A Study of the Relationships Among Effective Supervision, Organizational Culture Promoting Evidence-Based Practice, and Worker Self-Efficacy in Public Child Welfare

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A Study of the Relationships Among Effective Supervision, Organizational Culture Promoting Evidence-Based Practice, and Worker Self-Efficacy in Public Child Welfare

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The professional literature has not documented the relationship between effective supervision, an organizational culture promoting evidence-based practice, and self-efficacy in child welfare practice. Secondary analysis of survey data from one public child welfare agency was conducted to examine the relationship between these constructs. Results suggest that for inexperienced workers, there is a difference in their self-efficacy based on the effectiveness of the supervision they receive. Respondents receiving effective supervision were more likely to perceive their organizational culture as promoting evidence-based practice. Further, there was a significant difference in levels of self-efficacy based on this perception of organizational culture. This exploratory study supports further research into these promising organizational strategies for performance and outcome improvement.

KEYWORDS social work supervision, organizational culture, evidence-based practice, self-efficacy, child welfare

Although the important role supervisors play in promoting effective service delivery has received much lip service, there is little research into what makes social work supervision effective, particularly in child welfare, and...
little investigation into how effective supervision impacts other variables such as worker practice or client outcomes (Bogo & McKnight, 2006; Collins-Camargo, 2002; Tsui, 1997). While process data regarding clients served is widely captured by social service agencies, research has not established clarity with regard to the organizational factors that directly impact services. Further, the literature has not documented a consistent use of evidence-based practice in child welfare (Usher & Wildfire, 2003), or in other social work settings (Rosen, 1994; Rosen, Proctor, Morrow-Howell, & Staudt, 1995). We do not know, for instance, what attitudes child welfare staff have about evidence-based practice, or how it may impact their work with families. Thus, study of the extent to which child welfare staff are oriented toward evidence-based practice in their work with families is clearly warranted.

SELF-EFFICACY

One way of examining social work practice is to measure worker self-efficacy in performance of key tasks. This approach, grounded in social cognitive theory, has been extensively studied by Bandura (1997) who found that people are more strongly influenced by personal beliefs in their capability to perform tasks than objective facts and that this self-efficacy is related to motivation and actual behavior. In other words, if the person thinks the task can be done, and that he has the skill to do it, he will persevere even in the face of adversity. As human beings we exercise human agency through intentionality and forethought, self-regulation through self-reaction and self-motivation, and self-reflectiveness about our capabilities, the quality of our functioning, and the meaning of our life and the paths we choose to take (Bandura, 2001).

Efficacy beliefs are the foundation of agency through their impact on our adaptation to our experiences, and their impact on other behavioral determinants (Bandura, 2001). The relationship between self-efficacy and actual performance has been established empirically many times (e.g., Bandura, Adams, & Beyer, 1977; Johnson, 1999; Zimmerman, 1995). It regulates human functioning in four ways: cognitively, motivationally, affectively, and socially. Self-efficacy influences the way people face challenge, and their perseverance in the face of adversity and lack of success. Efficacious people are further likely to use structures as an opportunity, and circumvent structural constraints when necessary for effective performance (Bandura, 1997). Some of these aspects are the very behaviors we want to promote in evidence-based social work practice. In order to bring about desired results, we reflect on our behavior and experiences, and use whatever knowledge and skills we can relate to the situation at hand, in order to make good choices.

The work unit is also important in this conceptual framework. The individual self-efficacy perceptions of those in a work unit are not merely
summed. Those acting together with shared beliefs have what Bandura (1997) referred to as collective efficacy, which has been demonstrated through research to be related to higher aspirations and motivation, persistence through challenges, resilience to stressors, and performance accomplishments. It would seem to follow, then, that an effective supervisor that promotes teamwork and cohesion, would be increasing the positive effects of individual work toward higher staff self-efficacy. In addition to the interaction between internal and external influences, it would make sense that those with whom one has the most frequent contact would be of greatest importance. This further justifies the individual in the context of their work unit as the unit of analysis.

According to Bandura (1997), perceived self-efficacy has four sources. Each of these can clearly be linked to effective supervision. The most powerful source is enactive mastery experience. When supervisors provide staff with effective performance strategies and persuade them to apply them consistently, staff will have successful experiences that will build self-assurance. The second source is through vicarious experiences. By watching others successfully perform, such as mastery modeling by supervisors, individuals develop their own efficacy. Research shows that the greater the presumed similarity between the modeler and the individual, the greater the impact. Supervisors can model directly or facilitate self-modeling processes. Verbal persuasion is the third source. For optimal impact, the influencer must be a significant other to the person in question. The link here to supervision is clear. Performance feedback through supervision is an important reinforcement. Finally, self-efficacy comes from physiological and affective states. Individuals process somatic information, such as performance anxiety, as they attempt to consider or undertake tasks, or cope with stressors. A supportive supervisor and work unit may promote a safe environment, and increase the individual's ability to handle situations, thereby decreasing negative affective experiences over time. With reduced anxiety or stress, individuals feel a greater sense of control (Bandura, 1997).

