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RESEARCH ARTICLE

The Evidence Base for How and Why Infant and Early Childhood Mental Health Consultation Works

Kaela M. Tidus
Annie E. Davis Schoch
Deborah F. Perry
Lauren Rabinovitz
Neal M. Horen
Georgetown University

Infant and Early Childhood Mental Health Consultation (IECMHC) is an evidence-based service in which consultants build capacity for early childhood professionals and programs to promote the social-emotional development of infants and young children. This paper describes the current state of the evidence for IECMHC, mapping the evidence to a new theory of change from the Center of Excellence (CoE) for IECMHC. There is a substantial literature base regarding the effects of consultation on outcomes for infants and young children; yet the evidence for consultation's specific mechanisms of change, moderators of impact, and reductions in disparities have been understudied. The authors identify gaps in the scholarly literature, articulate next steps for research, and conclude with a call to action for IECMHC researchers to expand rigorous studies to the range of settings in which IECMHC is implemented and to center social justice in the research questions, methods, and dissemination.

Keywords: IECMHC, early childhood, early childhood mental health

INTRODUCTION

What is IECMHC?

Infant and Early Childhood Mental Health Consultation (IECMHC) is an evidence-based service in which a mental health professional builds the capacity of early childhood professionals and programs to improve the social-emotional development of infants and young children and enhance equity in early childhood settings. These mental health professionals, referred to as IECMH consultants, have expertise in early childhood and indirectly help young children by partnering

with the adults who care for them. IECMH consultants adopt a "consultative stance" which defines how they approach all activities of consultation. The consultative stance, as defined by Johnston & Brinamen (2006), refers to how consultants prioritize the formation of strong, empowering, equitable relationships in their role, embodying tenets such as "wondering instead of knowing" and "avoiding the position of the sole expert". Within the context of a trusting relationship, the early childhood professional explores their relationships with young children, practices new ways of interacting with them, and develops confidence in supporting how the individual addresses challenging behaviors.

IECMHC - also referred to in this article simply as "consultation" - is not therapy for children, families, or professionals. It is also not the same as coaching; although the two are complementary preventative services, IECMHC does not use predefined goals or strategies with consultees, and the consultants bring significant infant mental health expertise to their roles (NAEYC, 2011). Broadly, consultation programs are defined by their infrastructure, consultant workforce, and high-quality services; beyond that, consultation is unique in its focus on non-directive, capacity-building relationships which lead to indirect effects on children and families. It is rooted in the principles of Infant Mental Health and relational health, which center relationships as agents of change and emphasizes cultural and other contextual influences as essential to understanding a child or dyad (Frosch et al., 2021; Zeanah & Zeanah, 2019). Consistent with these theories, IECMHC is grounded in the recognition of how individual characteristics, developmental stage, and relationship quality are inextricably linked, and parallel processes (supervisor-consultant, consultant-provider, and provider-parent/child relationships) are intentionally invoked to promote positive outcomes (Frosch et al., 2021; Zeanah & Zeanah, 2019). As a multilevel service, consultants seek to understand the intersecting levels of influence on a child, family, early childhood professional, and/or program, (e.g., organizational climate, cultural considerations, parent engagement) and to build upon strengths across these levels.

IECMHC has been implemented in a variety of settings such as early childhood education (ECE), home visiting, child welfare, family friend and neighbor (FFN) care, Part C/early intervention services, and primary care. IECMHC programs vary based on the setting and individual models may evolve over time. Nevertheless, an overarching framework articulates the core elements of an IECMHC program: a solid program infrastructure, highly-qualified consultants, and high-quality services (Duran et al., 2009). These core components of an IECMHC program - paired with readiness for change, positive relationships, and positive interactions - contribute to IECMHC's positive outcomes for children, families, professionals, and programs. Key distal outcomes for IECMHC include improved early childhood professional skills and confidence in supporting early childhood mental health; programmatic improvements to support a positive climate; increased social-emotional skills and reduced externalizing behaviors in infants and young children; and reduced child suspensions and expulsions from ECE programs. Beyond these overall effects, IECMHC is intended to reduce disparities in these outcomes in early childhood programs and settings, both by providing additional supports to programs and children affected by poverty, discrimination, and other stressors and by building providers' awareness of their own biases.

What Are Theories of Change?

Theories of Change are a description or illustration used to understand the processes by which an intervention leads to desired short-term and long-term outcomes. It describes the hypothesized relationship between the necessary resources and activities that lead to those outcomes. Many IECMHC studies have primarily focused on more distal outcomes and have overlooked the causal pathways that lead to these impacts (Silver et al., manuscript under review). This pattern is characteristic of much of the extant literature on early childhood education programming (Schindler et al., 2019). A recent systematic review of ECE research concluded that use of a theory of change would have addressed common gaps in their methodology (Schindler et al., 2019). In their review, all 277 studies had at least one goal regarding impacts to child outcomes, but less than half of the studies discussed implementation fidelity and standardization. This review suggests studies should look beyond outcomes, and understand the causal mechanisms for these outcomes. In particular, few studies investigated moderating factors that could impact the relationship between an intervention and the expected outcomes, which could be of interest to policymakers and program developers to dissect why particular ECE programs elicit particular child outcomes (Schindler et al., 2019). The use of a theory of change may also elevate issues of disparities in who benefits from interventions thus promoting greater attention to racial equity in ECE.

