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Clinical Supervision of Mental Health Services: A Systematic Review of Supervision Characteristics and Practices Associated with Formative and Restorative Outcomes

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Abstract

In this review, the authors examined supervision characteristics and practices associated with formative (e.g., skill development) and restorative (e.g., well-being) provider outcomes. We used qualitative review to summarize supervision characteristics associated with desired outcomes. Then, we applied a distillation approach (Chorpita et al., 2005) to identify practices associated with formative and restorative outcomes. The most common practices for promoting formative outcomes were corrective feedback, discussing intervention, and role play. Findings indicate several supervision strategies have demonstrated empirical support for improving formative outcomes. However, more rigorous research is needed in community settings, particularly for understanding which strategies improve restorative outcomes.

Keywords

clinical supervision; mental health services; formative outcomes; restorative outcomes

As defined by Milne (2007), supervision is “relationship-based education and training that is work-focused and which manages, supports, develops and evaluates the work of colleagues” (p. 439). Supervision has been described as common in community mental health settings, with the majority (54-75%) of providers receiving 30-60 minutes of supervision weekly (Accurso et al., 2011; Dorsey et al., 2017; Kolko et al., 2009). Proctor (1986) specified three key functions addressed in the context of supervision: normative, formative, and restorative. The normative domain is concerned with managerial tasks of supervision that support ethical practice and compliance with agency regulations. The formative domain of supervision is comprised of activities that aim to facilitate provider skill development, increase provider knowledge about topics in clinical practice, and support professional identity development. Finally, the restorative domain of supervision involves the provision of supports that promote provider well-being, reduce burnout, and enhance job satisfaction.

There may be differences in the degree to which supervision domains are emphasized across contexts and settings. For example, in the context of supporting providers’ use of a novel

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intervention, significant emphasis may be placed on the formative domain and ensuring that providers implement the intervention as intended. On the other hand, priorities might also shift such that there is greater emphasis placed on the normative function due to the need to comply with agency regulations, with comparatively less emphasis placed on the restorative and formative domains. Although the goals of supervision may differ across contexts, there is practical utility for identifying supervision characteristics and practices that are associated with supervision outcomes across a broad range of contexts, treatment approaches, and settings. A growing literature of empirical studies has examined characteristics of supervision and supervision practices in relation to formative and restorative outcomes that lends itself to an empirical summary. Conversely, there is a dearth of research examining the normative domain. Though the normative domain holds importance for ensuring ethical and competent clinical practice, there is not yet enough research in this area to warrant its inclusion in a systematic review.

Thus, in the current review, our aims were to identify supervision practices and characteristics associated with formative and restorative outcomes. For the purpose of this review, we defined practices as intentional behaviors that supervisors may perform as well as shared activities between the supervisors and provider (e.g., role play) that occur in the context of clinical supervision. Supervision characteristics are defined as individual (e.g., personality characteristics, social skills), structural (e.g., frequency, length, format), and relational (e.g., supervisory support, supervisor-provider relationship) attributes in a supervisor-provider dyad that may impact supervision outcomes.

The focus on formative and restorative domains of supervision is timely and important. Evidence suggests that formative and restorative domains of supervision are critical to understand further, given well-documented difficulties in implementing effective interventions and high levels of provider turnover and burnout present in mental health service settings (Morse et al., 2012; Southam-Gerow et al., 2010; Weisz et al., 2006). Provider integrity to the treatment model and competence in the delivery of evidence-based practices, which are potential formative outcomes of supervision, have been linked to psychosocial treatment outcomes (Hogue et al., 2008; Schoenwald et al., 2004; Schoenwald et al., 2009a). There is empirical evidence, as well as widespread acknowledgement, that workshop trainings alone are not associated with meaningful and sustained skill acquisition (Beidas & Kendall, 2010; Herschell et al., 2010). Clinical supervision is increasingly recognized as an important support to consider in developing provider competencies and mastery due to its widespread availability and integration in mental health service systems (Bearman et al., 2013; Schoenwald et al., 2013). In addition, there is burgeoning evidence about supervision practices that are associated with formative outcomes. Specifically, Bearman et al. (2017) found that providers who received active supervision strategies, including modeling, corrective feedback, and role-playing, demonstrated continued growth post-training in fidelity and global competence in delivering cognitive behavioral therapy. A summary of the literature might provide additional insight about the features of supervision that are effective with regard to formative outcomes.

The restorative domain of supervision is also essential to understand. In part due to the numerous demands present in mental health service settings (e.g., large caseloads,

productivity standards, complex cases with multiple problems), provider burnout is a significant problem. Estimates suggest that 21-67% of mental health providers report experiencing burnout at some point in their career (Morse et al., 2012). Burnout is associated with a host of deleterious outcomes, including increased turnover (Beidas et al., 2016), physical and mental health problems (Maslach et al., 2001; Morse et al., 2012), absenteeism (Morse et al., 2012), and lower job satisfaction (Prosser et al., 1999). Burnout and other indicators of provider well-being are also associated with client outcomes. For example, burnout has been linked to lower client ratings of perceived quality of care and service satisfaction (Garman et al., 2002; Salyers et al., 2015). In addition, high rates of organizational provider burnout and turnover are also associated with poorer organizational implementation of evidence-based practices (Woltmann et al., 2008). Supervisors are well-suited to support provider well-being, as they frequently interact and have established relationships with providers. In addition to supporting individual providers, attending to the restorative domain may also yield benefits in other areas, including enhancing the quality of clinical care, implementation of evidence-based practices, and provider productivity (Garman et al., 2002; Salyers et al., 2015; Woltmann et al., 2008).