Supervision’s role in enhancing self-efficacy may also have an indirect impact on client outcomes in child welfare, but this topic has not been studied. Three aspects of social cognitive theory are particularly relevant to supervisory influence in the workplace (Wood & Bandura, 1989). First, supervisors have the potential to influence the development of workers’ cognitive, social and behavioral competencies through mastery modeling, which would imply that effective supervision should be a predictor of case outcomes. Second, they can help cultivate employees’ beliefs in their capabilities (self-efficacy) so that they will use their knowledge and skills effectively in specific work-related tasks, which would suggest that effective supervision should be a predictor of self-efficacy in workers. Finally, they are in the position to enhance staff’s motivation through goal systems. This final aspect implies the promotion of evidence-based practice.
EVIDENCE-BASED PRACTICE

Gambrill (2003) states that “evidence-based practice suggests a philosophy of practice as well as a unique series of steps and related technological innovations designed to help practitioners to integrate evidentiary, ethical and implementation concerns … and for each step, obstacles and potential remedies are explored in ongoing efforts” (p. 19). Evidence-based practice includes not just the narrow application of research-based findings in practice, but also, having an outcomes-based orientation in one’s work with clients, employing single system designs or other methods of determining the effectiveness of case level intervention; self-reflection; effectively using ethical decision-making; using agency data systems to inform practice; and, using personal, case and organizational goal-setting and on-going monitoring of incremental progress. This includes valuing and understanding the relationship between service resources accountability (outputs, number of services provided, cases carried) and service outcome accountability (measurement of desired change; Nugent, Sieppert, & Hudson, 2001).

FRONTLINE SUPERVISION

Bernard and Goodyear (2004) assert that supervision has two purposes: “to foster the supervisee’s professional development … [and] to ensure client welfare” (p. 12). This could be interpreted that to ensure client welfare requires evidence-based practice, so the conceptual connection between these two seems sound. Evidence-based practice flows from the facilitation of an organizational culture that promotes it, and the direct influence supervisors can have on the development of worker skills in this area. For example, by setting goals, monitoring progress and providing evaluative feedback, they emphasize quality performance, and strengthen self-efficacy beliefs.

Much of the literature on supervision is conceptual in nature, often focusing on descriptive categories of supervisory style or function (e.g., Austin, 1981; Brashears, 1995; Bunker & Wijnberg, 1988; Middleman & Rhodes, 1985). Empirical studies often do not often focus on child welfare settings, which are known for tremendous workloads, high levels of stress in staff, and astronomical turnover rates. One study of child protection workers recognized the importance of supervisors’ support and direction of staff but found a significant proportion of workers turn elsewhere for support and guidance on work-related issues (Collins-Camargo, 2002). Of particular concern in this sample was that 45% of the responding workers who had less than a year experience in child welfare and 38% of those who had 1–3 years experience turned to peers rather than their supervisors for advice and guidance on work-related issues. Of workers responding to a survey, 50% felt the primary role of the supervisor is to be supportive of workers, rather than to perform administrative tasks. Of the 836 respondents, 81%
felt that supervision was very important to the workers’ ability to provide effective casework services (Collins-Camargo, 2002).

In the study, the educational role of supervision was also recognized as important to service provision, in that on-the-job training and modeling were two supervisory activities deemed most important. Staff in all categories emphasized the importance of supervisors supporting staff and promoting improved practice; however, a significant proportion of workers turn elsewhere for support and guidance on work-related issues. Supervisory techniques that were targeted toward improving worker practice, such as case review and consultation, exploring ethical issues, promoting self-reflective practice, modeling good practice, and promoting workers’ identification of important casework questions, were considered important but were often not provided effectively or at an adequate level (Collins-Camargo, 2002). Clearly, the provision of quality supervision is an area worthy of study in public child welfare.

While other studies have examined the special issues or challenges that confront supervisors in contemporary child protective services (Compher, Meyers, & Mauro, 1994; Cosier & Glennie, 1994; Cruthers, 1985), the empirical study of effectiveness in supervisory issues in child welfare is limited in focus (Magnuson & Wilcoxon, 1998; Schoech, 2001). Bowers, Esmond, and Canales (1999) found significant variations in what supervisors thought was effective in their practice. Their study further established that most supervisors used case management as opposed to the client-centered approach due to workload. Scott and Farrow (1993), and Harkness and Hensley (1991) found that a mixed focus in supervision (administrative, training and clinical consultation) was related to better outcomes.

A significant body of literature has attempted to describe supervisory characteristics and style (Granvold, 1977; 1978; MacEachron, 1994; Russell, Lankford, & Grinnell, 1983; York & Denton, 1990; York & Hastings, 1985). Supervisory style emphasizes the importance of procedures such as regular conferences with staff, review of case records and time studies, and supervisory procedures supporting worker autonomy, responsibility, self-initiation, and independent decision-making. Hipp and Munson (1995) and Nelson (1997) encourage a partnership model, as opposed to the traditional hierarchical models, that promote collaborative learning and the pursuit of client and worker goals. However, neither of these studies investigated the relationship between supervision and worker self-efficacy attitudes toward their child welfare tasks.