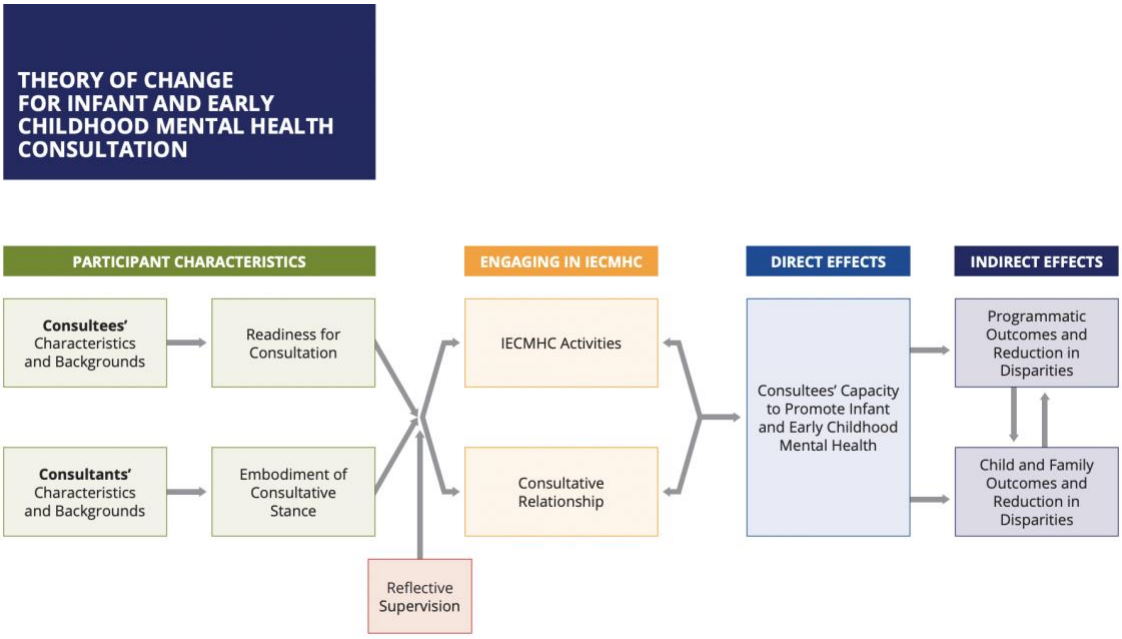
New Theory of Change for IECMHC

The SAMHSA-funded Center of Excellence (CoE) for IECMHC has several core initiatives: provide Technical Assistance to IECMHC programs across the nation, generate new professional development resources for IECMHC staff, and serve as a clearinghouse for IECMHC resources. To contribute to the knowledge base on IECMHC, the CoE published a new Theory of Change (ToC) for IECMHC in 2021 that identified the pathways and mechanisms through which IECMHC makes its impact, based on current research, theory, and clinical insights. This new ToC portrays consultation as an indirect, relationship-based mental health service and articulates the essential constructs at multiple levels that affect the process and outcomes of consultation. The ToC (Figure 1) depicts four domains: participant characteristics, engaging in IECMHC, direct effects, and indirect effects.

(see Figure 1 on next page)

FIGURE 1

Theory of Change for Infant and Early Childhood Mental Health Consultation



The well-established outcomes of consultation are presented as the result of the pathway in the ToC; specifically, programmatically, child outcomes, family outcomes, and reduction in disparities. To demonstrate the indirect nature of this impact, those outcomes are shown to be mediated by the direct effects of consultation on the early childhood professionals who participate in the service. Their changes in behavior and attitudes to better support children's social-emotional development are shown to lead to the final outcomes. These direct and indirect effects are shown to result from consultees' active engagement in consultation. The process of engaging in IECMHC is described as a continuous interaction between the specific activities performed by the consultant as well as the quality of the relationship between consultant and consultee - both of which are supported by reflective supervision provided to the consultant. Lastly, the ToC articulates the moderating role of the characteristics and skills of the individuals who enter into a consultative relationship.

While there have been several recent reviews of the evidence base for IECMHC (i.e., Albritton et al., 2019 and Silver et al., manuscript under review), this article is distinct in that it organizes the literature in relation to this ToC. This strategy reveals strengths and gaps in the knowledge base for the mechanisms through which IECMHC leads to the well-documented child-level outcomes that the prior reviews have reported on. Through this approach, we hope to articulate key future directions for research, bolstered by the inclusion of research questions and methods from related fields.

Although IECMHC has been implemented in a variety of settings, the preponderance of peer-reviewed findings report on IECMHC implemented in ECE settings. In fact, during the course of

this systematic review, the research team could find no published empirical studies of IECMHC in other settings in which it is implemented, including child welfare, primary care, and early intervention. There is a nascent literature base about the provision of consultation to home visitors, with the potential to indirectly benefit the families they serve. Lambarth & Green (2019) conducted a mixed-methods study of the impact of providing consultation to home visitors to support their work with families. Over the course of 24 months, the consultants provided training, reflective group supervision, individual supervision, child-specific consultation, and referral information to a home-visiting program. As a result of consultation, the home visitors reported significant improvements in knowledge of child and adult mental health, confidence in partnering with parents, and leadership around mental health issues. This study - in addition to multiple unpublished reports - provides preliminary evidence for the positive impact of IECMHC in settings other than ECE. Due to the paucity of empirical studies available outside of ECE settings, the remainder of this article will focus on findings from studies of ECE-based IECMHC and will utilize language consistent with ECE settings (e.g., "teacher" or "program director" instead of "consultee").

REVIEWING THE EVIDENCE FOR THE THEORY OF CHANGE

The next sections of this paper will review the evidence base for each of the four domains depicted in the ToC. First, a definition of the domain is offered, followed by a description of the evidence for how that domain impacts the outcomes of IECMHC. Examples from other early childhood research are included in areas where there are significant gaps in the IECMHC literature. Each section ends with recommendations for future research in this domain.

Participant Characteristics

Broadly, the Participant Characteristics section of the ToC calls attention to the role of individual backgrounds, experiences, and attitudes on the process of IECMHC. Because the work is relational and individualized, the work of consultation cannot be separated from the consultants' and consultees' personal characteristics. In other words, variables related to the individuals in consultation are thought to moderate the process and outcomes of consultation over time. There is scant research on the four constructs in this section of the ToC and recommendations to address these gaps are provided.

