3 REU - eco-political contexts with a high concentration of research evidence using agencies will rely on research evidence for decision-making as the eco-political context adapts to the expectations of the nested partner organizations. In Figure 1, these processes are described as self-reinforcing. As such they represent the sort of dynamic processes that drive diffusion (Rogers, 2003).

Overview of Methods and Initial Findings

In this study, we focus on two research questions embedded in the pathways described in the conceptual model above: (1) Do some people use research evidence more routinely than others? (2) Do organizations reporting greater research evidence use achieve better outcomes?

Sample

The data for the study come from a survey of research evidence use conducted between December 2013 and February 2014 in a highly privatized state. The University of Chicago IRB approved the study.

From lists provided to us by the state child welfare agency, we contacted 49 private child welfare agencies working in the state and asked their leadership if they would be willing to participate in a survey of evidence use. Agencies that elected to participate ($n = 26$) gave us permission to survey their employees. Participating agencies ranged in size. The number of staff eligible for the study ranged from six to 244. The number of children admitted to each agency between 2012 and 2013 ranged from 8 to 873. The multilevel, cross-classified models we used to analyze the data account for these size differences (Hedeker & Gibbons, 2006; Raudenbush & Bryk, 2001)

Measures

The agency staff survey, which was web-based, consisted of questions about research evidence use on the part of individuals, their personal background, agency culture, size, leadership, and the level of support for evidence use. To measure research evidence use, we borrowed items from the Structured Interview of Evidence Use (SIEU; Palinkas et al., 2014). Because the SIEU differentiates between types of research and types of use, it has the needed item breadth and depth. To those, we added questions designed specifically for this study. In addition, one representative from each agency was asked to complete a separate survey related to characteristics of the agency such as size, budget, and populations served. We asked the same questions of county public child welfare officials, as the private agencies contract with these local entities to provide care.

The agency staff survey was distributed to all executives, mid-level managers, supervisors, and caseworkers at each participating agency ($n = 947$) and approximately half responded ($n = 463$). This rate varied by staff level (59 percent of executives, 66 percent of mid-level managers, 43 percent of supervisors, 39 percent of caseworkers) and by participating agency (between 19 and 92 percent of eligible staff at each organization). Details of the survey, including the survey

instrument, are available from the authors. A thorough analysis of response rates at the item level is also available from the authors.

Findings

As noted above, the findings reported in this paper are organized around two questions at the heart of our theoretical model. The first asks whether individuals who use research evidence differ from individuals who do not; the second asks whether organizations with more research evidence users achieve better outcomes for the children they serve.

Descriptive statistics

Although the broader *Project* asked about all three components of REU, here we report on acquisition, with a specific emphasis on generating research evidence as a form of acquisition. Individuals who acquire research evidence by generating evidence scored high on a three-item scale measuring the frequency (1 = not at all; 5 = all the time) with which they either conduct or ask for statistical studies pertaining to their agency or caseload. Descriptive statistics for these items are provided in Table 1.

Table 1: Descriptive statistics for items measuring the frequency of REU/Generate behavior

When I need information on outcomes for children served by my agency's foster care program...	Mean	SD
<ul style="list-style-type: none">I conduct a statistical analysis of administrative data on children served by my agency.	1.52	1.40
<ul style="list-style-type: none">I depend on someone else (either within my agency or outside) to conduct a statistical analysis of administrative data on children served by my agency.	2.29	1.78
<ul style="list-style-type: none">I conduct a statistical analysis of foster care data using the Center for State Child Welfare Data's online web tool.	1.04	1.78

As for the characteristics of the individuals who work for agencies, we asked about their work experience, their attitudes toward research evidence, and their REU skills. Experience was measured simply as the number of years working in the field of child welfare; attitudes toward research evidence use were captured by a scale containing four questions about the value placed on research evidence as compared to the value placed on experience, adapted from the

Evidence Based Practices Attitude Scale (Aarons, 2005)¹; skill was measured with a 5-point Likert scale item (1 = strongly disagree; 5 = strongly agree) asking if the respondent knows how to locate research evidence to support decisions about how to intervene with children/families. Means and standard deviations for these worker-level characteristics are provided in Table 2. In our model, we hypothesize that workers with more years on the job, those with favorable attitudes toward research evidence, and those who say they know where to find research evidence will be more likely to acquire research evidence