This work builds upon prior reviews of the supervision literature (Alfonsson et al., 2018; Dawson et al., 2013; Hoge et al., 2011; Milne & James, 2000; Spence et al., 2001; Watkins, 2020; Wheeler & Richards, 2007). Strengths of these reviews included providing a comprehensive overview of the scope, format, and structure of supervision; summarizing strengths and limitations of the supervision literature; and reviewing evidence regarding the overall effectiveness of supervision. However, limitations of these reviews included sole reliance on qualitative methods to summarize the literature, summarizing a very broad array of the supervision literature (perhaps due to limited research available at the time of publishing), and summarizing findings from a narrow subset of the literature (e.g., summarizing supervision research on one treatment approach). Though these reviews have advanced the field’s knowledge of supervision, there is an opportunity to further extend our understanding of using novel methods to summarize the burgeoning body of supervision research that has emerged in recent years.

Thus, in the current review we applied both qualitative summarization and distillation methods to characterize the supervision literature. We used qualitative review to summarize supervision characteristics with formative and restorative outcomes. Then, we used a distillation approach (Chorpita et al., 2005; Chorpita & Daleiden, 2009) to identify discrete practices that were associated with formative and restorative outcomes. This evidence synthesis approach allows for a common ontology to be used to describe a taxonomically diverse literature in terms of supervision practices and the outcomes achieved (Chorpita et al., 2005). Additionally, distillation enables evidence to be synthesized at the practice level (i.e., not only at the level of the supervision model or intervention), which then permits identification of common practices across all effective supervision approaches.

In this review, we examined two primary questions: First, which characteristics of supervision (e.g., frequency, aspects of supervisor-supervisee relationship, format) are associated with formative and restorative outcomes? Second, which supervision practices (e.g., role play, modeling, etc.) are most frequently associated with formative and restorative

outcomes? Given concerns noted in prior reviews regarding the quality of supervision research (Dawson et al., 2013; Wheeler & Richards, 2007), we also examined the methodological rigor of studies included in the current review.

Method

Search Process and Selection Criteria

This review was conducted according to PRISMA guidelines for meta-analyses and systematic reviews (Moher et al., 2009). A flow diagram outlining the process of identification, screening, eligibility determination, and inclusion of articles is presented in Figure 1. PsycINFO, Google Scholar, and PubMed were searched for potentially relevant articles using the following search terms: supervision AND community AND mental health, supervision AND mental health, mental health supervision. In addition, search terms related to formative (i.e., implementation, fidelity, competence, skill development) and restorative (i.e., burnout, fatigue, depersonalization, well-being, satisfaction) outcomes were used. A total of 2,122 abstracts were screened to identify articles that were potentially relevant to the current review. Of the abstracts screened, 118 articles were identified as relevant. In addition, the reference lists of other supervision reviews were examined (Dawson et al., 2013; Hoge et al., 2011; Milne & James, 2000; Spence et al., 2001; Wheeler & Richards, 2007). This method yielded one additional potentially relevant article. The 119 articles that passed initial screening were read in their entirety and evaluated for selection according to predetermined inclusion and exclusion criteria.

For inclusion in the review, articles were required to (1) be published in a peer-reviewed journal (119 articles); (2) examine supervision characteristics and/or practices using a correlational, quasi-experimental (e.g., single group pre-post design), or experimental (e.g., randomized controlled trial) design (49 articles); (3) examine at least one formative or restorative outcome (23 articles); and (4) examine supervision of mental health providers delivering psychosocial (i.e., non-pharmacologic) interventions (23 articles). One article that used a case study design was excluded, yielding a final sample of 22 articles.

Twenty-two studies published between 1981 and 2018 met criteria and were included in the current review. Eight (36.4%) studies examined supervision practices, ten (45.5%) examined supervision characteristics, and four (18.2%) examined supervision practices and characteristics. For supervision outcomes examined, 13 (59.1%) studies examined formative outcomes, six (27.3%) examined restorative outcomes, and three (13.6%) examined formative and restorative outcomes. Characteristics of reviewed studies are presented in Table 1.

Coding

Each study was coded using a codebook that summarized multiple variables related to study design, sample characteristics, supervision setting and characteristics, supervision practices, and formative and restorative outcomes. Supervision characteristics were organized into four themes that emerged in the process of reviewing the literature: *supervisor characteristics, supervisor-provider relationship, supervisory support and processes,* and *supervision format*

and structure. *Supervisor characteristics* are defined as supervisor attributes that may influence supervision outcomes, such as personality characteristics and expertise in evidence-based treatments. The *supervisor-provider relationship* comprises the working relationship and alliance between the supervisor and provider. *Supervisory support and processes* include factors related to the supervisor's general supervision approach (e.g., emphasis on evidence-based practices) and provision of instrumental and emotional support to the provider. Finally, *supervision format and structure* includes the frequency, structure, and amount of supervision received. Supervision characteristics were not included in distillation analyses for formative and restorative outcomes.

Each study was coded by the first author, who developed the codebook in consultation with the second author. The coding process included the following phases: (a) review of the supervision research literature and existing coding schemes to identify potential codes; (b) drafting of initial codes, labels, definitions, and examples; (c) piloted application of the initial set of codes to a sample of studies to identify new codes and refine existing ones; (d) iterative codebook review and confirmation of final codes; and (e) application of the final set of codes to the full sample of studies.

Supervision Practices—The Supervisor Integrity to Evidence-Based Interventions (SIEBI) coding system was used to code supervision practices described in reviewed studies (Bearman et al., 2015). The SIEBI was developed based on a review of the supervision literature, review of supervision tapes, self-report supervision measures, and other observational coding systems used to code therapy sessions. The SIEBI includes 37 supervision practice codes that fall within three domains: (1) evidence-based microskills (e.g., agenda setting, modeling, role-play), (2) non-specific microskills (e.g., case management, case conceptualization, administration), and (3) alliance microskills and process items (e.g., empathy, praise, collaboration). In addition, the coding system allowed for write-in additions of practices in cases where a practice described in a study was not included in the SIEBI. These practices were coded in accordance with distillation procedures outlined by Chorpita and colleagues (2005). Eight supervision practice codes were added: *action planning, goal setting, live corrective feedback, planning for future sessions, rapport building, strengths identification, and values clarification*. Table 2 presents practices coded at least once and their definitions. Practices in the table with an asterisk were added to the codebook. Practices without an asterisk were included in the SIEBI coding system.