Consultee's Characteristics and Background. Consultee's characteristics and background seeks to explain how the personal attributes and professional experiences of the consultee are influential to the mechanisms of change in consultation. Personal attributes of interest include demographic information (e.g., age, race/ethnicity), professional experiences (e.g., educational attainment, lead, or assistant teacher), and working conditions (e.g., organizational climate, compensation, class size). A few empirical studies have investigated the role of teacher characteristics on consultation outcomes. For example, Heller and colleagues (2011) found that the impact of consultation on teacher self-efficacy depended upon a teacher's age and level of experience, such that there was a greater impact for younger, less experienced teachers. In addition, Davis and colleagues (2018) investigated the potential impact of teachers and children being the

same race/ethnicity in their secondary analyses of Arizona's IECMHC program evaluation dataset. Over half of the participants were White children (54.5%) and teachers (59.7%), approximately one-quarter of children (22.8%) and teachers (27.4%) were Latinx, and a smaller proportion were Black children (12.5%) and teachers (6.3%). Other ethnic groups (Asian American or Pacific Islander, American Indian or Alaska Native, Multiethnic, and "Other") also had a small representation in the sample. By using multilevel modeling, the researchers found that teacher-child "ethnic match" was a moderator of effects. Specifically, the consultative relationship predicted improvement in child attachment behaviors only when the teacher and child were the same ethnicity, and the connection between the relationship and some outcomes was strongest when the child was a boy of color.

Research from related fields supports the notion that teacher characteristics may be influential in eliciting shifts in the teacher-child relationship. A study by Castle and colleagues (2016) investigated a myriad of teacher characteristics for a group of Early Head Start teachers and found the field in which teachers earned their bachelor's degree moderated the link between their temperaments and teacher-child interaction quality, such that adaptive temperament was associated with higher quality teacher-child interactions only when teachers had a degree in ECE. No IECMHC studies have investigated the effect of teacher stress as a moderator of effects on the children, though there has been more research in ECE settings that suggests this may play a role (Gilliam et al., 2006). For instance, one study found that lead teachers' personal stress increased the perceived intensity of child anger-aggression and child anxiety-withdrawal, while assistant teachers' work stress was associated with lower perceived child social-emotional competence (Jeon et al., 2019). Furthermore, a study by Li Grining and colleagues (2010) found that Head Start teachers' personal stressors were moderately predictive of lower use of effective behavior management strategies in the classroom. Future research should continue to investigate consultee characteristics (e.g., race/ethnicity, socioeconomic status, and degree type) as moderators, with a particular emphasis on whether certain consultee characteristics are associated with closing disparities in outcomes.

Consultant Characteristics and Background. In a parallel manner, Consultant characteristics and background may affect the mechanisms of change in consultation. Relevant personal attributes of the consultant may include identity characteristics (e.g., race/ethnicity, cultural background), professional background (e.g., degree type, licensure, years of experience), and working conditions (e.g., caseload, job stressors). Only two studies (Davis et al., 2018; Green et al., 2006) have investigated linkages between consultant characteristics, mechanisms of change, and outcomes and found connections between consultant characteristics and the quality of the relationship formed with consultees, though degree type was non-significant. In a secondary data analysis conducted on a longitudinal evaluation dataset from a statewide IECMHC program, the authors used multilevel modeling and discovered that a stronger consultative relationship predicted greater improvement in classroom climate and child attachment behaviors only when the IECMH consultant had expertise in cultural diversity (Davis et al., 2018).

Additionally, a study by Green et al., (2006) was the first to look at the teacher-consultant relationship by employing hierarchical linear models to examine a myriad of consultant characteristics associated with IECMHC outcomes. Interestingly, only consultants' affiliation with a private practice predicted teachers' perceptions of the impact of IECMHC (Green et al., 2006).

While consultant characteristics have only been explored in those few studies, research on characteristics of mental health professionals in relation to outcomes has been conducted. For instance, a study found that therapist occupational burnout had a negative impact on treatment outcomes (Delgadillo et al., 2018). Future research in IECMHC should investigate which, and to what extent, consultant characteristics can impact the consultative relationship, thus indirectly influencing the outcomes of IECMHC.

Readiness for Change. The consultees' readiness for change refers to the extent to which the consultee is open to working with the consultant and to considering new practices and ways of thinking. Readiness can vary for individuals, leaders, and programs, with implications for the way consultation proceeds. Importantly, this construct is not meant to judge who should receive consultation; rather, because consultants "meet people where they are," it has implications for how consultation begins and how the relationship is built. Of note, there are valid reasons for individuals and programs not to be "ready," and this construct should be considered from a strengths-based perspective. For instance, communities with negative experiences being over-diagnosed or discriminated against by mental health systems may be perceived as "unready" but are actually demonstrating protectiveness of the children in their care. Tribal communities have repeatedly experienced traumatic events throughout history, which may manifest distrust in interventions from non-Native Americans that impose Western ways of thinking (Tribal Evaluation Workgroup, 2013). Consultants should approach consultation in these communities with understanding and build relationships that take into account the cultural practices and beliefs of the community they are serving. In addition, underfunded programs may feel that they first need to prioritize other needs before allocating the time and energy needed for consultation.

There are no known studies that have assessed the impact of the construct of readiness for change on the process or outcomes of IECMHC. The IECMHC field is lacking a valid measure of readiness both at this individual consultee level, as well as the program level. Nevertheless, there are relevant measures of readiness for change. For instance, the Stages of Changes (SOC) scales have been used in other settings, such as child welfare. Girvin (2004) used a SOC scale called the University of Rhode Island Change Assessment (URICA) in a study of primary caregivers receiving in-home child welfare services (Girvin, 2004). Despite finding differences in readiness for change and the frequency and severity of problems caregivers experienced, Girvin noted the need for future research to incorporate flexible conceptualizations of readiness for change that take into account individual differences. IECMHC could employ measures such as the URICA to better understand a consultee's motivations or hesitation in incorporating changes suggested by the consultant. Another consideration in collecting data on a consultee's readiness for change is the need to avoid ethical issues. While readiness may affect the pace and emphasis of consultation, this is not intended to exclude people or programs who may be impacted by scarce resources. Nevertheless, it is worth considering whether, for less "ready" programs, other supports might be more effective prior to consultation, such as coaching or professional development, to pave the way for IECMHC at the appropriate stage.

Embodiment of Consultative Stance. This element refers to the extent to which the IECMH Consultant demonstrates the ten tenets of the consultative stance, as articulated in a book by Johnston & Brinamen (2006). The consultants' use of this "way of being" in their interactions with consultees is the key distinguishing factor between IECMHC and related supports, such as

coaching and psychotherapy. No studies have yet quantified this complex facet of IECMHC implementation, nor have they evaluated its impact on outcomes. Measuring nuanced aspects of a provider's demeanor is challenging, yet examples are present in other disciplines.