This article describes a study of the relationship between worker perception of effective supervision and worker self-efficacy in child welfare tasks. Rycraft (1994) found that an important factor in the retention of case-workers was the goodness of fit among the worker’s knowledge, skills, and job responsibilities, which is clearly similar to the concept of self-efficacy. Although self-efficacy has been extensively studied by many disciplines, its place in child welfare practice has been only minimally explored. Secondly,
this study examines whether worker perception of effective supervision is associated with perception of the organizational culture promoting evidence-based practice. This is related to the experience of a learning organization (Senge, 1990). Inherent in the development of a learning organization is the development of true partnership between supervisors and staff (DeVilbiss & Leonard, 2000). If it is assumed that supervisors can promote evidence-based practice in the workplace, it is important to determine whether the relationship between caseworkers’ belief that their work environment promotes evidence-based practice influences their own self-efficacy ratings.

THE LITERATURE IN BRIEF

Impact of Frontline Supervision

The potential impact of supervision on transfer of learning, practice, and organizational improvement is described conceptually (Diwan, Berger, & Ivy, 1996; Gregoire, Propp, & Poertner, 1998; Rushton & Nathan, 1996). Supervision is also found in the empirical literature to affect organizational, worker, and client outcomes on a number of levels, including reduced worker stress (e.g., Himle, Jayaratne, & Thyness, 1989; Martin & Schinke, 1998), staff retention (e.g., Ellett & Millar, 2001; Schoen, Goodson, King, & Phillips, 2001), worker motivation in practice and volume of service provision (McGrew & Bond, 1997), worker’s perception of skills (e.g., Berkman & Press, 1993; Young, 1994), and client engagement (Bibus, 1993). Thus, supervisors play a critical role within social work and human service organizations.

Organizational Culture and the Learning Organization

The literature suggests that supervisors play a key role in creating an organizational culture that enhances client outcomes. In one study, organizational climate was found to be a significant factor in promoting child psychosocial functioning, while interagency collaboration was not (Glisson & Hemmelgarn, 1998). Moore, Rapp, & Roberts (2000) have reported on the beneficial impact that supervisors can have by using client outcome data to improve child welfare services. They found improved staff morale; development of a common language and organizational culture; increased accountability; improved supervisory practice; improved adherence to child welfare policies; and increased performance. These findings demonstrate that supervisors applying an evidence-based approach to their practice have the potential to impact the child protective services system in a substantial way through their influence on organizational culture.

A significant body of research informs us as to how learning and change most effectively occur. For example, Tannenbaum (1997), in a study of 500
employees in seven organizations, found that training quality, relevance, and supportive work environments determined the success of the continuous learning initiative. Employees reported greater self-confidence and satisfaction with their professional development when their supervisors were actively contributing to a learning environment. However, there has been a call for research into how improved organizational climate will impact client outcomes in child welfare (Bednar, 2003). Glisson (2007) has demonstrated through a randomized, control trial that organizational intervention that is mission-driven, results-oriented, improvement-directed, relationship-centered and participation-based can lead to improved organizational climate and reduced staff turnover in human services agencies. These principles are directly related to evidence-based practice.

Evidence-Based Practice

Gambrill (1999; 2001) maintains that existing knowledge is underused by practitioners and believes that we must adopt an evidence-based approach to move forward as a profession. The literature is full of references relating to the assertion that social work practice is often not guided by research findings or empirically evaluated, and therefore evidence-based practice is not realized (Cheatham, 1987; Fischer, 1993; Kirk & Penka, 1992; Richey, Blythe, & Berlin, 1987; Rosen, 1994; Rosen et al., 1995). In a multi-site statewide evaluation of state-funded family support programs, Carrilio, Packard, and Clapp (2003) found that programs did not consistently use their information systems' data despite the provision of training and technical assistance and even though it was required by funders. The authors proposed promoting organizational culture change that would value information, quality performance, and measured results. Along this line, Randall, Cowley, and Tomlinson (2000) have indicated that agencies must provide models of supervision that promote evidence-based practice for better practice outcomes to occur.

Self-Efficacy

Self-efficacy has been examined empirically from the perspective of many fields, including health (e.g., Holden, 1991; O’Leary, 1985), counseling (e.g., Larson & Daniels, 1998), social work education (e.g., Montcalm, 1999), children’s career aspirations (e.g., Bandura, Barbaranelli, Caprara & Pastorelli, 2001), and organizational behavior (e.g., Yoon, 2001). Holden, Anastas, and Meenaghan (2003) cite a lengthy body of literature demonstrating the construct is predictive of future job performance (e.g., Ewart, 1995; Holden, 1991; Holden, Moncher, Schinke, & Barker, 1990; Zimmerman, 1995). A number of studies have measured the impact of self-efficacy on other factors involved in workplace performance (e.g., Bandura & Cervone, 1983; 1986; Cervone & Peake, 1986; Jacobs, Prentice-Dunn, & Rogers, 1984).
Murphy and Ensher (1999) found that subordinates with low self-efficacy benefited from a high degree of exchange with leaders, thereby developing higher self-efficacy. In a number of studies, Ellett and colleagues (1995; 2001; 2003) have found low self-efficacy was associated with a low intent to remain employed in child welfare and that organizational culture also had a significant relationship with worker intent to remain employed.