Supervision Outcomes—Formative and restorative outcomes were coded using predetermined operational definitions that align with Proctor's model of supervision (1986). Outcomes were classified as formative if they were associated with implementation of interventions (i.e., fidelity, integrity, adherence, and competence), declarative knowledge related to intervention delivery, or provider skill development. Outcomes were classified as restorative if they were associated with provider well-being as it relates to occupational functioning, including burnout, turnover or turnover intention, and job satisfaction.

Effectiveness Indicators—For studies examining supervision practices, formative and restorative outcomes were coded as either significant ("win") or non-significant (Chorpita et al., 2005). For correlational studies, a significant relation between a supervision practice and

formative and/or restorative outcome was considered a win. For single group pre-post designs, a statistically significant difference in the desired direction from pre- to post-test was coded as a win. For non-randomized and randomized trials with at least two groups, a significant group x time interaction or significant between-group difference at post-test (for designs that did not collect pre-test data) was used to indicate a win. To reduce variability attributable to the number of measures used in studies to assess outcomes, a maximum of one win for restorative and formative outcomes was assigned to a group. For example, a study group with four significant measure outcomes for the formative domain and another study group with one significant formative outcome measure would both receive one win for the formative domain. Frequencies were computed to identify supervision practices that were most commonly present among "winning" groups for restorative and formative outcomes (Chorpita et al., 2005).

Methodological Rigor—Due to prior concerns regarding the rigor of supervision research (Dawson et al., 2013; Hoge et al., 2011; Wheeler & Richards, 2007), the methodological rigor of studies was coded. A "levels of evidence" framework was used, which has utility for comparing findings yielded from different study designs (Evans, 2003). Higher methodological rating scores were indicative of a more rigorous study design, whereas lower scores were indicative of a less rigorous design. Methodological rigor ratings used in the current review included one for correlational study designs, two for single-group pre-post designs, three for trials with at least two groups but no randomization, and four (highest) for randomized controlled trials.

Results

Participant Characteristics

Supervisors—Among studies reporting race/ethnicity characteristics, the majority of supervisors were European-American (ranging from 51.0–100.0%). Among studies reporting educational attainment, supervisors held bachelor's degrees (at least one in 11.1% of studies), master's degrees (66.7% of studies), and doctoral degrees (77.8% of studies). Supervisors represented a variety of disciplines, including psychology (100.0% of studies), social work (42.9% of studies), counseling (42.9% of studies), and nursing (28.6% of studies).

Providers—Most providers identified as European-American in 90.9% of studies (ranging from 34.9-100.0%). For studies reporting educational attainment (72.7%), providers held bachelor's degrees (50.0% of studies), master's degrees (68.8% of studies), and doctoral degrees (75.0% of studies). The most common disciplines included psychology (82.4% of studies), social work (52.9% of studies), counseling (52.9% of studies), nursing (23.5% of studies), and medicine/psychiatry (23.5% of studies).

Study Design and Methodological Rigor

Thirteen studies (59.1%) used a correlational design, three studies (13.6%) used a single group pre-post design, one study (4.5%) used a trial design with two groups but no randomization, and five studies (22.7%) used a randomized controlled trial design. On a

scale from one (lowest) to four (highest), the average methodological rigor score for reviewed studies was 1.91 (*SD* = 1.27).

Formative Outcomes

Supervision Characteristics—Six studies examined supervision characteristics associated with formative outcomes. Findings on supervision characteristics are presented according to four themes that emerged while reviewing the literature: *supervisor characteristics, supervisor-provider relationship, supervisory support and processes,* and *supervision format and structure*.

Supervisor Characteristics (*n* = 2 studies).: In a study of implementation of multisystemic therapy (MST), Henggeler and colleagues (2002) found that *supervisor expertise* in MST and empirically supported treatments more broadly was associated with greater provider adherence to MST principles of family-provider collaboration and follow-up on treatment progress. Bambling and King (2014) observed that supervisor social skills (i.e., verbal and nonverbal communication skills) were associated with greater provider-reported learning related to treatment techniques, theory of therapeutic approaches, management of client issues, management of working alliance with clients, and greater perceived utility of supervision.

Supervisor-Provider Relationship (*n* = 3 studies).: Dodenhoff (1981) observed that provider-reported positive regard for the supervisor was associated with higher supervisor ratings of provider effectiveness. Kavanagh and colleagues (2003) found that providers' sense of safety in expressing themselves during supervision was associated with greater therapist-report ratings of supervision impact on practice. In a large national study of 192 supervisors and 393 providers, Laschober et al. (2013) found that overall relationship quality and length of supervisor-provider relationship were moderately associated with supervisor-rated therapist task performance.

Supervisory Support and Processes (*n* = 3 studies).: Two studies examined the extent to which supervisor focus on MST adherence was associated with greater provider MST adherence (Henggeler et al., 2002; Schoenwald et al., 2009b). One study found that supervisor focus on the MST analytic process and principles was negatively associated with family-provider collaboration and not associated with attempts to change family interactions or follow-up on treatment progress (Henggeler et al., 2002). Another study found average supervisor focus on MST principles across treatment was associated with greater overall provider MST adherence; however, supervisor adherence to MST structure and process, use of analytic process, and focus on clinician development were not associated with provider MST adherence (Schoenwald et al., 2009b). Kavanagh et al. (2003) found that supervision that had a focus on teaching new skills and that used a clear, fully specified supervision contract, including goals, outlined format and content, session frequency/duration, and roles/responsibilities, was associated with higher provider ratings of supervision impact on practice quality.