Table 2: Worker-level characteristics

Construct	Item	Mean	SD
Years of experience	How long have you been working in the field of child welfare in general? (years)	13.97	10.72
Ability to locate research evidence	I know how to locate research evidence about whether a new policy/practice could improve outcomes for children in foster care.	3.40	0.88
Value of research evidence	I see the value in using research evidence to inform my work.	4.11	0.72
	I am willing to use research evidence to inform my work with children in foster care, even if I have to follow guidelines for doing so.	4.07	0.65
	I am willing to try using research evidence to inform my work with children in foster care, even if using research evidence is very different from what I am used to doing.	4.00	0.64
	Evidence based policies/practices are useful to my work with children in foster care.	4.04	0.65

The approach to the second question combines data from the survey with agency-specific, child-level outcome data. The linked data, which pairs children with the foster agency or agencies that provided their care, allows us to compare the research evidence use profile of the agency – i.e., the collective acquisition behavior of an agency’s staff – with the permanency outcomes those agencies achieved. Agencies with a higher concentration of research evidence using workers scored higher on the measure of agency-level REU. In turn, agency-level REU was used as a level-two predictor in a discrete time hazard model that predicts the person-period

¹ Respondents rated their agreement with each statement using a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Cronbach’s Alpha for the four questions was .86.

rate of exit to permanency (i.e., exit to reunification, adoption, or guardianship with a relative), net of child-level characteristics, the nesting of children within agencies and counties, and the level of research evidence use by the agency.

Person-Level Research Evidence use

Table 3 presents the findings that connect individual characteristics with research evidence acquisition, defined by whether the person conducts statistical analysis of administrative data on children served by the agency.

Table 3: Regression Model Showing Effects of Worker Attitude, Experience, and Skills on Individual Research Evidence Use (Acquisition).

Model	Estimate	Error	Pr > t	Odds-Ratio	95% Confidence Interval	
1: Intercept	1.448	0.341	0			
Attitude	0.21	0.082	0.011	1.23	1.05	1.45
2: Intercept	2.157	0.082	< .0001			
Experience	0.011	0.004	0.003	1.01	1.00	1.02
3: Intercept	1.836	0.18	< .0001	1.15	1.04	1.26
Skill	0.138	0.049	0.005			
4: Intercept	1.143	0.342	0.003			
Attitude	0.166	0.085	0.052	1.18	1.00	1.39
Skill	0.098	0.052	0.059	1.10	1.00	1.22
Experience	0.011	0.004	0.005	1.01	1.00	1.02

Workers with a positive attitude toward evidence, more experience, and the know-how to find research evidence were all more likely to acquire research evidence as part of their decision making process. When individuals with “better” attitudes, experience, *and* skills were compared with all other individuals, REU was higher in the former group rather than the latter group, which is in the direction predicted.

The Impact of REU on Agency-Level Outcomes

Among other things, our model of research evidence use predicts better outcomes for children in foster care if they are served by agencies with higher REU scores. To test whether this is indeed the case, we mapped the individual-level REU of participating staff onto the agencies

where those staff work, creating an agency-level REU score, and then examined whether permanency rates differ by agencies after controlling for the agency's REU score.² The results are found in Table 4.

The child-level controls include person-period (which adjusts for length of stay), age, race/ethnicity, placement type, and placement history (i.e., how many prior placements the child may have experienced). The analysis is at the child/agency pair. Children are with one and only one agency at a time; however, as children change placements, the agency with which they are placed may also change. These placement changes are considered in the model. Similarly, agencies serve children from different counties and counties are their own source of variation (i.e., the eco-political context). We accounted for the cross-classified nature of the data in the discrete time model, which is one reason we selected the discrete time, multilevel model as the basis for this analysis.

² We tested two ways to express individual REU at the agency level. For the first, we aggregated the individual-level REU scores to the agency level using a simple average derived from the responses made by the individuals working for a particular agency. The results in Tables 3 and 4 are based on that approach. The challenge with using the average response of the workers in a given agency concerns agency size. Because some agencies are larger, the average is a more or less accurate depiction of the agency's level of REU. To counteract this problem, we used the Empirical Bayes (EB) estimate from a multi-level model as a more accurate summary of the agency-level REU. The multilevel model uses all of the individual scores to assess the average level of REU within and between agencies. The EB estimate more accurately captures, at the agency level, the extent to which REU varies between and within agencies because of how differences in agency size are managed in the estimation process. The results of those models show stronger results in the same direction.