**STUDY PURPOSE AND HYPOTHESES**

Given the gaps in the literature, this study sought examine the relationship between workers’ perception of effective supervision and worker competency in child welfare practice operationalized as their ratings of self-efficacy in child welfare tasks, and in identified case outcomes from state and national data sets. Rycraft (1994) found that an important factor in the retention of caseworkers was the goodness of fit between the worker’s knowledge, skills, and job responsibilities, which is clearly similar to the concept of self-efficacy. Further, this study sought to examine whether worker perception of effective supervision is associated with their perception of the organizational culture promoting evidence-based practice. This is related to the experience of a learning organization. Management theorist, Peter Senge (1990), described learning organizations as what he termed five disciplines: personal mastery, mental models, shared vision, team learning, and systems thinking. Inherent in the development of a learning organization is the development of true partnership between supervisors and staff (DeVilbiss and Leonard, 2000). If it is assumed that supervisors can promote evidence-based practice in the workplace, it is important to determine whether the relationship between caseworkers' belief that their work environment promotes evidence-based practice influences their own self-efficacy ratings.

Therefore the following hypotheses were examined:

1) Child welfare staff who rate their supervisors as effective will report a higher level of self-efficacy in child welfare tasks as compared to those who do not, after controlling for number of years experience in child welfare, and educational degree;

2) Child welfare staff who rate their supervisors as effective will be more likely to perceive their organizational culture as promoting evidence-based practice, after controlling for number of years experience in child welfare, and educational degree, than those who do not rate their supervisors as effective; and

3) Child welfare staff who perceive their organizational culture as promoting evidence-based practice will report higher levels of self-efficacy than those who do not, after controlling for years of experience and educational degree.
Sample and Data Collection Procedures

This study involved secondary analysis of cross-sectional data obtained from an electronic survey completed by staff in the public child welfare agency of a Midwestern state in May of 2003. Specifically, 2237 employees were sent an e-mail invitation to participate in the research and were provided with a hyperlink to the survey. There were 1261 valid responses, yielding a 56.37% response rate. However, for the purpose of the current study, only participants in the frontline child welfare worker and supervisor categories were included in the analysis and this amounted to approximately 900 respondents, all of whom participated voluntarily. Raw data for specific items on the survey were obtained from the original researcher with the permission of the public agency in which the data were collected.

Measures

Survey of Organizational Excellence

The survey was composed of two instruments. The Survey of Organizational Excellence (SOE) has been tested extensively; by 1999 more than 300,000 individuals had completed the SOE (Lauderdale, 2001). The instrument has demonstrated through repeated testing to yield reliable data (Cronbach’s alpha ≥ .85). This instrument has been under continuous development to promote validity. Particular subscales have been subject to establishment of convergent validity with other instruments, such as the burnout subscale with Dean’s Alienation Scale, and Maslach’s Burnout Inventory. In addition, content validity has been established through expert panel review, and comparison of data rankings of constructs to ratings of organizations by trained observers (Lauderdale, 1999).

Although not designed for child welfare agencies, this instrument is particularly well-suited to the present study as it was developed to promote an environment of self-reflection and learning in organizations (Lauderdale, 2001), and therefore measures five workplace dimensions (work group, work setting, organizational features, communication, and personal demands), within which have been identified twenty constructs, including supervisory effectiveness, team effectiveness, organizational change-oriented, goal oriented, and quality) (Lauderdale, 1999). Constructs are measured with 86 primary items employing a six-point Likert scale (strongly agree; disagree; feel neutral; agree; strongly agree; don’t know/not applicable).

Effective supervision was defined by a composite of two constructs identified in the SOE: supervisor effectiveness and team effectiveness. It is believed that the combination of these two comprehensive measures encompasses the various aspects of supervision described in the literature.
The Supervisor Effectiveness construct included seven items (e.g., *We are given the opportunity to do our best work; We are given accurate feedback about our performance; There is a basic trust among employees and supervisors*); the Team Effectiveness construct was composed of six items (e.g., *We seem to be working toward the same goals; There is a real feeling of teamwork; Work groups are actively involved in making work processes more effective*).

Organizational culture promoting evidence-based practice was defined as those shared values and beliefs generally understood by employees within the work unit that encourage the use of available information to enhance the likely effectiveness of their work with clients, and operationally defined by a composite of twelve items on the SOE measuring concepts derived from the literature as multifaceted components of evidence-based practice that may be descriptive of the organization’s culture (Gambrill, 2003; Holloway, 2001; Humphries, 2003; Nugent, Sieppit, & Hudson, 2001; Rosen, 2003), including an outcomes-based approach to practice, an atmosphere of open inquiry and learning, and a focus on quality service provision. Items included, for example, *We are constantly improving our services; We develop services to match our clients’ needs; We integrate information and act intelligently on that information; and We use feedback from those we serve to improve our performance*.