For example, provider's adoption of the FAN (Facilitating Attuned INteractions) model's arc of engagement has been well documented and measured. Developed by Erikson Institute's Fussy Baby Network (FBN), this model provides a loose structure that can be used by a range of professionals to increase attunement in helping interactions and promote reflective capacity (Heffron et al., 2016). In Illinois, home visiting staff were trained in the FAN, and evaluators measured their use of the model via surveys and interviews. After incorporating this model, home visitors were more self-regulated, collaborative, and focused on parenting (Spielberger et al., 2016), and in the long run, they were more resilient on a measure of burnout (Spielberger et al., 2019).

A next step for IECMHC research is to create a reliable and valid measure of the consultative stance based on qualitative data and pilot testing. Once developed and validated, the measure can be used to: 1) assess consultant fidelity to this "way of being" in the work; and 2) assess the extent to which embodiment of the consultative stance may predict direct and indirect outcomes. Additional analyses could examine the interrelationships between the embodiment of the consultative stance, the background of the consultant, and the quality of reflective supervision.

Engaging in IECMHC

Alongside the importance of who participates in consultation, the actual process of engaging in consultation is a major predictor of outcomes. The activities that consultants perform, how they engage in the relationship with the consultee, and availability of reflective supervision all contribute to the effectiveness of IECMHC.

Reflective Supervision. This element of the ToC refers to the availability, frequency, and quality of reflective supervision (RS) for the IECMH Consultant (Tomlin et al., 2014). As depicted in the ToC for IECMHC, reflective supervision is conceptualized as a moderator of the quality of the relationship between consultant and consultee. Although research in RS in IECMHC is scant, research from other interventions supports the efficacy of reflective supervision to bolster providers' ability to engage in reflective practice with consultees (Frosch et al., 2018).

The only known study to connect RS in IECMHC to outcomes was a 12-month pilot study by Shea and colleagues (2022) which investigated the impact of implementing group reflective supervision for consultants serving ECE settings in Pennsylvania. After monthly 2 hour group reflective supervision sessions for 12 months, consultants demonstrated an increase in IECMH professionals' reflective practice self-efficacy and use of reflective practice skills. These changes were measured using a new tool piloted by the authors (the Reflective Practice Self-Efficacy Scale) and the Use of Self and Reflective Practice Skills (Heffron, 2013). Additionally, this study found that consultees working with a consultant who was receiving reflective supervision reported decreased stress, which had not been seen in the year prior to beginning reflective supervision (Shea et al., 2022).

Given the dearth of scholarly research on reflective supervision in IECMHC, it is important to note that reflective supervision has been studied in other settings with positive findings. Other early childhood services have investigated provider stress and found the effects of reflective supervision on self-care behaviors on the IECMH workforce to mediate the effects of COVID-19 stress (Morelen et al., 2022). Additionally, in a study conducted in Part C, Frosch and colleagues (2018) found that receiving reflective supervision was associated with reduced job stress, improvements in self-efficacy, and increased job satisfaction by using the Reflective Supervision Self-Efficacy Scale for supervisees. Future research should utilize quantitative measures of reflective supervision to measure its effects on IECMHC process and outcomes such as the Reflective Interaction Observation Scale (RIOS) (Meuwissen & Watson, 2021).

Consultative Relationship. The consultative relationship is the alliance between consultant and consultee; a high-quality relationship is characterized by trust, respect, responsiveness, non-judgment, equality, and shared vulnerability. Dyads with strong alliances can navigate challenging conversations and differences in opinion and are well-positioned to productively discuss race, culture, and prejudice as pertains to the consultative process. Input from consultants affirms that the formation of a strong alliance is a mechanism through which the activities of IECMHC may lead to direct and indirect outcomes.

This construct has been included in several IECMHC studies. First, Green et al. (2006) measured teacher-reported relationship quality among Head Start staff and concluded that, compared to other measured variables, teacher-consultant relationship quality was the single strongest predictor of teacher perceptions that consultation was effective. In a follow-up study, Allen and Green (2012) found that teacher- and consultant-reported relationship quality was significantly positively correlated with each other, and that consultants who self-reported strong relationships with families were more likely to have stronger consultative relationships, as rated by teachers. Using data from Arizona's IECMHC program, Davis et al. (2020) found that higher consultant-rated relationship quality predicted greater improvements in several child- and teacher-level outcomes, including teacher-child relationships, classroom climate, and teacher self-efficacy from baseline to six months. For several of those links, moderation analyses revealed that the effect was only significant when the child was a boy of color and/or the consultant self-reported having expertise in cultural diversity (Davis et al., 2018). Similarly, Virmani et al. (2012) found that teacher-child interaction outcomes were predicted by how respected the teacher felt by the consultant. Qualitative studies have described the consultative relationship by utilizing interviews with childcare providers (Denatale, 2013; Kniegge-Tucker et al., 2020).

This emphasis on the relationship can be seen in studies of other related services. For instance, the psychotherapy literature (for children and adults alike) has paid significant attention to the role of the relationship, which they refer to as the therapeutic alliance (Elvins & Green, 2008) - and more recently, to the alliance formed via virtual psychotherapy (Lederman & Alfonso, 2021). Similarly, the Working Alliance Inventory tool has been used to measure home visitor-family relationship factors, including their bond or alignments on goals (Becker et al., 2016; Burrell et al., 2018).

What distinguishes those studies, in contrast to the extant literature on the consultative relationship in IECMHC, is the use of a standardized measure. To increase the rigor of the current evidence for the pivotal role of the relationship, a measure should be created or adapted and validated in a

sample of consultants and consultees. In addition, future research should use this measure to ascertain whether relationship quality is a mediating variable in the outcomes for IECMHC, as is depicted in the ToC.

IECMHC Activities. IECMHC is defined by the activities of the consultants, and those activities are adjusted to meet the needs of the specific consultee/ program served. At this time there is no definitive list of the core or essential activities of IECHMC that is agnostic to setting. A few studies have discussed these activities in ECE settings, providing some insight into the effects of certain consultation activities as influencing factors.