Supervision Format and Structure (*n* = 1 study).: Kavanagh and colleagues (2003) observed that hours of supervision received monthly was modestly associated with provider ratings of supervision impact on practice quality.

Supervision Practices—Eleven studies examined supervision practices in relation to formative outcomes. Across 11 winning study groups included in the analysis, 15 practices were present in winning groups. The most common practices included *corrective feedback* (64%), *discussing intervention* (55%), *role play* (36%), *case conceptualization* (36%), *agenda setting* (27%), *live corrective feedback* (27%), *modeling* (18%), and *empathy* (18%). Figure 2 presents the supervision practice element profile for formative outcomes.

Restorative Outcomes

Supervision Characteristics—Eight studies examined supervision characteristics associated with restorative outcomes.

Supervisor Characteristics (*n* = 1 study).: Webster and Hackett (1999) examined provider-rated supervisor leadership characteristics and indicators of provider burnout. Supervisor leadership characteristics, including inspiring shared vision among colleagues, modeling alignment of actions with shared values, recognizing contributions of others, providing support and resources to facilitate autonomy, and providing challenges to the provider, were all moderately associated with lower levels of provider emotional exhaustion and depersonalization. However, these characteristics were not associated with provider sense of personal achievement.

Supervisor-Provider Relationship (*n* = 4 studies).: Livni et al. (2012) found that supervisory working alliance was associated with greater provider well-being, job satisfaction, and lower burnout among providers receiving individual supervision but not among providers receiving group supervision. In addition, supervisory working alliance was higher among providers receiving individual supervision compared to group supervision.

Roncalli and Byrne (2016) examined associations between provider relationship with supervisor with job satisfaction, intrinsic (i.e., autonomy, self-realization, accomplishment) and extrinsic (i.e., salary, organizational policies, opportunities for advancement) satisfaction, and burnout. After controlling for provider hours worked per week, experience, perceived level of teamwork within mental health team, and satisfaction with coworkers, relationship with supervisor was the only significant predictor of overall job satisfaction and intrinsic satisfaction. When controlling for the same variables, relationship was not associated with extrinsic satisfaction or burnout.

Locke and colleagues (2018) took a dyad-centered approach by studying supervisor and provider agreement and discrepancy in ratings of supervisory relationship and alliance in relation to provider ratings of organizational climate and emotional exhaustion. Greater agreement in provider and supervisor ratings of supervisor-provider relationship, or the extent to which providers and supervisors viewed their relationship similarly, was associated with providers rating their organization as less psychologically stressful. In addition,

supervisory relationship and alliance were associated with lower levels of provider emotional exhaustion.

Kavanagh et al. (2003) examined aspects of supervisor-provider relationship, including the extent to which providers feel safe expressing themselves during supervision and having a positive attitude toward supervisor, in relation to job satisfaction. Ratings of positive attitude toward the supervisor were modestly associated with higher job satisfaction. Interestingly, the extent to which providers felt safe expressing themselves during supervision was negatively associated with job satisfaction, which is inconsistent with findings from other reviewed studies.

Supervisory Support and Processes (*n* = 2 studies).: Kavanagh and colleagues (2003) found that having a clearly defined supervision contract (i.e., defined goals, format/content, session frequency/duration, roles/responsibilities) was not associated with provider job satisfaction. However, receipt of supervision focused on learning new skills was modestly associated with greater job satisfaction. Using longitudinal data, Fukui et al. (2019) found that emotional exhaustion mediated the relation between supervisory support and turnover intention.

Supervision Format and Structure (*n* = 2 studies).: After controlling for agency, therapist, and workload factors, Kim and colleagues (2018) found that the amount of supervision received was not significantly associated with therapist burnout. Livni et al. (2012) similarly found that supervision time received was not associated with provider burnout, wellbeing, or job satisfaction.

Supervision Practices—Two studies examined supervision practices in relation to restorative outcomes. Two practices were present in one winning study group, including *empathy* (50%) and *praise* (50%). Figure 3 presents the supervision practice element profile for restorative outcomes.

Discussion

In this review, we examined supervision characteristics and practices associated with provider formative and restorative outcomes. Several supervision characteristics emerged as having empirical associations with both categories of outcomes. Analyses of supervision practices were preliminary, given the small number of studies reporting supervision practices, but yielded interesting patterns for formative outcomes in particular.

There appear to be three supervision characteristics with emerging support for their associations with formative outcomes. First, supervisor expertise and knowledge of evidence-based practices appear to be important for promoting provider adherence and quality service delivery (Henggeler et al., 2002). Supervisor expertise and knowledge are necessary for providing intervention-specific consultation to providers, identifying potential implementation pitfalls, and effectively teaching providers new skills. Second, an effective and collegial supervisor-provider relationship appears to be important for addressing tasks within the formative domain (Dodenhoff, 1981; Kavanagh et al., 2003; Laschober et al.,

2013). Third, supervision that is structured with clearly defined goals, format and content, session frequency/duration, and roles/responsibilities may aid in supervision being more efficient and effective in addressing providers' formative needs (Kavanagh et al., 2003).

The most common supervision practice for formative outcomes was *corrective feedback*, which was included in 64% of winning groups. *Corrective feedback* serves two valuable functions. First, because *corrective feedback* involves the supervisor reviewing provider practice delivery, it allows for the supervisor to evaluate the implementation and quality with which practices are delivered. This enables the supervisor to identify concerns associated with practice delivery that may not be identified using discussion-based strategies alone. Second, constructive feedback is given to the provider with the goal of improving future practice delivery. Based upon concerns identified, additional supervision practices may be used to develop provider competency in areas of relative weakness. Several of the common supervision practices identified for formative outcomes, such as *modeling*, *role play*, and *live corrective feedback*, are consistent with an experiential learning theory approach (ELT; Kolb, Boyatzis, & Mainemelis, 2001). ELT posits that learning is the result of synergistic interactions between the individual and environment (in this case, the supervisor), and involves concrete experience as well as guided reflection about that experience.