**SELF-EFFICACY ASSESSMENT-SOCIAL WORK**

A second instrument, the *Self-Efficacy Assessment–Social Work (SEA-SW)* Scale (Ellett, 2001) was used to operationally measure worker self-efficacy in child welfare tasks. This scale has been used extensively (n ~2500) within three states’ child protection agencies in studies researching the relationship between self-efficacy and child welfare employees’ intent to remain employed in the agency (Ellett, 2001; Ellett, Ellett, & Rugutt, 2003). The SEA-SW is composed of 16 items to which subjects respond using the stem using a four-point Likert scale (weak to very strong): *The strength of my personal beliefs in my capability to* . . . . *Child welfare task rated include, for example, Use assessment skills in decision making about child safety*. Three factors that have been identified through principal components analysis: 1) client assessment/analysis, 2) effort/persistence, and 3) foster care/adoption, all of which have demonstrated strong internal consistency (Ellett, Ellett, & Rugutt 2003). Analysis was conducted using each of the individual factors as dependent variables. In addition, there are four efficacy expectations items, such as, *In your work as a child welfare professional, how much influence do you believe you personally have to positively affect the clients you serve?* (no influence; weak influence; strong influence; very strong influence). Expert reviews and content validation were complete in a pilot study prior to large-scale use (Ellett, Ellett, & Rugutt, 2003).
Data Analyses

For each variable, mean (or mode for nominal variables), standard deviations, and ranges were computed, as well as skewness and kurtosis tests for distribution normality. In variable distributions where the results of these tests exceeded 1.0, transformations of the variable were completed. Overall, missing data was not a problem for this study; however, there were three questions with more than 5% missing (two items contributing to the effective supervision construct, and one item for the self-efficacy-foster care/adoption factor of the self-efficacy construct). A missing value analysis was conducted to look for patterns, but none were noted. Based on statistical consultation, the primary variables of interest, all of which are ordinal measures, (effective supervision, professional organizational culture and self-efficacy) were each computed using the MEAN command in SPSS (Version 13.0, SPSS, Inc., Chicago, IL) for the survey items tied to each construct, as this procedure ignores the missing values and therefore does not skew the data, retaining the usability of the largest portion of the sample possible. Although summation of the item values would allow greater variance in scores, missing values have the potential of significantly skewing the data.

Bivariate analysis was completed to explore correlational relationships between variables, using Pearson’s correlation coefficient, or chi square analysis, depending on the level of measurement of the variables involved. Based on the emphasis within the research questions on group differences among levels of supervisory effectiveness and given that the variables were only ordinal level, one-way analysis of variance was conducted to assess the level of differences in the dependent variables using various grouping variables with the intent being to generate findings that may be used by agencies in practice and organizational resource decisions. In order to examine relational patterns across low, medium and high levels of supervisory effectiveness within this sample were categorized in SPSS to assign group membership by using the n tiles function. The same procedure was used for the professional organizational culture variable as appropriate when used as an independent variable. This method of creating groups within this variable was selected as analysis of covariance (ANCOVA) is most accurate when groups are approximately equal in size (Green & Salkind, 2003). Contrast analysis of means was conducted using Sidak post hoc pair-wise comparisons to explore the differences in dependent variables across levels of effective supervision.

Two variables were included as control variables due to their likely relationship with worker self-efficacy in child welfare tasks: years of service with this organization and highest educational level. The literature has demonstrated a relationship between social work education levels and child welfare performance (e.g., Dhooper, Royse, & Rompf, 1990; Zlotnik, 2002); however, the data set did not include a variable on type of degree. Both education and experience have a potential correlation with perceptions of supervision as
well. When preliminary bi-variate analysis confirmed a statistically significant relationship between one of these variables and a variable of interest, they were controlled for in the analysis. Factorial ANOVA was not selected, as the focus of the study was on the isolation of the relationships among supervision, organizational culture promoting evidence-based practice, and self-efficacy, rather than the influence of education and work experience on the dependent variables.

To further explore any possible influence of experience, an ANCOVA procedure was conducted using only respondents with two years of experience or less in the agency for each of the self-efficacy variables. This decision was based on findings of an earlier study of supervision in public child welfare, in which two years or less of experience was identified as a critical juncture at which social workers' experience with supervision was different from that of more experienced workers (Collins-Camargo, 2002).

RESULTS

Sample Description

The final sample for this study consisted of 876 social service workers and supervisors. There were 752 respondents from social services workers I and II categories (response rate = 52.8%) and 124 social service supervisors (61.7% response rate). Most of the respondents were women (87.7%), and White (87.0%). Approximately 33% of the sample were in two age categories: age 16–29 years (32.1%) and age 30–39 years (30.0%).

An important issue confronting public child welfare services is worker turnover. Respondents were asked if they planned to be working for the organization in 2 years, and 30.8% of respondents indicated they did not. Approximately 80% of the sample had a bachelor's degree, and 18% a master's degree. The other covariate believed to impact self-efficacy was the respondent's length of service in the agency. The percentage of respondents in each category were: <1 year (6.3%); 1–2 years (19.3%); 3–5 years (28.4%); 6–10 years (22.5%); 11–15 years (10.6%); and >15 years (12.8%). Excluding supervisors, this was a fairly inexperienced sample as 29.5% reported having 2 years of experience or less, and 31.3% had 3–5 years of experience.

