



# Service Coordination by Public Sector Managers in a Human Service Contracting Environment

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## Abstract

Despite emerging evidence of contracting for evidence-based practices (EBP), little research has studied how managers lead contract-based human service delivery. A 2015 survey of 193 managers from five San Francisco Bay Area county human service departments examined the relationship between contract-based service coordination (i.e., structuring cross-sector services, coordinating client referrals and eligibility, overseeing EBP implementation) and the predictors of managerial role, involvement, and boundary spanning. Multivariate regression results suggested that county managers identified fewer service coordination challenges if they were at the executive and program levels, had greater contract involvement, and engaged in contract-focused boundary spanning. In conclusion, we underscore the organizational and managerial dimensions of contract-based service delivery.

**Keywords** Human services · Mental health services · Contracting · Evidence-based practice · Collaboration

In many jurisdictions in the U.S., the organization of mental health services and other human service programs occurs primarily through public, county-based organizations. Particularly in metropolitan regions with robust private markets, county-based services may be contracted out to private, non-profit agencies (Smith and Philips 2016). In these settings, county agencies have fiduciary authority and are responsible for the oversight of and accountability for contracted out services. Counties also retain authority for important authorization processes structuring the ability of their non-profit partners to deliver services, including: the specification of different services to be delivered and their eligibility criteria; the referral of appropriate numbers and types of clients in alignment with contractual expectations; and

ensuring that traditional services and more specialized care including evidence-based practices (EBPs) meet the needs of client populations (Smith and Phillips 2016; Wells et al. 2014; Willging et al. 2015).

These processes are coordinated functions in contracted out situations, requiring interorganizational collaboration at the level of the county agency and private provider, and the development of professional alliances among public and private managers (Bunger et al. 2016; Romzek et al. 2014). Interorganizational efforts to promote contracting have been associated at the managerial level with increased responsibilities for delivering health and human services. Public and nonprofit agencies may be required to ensure that programs are delivered in accordance with contractual expectations, and monitor program performance and evaluate service effectiveness (Girth et al. 2014; Moullin et al. 2017). Although human service contracting has increased over the past few decades and totals over \$80B (Pettijohn and Boris 2014), there is little systematic evidence concerning how public and private managers address these shared service delivery issues.

The current study reported on county manager perspectives on the coordination of human services (notably mental health services) in contracted out settings. Recent studies have identified county management staff as central for developing, initiating, evaluating, and sustaining

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performance-based, EBP-focused contracting initiatives; these efforts have been identified as requiring the development of alliances between county and nonprofit administrators in the support of shared goals, identification of key roles, and clarification of major tasks (Aarons et al. 2016; Willging et al. 2016). Other research has highlighted the roles played by county managers in performance management, including: identifying relevant performance indicators; leading nonprofit managers and external researchers in the collection, analysis, and utilization of administrative data; and the development of program improvement processes and other organizational routines to improve service delivery (Campbell and Lambright 2016; Girth 2014). However, the types of personnel, level of involvement, and interorganizational activities of county managers involved in contract coordination have yet to be described fully.

In response to calls for quantitatively-focused research on the managerial processes that promote interorganizational collaboration (Gazley 2017), our survey-based examination focuses upon county human service managers charged with the oversight and evaluation of contracted out services and, in particular, their interactions with their private sector managerial counterparts. Specifically, we distinguish between executive, program, and administrative staff involved in the contract-based management of service delivery. We also identify managerial factors associated with the coordination of service delivery processes. Research on the formal roles, involvement, and boundary spanning efforts of county managers can assist policymakers and agency leaders in improving the organization of contracted out services. The current study examined these issues through quantitative survey data from public managers in the San Francisco Bay Area region.

## Organizational and Managerial Correlates of Service Coordination in Contracted Out Settings

The management of contracted out services has been of interest since the rise of Medicaid managed care in the 1980s, and more recently as a result of state and county experimentation with performance-based contracting and other market-based financing mechanisms that link private sector risk acceptance and agency profit incentives to service provision (Collins-Camargo et al. 2011; Smith and Phillips 2016). Research on the determinants of contract effectiveness has emphasized the use of formal bureaucratic tools to organize private service delivery, and has described the responses of nonprofit mental health providers and other human service agencies to the requests of county departments and local and state policymakers. Studies reflecting command-and-control administrative approaches have highlighted the organization of mental health services through

the contractual specification of performance targets linked to the formal monitoring and evaluation of providers (Willging et al. 2015). Case studies have examined the adaptations of public and nonprofit organizations to different fiscal incentives and policy and practice requirements, including those promulgated through EBPs (Palinkas et al. 2017). Research focusing upon the system level has documented the development of interorganizational behavioral health networks with the goal of promoting the policy- and funding-based diffusion of service innovations in response to local population needs (Bunger et al. 2014; Huang 2014).

Research has also focused upon the efforts of public administrators as critical facilitators of contracting amidst challenges in program design, implementation, and evaluation (Bryson et al. 2015). The relational contracting literature has highlighted the role of interorganizational partnerships supported by norms of trust and reciprocity for organizing informal accountability regimes separate from contract-based formal governance requirements (Amirkhanyan et al. 2012; Lamothe and Lamothe 2012; Romzek et al. 2014; Van Slyke 2007). Studies have noted the importance of professional relationships among leaders that support organizational culture and climate as well as collaborative, contract-based problem solving (Aarons et al. 2016). They have also shed light on the role of public managers in assisting nonprofit managers with contract-based performance measurement (Campbell and Lambright 2016).

With some exceptions, research focused at the system and organizational levels has conceptualized contract effectiveness either as program outcomes or as client outcomes involving changes in health or wellbeing related to the consequences of service delivery. As a result, research has not fully described the more immediate efforts of managers to organize the task and technical environment of service delivery. In contracted out settings, however, the management of service structures and processes is essential for achieving desired program and client outcomes. Managers may organize service delivery processes by identifying the most appropriate clients for service programs and by developing and enhancing new service innovations (McBeath and Meezan 2010; Van Slyke 2007). Managers may also use their knowledge of bureaucratic procedures—including the application of general policies, the use of allowable exceptions, and the development of policy workarounds—to expand client eligibility for services (Campbell 2012). When service delivery involves EBPs, managers can provide necessary leadership to initiate and sustain EBP implementation (Aarons et al. 2014; Moullin et al. 2017).