Two supervision characteristics emerged with regard to promoting restorative outcomes: supervisor-provider relationship and supervisory support. Findings from reviewed studies suggest that supervisor-provider relationship is a critical factor in supporting provider well-being (Kavanagh et al., 2003; Livni et al., 2012; Locke et al., 2018; Roncalli & Byrne, 2016). A strong supervisor-provider relationship is likely necessary for the provider to feel comfortable disclosing well-being concerns to the supervisor and to seek out support as needed (Knox, 2015). In addition, perceived supervisory support, or the degree to which the provider feels emotionally and instrumentally supported by their supervisor, appears to be an important supervision characteristic that is distinct from the quality of the working relationship and buffers providers against emotional exhaustion (Fukui et al., 2019).

Two supervision practices were identified for restorative outcomes: *empathy* and *praise*. These practices are consistent with a client-centered psychotherapy approach, which emphasizes providing unconditional positive regard and praise to the client, demonstrating empathy, and prioritizing relationship factors (Rogers, 1949). A similar approach may have utility for supporting provider well-being in the context of supervision. However, only two reviewed studies examined supervision practices in relation to restorative outcomes, and among these studies, only one study group achieved a win. Thus, additional research is needed before more definitive conclusions can be drawn regarding practices for restorative outcomes.

Given prior concerns regarding the strength of the supervision literature (Dawson et al., 2013; Hoge et al., 2011; Wheeler & Richards, 2007), the methodological rigor of reviewed studies was examined. Overall, the methodological rigor of reviewed studies was somewhat low. The average rigor score was 1.91 out of four, and only five (22.7%) studies utilized a randomized controlled trial design. These findings highlight the critical need for more

rigorous supervision research to be conducted that can inform supervision practice that is both effective and feasible in community settings.

In recent decades, the mental health services field has embraced the use of psychosocial interventions demonstrated efficacious in the treatment of mental health problems (American Psychological Association, 2006). As a result, a substantial evidence base has amassed on effective intervention strategies for various problems, populations, and contexts. Unfortunately, current supervision practice is often not guided by evidence, and the evidence base for effective supervision strategies is nascent. Milne and Reiser (2012) have advocated for the field to move toward a model of evidence-based supervision. Drawing from the American Psychological Association (2006) definition of evidence-based practice in psychology, they propose an evidence-based approach to supervision that integrates theory, research evidence, supervisor judgement, and progress monitoring in supervision practice decision making. An evidence-based approach may reduce variability in the quality of supervision received by providers and therefore increase the probability of obtaining positive supervision outcomes (Milne & Reiser, 2012). This review moves the field closer toward evidence-based supervision through its synthesis of the emerging evidence on which supervision practices and characteristics yield desired formative and restorative outcomes. However, it is necessary for this evidence to be considered within the context of relevant theory, supervisor judgement, data (e.g., provider-level strengths and weaknesses), and the limitations of the extant research.

The current review has several strengths that warrant mention. First, we used a blend of qualitative summary and distillation methods (Chorpita et al., 2005) in this review. This approach permitted a richer analysis of the supervision literature by combining the nuanced description of findings that a qualitative summary provides with the knowledge aggregation that a distillation approach offers. As an evidence synthesis method, a distillation approach has utility for identifying practices that are frequently included among effective interventions and that may hold promise for obtaining a positive outcome. Further, this approach has benefits for the dissemination and implementation of effective supervision practices. In community mental health settings, for example, it is likely more feasible (and desirable) for supervisors to learn a limited number of practices that consistently appear among effective supervision approaches than to learn multiple supervision approaches with similar practices and content. Another study strength is that methodological rigor ratings were used to assess the overall quality and strength of reviewed studies and to characterize study designs used in the literature. This is important in light of concerns and calls for improvement regarding the methodological rigor and quality of supervision research (Dawson et al., 2013; Hoge et al., 2011; Wheeler & Richards, 2007).

There are several limitations of this review and the extant supervision literature more broadly. The major limitation is the reliance on a single coder’s judgment throughout the coding process. This constraint was a function of limited resources for this review and introduces the prospect of bias into coding and the results. The use of a structured codebook with clear definitions and coding rules was intended to reduce bias. However, it is not possible to know the reliability of the existing coding. Other limitations to this review represent limitations in the literature reviewed. Most studies in this review used correlational

or quasi-experimental designs rather than a randomized controlled trial design. Although these studies offer valuable insights to inform future supervision practice and research, there remains a need for more randomized controlled trials that experimentally test supervision strategies. In addition, the majority of reviewed correlational studies relied on use of cross-sectional data. More longitudinal studies are needed to better understand how formative and restorative outcomes change over time in relation to supervision characteristics and practices. Several studies provided vague details regarding supervision strategies used, especially in instances where a comparison supervision group (e.g., supervision as usual) was described. It is possible this resulted in the under-identification of some supervision practices. Further, our method of identifying supervision practices warrants caution. The relative frequency of practices being present in winning groups should not be equated with their efficacy (Chorpita et al., 2005). Because practices are typically not examined in isolation (i.e., tested as part of a package of practices), it is not possible to disentangle the relative efficacy of one practice compared to another. These results were presented, instead, as a synthesis of the literature to identify behavioral practices common to effective supervision. Finally, our review did not examine supervision practices and characteristics associated with normative outcomes due to the dearth of research.

Conclusions and Future Directions

The present study identified promising supervision characteristics and practices that might enhance formative and restorative outcomes for providers. Future researchers could examine these characteristics and practices within the context of increasingly more rigorous study designs (e.g., randomized controlled trials) to further identify the features of effective supervision. As more evidence amasses on supervision approaches, additional distillation studies should be conducted that provide an updated “snapshot” regarding the latest evidence on effective supervision.