Effective supervision was computed as the mean of the 13 items making up the supervisory effectiveness and team effectiveness constructs measured using a 0-point Likert scale of the SOE of 0-5 (mean = 2.85, SD = .76). Internal consistency was strong for this subscale (alpha = .92). In order to conduct analysis using chi-square and ANCOVA analyses, the effective supervision variable was transformed into a nominal variable with three categories of low, medium, and high supervisory effectiveness as described in the analysis section. A number of statistically significant differences were
found. There was a difference in supervision by education level (\(\chi^2 = 11.867, p = .018\)), as proportionately more respondents with bachelor’s degrees ranked their supervision in the more effective categories than did those with master’s degrees or higher degree.

Another significant difference was found by length of service (\(\chi^2 = 54.939, p = .000\)). Those with less experience tended to rank their supervision higher. Also, those who indicated they intended to still be working in the agency in two years were much more likely to rank their supervision as effective (\(\chi^2 = 29.727, p = .000\)). Approximately 40% of those ranking their supervisory effectiveness in the low category did not intend to stay.

Professional organizational culture promoting evidence-based practice was computed as the mean of twelve items from the SOE. Internal consistency for this subscale was (alpha = .85). This variable was also transformed into a nominal variable with three levels of professional organizational culture (low, medium, high). Once again, there was a significant difference by education (\(\chi^2 = 12.136, p = .016\)), and length of service (\(\chi^2 = 59.447, p = .000\)). As the length of service increased and the amount of education increased, there was a tendency for the organizational culture to be ranked in the lower categories. There was also an important difference among those who intend to remain employed in the agency, as they were much more likely to rate the organizational culture in higher categories (\(\chi^2 = 32.390, p = .000\)). Pearson correlation coefficients revealed that effective supervision was highly correlated with professional organizational culture promoting evidence-based practice (\(r = .845, p \leq .000\)).

The self-efficacy variables, measured on a four-point Likert scale. Factor analysis of the current data as well as reliability analysis confirmed these three factors or subscales. Client assessment/analysis had an eigen value of 7.235, a Cronbach’s alpha = .8556, and accounted for 45% of the variance; effort/persistence had an eigen value of 1.098, a Cronbach’s alpha = .7839, and accounted for 7% of the variance; and foster care/adoptions had an eigen value of .930, a Cronbach’s alpha = .6910, and accounted for 6% of the variance. The current sample suggests generally high perceptions of self-efficacy with means for the three factors ranging from 3.22 to 3.29 (SD .51–.57), with efficacy expectations being lower, at 2.88.

### Relationship Between Effective Supervision and Self-Efficacy

Hypothesis 1 stated that child welfare staff who rate their supervisors as effective will report a higher level of self-efficacy in child welfare tasks as compared to those not having effective supervision, after controlling for length of service, and educational degree. To test this hypothesis, only worker responses were analyzed. A series of analyses of covariance were conducted using each of the four self-efficacy subscales (client assessment/
analysis, effort/persistence, foster care/adoption, and efficacy expectations) as a dependent variable for a separate procedure. For only one self-efficacy variable, efficacy expectations, was there a significant difference in means between levels of effective supervision \( (F(2, 736) = 3.539, p = .030, \text{partial } \eta^2 = .01) \), after significant adjustment by the covariate, education. Length of service did not significantly impact the model \( (F(1, 736) = .380, p = .538, \text{partial } \eta^2 = .001) \). Examination of adjusted and unadjusted group means indicates a very slight increase between low and medium levels of supervision, and a larger increase in efficacy expectations between the medium and high levels of supervision.

When a subset of the sample including only those staff with 2 years of experience or less was analyzed, worker self-efficacy relative to client assessment/analysis was found to vary significantly with levels of effective supervision, \( F(2, 220) = 5.311, p = .006, \text{partial } \eta^2 = .046 \), after adjustment by education, although the impact of the latter was not significant. Contrast analysis of means was conducted using Sidak post hoc pair-wise comparisons to explore the differences in client assessment/analysis means across levels of effective supervision. Using low levels of effective supervision as the reference category, a significant difference was found between both low and medium, and medium and high levels of effective supervision \( (p \leq .05) \), but not between low and high. Review of adjusted and unadjusted means revealed an interesting pattern, in that client assessment/analysis means drop from low to medium levels of effective supervision, but then rebound slightly higher than the low effective supervision level at the high level.

When this procedure was conducted using the self-efficacy persistence and effort subscale as the dependent variable, similar results were found. While education did not have a significant influence \( (F(1, 219) = .859, p = .355, \text{partial } \eta^2 = .004) \), persistence and effort did vary by levels of group supervision, \( F(2, 219) = 5.783, p = .004, \eta^2 = .050 \). Post hoc testing showed a significant difference in means between medium and high levels of effective supervision \( (p < .01) \). Persistence and effort means actually decrease between low and medium levels of supervision, and rebound even higher with high levels of effective supervision.