Our previous research supports this understanding of managers as essential for the interorganizational coordination of service delivery processes in contracted out settings (McBeath et al. 2017). Through qualitative interviews and focus groups with managers in three Bay Area county human

service agencies and three nonprofit human service agencies with contracts with these county agencies, we found evidence of sustained cooperation between county and private managers. Public managers viewed their relationships with their contract counterparts as helpful for responding to changing and unpredictable client needs and referral levels; and for addressing conflicting client eligibility and funding requirements as well as coordination difficulties involved in nonprofit service delivery and program reporting. Dialogue during contract implementation helped promote information sharing and the identification of promising strategies for addressing service delivery challenges. Overall, managerial service coordination activities were viewed as supporting effective contracting relationships.

## Current Investigation

The current study builds upon conceptual and qualitative research to examine the relationship between three managerial dimensions or drivers—formal *organizational role*, *managerial involvement in contracting*, and *cross-sector boundary spanning*—and county human service managerial perspectives on the effectiveness of service coordination with their private service partners. Conceptually, these dimensions reflect concerns with: (1) which county managers are most involved in service coordination efforts in contracted out settings; (2) the resources and technical skills needed by managers to support these interorganizational efforts; and (3) the level of managerial participation in relational contracting.

First, literature has emphasized the importance of organizational role, notably executive-level leadership, in supporting the development and maintenance of interorganizational alliances (Aarons et al. 2014). Agency executives can exercise formal authority in developing policies and marshaling resources to support interorganizational collaboration; senior leaders can also legitimate the efforts of interorganizational initiatives informally through the development of social networks with individuals from other agencies. Studies have identified the presence of active agency leadership in supporting EBP exploration, preparation, implementation, and sustainment (Aarons et al. 2017; Moullin et al. 2017).

Second, research has explored the linkage between managerial involvement in contracting and the resulting quality of interorganizational service collaboration. Contract involvement is fundamental to how managers address public–private fiscal-administrative and service delivery challenges (Chuang et al. 2014; Melton and Meier 2017). Managers require time and practice to address complex, unclear, and/or ambiguous contracting policies and procedures, thereby supporting the development and maintenance of collaborative interorganizational relationships (Aarons et al. 2014; Argyris

and Schon 1978; Moullin et al. 2017). Over successive iterations, managers can be expected to develop contract-based expertise and interpersonal knowledge through working alliances with their contract counterparts. As applied to public-nonprofit service contracting and EBP implementation, contract involvement may also serve as an important supplement for transformational leadership (Aarons et al. 2015; Giffords et al. 2017; Richter et al. 2016).

The final proposed driver of managerial effectiveness in coordinating service delivery in contracted out settings is managerial boundary spanning. Boundary spanning has traditionally been understood to be a means of promoting knowledge sharing across units within a single organization as well as between organizations (Williams 2002). Within-organizational and interorganizational boundary spanners may provide essential support in coordinating agency service processes (Silvia and McGuire 2010). From a human service contracting perspective, boundary spanning managers may champion and organize the development of informal networks of public and nonprofit managers focused on common service delivery issues (Austin et al. 2012; Guerneros-Meza and Martin 2016). Evidence has affirmed the importance of boundary spanners in anchoring contract implementation efforts and building capacity for cross-sector behavioral health service partnerships (Bunger et al. 2016; Willging et al. 2016). In addition, the implementation science literature highlights boundary spanning as an essential leadership activity as EBPs are diffused within large public mental health and child welfare systems and across agencies (Aarons et al. 2016; Willging et al. 2015). These studies refer to the challenges of contract-focused boundary spanning, as managers seek to balance their formal responsibilities (which may not focus exclusively on boundary spanning) with their informal boundary spanning roles.

## Hypotheses

In sum, existing research identifies the importance of organizational role, contract management involvement, and managerial boundary spanning in understanding how county managers engage in service coordination in contracted out settings. As county human service departments contract across a variety of service areas and with diverse types of private sector agencies (ranging from the delivery of evidence-based behavioral health services to more traditionally understood case management-based programming), it can be expected that managers vary in their engagement with contract-based service coordination.

With respect to hypotheses, in the current study we expected that county managers would register fewer contract-based service coordination challenges if they were at the executive level in their formal organizational role. We also expected that service coordination difficulties would

be lessened through greater involvement in contracting. Finally, we anticipated that county managers would experience fewer contract-based service coordination challenges as they engaged more intensely in contract-focused boundary spanning.

## Methods

The aim of the current study was to examine our conceptual model concerning the organizational and managerial determinants of human service contracting using quantitative data from a 2015 cross-sectional survey of managers from county human service departments. The study focused upon the perspectives of county human service managers with regard to contract-based service delivery with private (largely nonprofit) human service agencies in five California counties in the San Francisco Bay Area region.

## Study Context

In California, county governments administer human service delivery to client populations receiving child welfare services, public assistance, employment and training, and services for the elderly and adults with disabilities. Federal and state human service funding is directed to counties that also provide local funds. Every county delivers human services through a combination of county-delivered services and contracted services. Table 1 provides summary information on select county human service organizational and sociodemographic characteristics.

Agencies varied substantially across the county organizations, with budgets ranging from \$133 to \$932 million, staff sizes ranging from 578 to 2614 full-time employees, and number of contracts ranging from 53 to 416. In regards to the human service contracting context, 267 of 831 contracts in the 2013–2014 fiscal year concerned mental health and related supportive services delivered by private, largely nonprofit organizations. The 267 contracts included: psychological, counseling, or therapeutic services for children, adults,

and/or families (e.g., mental health assessment and treatment for child welfare-involved families and CalWORKs recipients assessed with behavioral health issues); case management, training, and/or educational services not specifically targeted for mental health treatment (e.g., life and parenting skills training); and specific EBPs for use as innovative program models (e.g., Triple P Positive Parenting Program, Parent–Child Interaction Therapy, SafeCare).

The study was conducted in the wake of the Great Recession as Bay Area county human service departments were assessing the impacts of cutback management. Strategies for responding to cutback management efforts included: greater emphasis on interorganizational partnerships with private service providers as well as other county divisions to sustain service continuity despite regular budget challenges; reliance on performance data and program monitoring to support decision-making on internal operations and programmatic changes; internal reorganization of programs to reduce redundancy, and the reduction of services deemed too costly or nonessential; and the search for innovative interorganizational partnerships and service delivery models to meet community needs inexpensively (Graff et al. 2016; Radu et al. 2015).