The supervision literature has a significant imbalance that represents formative outcomes relative to restorative and normative outcomes. Empirical studies that conceptualize supervision as a multipurpose event and includes multidomain measurement within the same trial would advance the science and practice of supervision. We were unable to examine supervision practices and characteristics associated with normative outcomes due to the paucity of research in this area, yet this domain is often emphasized in community mental health settings (Bailin et al., 2018). Multidimensional conceptualization and measurement in future trials would enhance theory regarding the associations among normative, formative, and restorative practices and outcomes. Additionally, the pursuit of multidomain measurement would yield important insights about how the relative allocation of resources to any single purpose or supervision domain can support (or hinder) the other domains. The distillation work presented in this paper might prove useful to future researchers who wish to use our ontological framework.

There exist few supervision models, and the best-articulated models have been developed in concert with specific evidence-based treatment approaches (e.g., MST). Our findings lead us to believe that there is an opportunity to pursue the development and dissemination of supervision practices that are nimble and can be broadly applied, independent of the specific

intervention. For example, active supervision strategies such as feedback and role play are broadly applicable and have significant empirical support for their effects on learning outcomes in a variety of fields (DeKeyser, 2007; Torrance, 2007). Findings from this paper yield optimism that supervisors offer a promising (human) resource, but one that is currently underutilized.

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Biography

W. Joshua Bradley, B.A. is a graduate student in the Clinical-Community Psychology Ph.D. program at the University of South Carolina. Mr. Bradley focuses his research on (1) the role of clinical supervision and organizational supports in enhancing the quality of mental health services; (2) racial and ethnic disparities in mental health services, including disparities in treatment engagement; and (3) measurement of treatment engagement. Mr. Bradley is a trainee in the Behavioral Biomedical Interface Program at the University of South Carolina, which is a T32 predoctoral training program funded by the National Institute of General Medical Sciences (NIGMS).

Kimberly D. Becker, Ph.D. is a licensed psychologist and an Associate Professor in the Department of Psychology at the University of South Carolina. Dr. Becker focuses her research on improving the effectiveness of children's mental health services, with specific interests in clinical decision-making and treatment engagement. Dr. Becker has published more than 60 articles on these topics and has received research funding from the National Institute of Drug Abuse, the Health Resources and Services Administration, and the William T. Grant Foundation to support her work.

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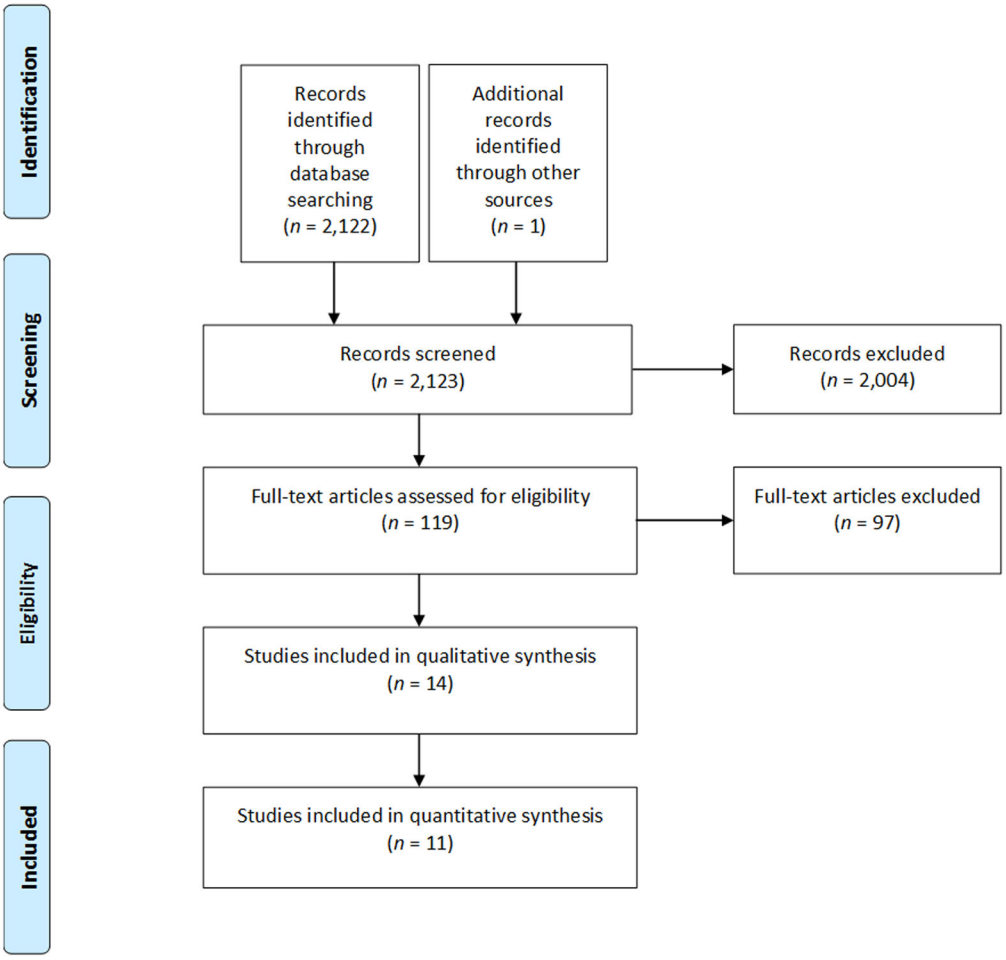

Figure 1.
PRISMA flowchart.