Analysis of covariance using the self-efficacy foster care/adoption variable did not reveal a significant difference in means based on the level of effective supervision \( F(2, 217) = 1.958, p = .144, \eta^2 = .018 \), and education also did not have a significant impact. Similarly, the effectiveness of supervision was not associated with a significant variance in means for efficacy expectations, \( F(2, 218) = 2.557, p = .080, \eta^2 = .023 \) in the subsample although there was significant variance for the entire sample of workers, indicating that the impact of supervision for this factor is not associated with inexperience and may therefore be an area where supervisors can effectively impact their staff even after they become more experienced.
To determine if 2 years or less of experience was the appropriate subsample for this analysis, a similar array of procedures was completed with respondents with 5 years of experience or less, but the difference of levels of effective supervision was no longer significant for the self-efficacy variables.

Effective Supervision and Organizational Culture Promoting Evidence-Based Practice

This hypothesis stated that child welfare staff who rate their supervisors as effective will be more likely to perceive their organizational culture as promoting evidence-based practice, after controlling for number of years experience in child welfare and educational degree, than those who do not have effective supervision. Once again, an ANCOVA was completed, using the categorized effective supervision variable with three levels. The main effect of levels of effective supervision on professional organizational culture was significant, $F(2, 746) = 430.104, p = .000$, partial $\eta^2 = .536$, after adjusting for the significant impact of length of service. The other covariate, education, did not have a significant impact ($F(1, 746) = .259$, $p = .611$, $\eta^2 = .000$). Reviewing adjusted and unadjusted means for professional culture promoting evidence-based practice by level of effective supervision revealed significant differences across all levels, in the expected direction ($p \leq .000$). As the effectiveness of the supervision increases, the organizational culture is significantly more characterized by evidence-based practice.

Organizational Culture Promoting Evidence-Based Practice and Self-Efficacy

The third hypothesis was that child welfare staff who perceive their organizational culture as promoting evidence-based practice would report higher levels of self-efficacy than those who do not, after controlling for years of experience and educational degree. In order to test this hypothesis, only worker responses were analyzed. A series of analyses of covariance was conducted using each of the self-efficacy variables in separate procedures.

The main effect of professional organizational culture was not significant on either the self-efficacy client assessment/analysis or foster care/adoption subscales. However, for the other three variables, there was a statistically significant difference in means between levels of professional organizational culture. Persistence/effort varied significantly with organizational culture, $F(2, 743) = 7.546, p = .001$, $\eta^2 = .020$, although neither of the covariates had a significant effect on the variance in this case. Significant differences were found between the low and high levels of professional organizational culture.
Means for efficacy expectations varied significantly with professional organizational culture, $F(2, 736) = 14,320, p = .000$, partial $\eta^2 = .037$, after significant adjustment by education, but not length of service. Review of adjusted and unadjusted means demonstrated that there is a very slight increase in efficacy expectations between low and medium levels of organizational culture, but a larger increase with a high rating.

Finally, the main effect of professional organizational culture on means for self-efficacy total was significant, $F(2, 743) = 4.353, p = .013$, partial $\eta^2 = .012$, after adjustment for length of service and education which demonstrated a statistically significant relationship. Similar to the other comparisons, a significant difference was found between low and high levels of professional organizational culture ($p \leq .05$).

**DISCUSSION**

The expected relationship between effective supervision and the existence of an organizational culture that promotes evidence-based practice was strongly supported in this study. The level of effective supervision explained a full 53% of the variance in ratings of professional organizational culture promoting evidence-based practice. Although level of education did not have a significant impact on this relationship, the respondent’s length of service in the agency did. These findings fit well with prior studies on effective techniques in supervision and field instruction. Recent studies in field education have found that supervisory practices that emphasize the gathering of evidence of student skill are associated with student perception of a quality learning experience (Fortune McCarthy, & Abramson, 2001; Whisenhunt, Romans, Boswell, & Carlozzi, 1997). Respondents in this study who indicated their intention to remain employed tended to report higher levels of organizational culture promoting evidence based practice, suggesting that this may also be important to staff retention, building on literature already linking organizational culture in general to intent to remain employed (Ellet, Ellett, & Rugutt, 2003; Ellett & Millar, 2001).

While the literature on organizational culture and change (e.g., DeVilbiss & Leonard, 2000; Rushton & Nathan, 1996) argues that supervisors are in positions that can promote organizational change, the hypothesis had not been tested. The current study is perhaps the first to find data to make the link between effective supervision and the development of an organizational culture to promote worker learning and evidence-based practice in social work.

There is little social work literature that addresses the relationship between organizational culture promoting evidence-based practice and self-efficacy. The results of the current study support Bandura’s (1997) theory, in that there was a significant difference in levels of self-efficacy based on
ratings of organizational culture. These findings are also consistent with others indicating that frontline supervisors play an important role in creating and interpreting the organizational culture of their work unit (e.g., Burke & Litwin, 1992; Cohen and Austin, 1994). When workers perceive that this culture promotes evidence-based practice—an orientation which is conceptually tied to professional and organizational learning, as well as data-driven measurement of practice effectiveness (Gambrill, 2003)—these findings suggest they will tend to also rate their supervision as effective. This evidence-based practice culture, then, would logically produce workers with higher levels of self-efficacy in child welfare tasks.