## Sample and Data Collection

The study was conducted in partnership with the Bay Area Social Services Consortium, which includes directors of 11 county human service agencies, five university social work educational programs, and a local foundation. From these 11 agencies, five were selected using a purposive organizational sampling strategy designed to maximize variation across counties with respect to organizational size, contracting, and underlying demographic characteristics. They were also selected to represent the Bay Area's urban, suburban, and rural communities.

At the managerial level, the purposive, nonprobability sampling strategy was developed to ensure basic similarity in data collection from county employees concerning perceptions of the strengths and challenges regarding

**Table 1** Summary descriptions of county organizations and overall population

	County human service organization			County sociodemographics				
	Budget (\$M)	FTE	Total contracts	Population	Poverty rate	% Black	% Hispanic	% Asian
County A	723.8	2614	219	1,638,215	11.5	10.9	22.6	28.9
County B	447.8	2049	73	1,126,745	10.2	8.8	25.3	16.2
County C	133	578	53	274,146	15.4	1.0	33.3	4.5
County D	932.4	2055	416	864,8816	12.4	5.1	15.3	34.7
County E	339.5	970	70	502,146	12.0	1.5	26.3	4.1

County human service budget, FTE, and sociodemographic summaries were from state fiscal year 2015–2016; county human service contract information was available only from state fiscal year 2013–2014

contract-based service delivery processes. The purposive sample was also designed to promote variability at the managerial level, by inviting county managers in different roles, and with varied involvement in contract management and service contracting, to participate in the study (Palinkas et al. 2015). The purposeful sample thus included the following types of staff who had past and/or current interactions with one or more private service contractors: (1) executives, reflecting members of the executive team; (2) program managers, including individuals who were employed in the children and families, employment services, public assistance, and seniors and adults with disabilities divisions; and (3) administrative managers whose principal role involved fiscal, contracting, human resources, planning and evaluation, and quality assurance/organizational improvement functions within their county organization. Caseworkers were specifically excluded from study participation.

Each county director sent an email invitation to participate in an online survey to employees at these levels. The survey instrument was developed to capture county managerial perspectives on interorganizational service delivery relationships and contract processes. Survey questions covered four major domains: formal organizational role and duties; practitioner contract management activities; performance measurement and management involving the monitoring of contractor performance; and strategies for addressing contract management challenges with service providers. The survey instrument was refined through pilot testing with a sample of experts and then reviewed by mid-level managers from each county organization.

In total, 193 of 295 identified managers completed the online survey. Thus, the survey had an estimated 65% response rate, which is considered above average for surveys of agency managers (Baruch and Holton 2008). Because

county human service departments varied in their internal organization involved in contracting, the number of managers from each county varied from a low of 15 respondents (comprising 8% of the study sample) from a small, rural county to a high of 92 respondents (48%) in a large, urban county. The current study was conducted in compliance with the Institutional Review Board of The University of California-Berkeley, where all study data were repositied.

## Measures

### Three Dependent Variables Reflecting Managerial Perceptions of Contract-Based Service Coordination

Operationally and reflecting upon the research reviewed previously, our study used factor analysis of a 10-item scale to develop three dependent variables pertaining to the *structuring of cross-sector service delivery, coordination with contracted service providers around client referrals and eligibility, and oversight of contractor use and/or uptake of EBPs*. Using a 5-point Likert scale ranging from 1 = *very difficult* to 5 = *very easy*, respondents were asked to rate the ease or difficulty of working with contractors to manage 10 different contractual issues related to client case management and service delivery. As the correlation matrix of the 10 items in the scale revealed that many items were moderately correlated with many coefficients above 0.4 and some as high as 0.77, an exploratory factor analysis was conducted to determine the underlying dimensionality of the 10-item scale. As can be seen in Table 2, the exploratory factor analysis revealed a two-factor solution with eigenvalues greater than 1. Component 1 explained 40.22% of the variance, and contained 6 items; and component 2 explained 29.33% of the variance,

**Table 2** Factor loadings and descriptive statistics of items comprising the service coordination measure

	Factor 1	Factor 2	Mean (SD)
Communicating with your primary contract counterparts	<b>0.73</b>	0.23	4.13 (1.00)
Developing appropriate case goals for clients being served	<b>0.81</b>	0.35	3.53 (1.04)
Ensuring that services meet client needs	<b>0.86</b>	0.30	3.44 (0.98)
Coordinating with contractors to serve clients	<b>0.74</b>	0.43	3.62 (1.01)
Ensuring that service delivery matches the county's overall program vision	<b>0.82</b>	0.15	3.51 (1.09)
Communication between your case managers and case managers in contracted agencies	0.27	<b>0.56</b>	3.71 (1.07)
Ensuring the right number and timing of clients/referrals to contractors	0.19	<b>0.89</b>	3.07 (1.07)
Ensuring that the right clients are being referred to contractors	0.40	<b>0.77</b>	3.24 (1.06)
Managing different client eligibility requirements	0.32	<b>0.80</b>	3.27 (1.19)
Overseeing contractor use and/or uptake of EBPs	<b>0.70</b>	0.35	3.04 (1.12)
Eigenvalue	5.82	1.13	
% of variance explained	40.22	29.33	

Factor loadings above 0.40 appear in bold

and contained 4 items. Factor loadings were above 0.4 for all items.

As noted, three dependent variables were employed: (1) the mean value of the first five items comprising the first factor; (2) the mean value of the four items comprising the second factor; and (3) the single measure pertaining to county manager oversight of contractor EBP use/uptake. Specifically, the 5-item outcome of *structuring cross-sector service delivery* reflected perspectives of respondents on the ease of communicating with their primary contract counterparts, developing appropriate case goals for clients being served, ensuring that services meet client needs, coordinating with contractors to serve clients, and ensuring that service delivery matches the county's overall program vision ( $\alpha=0.89$ ). These items concerned higher-order questions of public-private collaboration in service development and service accountability (Girth et al. 2014; Huang 2014; Romzek et al. 2014). The 4-item outcome of *coordinating with contracted service providers around client referrals and eligibility* captured respondents' perceptions of the ease of communication between county case managers and their contract counterparts, ensuring the right number and timing of clients/referrals to contractors, ensuring that the right clients were being referred to contractors, and managing different client eligibility requirements ( $\alpha=0.85$ ). These items reflected case-based perspectives on service access and service delivery (Bunger et al. 2016; Campbell and Lambright 2016). Finally, the outcome of *oversight of contractor use and/or uptake of EBPs* was operationalized as a single-item measure, due to its salience to the literature on EBP implementation in contracted out settings (Aarons et al. 2016; Willging et al. 2016). The first two factors, as well as Factor 1 and the single-item dependent variable, were strongly correlated ( $r=0.59$  and  $r=0.67$ , respectively); the correlation between Factor 2 and the single-item outcome variable was 0.47.