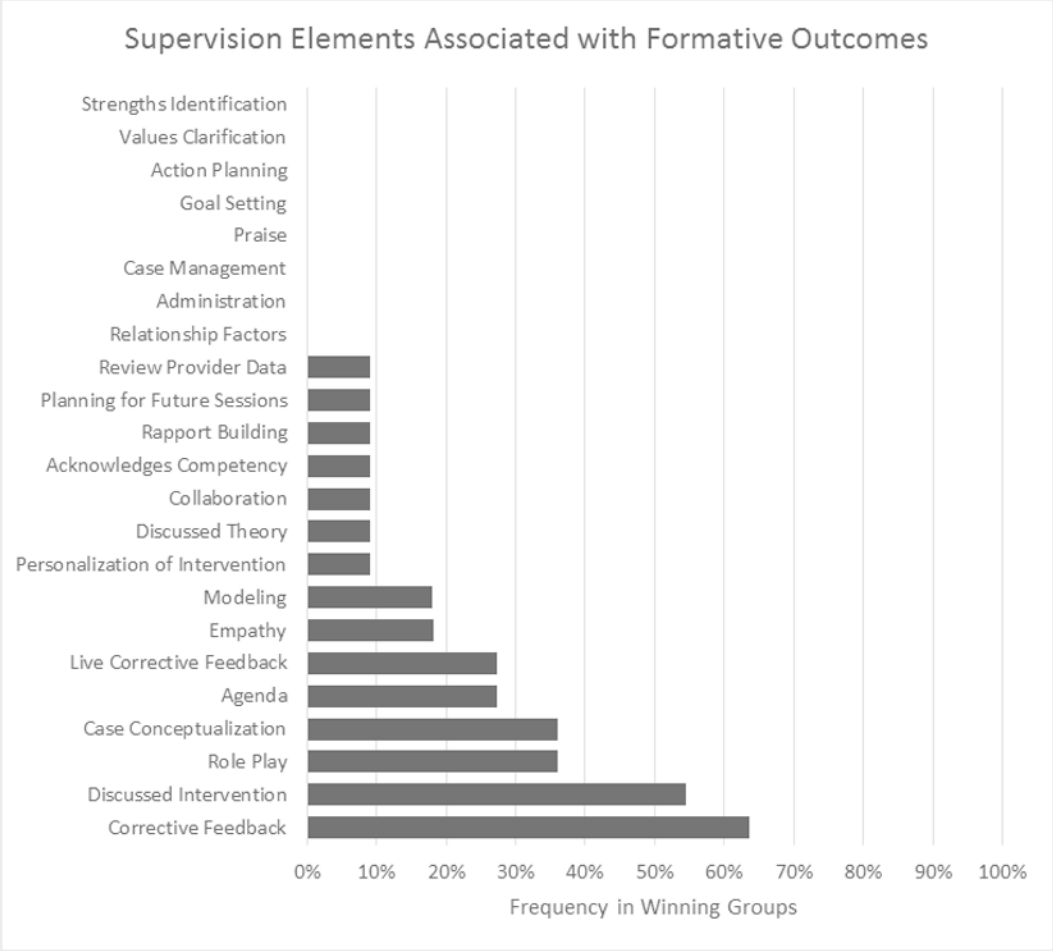

Figure 2.
Supervision practice element profile denoting element frequencies for formative outcomes (n = 11 studies).

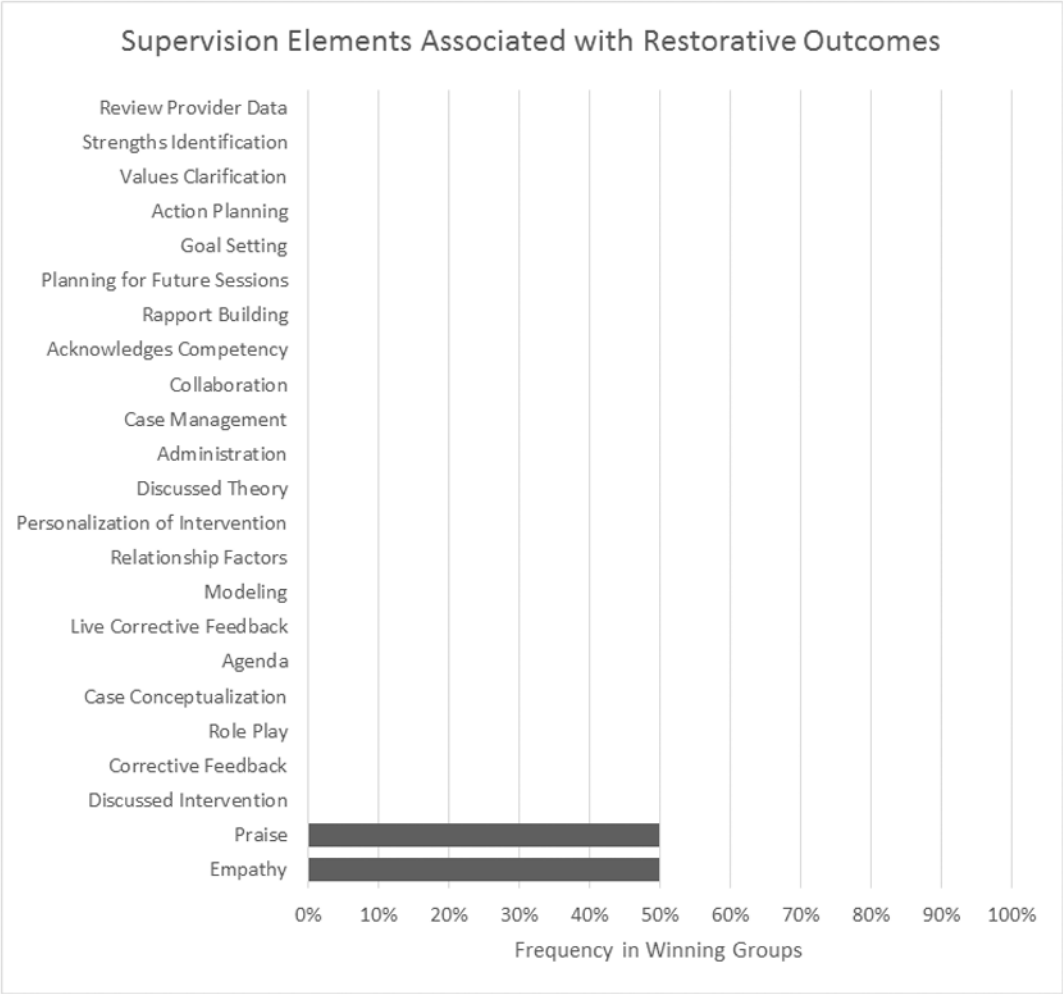

Figure 3.
Supervision practice element profile denoting element frequencies for restorative outcomes (n = 2 studies).