When the data from workers with less than two years of experience were analyzed separately, the true potential for supervisory impact on self-efficacy of child welfare tasks was realized. The partial support of this hypothesis is understandable in light of the nature of the measurement being used. There was a tendency for respondents in this study to rate themselves relatively high on the self-efficacy scales. Some of this may be explained by the possibility that they do not have an accurate perception of themselves. For more experienced workers, if they do not have high self-efficacy in tasks regularly required in the work, one would wonder if they would stay, particularly given the high stakes involved in child welfare work, which seems consistent with retention studies (e.g., Ellet, 2001; Rycraft, 1994). Self-efficacy has been described in terms of these components: workers’ commitment to tasks even in the face of significant challenge (which would likely be the case in child welfare), their belief that they have the capability to perform the task, and their belief that their efforts will result in desired outcomes (Bandura, 1997). Child welfare supervisors may be in a unique position to create the environment for the four sources of self-efficacy (enactive mastery experiences, vicarious experiences, verbal persuasion and affective states) described by Bandura (1997), through the provision of opportunities for reflective practice success, modeling, performance feedback, and the provision of a supportive practice environment. This underscores the importance of efficacy expectations, or the belief that their actions have the potential to result in desired outcomes, which the current study suggests are amenable to supervisory influence regardless of years of experience.

Supervisory influence may be most potent with newer workers, however. The body of literature outside social work supporting self-efficacy as a predictor of future behavior (e.g., Holden, 1991; Larson & Daniels, 1998; Montcalm, 1999; O’Connor & Korr, 1996; Yoon, 2001) has often focused on its use with employees involved in professional development, in an internship capacity, or otherwise in the position to have their skills enhanced. As has been previously stated, the 16 items in the primary self-efficacy scale measure skills that experienced workers would be expected to have mastered. It is in the early years of employment that supervisors have most
ability to impact the development of such knowledge and skills. The reason behind the curvilinear relationship between supervision and self-efficacy when examining means across levels of supervision can only be supposed, and ought to be a focus of future research. It is possible that workers of low and higher levels of self-efficacy receive more attention from supervisors, while mediocre workers receive less supervision.

The effort/persistence, and efficacy expectations measures of self-efficacy also varied significantly with professional organizational culture. Work units supporting such a culture may in turn promote and enhance levels of self-efficacy in their staff, particularly in terms of their ability to persist in the face of challenge. Such a culture may enhance beliefs regarding their ability and responsibility toward impacting the lives of their clients. These are two important factors in a stressful environment like public child welfare. It should be noted, however, that with all three self-efficacy subscales, the magnitude of difference was relatively small; the largest being associated with self-efficacy persistence/effort in which 4% of the variance was explained by organizational culture.

Though the magnitude of the findings were modest and based on cross-sectional, attitudinal data, this does not negate that a portion of the variance in the self-efficacy dependent variables is explained by factors that are within the purview of the agency to change: supervisory practice, a professional organizational culture promoting evidence-based practice, and the development of efficacy expectations regarding child welfare work. As agencies struggle for strategies to enhance the effectiveness of frontline work, there is a need for evidence to guide their decision-making about interventions that have the best potential for success and are therefore deserving of precious resource allocation.

This study supports three separate but integrally related strategies which social work organizations, and in particular, embattled child welfare agencies, may use to promote more effective practice. First, this study provides some evidence that social work supervision may be key to the promotion of perceived effective practice in child welfare settings. The demonstration that supervision contributes to self-efficacy for inexperienced workers, and to the quality of worker practice, lays the foundation for administrative interventions that may promote improved outcomes for victims of child abuse and neglect, and their families.

It also supports the assertion that effective supervision and the promotion of an organizational culture promoting evidence-based practice can be closely linked, and therefore can be used in the agency to promote improvement. Supervisors can be taught how to facilitate such a culture through use of worker- and unit-level data to assess practice effectiveness, and promoting an outcome-focused and data-driven approach to the work. Finally, the nurturing of efficacy expectations in child welfare workers may be a valuable role for supervisors to play, as they promote accomplishment
of worker practice standards with an eye on the worker’s ability to effective positive change in collaboration with the client.

This study expands the professional literature that had suggested, but not demonstrated, a conceptual link between supervision, organizational culture, and self-efficacy in social work settings. Limited resources require that child welfare agencies make well-informed choices when moving towards evidence-based practice. Most importantly, this study presents a powerful argument for interventions to promote more effective supervision and the promotion of evidence-based practice in this field. The findings indicate that supervisors do play an important role in creating an organizational culture promoting evidence-based practice and that, when such a culture exists, workers have stronger self-efficacy in child welfare tasks. This study helps us begin to understand the milieu of evidence-based practice in public child welfare. Since supervisors are an important vehicle for impacting positive outcomes for children and families, agencies can feel confident that investing in supervision will promote better outcomes.

REFERENCES


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