In the evaluation of Arkansas' statewide IECMHC program, researchers found that more consultant time spent in the classroom specifically predicted greater reductions in problematic teacher interaction styles and greater use of positive classroom management strategies (Conners-Burrow et al., 2013). This evaluation found that certain activities of IECMHC, such as frequency of consultant and consultee meetings, were associated with reductions in punitiveness. Additionally, reductions in detachment and improvements in positive interaction styles were associated with a consultant's effort to help a teacher understand a child's challenging behavior. In a study conducted by Alkon and colleagues (2003), the researchers found that a higher frequency of mental health consultation activities predicted lower rates of teacher turnover. Additionally, they found that more years of consultation predicted greater change in center quality from Time 1 to Time 2, measured by the Early Childhood Environment Rating Scale (ECERS) (Alkon et al., 2003). While the specific activities of IECMHC are of interest, the dosage that influences the outcomes from these activities is also important. One study found a "dose-effect" between the number of hours of consultation a child received and an improvement in child behavior scores, suggesting that more consultation yields better outcomes (Upshur et al., 2009). Furthermore, another study found that the frequency of consultation activities was slightly positively correlated with a change in the quality of teacher-child interactions (Virmani et al., 2012). More research is needed on overall dosage as well as the impact of specific activities of IECMHC to inform programmatic decisions that would result in favorable outcomes.

For other interventions, the role of provider adherence to a core set of activities is studied using measures of fidelity. For instance, a study of an implementation of the Oregon model of Parent Management Training (PMTO) found that model fidelity was associated with better treatment outcomes (Forgatch et al., 2021). Specifically, high scores on their PMTO-specific Fidelity of Implementation Rating System (FIMP) predicted increased effective parenting practices.

Although there is currently no definitive list of IECMHC activities, the research team at the CoE is currently conducting a Delphi qualitative study to fill in this gap in knowledge. A panel of carefully selected IECMHC experts from a variety of settings like early intervention, home visiting, and elementary schools are engaged in this consensus-building activity to determine the core elements of IECMHC that cut across settings. Understanding the core activities of consultation can be used to create a fidelity measurement for IECMHC. Kaufmann et al. (2012) highlighted the challenges in creating a fidelity measure for IECMHC—notably that unlike interventions such as PMTO—it is not a manualized intervention designed by one entity, and IECMHC has been adapted to different settings. Future research should investigate which specific activities lead to particular outcomes to further articulate IECMHC as a service. Analyses should

be conducted to explore whether frequency and duration of consultation activities mediate specific outcomes.

Direct Effects

While IECMHC is an intervention geared towards indirect changes in children, families, and programs, it does so by directly affecting the early childhood professionals who receive consultation. The consultee engaging in consultation may be impacted psychologically, behaviorally, and relationally. These impacts can yield improvements in their ability to support children's and families' social-emotional needs.

Consultees' Capacity to Promote Infant and Early Childhood Mental Health. Consultation, though on behalf of children, occurs among adults. This collaboration often leads to changes in consultees' knowledge, perceptions, emotions, relationships, and behaviors (Cohen & Kaufmann, 2005). An early seminal piece on mental health consultation describes how a consultant's relatively light touch paves the way for a more widespread impact through changes to the consultee (Caplan, 1963). These changes in turn lead to increased capacity to understand, empathize with, and respond sensitively to children's social-emotional needs. Research on mental health consultation has documented a range of direct effects, including consultee self-efficacy, consultee knowledge about social-emotional development, and enhanced consultee interaction style. For instance, Heller and colleagues (2011) found that teachers who participated in the statewide Louisiana consultation program demonstrated improved self-efficacy from pre- to post-intervention, as well as improved self-reported competency with social-emotional development and managing challenging behavior. The recent Illinois statewide IECMHC program evaluation found that staff in the intervention group receiving IECMHC demonstrated greater improvement in reflective capacity over time than those in the comparison group, as measured using the Reflective Functioning Questionnaire and the Provider Reflective Process Assessment Scale (Spielberger et al., 2021). These increases in reflective capacity are important since adults with higher reflective capacity scores rated children's behavior as demonstrating more strengths and fewer behavioral concerns, and overall teachers in the intervention group indicated a lesser impact of child challenging behavior on learning and relationships (Spielberger et al., 2021). Additionally, in a descriptive article written by Silverman & Hutchinson (2019), the authors detail how consultation can address multiple levels of systematic racism, using examples from The Infant-Parent Program at the University of California, San Francisco (UCSF). The authors chronicle how consultation has salutary effects on consultees by increasing their self-awareness, thus allowing the consultee to recognize and reflect on issues related to race, trauma, and reproductive justice to address interpersonal and institutional racism (Silverman & Hutchinson, 2019).

To continue to unpack the direct effects of consultation, new constructs should be investigated such as consultee implicit bias and trauma-informed care, which have been shown in related fields to be responsive to intervention. In a study of a Practice-Based Coaching (PBC) model, the inclusion of coaches was found to allow teachers to recognize and address implicit biases in the classroom that allowed them to develop more emotionally supportive teaching practices, particularly for Black boys, which could be applicable to IECMH consultants (Catherine & Swadener, 2021). Additionally, while little is known about IECMHC's effect on trauma-informed

attitudes, the Attitudes Related to Trauma-Informed Care (ARTIC) Scale has been used successfully among staff employed in education, human services, and health care (Baker et al., 2015).

A limitation of the research around consultee capacity is the lack of significant findings for impact on the consultee in either of the two RCT studies conducted to date (Gilliam, 2016; Reyes et al., 2020) as well as the absence of disaggregated analyses to determine whether these changes are equitable to consultees of color. Future research should seek to better understand those null findings, engage in disaggregated analysis, and explore the aforementioned additional constructs of interest.

Indirect Effects

Programmatic outcomes. The indirect programmatic effects of consultation refer to changes to improve the social-emotional context in which the child grows and learns. The "program" will depend on the recipient(s) of consultation but may include the classroom, home visiting program, childcare program, and others. The preponderance of the findings, with evidence from studies with diverse populations in both rural and urban communities, has been about improvements in classroom climate (Davis et al., 2020; Davis et al., 2018; Heller et al., 2012) with a smaller body of evidence about changes in center quality (Alkon et al., 2003) and expulsion rates (Upshur et al., 2009). Improvements in classroom climate have been measured in a variety of ways, such as quantitative measures like the Preschool Mental Health Climate Scale (PMHCS), the Classroom Assessment Scoring System (CLASS), or through qualitative interviews.