### Independent Variables

One categorical variable reflecting respondents' *organizational role* indicated whether respondents were executives (referent), program managers, administrative managers, or hybrid program/administrative staff.

*Managerial involvement in contracting* was operationalized using two variables that reflected the literature. The number of contracted agencies for which the respondent was responsible reflected an assumption of increased expertise (i.e., formal, technical and informal, interpersonal knowledge through organizationally-situated contract interactions) and skill development (Aarons et al. 2015; Chuang et al. 2014; Melton and Meier 2017). In contrast, the number of contracts that the respondent was managing reflected an underlying expectation of diminishing resources for contract

management (notably time management in relation to complex cases) (Palinkas et al. 2017; Willging et al. 2016). Given non-normal distributions due to small numbers of respondents managing large numbers of contracted agencies and contracts, the natural log of each variable was used.

Finally, *managerial boundary spanning activities* was measured using an 8-item index ( $\alpha=0.88$ ) of the average amount of time per month spent on the following contract-based activities: identifying and involving the right people needed to achieve contract goals; finding and putting into use resources needed to achieve contract goals; facilitating agreement on leadership and administrative roles; helping develop a working structure for the contract relationship (i.e., commitment, meetings, assignments); strengthening the commitment of critical stakeholders to the contract relationship; facilitating relationships; promoting information exchange; and managing client referrals effectively. This measure reflected previous instruments developed to assess boundary spanning of public sector managers (Chuang et al. 2014; Guerneros-Meza and Martin 2016; Silvia and McGuire 2010). Items were rated on a 4-point Likert scale (1 = none to 4 = a lot).

### Control Variables

We also controlled for variables regarding managerial tenure and background. Two variables assessed respondents' total years in their current position at the agency as well as years of contract management experience. Education was indicated by whether the respondents' highest level of education was a bachelor's degree or less (referent), an MSW, or another graduate degree. We controlled for respondent race/ethnicity (a dichotomous variable set = 1 if the respondent was African American, Hispanic/Latino, or another non-Caucasian minority; else set = 0) and gender (set = 1 if respondent was a male; else set = 0). While we did not specify hypotheses concerning how these factors might affect perceived ease of service coordination, we included them in models to account for differences in the characteristics of managers.

### Analyses

The analytic sample included only county managers who had participated previously in service coordination-related activities. Out of 193 total respondents, 141 respondents answered questions related to the 5-item outcome of structuring cross-sector service delivery, 125 addressed the 4-item outcome of coordinating with contracted service providers around client referrals and eligibility, and 116 provided information about the oversight of contractor use and/or uptake of EBPs. Listwise deletion due to item missingness

on independent variables resulted in final model N for Model 1 = 121, Model 2 = 107, and Model 3 = 99.

Given the small number of counties and unbalanced numbers of respondents at the organizational level, and given per-county categorical data limitations for independent variables, we employed a single-level ordinal logistic regression model (Maas and Hox 2004; Moineddin et al. 2007). Three ordinal logistic regressions, with standard errors clustered by county organization, were conducted to examine associations between managerial factors and each of the dependent variables. Assuming power of 0.8 and alpha of 0.05, our three sample sizes identified sufficient power to detect medium to large effects (Chen et al. 2010).

Bivariate Pearson, Spearman, and phi correlation tests did not indicate any problematic collinearity among independent variables (e.g.,  $> 0.33$ ). Nor were the dependent variables highly correlated with any of the independent or control variables (i.e., all  $> 0.21$ ). Results of the Brant test indicated that models did not meet the parallel regression assumption, i.e., that effects of explanatory variables do not vary across different values of the dependent variable (Long and Freese 2014). However, results of partial proportional odds models in which the parallel regression assumption was relaxed for specific variables identified as violating the

parallel regression assumption did not differ significantly from the ordinal logistic regression; thus, only the former are reported here. Analyses were conducted using Stata 14.0 (StataCorp 2015).

## Results

### Description of Study Sample

Table 3 presents descriptive statistics for the five-county sample of public human service staff involved in contract management. County managers perceived that working with contractors to manage contract-based service delivery issues was not particularly difficult. Mean values for the outcomes of service coordination to structure cross-sector services and coordinate client referrals and eligibility were between “neither difficult nor easy” and “easy” ( $m = 3.75/5$  and  $m = 3.41/5$ , respectively), whereas respondents noted that overseeing contractor use and/or uptake of EBPs was “neither difficult nor easy” ( $m = 3.04/5$ ).

With respect to managerial work role, 13% of the sample ( $n = 24$ ) consisted of executives, with 43% and 40% of respondents ( $n = 81$  and  $n = 76$ , respectively) in

**Table 3** Descriptive statistics for county human service managers

	n	%	Mean (SD)	Range
Outcome variables				
Structuring cross-sector service delivery	141		3.75 (0.89)	1–5
Coordinating client referrals and eligibility	125		3.41 (0.97)	1–5
Overseeing contractor use and/or uptake of EBPs	116		3.04 (1.12)	1–5
Predictors				
Work role				
Executive	24	13		0–1
Program	81	43		0–1
Administrative	76	40		0–1
Program/administrative	8	4		0–1
Number of contracted agencies for whom respondent is the primary manager	188		6.10 (11.65)	0–75
Number of contracts managed currently	187		18.88 (41.90)	0–300
Boundary spanning	180		2.17 (0.67)	1–4
Controls				
Years in current position in agency	191		5.21 (4.88)	0–28
Years of contract management experience	190		7.83 (7.25)	0–40
Education				
Undergraduate or less	68	42		0–1
MSW	35	21		0–1
Other graduate degree	60	37		0–1
Race				
Respondent is person of color	56	37		0–1
Gender				
Person is male	36	22		0–1

program and administrative roles. In regards to managerial involvement in contracting, respondents were the principal county contact for 6 service providers, and were managing nearly 19 contracts at the point of the survey. Finally, managers dedicated between “a little” and a “moderate” amount of time ( $m = 2.17/4$ ) to contract-based boundary spanning (e.g., identifying and involving the right people needed to achieve contract goals, finding and putting into use resources needed to achieve contract goals, facilitating agreement on leadership and administrative roles, helping develop a working structure for the contract relationship, and strengthening the commitment of critical stakeholders to the contract relationship).