Table 4: Discrete Time Multi-level Model Showing the Impact of Agency-Level Research Evidence Use on Permanency

Effect	Estimate	Error	Pr > t	Prob.	Odds Ratio	95% Confidence Interval	
Person period							
Pers. Per. 1	-3.133	0.445	< .0001	0.042			
Pers. Per. 2	-3.281	0.446	< .0001	0.036			
Pers. Per. 3	-3.016	0.446	< .0001	0.047			
Pers. Per. 4	-2.754	0.448	< .0001	0.06			
Pers. Per. 5	-3.114	0.457	< .0001	0.043			
Pers. Per. 6	-3.342	0.471	< .0001	0.034			
Pers. Per. 7	-3.117	0.482	< .0001	0.042			
Pers. Per. 8	-3.52	0.549	< .0001	0.029			
Age at entry							
Under 1	Reference						
Age 1 to 5	0.194	0.14	0.166		1.21	0.92	1.60
Age 6 to 10	-0.006	0.148	0.97		0.99	0.74	1.33
Above 10	0.058	0.143	0.687		1.06	0.80	1.40
Race/ethnicity							
Other races	Reference						
Blacks	0.258	0.113	0.023		1.29	1.04	1.62
Whites	0.184	0.104	0.077		1.2	0.98	1.47
Hispanics	0.204	0.151	0.178		1.23	0.91	1.65
Placement type							
Congregate care	Reference						
Foster care	-0.492	0.104	< .0001		0.61	0.50	0.75
Kinship care	-0.218	0.223	0.329		0.8	0.52	1.25
Prior history							
First spell	Reference						
Second spell	-0.281	0.086	0.001		0.76	0.64	0.89
Third spell or greater	-0.708	0.145	< .0001		0.49	0.37	0.65
Evidence use							
REU	0.493	0.168	0.003		1.64	1.18	2.27

With respect to the control variables, the results are in the expected direction. Expressed as the discrete time probability of a permanent exit (Pers. Per. 1 through 8), rates of permanency generally decline with time spent in care. Older children generally exit to permanency (reunification, adoption, or guardianship) more quickly than very young children, although in this study the differences are not statistically significant. When compared with children of other races (which includes children with missing or unknown races), white, Black, and

Hispanic children leave care at roughly the same speed. The effects of placement history, which includes placement type and history of prior placements, are also in the expected direction relative to the reference categories.

The last row of Table 2 shows the effect of agency-level REU on permanency for children in foster care. Agencies with higher REU scores do indeed move children to permanency significantly more quickly than agencies with lower REU scores ($p = 0.003$).

Arguably the impact of REU on permanency rates could simply be the direct effect of positive worker attitudes, skills, and experience on permanency rates. To test for that possibility, we constructed a second model with the direct effects of worker attitudes, skill, and experience added to the first. The results suggest that REU, rather than worker characteristics, is what is important. Put another way, unless individuals acquired research evidence in the course of their work with children and families--their attitudes, skill, and experience alone were not linked to outcomes (see Table 3).

Table 3: Discrete Time Multi-level Model Showing Direct and Mediated Effects of Research Evidence Use on Permanency

Effect	Estimate	Error	t Value	Pr > t	Odds Ratio	95% Confidence Interval	
Person period							
Pers. Per. 1	-1.61	0.339	-4.75	< .0001			
Pers. Per. 2	-1.759	0.344	-5.12	< .0001			
Pers. Per. 3	-1.491	0.345	-4.32	< .0001			
Pers. Per. 4	-1.226	0.347	-3.53	0			
Pers. Per. 5	-1.587	0.359	-4.42	< .0001			
Pers. Per. 6	-1.816	0.378	-4.8	< .0001			
Pers. Per. 7	-1.593	0.392	-4.07	< .0001			
Pers. Per. 8	-1.991	0.472	-4.22	< .0001			
Age at entry							
Under 1							
Age 1 to 5	0.195	0.14	1.39	0.164	1.21	0.92	1.60
Age 6 to 10	-0.005	0.148	-0.03	0.973	1	0.74	1.33
Above 10	0.057	0.143	0.4	0.687	1.06	0.80	1.40
Race/ethnicity							
Others							
Blacks	0.267	0.113	2.35	0.019	1.31	1.05	1.63
Whites	0.183	0.104	1.76	0.079	1.2	0.98	1.47