Evidence for changes to classroom climate includes a study that investigated an integrated IECMHC and teacher training program in Head Start called the Chicago School Readiness Project (CSRP). Raver and colleagues (2008) found positive changes in classroom climate for those classrooms receiving IECMHC. A program in rural Appalachia focused its consultation services on the promotion of trauma-informed care to boost teachers' competency in meeting the social-emotional needs of children and increase resilience in children (Shamblin et al., 2016). Post-consultation sites demonstrated a reduction in Negative Attributes on the PMHCS, though not an increase in Positive Attributes (Shamblin et al., 2016). Only one study, conducted by Alkon and team, found significant increases in center quality from Time 1 to Time 2 as measured by an observational tool, as well as reported changes to center and child practices, as reported during qualitative interviews (Alkon et al., 2003). Additionally, a study of a consultation program in a Head Start program found that staff had reduced use of sick leave after consultation, which can be construed as better staff wellness (Beardslee et al., 2010).

Consultation has also been shown to predict reduced rates of student expulsion in ECE programs (Upshur et al., 2009). Expulsion rates have been an outcome of focus since Gilliam's (2005) landmark study which found a prekindergarten expulsion rate 3.2 times higher than that of K-12 students with older, Black boys expelled at higher rates than their peers (Gilliam, 2005). Expulsion rates have garnered more interest in evaluations of IECMHC, but recently a Colorado survey also linked knowledge of how to access IECMHC predicted lower suspension rates (Miles et al., 2021). While it is evident that IECMHC is effective in reducing expulsions, there is little evidence yet

that IECMHC addresses the racial disparities that manifest in expulsion rates (Albritton et al., 2019).

There has yet to be a study that measures IECMHC's impact on program-level measures of equity. Future research could employ measures of equitable socio-cultural interactions such as the Assessing Classroom Sociocultural Equity Scale (ASCES) (Curenton et al., 2019) to address this gap, and could investigate program-level policy changes that may also reduce systemic inequities built into program infrastructure. Overall, while we know that programs seem to benefit from mental health consultation, it is important to investigate whether and how consultation may be addressing disparities that are evident at the program level such that systemic inequities in community resources do not dictate the quality of early childhood services available to children and families.

Child and family outcomes. The collaboration between consultants and consultees also indirectly affects children and families and may reduce disparities manifested by race, gender, socioeconomic status, and linguistic background. The vast majority of studies have investigated the impact of consultation on children (e.g., Albritton et al., 2019), though there is a growing literature base on the impact on families (see for example Bender et al., 2017).

Numerous studies have found that IECMHC has positive impacts on infants and young children. These studies have varied in research designs (e.g., randomized control trials (RCT), Quasi-experimental, and mixed methods) and settings (e.g., ECE and Head Start). A wide range of measures have been used, including the Devereux Early Childhood Assessment - Clinical (DECA-C), Strengths and Difficulties Questionnaire, and the Sutter-Eyberg Student Behavior Inventory. The majority of studies of child outcomes have been conducted with predominantly White samples (Bender et al., 2017; Gilliam et al., 2016; Shamblin et al., 2016), few have been conducted with predominantly Black samples (Williford & Shelton, 2008), and other racial/ethnic groups are poorly represented (see for exception Beardslee et al., 2010); further disaggregation by race/ethnicity is rare (see for exception Shivers et al., 2021).

The majority of research on child-level impacts can be summarized into three main constructs: improving child social-emotional skills, reducing child externalizing behavior, and decreasing the risk of expulsion. Multiple empirical studies have indicated that children's social-emotional competencies (such as social skills, self-regulation, protective factors, and adaptive behaviors) increase after consultation (Crusto et al., 2013; Green et al., 2012; Perry et al., 2008; Shamblin et al., 2016). For instance, Reyes & Gilliam (2021) conducted an evaluation of the statewide consultation program in Ohio and found that target children who received consultation demonstrated significantly higher scores for protective factors (DECA scores for Initiative and Attachment) post-consultation compared to the control group. This was the first study to demonstrate impacts on non-target peers, who improved significantly on the Initiative subscale compared to the control group.

Next, many studies have reported that children's challenging behaviors tend to decrease after consultation (Perry et al., 2010). For example, the randomized control trial (RCT) of Connecticut's consultation program demonstrated significant decreases in hyperactivity, restlessness, and externalizing behaviors among children who received consultation compared to control group

children (Gilliam et al., 2016). This finding has been replicated using other designs and a variety of measures. For example, another study found that children with identified concerns at baseline demonstrated significant improvement across all domains of the DECA, with large effect sizes, after consultation (Crusto et al., 2013).

As described above, reductions in program-wide expulsion rates after consultation have been documented; in addition, there is emerging evidence that children at risk for expulsion are more likely to be retained in their ECE setting after consultation (Perry et al., 2008). An evaluation of Arkansas's statewide expulsion prevention initiative reported decreased challenging behavior and risk for expulsion among children who received consultation (Conners Edge et al., 2021).

There is nascent literature on IECMHC's impact on other child outcomes. For instance, a D.C. consultation program reported that children in schools receiving IECMHC had higher academic achievement scores - a proxy measure for school readiness - after one academic year of consultation (Mathis et al., 2022). In addition, research is beginning to investigate equity in child outcomes, IECMHC evaluation data from Arizona suggested that IECMHC may have a stronger positive impact when Black children, and in particular Black boys, are the focus of consultation as compared to White children (Shivers et al., 2021). After 12 months of IECMHC, teachers reported lower levels of conflict with Black children, who had higher scores of conflict at baseline, than they did with White children, thus the racialized conflict gap was closed. An additional finding was there was no differential impact between Black girls and White girls. Based on the anti-racist principles of mental health consultation (Silverman & Hutchison, 2019), it is thought that IECMHC may predict reduced disparities for children and families that may manifest by gender, race, income, linguistic background, and/or disability; this needs to be confirmed in future studies.