Managers had spent over 5 years in their current position, and had on average nearly 8 years of contract management experience. Regarding managerial background, 42% of respondents ( $n = 68$ ) held an undergraduate degree or less, whereas 21% ( $n = 35$ ) held the MSW degree and 37% ( $n = 60$ ) had another graduate degree. Roughly a third of managers (37%,  $n = 56$ ) were persons of color, and 22% of respondents ( $n = 36$ ) were male.

## Multivariate Results

Table 4 presents the results of three multivariate ordinal logistic regressions concerning county managerial perspectives of the difficulty of coordinating services with contracted agency staff. As can be seen, organizational role was significantly associated with the first outcome concerning county managerial efforts to structure cross-sector service delivery. As compared to executive-level staff and recalling the 5-point Likert scaling of the dependent variables (with 1 = *very difficult* to 5 = *very easy*), program staff (OR 0.47,  $p < 0.05$ ), administrative staff (OR 0.56,  $p < 0.01$ ), and hybrid program/administrative staff (OR 0.08,  $p < 0.001$ ) perceived greater difficulties in coordinating services with contractors. Both indicators of managerial contract involvement were significantly associated with this outcome, although in different directions. County managers registered fewer service coordination challenges as they served as the primary county contact for more private service providers (OR 1.39,  $p < 0.01$ ); whereas the number of contracts managed was associated with more service coordination challenges (OR 0.60,  $p < 0.001$ ). In addition, managers who noted greater involvement in contract-focused boundary spanning registered fewer challenges in structuring cross-sector service delivery (OR 2.60,  $p < 0.001$ ). With respect to

**Table 4** Ordinal logistic regressions of organizational and managerial factors associated with contract-based service coordination

	Structuring cross-sector service delivery		Coordinating client referrals and eligibility		Overseeing contractor use and/or uptake of EBPs	
	OR (SE)	95% CI	OR (SE)	95% CI	OR (SE)	95% CI
<b>Predictors</b>						
<b>Work role</b>						
Executive	–	–	–	–	–	–
Program	0.47 (0.16)*	0.24, 0.92	0.54 (0.27)	0.20, 1.46	0.64 (0.33)	0.23, 1.76
Administrative	0.56 (0.11)**	0.38, 0.82	0.31 (0.15)*	0.12, 0.78	0.31 (0.13)**	0.14, 0.70
Program/administrative	0.08 (0.05)***	0.03, 0.27	0.73 (0.75)	0.09, 5.44	0.10 (0.09)**	0.02, 0.57
Number of contracted agencies for whom respondent is the primary manager	1.39 (0.16)**	1.12, 1.73	0.97 (0.13)	0.74, 1.27	1.33 (0.19)*	1.01, 1.76
Number of contracts managed currently	0.60 (0.07)***	0.47, 0.75	0.81 (0.08)*	0.67, 0.98	0.70 (0.15)	0.46, 1.08
Boundary spanning	2.60 (0.70)***	1.53, 4.42	1.86 (0.61)	0.98, 3.55	2.01 (0.41)**	1.36, 2.99
<b>Controls</b>						
Years in current position in agency	1.03 (0.03)	0.98, 1.08	1.09 (0.05)	0.99, 1.19	1.04 (0.02)	0.99, 1.08
Years of contract management experience	0.97 (0.03)	0.91, 1.03	1.00 (0.05)	0.92, 1.10	0.97 (0.03)	0.91, 1.02
<b>Education</b>						
Undergraduate or less	–	–	–	–	–	–
MSW	0.32 (0.23)	0.08, 1.32	0.63 (0.49)	0.14, 2.91	0.42 (0.39)	0.07, 2.56
Other graduate degree	0.66 (0.13)*	0.45, 0.96	0.71 (0.07)***	0.59, 0.85	0.84 (0.16)	0.58, 1.21
Respondent is person of color	1.02 (0.32)	0.55, 1.90	1.51 (0.93)	0.45, 5.06	0.99 (0.24)	0.61, 1.59
Person is male	3.85 (1.27)***	2.02, 7.35	3.16 (2.17)	0.82, 12.13	5.05 (2.46)**	1.94, 13.11

Model 1 N = 121; Model 2 N = 107; and Model 3 N = 99

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



control variables, as compared to managers with an undergraduate degree or less, managers with a non-MSW graduate degree noted greater difficulties in coordinating services with contractors (OR 0.66,  $p < 0.05$ ). Finally, as compared to female managers, male managers perceived fewer service coordination challenges (OR 3.85,  $p < 0.001$ ).

Concerning the second outcome, administrative managers noted greater challenges in coordinating with contracted providers around client referrals and eligibility determination, as compared to executive- and program-level managers (OR 0.31,  $p < 0.05$ ). The number of contracts managed was associated with more service coordination challenges (OR 0.81,  $p < 0.05$ ). In regards to control variables, as compared to managers with an undergraduate degree or less, managers with a non-MSW graduate degree noted more difficulty in coordinating with contract agency staff around client referrals and eligibility determination (OR 0.71,  $p < 0.001$ ).

Finally, as compared to executives and program managers, administrative managers (OR 0.31,  $p < 0.01$ ) and hybrid program/administrative staff (OR 0.10,  $p < 0.01$ ) perceived greater challenges in the oversight of contractor use and/or uptake of EBPs. In addition, county managers registered fewer challenges in overseeing contractor use/uptake of EBPs as they served as the primary county contact for more private service providers (OR 1.33,  $p < 0.05$ ). We also found that contract-focused boundary spanning was associated with fewer managerial challenges in overseeing contractor EBP implementation (OR 2.01,  $p < 0.01$ ). Finally, as compared to female managers, male managers perceived fewer challenges in overseeing contractor use/uptake of EBPs (OR 5.05,  $p < 0.01$ ).

## Discussion

The study results provide support for our model linking organizational role, managerial contract involvement, and contract-focused boundary spanning to county managerial perceptions of service coordination with contracted service providers. We employed three outcome measures pertaining to the ease or difficulty of coordinating with county staff to: (1) structure cross-sector service delivery; (2) address client referrals and determine eligibility; and (3) oversee the use/uptake of EBPs. These measures reflected conceptual and qualitative research emphasizing the importance of county and private managers collaborating to resolve policy and fiscal issues impacting the organization of human service contracts (Aarons et al. 2016; Palinkas et al. 2017; Willging et al. 2015). Our three outcome measures were moderately to strongly intercorrelated, suggesting that researchers, policymakers, and managers invested in the implementation of EBPs should be aware of the cross-sector design of human service programs and its administration at the case level.