Table 1

Study Characteristics

Citation	Study Design	Methodological Rigor	Examined Practices	Examined Characteristics	Examined Formative Outcome	Examined Restorative Outcome	Supervisor Sample Size	Provider Sample Size	Setting	Country
Anderson et al., 2012	One-group pre-post	2	Yes	No	Yes	No	2	16	Clinic	US
Bambling & King, 2014	Correlational	1	No	Yes	Yes	No	40	50	Clinic	Australia
Bearman et al., 2013	Correlational	1	Yes	Yes	Yes	No	12	57	Clinic, School	US
Bearman et al., 2017	Randomized controlled trial	4	Yes	No	Yes	No	Not Reported	40	Other	US
Bradshaw et al., 2007	Quasi-experimental trial	3	Yes	No	Yes	No	Not Reported	23	Clinic, Hospital	UK
Carmel et al., 2016	Randomized controlled trial	4	Yes	No	Yes	Yes	5	8	Clinic	US
Dodenhoff, 1981	Correlational	1	No	Yes	Yes	No	12	44	Clinic	US
Fukui et al., 2019	Correlational	1	No	Yes	No	Yes	N/A	195	Clinic	US
Henggeler et al., 2002	Correlational	1	No	Yes	Yes	No	12	74	Not reported	US
Kavanagh et al., 2003	Correlational	1	Yes	Yes	Yes	Yes	Not Reported; Total *N* = 272	Not Reported; Total *N* = 272	Clinic, Hospital	Australia
Kim et al., 2018	Correlational	1	No	Yes	No	Yes	N/A	688	Clinic	US
Knudsen et al., 2008	Correlational	1	No	Yes	No	Yes	N/A	1001	Clinic	US
Laschober et al., 2013	Correlational	1	Yes	Yes	Yes	No	162	392	Clinic	US
Livni et al., 2012	One-group pre-post	2	Yes	Yes	Yes	Yes	10	37	Clinic	Australia
Locke et al., 2018	Correlational	1	No	Yes	No	Yes	47	187	Clinic	US
Martino et al., 2016	Randomized controlled trial	4	Yes	No	Yes	No	22	66	Clinic	US
Rakovshik et al., 2016	Randomized controlled trial	4	Yes	No	Yes	No	Not Reported	61	Clinic, Hospital	Russia, Ukraine
Roncalli & Byrne, 2016	Correlational	1	No	Yes	No	Yes	N/A	77	Clinic	Ireland
Schoenwald et al., 2009	Correlational	1	No	Yes	Yes	No	122	429	Clinic	US
Smith et al., 2007	One-group pre-post	2	Yes	No	Yes	No	5	13	Clinic	US
Webster & Hackett, 1999	Correlational	1	No	Yes	No	Yes	N/A	151	Clinic	US
Weck et al., 2016	Randomized controlled trial	4	Yes	No	Yes	No	9	23	Clinic	Germany

Table 2

Coded Practices and Definitions

Practice	Definition
Acknowledges Competency	Supervisor indicated that he/she experiences the supervisee as competent or skillful
Action Planning*	Supervisor and provider translated goals into specific actions to be taken
Administration	Supervisor discussed or checked in on administrative tasks
Agenda	Supervisor used an agenda to organize the structure of the supervision session
Case Conceptualization	Supervisor discussed case conceptualization
Case Management	Supervisor discussed case management related to supervisee's client
Collaboration	Supervisor solicited ideas from provider during session
Corrective Feedback	Supervisor referenced recording of therapy sessions and provided feedback
Discussed Intervention	Supervisor referred to interventions while discussing cases
Discussed Theory	Supervisor discussed the underlying theoretical model for a treatment or practice
Empathy	Supervisor expressed empathy toward supervisee
Goal Setting*	Supervisor and provider establish goals for provider skill development
Live Corrective Feedback*	Supervisor provided feedback to provider during session via earpiece or monitor
Modeling	Supervisor used live modeling to demonstrate skills, alliance-building behaviors, and treatment content
Personalization of Intervention	Supervisor encouraged discussion on how intervention would be conceptualized and implemented to meet the client's unique characteristics
Planning for Future Sessions*	Supervisor and provider considered and selected relevant practices for future client sessions
Praise	Supervisor provided positive feedback, praise, and/or demonstrated other behaviors consistent with unconditional positive regard
Rapport Building*	Supervisor and provider engage in activities aimed at building rapport and relationship between them
Relationship Factors	Supervisor referred to specific alliance-building behaviors, such as empathy, positive regard, collaboration, or goal consensus and encouraged the supervisee's use with client
Reviewing Provider Data*	Supervision reviewed data regarding provider practice delivery (e.g., fidelity checklist)
Role Play	Supervisor and provider engaged in role playing to practice therapeutic skills, alliance-building behaviors, and delivery of treatment content
Strengths Identification*	Supervisor and provider discussed and identified provider strengths and their application to practice
Values Clarification*	Supervisor and provider discussed provider values and their application to practice

Note. Practices with an asterisk were added to the codebook during coding. Practices without an asterisk were included in the SIEBI codebook. Practices included in this table were coded at least once.