While there is ample evidence for the impact of IECMHC on the social-emotional wellbeing of infants and young children, the evidence for family outcomes remains scarce. Family outcomes like parent/caregiver perception of consultation and parent-reported child outcomes have not been investigated extensively in IECMHC, although a study conducted by Bender and colleagues (2017) found that IECMHC positively influenced parent-child interactions. There is a range of other child and family outcomes pertinent to consultation that should be studied, including child internalizing behaviors, trauma symptoms, and caregivers' confidence in navigating the systems. While IECMHC has been shown to have the aforementioned positive effects in the short term, sustained effects on outcomes have yet to be demonstrated in IECMHC and necessitate longitudinal studies. In summary, the positive impacts for children have been replicated numerous times using different settings, measures, and research designs, but further research is required to investigate how IECMHC indirectly impacts disparities as well as other important child and family outcomes.

Pathways Synthesis

IECMHC is widely agreed to be an indirect mental health service in which the primary role of the consultant is to build the capacity of the consultee, who in turn creates an environment for children to thrive. In other words, changes in a consultee precede - and are a necessary precondition for - changes for a child. However, to demonstrate this pathway would require at least three-time points

of data collection and the use of mediation analyses within a nested data structure. Researchers have not yet conducted these analyses.

Not only have the indirect effects not yet been demonstrated, but there is evidence that contradicts the indirect nature of consultation as depicted in the theory of change. In the two randomized-controlled trials for IECMHC, significant effects at the child level were found in the absence of significant effects at the consultee level. In Connecticut's eight-week model of IECMHC, Gilliam et al. (2016) found that children in the consultation group showed significantly greater reductions in externalizing behaviors than control children, yet there were no significant differences in classroom environment quality (as measured by the CLASS) between classrooms that received consultation and control classrooms. Similarly, in Ohio's six-week model of IECMHC, Reyes & Gilliam (2021) found significantly greater improvements in indicators of child resilience on the DECA for intervention vs. control children, yet found no differences in intervention vs. control teachers or classrooms on multiples measures including classroom mental health climate, locus of control, depression, and teaching beliefs and practices. While these findings appear to contradict the theory of change, the absence of direct effects on teachers or classrooms may be an artifact of measurement. Another limitation of the current evidence from RCTs is that both programs are relatively short in duration. Additional studies—including RCTs—are needed to demonstrate the mediation of indirect effects of consultation in longer-duration models.

To date, several mediation models have been tested in IECMHC studies that quantify indirect effects, albeit not the mediating role of consultee changes on child outcomes. Consistent with the ToC, Green et al. (2006) found that the quality of the teacher-consultant relationship mediated the link between the frequency of consultation activities and the perceived effectiveness of consultation (per teacher report). In other words, the relationship was the mechanism of change whereby the amount of consultation predicted the extent of improvement in outcomes. Importantly, Bender et al. (2017) used mediation to investigate an understudied aspect of consultation - the impact on parents/caregivers. Specifically, they investigated the role of parent-child interactions and parental distress on the link between IECMHC and child outcomes. Parent-child dysfunctional interactions (a subscale of the Parenting Stress Index) mediated the association between IECMHC (i.e., whether in consultation or comparison group) and child outcomes (both behavioral problems and protective factors); parental distress was a non-significant potential mediator. While this model would benefit from replication in a study with three-time points of data, it suggests that changes in parent-child interactions may arise after consultation and lead to positive child outcomes. Upshur and colleagues (2009) investigated an additional hypothesized mechanism of change - improvement in child developmental skills - but the findings were non-significant.

In addition to the few mediation models tested to date, it is also important to note that research has investigated constructs that are hypothesized mediators of the impact of IECMHC, such as the consultative relationship and activities (see above). Increasing clarity about how constructs are operationalized is a helpful precondition to including them in formal mediation analyses. Further, beyond analyzing the indirect effects of consultation, there are many other pathways to explore quantitatively that are visually depicted and hypothesized in the theory of change. A few examples are: does the quality or amount of reflective supervision moderate a link between mental health consultant characteristics and the consultative relationship quality? Does consultee readiness for

consultation moderate the link between the activities of consultation and the direct effects? And, does consultative relationship quality mediate the link between consultant embodiment of the consultative stance and programmatic outcomes? Continuing to explore these pathways using moderation and mediation analyses will expand understanding of the ways in which consultation has its positive effects, and for whom, with implications for training and continuous programmatic improvement.

DISCUSSION

This paper presented the evidence base for Infant and Early Childhood Mental Health Consultation (IECMHC) through the lens of a new theory of change (ToC) which articulates the mechanisms by which IECMHC is hypothesized to lead to key outcomes. By categorizing the findings from the extant research by the constructs of the ToC, it is clear that the vast majority of research has investigated whether IECMHC has positive outcomes for children and the adults who work with them, but not how positive impacts are achieved or for whom they are strongest. Furthermore, it is clear that consultation in early childhood education (ECE) settings have been well-represented in the literature while all other settings (e.g., home visiting, primary care, child welfare) have been underrepresented.

From a policy perspective, the question of program effectiveness is crucial for funding and program expansion. IECMHC's effectiveness has been well established in ECE, though research in other settings is just beginning. Findings from published and some unpublished studies (not all of which are mentioned in this review) have repeatedly found that consultation in ECE settings is associated with decreased child externalizing behavior, improved social-emotional skills, improved teacher-child interactions, and improved teacher skills and confidence regarding fostering a healthy climate. To build upon the effectiveness data from ECE settings, best practices in implementation science dictate increased attention to quality and sustainability, including attention to health equity, workforce development, and program fidelity with flexibility.

Future Directions for Research

Areas of recognized need for additional research have been identified throughout this paper corresponding to each aspect of the Theory of Change for IECMHC. In addition, there are several cross-cutting next steps for IECMHC research that transcend the individual elements of the theory of change.