Descriptively, county managers registered relatively few service coordination challenges in working with contracted agency staff in areas related to our outcome domains, although we would not characterize managerial service coordination efforts as being easy overall. Previous research has identified the challenges facing county and private agency staff in addressing complex service delivery issues involving financing, policy implementation, as well as contract specification, implementation, and evaluation amidst changing client needs and organizational demands (Aarons et al. 2014; Bungler et al. 2016; Willging et al. 2016). However, in our earlier pilot qualitative study, basic consensus emerged concerning the complementary roles of county and non-profit organizations in addressing shared service outcomes (McBeath et al. 2017).

The survey findings thus direct attention from previous cross-sector research concerning the difficulty of contract-based human service coordination, and instead suggest the following management-level question: Which public managers experience fewer challenges in coordinating services with contract providers? To this end, we found that organizational role, managerial contract involvement, and boundary spanning mattered for some but not all of our three outcome measures of contract-based service coordination. First, executive-level staff generally perceived fewer challenges in coordinating services with contract providers than administrative and other staff. Interestingly, program managers noted greater challenges than executives in only 1 of 3 domains (i.e., structuring cross-sector services). In the main, the 56% of the sample comprised of executives and program managers had similar perceptions for the outcome measures of coordinating with contracted service providers around client referrals and eligibility as well as the oversight of contractor use and/or uptake of EBPs.

These findings suggest that discussions of organizational role—particularly for executive and program staff vs. administrative staff whose work role reflected fiscal, contracting, human resources, planning and evaluation, and quality assurance/organizational improvement responsibilities—inform human service contracting, although the relationship between work role and service coordination may not be direct. Possibly, county executives may have strong role-specific interactions with their nonprofit executive counterparts (McBeath et al. 2017; Moullin et al. 2017; Willging et al. 2016). Executives may also benefit from administrative and programmatic assistance at different stages of contracting. Overall, it seems unlikely that executives' vantage points are by and large insulated from the perspectives of other managers.

We would propose a different inference. Executives (and in some instances program managers, as a result of their service responsibilities) may be strongly engaged in cross-sector service contracting because their role requires active

involvement at critical developmental stages (e.g., program design and start-up). In contrast, by dint of their organizational role focused upon contract implementation and planning/research, administrative staff may face new and/or continuing service coordination challenges in managing multiple and often complex fiscal, programmatic, and policy tasks. If so, then these possibilities suggest the need for research on how to better support the capacity of administrative and program management staff in contract-based service coordination (Leeman et al. 2017).

Second, as an indicator of contract management involvement, the number of contract agencies for which the county manager was the primary contact was associated with fewer service coordination challenges in structuring cross-sector service delivery and overseeing contractor EBP uptake. One interpretation of this finding is that as managers become responsible for more contractors, they routinize their contract management work (e.g., sharing a common set of “tried and true” contracting strategies). An alternative explanation is that as managers become more involved in contract management, they gain diverse knowledge and skills that can be used to address service coordination challenges.

Regarding the other indicator of contract management involvement, the number of contracts that managers were responsible for monitoring was associated with greater service coordination challenges in structuring cross-sector service delivery and addressing client referrals and eligibility. A critical premise of the literature on contract management and EBP implementation is the concept of time needed for managerial learning and application, particularly in situations where managers are challenged to address technical problems and adapt to emergent organizational and inter-organizational situations (Aarons et al. 2015; Argyris and Schon 1978; Giffords et al. 2017; Richter et al. 2016). If the oversight of more contracts requires county human service managers to respond to more (and possibly complex) service coordination issues, then it is difficult to expect managers to develop effective and efficient service-focused work routines and adaptations. A similar argument can be made at the caseworker level in the frontline delivery of human services, whether in public or private contract settings.

Third, the measure of managerial boundary spanning was used to examine the extent to which relational contracting, as expressed in terms of the effort county managers dedicated to developing strong, collaborative partnerships with their contract counterparts, was associated with service coordination. Descriptively, levels of boundary spanning were modest, ranging from “a little” to “a moderate” amount of time. But as hypothesized, boundary spanning was related to fewer challenges in the areas of coordinating with contracted service providers to structure cross-sector services and oversee contractor use/uptake of EBPs. Previous research has suggested that the development of functional, cross-agency

workgroups reinforced by prosocial norms and positive relationships fosters contract-based organizational learning (Amirkhanyan et al. 2012; Lamothe and Lamothe 2012; Romzek et al. 2014; Van Slyke 2007). Our study results provide some evidence on the public managerial activities used to promote contract implementation and evaluation, develop cross-agency teams and identify needed resources, and engage in contract-focused problem solving.

Considered together, these three predictors may imply that contracting mastery increases as managers learn about their private sector counterparts. In particular, managers may develop a reservoir of problem-solving skills that serves as a buffer for daily contract management challenges and thereby leads to fewer difficulties in supporting contract collaboration. These possibilities reflect an effort to reduce administrative coordination challenges through role specialization, learning through application, and the development and sustainment of relationships with private providers characterized by high levels of trust and reciprocity.

Finally, the controls pertaining to respondent education and gender were notable. As compared to managers with an undergraduate degree or less, managers with a non-MSW graduate degree noted greater service coordination difficulties; and as compared to male managers, female managers perceived more service coordination challenges. Given the associational nature of our findings, we are unable to propose specific hypotheses for further investigation. However, we underscore the importance of regular supports in contract-based service coordination (e.g., trainings, structured coaching) for county staff with diverse backgrounds and experiences.

## Limitations

These findings should be understood in relation to limitations in the study design. First, because study data were drawn from self-reported managerial surveys, mono-method bias was present. The use of a single-level managerial survey may have contributed to omitted variable bias at the county organizational level, although the specific influence of contextual factors on contract-based service coordination is unclear. Second, because the survey invitation was sent from each county director, it is possible that social desirability bias was present as some managers may have been less likely to register challenging relationships with contracted service providers. However, managers were made aware that the Qualtrics survey could be completed off-site and would be repositied by the study authors at The University of California-Berkeley; and respondents were generally several levels of authority from the county director. Third, measurement error in the dependent variables may have existed as respondents may have been unfamiliar with some of the

items comprising the scale. However, survey items were rigorously pre-tested (including via cognitive interviews); and items were revised thoroughly before survey distribution, leading to relatively high per-item response rates for our three dependent variables. Fourth, although study findings were robust overall and largely comported with the literature, sample sizes were low and may have limited our ability to detect small to medium effects. Thus, it is possible that non-significant relationships may have been significant in the presence of larger samples drawn from the same county managerial population. Fifth, the research design was cross-sectional; as a result, care has been taken to frame statistically significant relationships as associational and not causal in nature. Finally, the study reflected a purposive, non-probability sample of managers who had knowledge of contract-based service delivery within a five-county region. Thus, it is unclear how generalizable study findings are to other regions, county human service organizational settings, and managers with different experiences of contract-based service delivery.