Effect	Estimate	Error	t Value	Pr > t	Odds Ratio	95% Confidence Interval	
Hispanics	0.208	0.151	1.38	0.168	1.23	0.92	1.66
Placement type							
Congregate care							
Foster care	-0.501	0.104	-4.8	< .0001	0.61	0.49	0.74
Kinship care	-0.228	0.223	-1.02	0.306	0.8	0.51	1.23
Prior history							
First spell							
Second spell	-0.28	0.086	-3.27	0.001	0.76	0.64	0.89
Three or more spells	-0.711	0.145	-4.9	< .0001	0.49	0.37	0.65
Person characteristics*							
Attitude	-0.524	0.441	-1.19	0.235	0.59	0.25	1.41
Experience	-0.009	0.018	-0.52	0.605	0.99	0.96	1.03
Skill	-0.418	0.303	-1.38	0.167	0.66	0.36	1.19
Evidence use							
REU	0.601	0.153	3.93	< .0001	1.82	1.35	2.46

Conclusion

The *Project on Research Evidence Use in Child Welfare* has two primary goals: to determine the extent to which research evidence is being used in the child welfare system and to determine whether research evidence use affects child outcomes. Considerable time and effort is spent promoting research evidence use in child welfare, particularly research having to do with evidence-based interventions, yet there has been little research that ties those investments with a payoff measured as improved outcomes. We aim to fill that gap.

In framing the study in this way, we are cognizant of the fact that individuals use research evidence in their decision-making. We are also cognizant of the fact that individuals work in organizations that may or may not support the use of research evidence. Our theoretical model accounts for the interplay between organizational culture, leadership, and research evidence use by acknowledging the dynamic, feedback oriented processes that lead to a deeper engagement with evidence use, at both the person and organizational level.

We have not tackled all of the predicted pathways in this initial analysis; we do however provide powerful initial findings. Research evidence use in the private sector varies.

Importantly, there is a clear set of attributes that describe the individuals who are more likely to use evidence: workers who know where to find research evidence; workers who have been in

the child welfare field longer; and workers who place a high value on the role of evidence in decision-making *use* more research evidence. Finally, we found that agencies with a higher REU score (i.e., more individuals in the organization that use research evidence) achieve higher rates of permanency for the children they serve. We also found that the worker attributes linked to REU did not have an independent effect on outcomes. In other words, skills, attitudes, and experience were not enough to produce outcomes. In order to produce an effect on outcomes, workers with those attributes still had to report they use—in this case, acquire—research evidence in their work.

With respect to limitations and implications, there are several points to make. The first pertains simply to the response rate. We employed a number of strategies over a several-month period to recruit participants for the study, yet only half of those invited participated. Future efforts will require additional brainstorming regarding techniques for boosting participation.

Second, because we do not have a link between workers and the children they managed, we cannot say, unequivocally, that workers who use research evidence required less time to achieve permanency for children on their particular caseloads. Rather, we are saying the organizations with more research evidence users accomplish higher permanency rates. Research that explores the worker level impact on permanency in light of their research evidence use would be an important next step.

Third, we would note that the present study focuses on only one component of REU—acquisition, and on only one type of acquisition (i.e., conducting or asking for statistical studies pertaining to their agency or caseload). Future studies on the predictors and effects of child welfare workers' processing behavior and application behavior would add to our understanding of which aspects of REU predict better child outcomes. It must also be said that we have yet to examine how agency culture and other attributes of organizations influence research evidence use. Questions that link organizational characteristics to evidence use are the subject of a subsequent paper.

Without a more complete understanding of how organizational factors play into the link between research evidence use and outcomes, specific implications are still hard to draw. That said, of the factors related to individual research evidence use, attitudes and skills would

appear to be malleable to staff development. The challenge is finding the right type of staff development. Skill development would seem particularly important, given the definition of research evidence use as a process. Access to research evidence is one thing; drawing relevant, case specific conclusions from the evidence being used is an altogether different matter. The findings presented here suggest that a deeper appreciation for the research evidence use process would pay off.

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