First, an important area for improvement is the investigation of potential differential effects of consultation for children based on demographic and/or identity characteristics, such as race/ethnicity, disability status, linguistic background, gender, socioeconomic status, and more. Few studies to date have conducted disaggregated analyses of IECMHC outcome data (see for example Shivers et al., 2021). To do so requires researchers to intentionally design research questions, collect data, and conduct statistical tests specific to equitable impact of consultation - keeping in mind that equity for individuals in marginalized groups would entail greater benefit from consultation than individuals who are not in marginalized groups. It is critical to continue to

examine the effects of IECMHC on disparities given the persistent inequities in expulsion policies for children of color compared to their white peers (Gilliam, 2005; Office of Civil Rights, 2016). While consultation is associated with reduced rates of expulsion, there is not currently evidence that it predicts reductions in disparities in expulsion based on race/ethnicity, gender, age, disability status, etc. (Albritton et al., 2019). This is a glaring omission given the foundation of mental health consultation in principles of social justice and anti-racism. In addition, it is necessary for unpacking what works for whom, which would improve the precision of service delivery.

It has long been challenging to concretely define and measure IECMHC given its non-directive, relationship-led principles. Nevertheless, to align IECMHC with best practices in implementation science, it is important to articulate and standardize the core activities that define IECMHC and to use these core activities to create fidelity measures. There are not yet research-based criteria for what can be considered consultation (as distinct from other related supports such as coaching and reflective supervision). Without such standardization, outcome data can be called into question as to whether different sites and even different consultants are truly all providing the same type of service. Furthermore, it impedes efforts to measure the quality of implementation. This need for standardization has been further complicated by the impact of the COVID-19 pandemic on the provision of consultation services, which led to increased virtual consultation and greater emphasis on adult wellbeing supports. Moving forward, researchers should create fidelity measures for IECMHC, pilot them, and analyze whether higher fidelity predicts better outcomes. This investigation should be inclusive of IECMHC in understudied settings - which includes all settings other than ECE. IECMHC is expanding to settings such as home visiting, child welfare, early intervention, primary care, and - in at least one instance - domestic violence shelters (Brinamen et al., 2012). An IECMHC fidelity measure that transcends settings should provide structure as well as latitude for appropriate adaptations for different settings.

In parallel to assessing implementation fidelity across settings, researchers must also prioritize the assessment of outcomes across settings. With the exception of home visiting, there is no known evaluation data for IECMHC in any setting other than ECE, as described in detail in this paper. There is a nascent evidence base for consultation provided to home visitors. Lambarth and Green (2019) found that the 12 home visitors in their sample who received consultation for two years reported significantly improved knowledge of mental health and confidence in partnering with parents, but no significant effect on their stress. While this is a promising beginning, there is much yet to be discovered in terms of direct and indirect effects, replication of effects across samples and measures, and mechanisms of change specific to home visiting. Expanding data collection to these settings is essential to determine how well consultation can be translated into disparate settings, and what different effects it might have depending on the target population in any alteration to service provision.

Similarly, across multiple constructs in the ToC, new measures are needed before quantitative data collection can advance. For example, the consultative stance is central to the provision of IECMHC as it was originally conceived, yet there are no measures of this nuanced construct. Hence, data cannot yet support its importance by investigating whether the quality of the consultant's embodiment of the consultative stance predicts the strength of outcomes. To address the understudied constructs in the ToC, researchers should either find and adapt existing measures or engage in best practices for measure generation and validation.

In addition to new measurement tools, researchers should work to both broaden and strengthen the research designs used for evaluating IECMHC. On the one hand, increased rigor in research design (i.e., use of control groups, data collection by trained research staff) can eliminate biases and alternative explanations for positive impacts that limit the credibility of findings. On the other hand, researchers should also expand the methods used to acknowledge non-Western ways of knowing and to honor community voice and personal narrative as valid sources of data.

Limitations of the Current Study

There are several limitations to the current review. As with any review of the literature, it is possible that we did not discover one or more articles on IECMHC, and that relevant papers have been published since this literature review was conducted in 2021 through early 2022. Further, the extent of research on IECMHC and the constructs in its ToC may be underrepresented in this article in light of the incorporation of some, but not all, of the "gray" literature on IECMHC. Many IECMHC evaluations result in an evaluation report that may not ultimately be published in the peer-reviewed literature, often because of time limitations for the evaluators. The authors incorporated findings from the unpublished "gray" literature only when there were no pertinent findings in the peer-reviewed literature for a given construct, yet based on the decentralized nature of the gray literature, it is possible that the authors are unaware of the entirety of the findings relevant to this review. Nevertheless, the authors referenced unpublished studies strategically where they could increase reader understanding while omitting studies with similar or redundant findings as appearing in peer-reviewed literature. This decision was thought to improve the parsimony of the paper while representing nuances of the literature base faithfully.

Each study design described in this review has strengths and limitations. Many of the studies used a quasi-experimental research method without a control or comparison group; hence, significant changes over time cannot be definitively attributed to consultation. Our review incorporates and labels all study designs, although some yield stronger conclusions than others.

Finally, there is insufficient evidence of effects across diverse groups of consultees, consultants, and children; many studies rely on primarily White, female samples of teachers and consultants with primarily White, male samples of children. There is also a lack of diversity in settings. The vast majority of the extant literature investigates IECMHC in ECE (e.g., Head Start, center-based child care, home-based child-care, pre-kindergarten), consultation takes place in a range of other settings including home visiting, child welfare, primary care, and early intervention. Addressing this need for diversity in samples and settings will strengthen the evidence for each construct, including those that have already been well replicated. This limitation can also be understood as a key future direction for research.

CONCLUSION

The evidence for the beneficial outcomes of IECMHC is well-established, both for the direct recipients of IECMHC (adults working with children) and for the young children in their care. To better understand these positive impacts, train highly skilled consultants, increase equity in

outcomes, and expand access to high-quality IECMHC, researchers must answer more nuanced questions about how it works and for whom. A theory of change structures these questions, and a new theory of change for IECMHC both helps summarize the extant literature and provides a clear research agenda for subsequent questions to explore. Researchers have only just begun to delve into the mechanisms of change and potentiators of impact for IECMHC and continuing to explore these pathways may increase the precision of service delivery and enhancement of social-emotional wellbeing and equitable settings for young children and the adults in their lives.

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