### Implications for Management Research and Practice on Human Service Contracting

Despite these limitations, the current study provides quantitative evidence concerning the involvement of different types of county managers in coordinating contract-based services. Future studies could examine whether the contract activities and perspectives of public and private managers are concordant. Addressing these issues will require data on public and private managers and their agencies in order to test for differences in the perceptions of managers in different practice settings and by field of service (e.g., concentrating upon managers involved in contracting for behavioral health services, as opposed to those contracting for multiple types of services). In addition, complex program contracts upon which private providers are fiscally dependent may be more salient to county human service managers than smaller, simpler contracts. And contracts with providers with which the county human service agency has had successful contracting experiences may be evaluated differently by county managers than contracts with new providers. These latter contracts may be perceived as especially important for county managers as they anticipate service coordination issues with contract counterparts.

Finally, research on managerial involvement in service coordination may serve to link: the policy- and financing-focused literature on contract specification and implementation, including the use of performance measurement and performance-based contracts; and studies of frontline service delivery and client outcomes. By illuminating the roles, responsibilities, and efforts of managers in supporting

interorganizational service coordination with their contract partners, future research can focus attention on how managerial coordination occurs and its impacts. Qualitative research could examine the evolution of contract-based relationships between public and private managers and the contexts in which these relationships are fostered, and quantitative research might explore cross-level influences between contract implementation and evaluation, organizational and managerial determinants of contracting (including those factors examined currently), and frontline service utilization and client outcomes.

The findings also support implications for policymakers and county human service administrators. Given the limited numbers of human service providers in many geographic areas that result in weak competition for contracts, public administrators may need to develop strong and stable contract-based relationships with their private sector partners (McBeath et al. 2017; Van Slyke 2007). County managers may use a relational contracting perspective to support service coordination through the development of informal alliances of public and private managers. Specifically, public organizations may de-emphasize the traditional top-down approach to contracting characterized by “steering but not rowing” and instead explore collaborative opportunities for shared problem solving in support of sustaining mutually beneficial public–private partnerships. Our findings also identify the importance of leadership, boundary spanning, and capacity for innovation as county managers transition from service coordination to outcome evaluation. Finally, county administrators may provide opportunities to train public and private managers on methods for collaborative contracting and program outcome achievement.

### Conclusions

In the human services, interorganizational service coordination is intended to facilitate contract collaboration and serves as a key mechanism whereby public and private managers develop and strengthen contract-based partnerships. Research has described the importance of public and private managers coordinating to address the fiscal, policy, and programmatic requirements impacting the authorization of services, develop and sustain client referral pathways, and ensure that EBPs are delivered in accordance with contractual demands and the expectations of elected officials. These are functions that, if not addressed effectively, may affect the resulting appropriateness and quality of service delivery and ultimately program and client outcomes. Our survey underscores the dimensions of county managerial activity involved in ensuring that contracted services are delivered effectively. Efforts by county human service managers to coordinate services with contracted private providers may

be informed by managerial roles, contract involvement, and contract-focused boundary spanning. Study findings provide support for future research and practice concerning the organizational and managerial drivers of service coordination in contract-based settings.

## Compliance with Ethical Standards

**Conflict of interest** All the author declares that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** It was obtained from all individual participants included in the study.

## References

- Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Hurlburt, M. S. (2015). Leadership and organizational change for implementation (LOCI): A randomized mixed method pilot study of a leadership and organization development intervention for evidence-based practice implementation. *Implementation Science, 10*, 11.
- Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., & Sklar, M. (2014). Aligning leadership across systems and organizations to develop a strategic climate for evidence-based practice implementation. *Annual Review of Public Health, 35*, 255–274.
- Aarons, G. A., Ehrhart, M. G., Farahnak, L. R., Sklar, M., & Horowitz, J. (2017). Discrepancies in leader and follower ratings of transformational leadership: Relationships with organizational culture in mental health. *Administration and Policy in Mental Health and Mental Health Services Research, 44*, 480–491.
- Aarons, G. A., Green, A. E., Trott, E., Willging, C. E., Torres, E. M., Ehrhart, M. G., & Roesch, S. C. (2016). The roles of system and organizational leadership in system-wide evidence-based intervention sustainment: A mixed-methods study. *Administration and Policy in Mental Health and Mental Health Services Research*.
- Amirkhanyan, A. A., Kim, H. J., & Lambright, K. T. (2012). Closer than “arms length”: Understanding the factors associated with collaborative contracting. *American Review of Public Administration, 42*, 341–366.
- Argyris, C., & Schon, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading: Addison-Wesley.
- Austin, M. J., Dal Santo, T., & Lewis, D. (2012). Boundary-crossing careers of senior human service administrators: A cross-case analysis. *Administration in Social Work, 36*, 109–132.
- Baruch, Y., & Holton, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*, 1139–1160.
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2015). Designing and implementing cross-sector collaborations: Needed and challenging. *Public Administration Review, 75*, 647–663.
- Bunger, A. C., Cao, Y., Girth, A. M., Hoffman, J., & Robertson, H. A. (2016). Constraints and benefits of child welfare contracts with behavioral health providers: Conditions that shape service access. *Administration and Policy in Mental Health and Mental Health Services Research, 43*, 728–739.
- Bunger, A. C., Doogan, N. J., & Cao, Y. (2014). Building service delivery networks: Partnership evolution among children’s behavioral health agencies in response to new funding. *Journal of the Society for Social Work and Research, 5*, 513–538.
- Campbell, D. A. (2012). Public managers in integrated service collaboratives: What works is workarounds. *Public Administration Review, 72*, 721–730.
- Campbell, D. A., & Lambright, K. T. (2016). Program performance and multiple constituency theory. *Nonprofit and Voluntary Sector Quarterly, 45*, 150–171.
- Chen, H., Cohen, P., & Chen, S. (2010). How big is an odds ratio? Interpreting the magnitudes of odds ratios in epidemiological studies. *Communications in Statistics—Simulation and Computing, 39*, 860–864.
- Chuang, E., McBeath, B., Collins-Camargo, C., & Armstrong, M. (2014). Strengthening public-private partnerships in state child welfare systems: Results of a multi-state strategic planning process. *Journal of Public Child Welfare, 8*, 1–24.
- Collins-Camargo, C., McBeath, B., & Ensign, K. E. (2011). Privatization and performance-based contracting in child welfare: Recent trends and implications for social service administrators. *Administration in Social Work, 35*, 494–516.
- Gazley, B. (2017). The current state of interorganizational collaboration: Lessons for human service research and management. *Human Service Organizations: Management, Leadership, & Governance, 41*, 1–5.
- Gifford, W., Graham, I. D., Ehrhart, M. G., Davies, B. D., & Aarons, G. A. (2017). Ottawa model of implementation leadership and implementation leadership scale: Mapping concepts for developing and evaluating theory-based leadership interventions. *Journal of Healthcare Leadership, 9*, 15–23.
- Girth, A. M. (2014). A closer look at contract accountability: Exploring the determinants of sanctions for unsatisfactory contract performance. *Journal of Public Administration Research and Theory, 24*, 317–348.
- Girth, A. M., Hefetz, A., Johnston, J. M., & Warner, M. E. (2014). Outsourcing public service delivery: Management responses in noncompetitive markets. *Public Administration Review, 72*, 887–900.
- Graff, G., Hengeveld-Bidmon, E., Carnochan, S., Radu, P., & Austin, M. J. (2016). The impact of the Great Recession on county human-service organizations: A cross-case analysis. *Human Service Organizations: Management, Leadership, & Governance, 40*, 152–169.
- Guarneros-Meza, V., & Martin, S. (2016). Boundary spanning in local public service partnerships: Coaches, advocates, or enforcers? *Public Management Review, 18*, 238–257.
- Huang, K. (2014). Knowledge sharing in a third-party-governed health and human services network. *Public Administration Review, 74*, 587–598.
- Lamothe, M., & Lamothe, S. (2012). To trust or not to trust? What matters in local government-vendor relationships? *Journal of Public Administration Research and Theory, 22*, 867–892.
- Leeman, J., Calancie, L., Kegler, M. C., Escoffery, C. T., Herrmann, A. K., & Fernandez, M. E. (2017). Developing theory to guide building practitioners’ capacity to implement evidence-based interventions. *Health Education and Behavior, 44*, 59–69.
- Long, J. S., & Freese, J. (2014). *Regression models for categorical dependent variables using Stata (3rd ed.)*. College Station: StataCorp LP.
- Maas, C., & Hox, J. (2004). Robustness issues in multilevel regression analysis. *Statistica Neerlandica, 58*, 127–137.
- McBeath, B., Carnochan, S., Stuart, M., & Austin, M. J. (2017). The managerial and relational dimensions of public-nonprofit human service contracting. *Journal of Strategic Contracting and Negotiation, 3*, 51–77.

- McBeath, B., & Meezan, W. (2010). Governance in motion: Service provision and child welfare outcomes in a performance-based, managed care contract environment. *Journal of Public Administration Research and Theory, 20*, i101–i124.
- Melton, E. K., & Meier, K. J. (2017). For the want of a nail: The interaction of managerial capacity and human resource management on organizational performance. *Public Administration Review, 77*, 118–130.
- Moineddin, R., Matheson, F., & Glazier, R. H. (2007). A simulation study of sample size for multilevel logistic regression models. *BMC Medical Research Methodology, 7*, 34.
- Moullin, J. C., Ehrhart, M. G., & Aarons, G. A. (2017). The role of leadership in organizational implementation and sustainment in service agencies. *Research on Social Work Practice.*
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*, 533–544.
- Palinkas, L. A., Um, M. Y., Jeong, C. H., Chor, K. H. B., Olin, S., & Hoagwood, K. E. (2017). Adoption of innovative and evidence-based practices for children and adolescents in state-supported mental health clinics: A qualitative study. *Health Research Policy and Systems, 15*, 27.
- Pettijohn, S. L., & Boris, E. T. (2014). *Contracts and grants between human service nonprofits and government: Comparative analysis*. July: Urban Institute Brief #4.
- Radu, P. T., Carnochan, S., & Austin, M. J. (2015). Obstacles to social service collaboration in response to the Great Recession: The case of the Contra Costa County safety net initiative. *Journal of Community Practice, 23*, 323–347.
- Richter, A., Schwarz, U., Lornudd, C., Lundmark, R., Mosson, R., & Hasson, H. (2016). iLead—A transformational leadership intervention to train healthcare managers' implementation leadership. *Implementation Science, 11*, 108.
- Romzek, B. S., LeRoux, K., Johnston, J., Kempf, R., & Piatak, J. S. (2014). Informal accountability in multisector service delivery collaborations. *Journal of Public Administration Research and Theory, 24*, 813–842.
- Silvia, C., & McGuire, M. (2010). Leading public sector networks: An empirical examination of integrative leadership behaviors. *The Leadership Quarterly, 21*, 264–277.
- Smith, S. R., & Phillips, S. D. (2016). The changing and challenging environment of nonprofit human services: Implications for governance and program implementation. *Nonprofit Policy Forum, 7*, 79–92.
- StataCorp. (2015). *Stata Statistical Software: Release 14*. College Station: StataCorp LP.
- Van Slyke, D. M. (2007). Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship. *Journal of Public Administration Research and Theory, 17*, 157–187.
- Wells, R., Pérez Jolles, M., Chuang, E., McBeath, B., & Collins-Camargo, C. (2014). Trends in local public child welfare agencies 1999–2009. *Children and Youth Services Review, 38*, 93–100.
- Willging, C. E., Aarons, G. A., Trott, E. M., Green, A. E., Finn, N., Ehrhart, M. G., & Hecht, D. B. (2016). Contracting and procurement for evidence-based interventions in public-sector human services: A case study. *Administration and Policy in Mental Health and Mental Health Services Research, 43*, 675–692.
- Willging, C. E., Green, A. E., Gunderson, L., Chaffin, M., & Aarons, G. A. (2015). From a “perfect storm” to “smooth sailing”: Policymaker perspectives on implementation and sustainment of an evidence-based practice in two states. *Child Maltreatment, 20*, 24–36.
- Williams, P. (2002). The competent boundary spanner. *Public Administration, 80*, 103–124.